



GREWIN INDUSTRIAL GROUP CO.,LTD.

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Chapter 1 Safety Precautions



Attention

Equipment use $220V \pm 10\%$ / 50HZ power.

Do not place the unit in a strong electromagnetic interference environment.

The equipment should be used in $-10\text{ }^{\circ}\text{C}$ -- $40\text{ }^{\circ}\text{C}$ 95% RH non-condensing environment.

The main circuit board integrated circuits susceptible to static electricity, do not touch the main circuit board.

Do not frequent start-up and turn off the power. Turn off the power 10 seconds before the start



Danger

- 1.Be sure to properly grounded, the 220V level ground impedance is less than 100 ohms.
- 2.Winding time, please pay attention to the dress and around objects placed so that you do not accidentally involved in winding shaft.
- 3.Do not push-pull winding frame , Avoid hand injury.
- 4.Confirm the power is cut off, and the inverter power light is off before maintenance.



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Chapter 2 Control Interface Description

WD516A touchscreen winding machine controller is a high-end controller, developed by WEIDING, using the 32-bit ARM and XILINX programmable logic controller chip. More powerful; Computing faster; Input and output optical isolation, higher reliability; Operation is very simple with touch screen.

Function Key Description

◆ Normal function keys:

Yellow background with black text, as shown.

Enter

- 【Start】 : Start winding in standby or stop state。
- 【Pause】 : Stop winding
- 【High Speed】 : Winding spindle high-speed
- 【Low Speed】 : Winding spindle low-speed
- 【Speed Up】 : Spindle speed percentage increase 1
- 【Speed Down】 : Spindle speed percentage reduce 1
- 【Brake】 : Lock spindle
- 【Release】 : Release spindle
- 【Lead】 : Winding lead to adjust the winding frame
- 【Lag】 : Winding lag to adjust the winding frame
- 【Previous Group】 : Current group reduce 1
- 【Next Group】 : Current group increase 1
- 【Parameter Setting】 : Into the functional selection page .
- 【Frame Parameters】 : Into frame parameters input page.
- 【User Parameters】 : Into user parameters input page.
- 【Production Parameters】 : Into production parameters input page.



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【System Parameters】 : Into system parameters input page.

【Operating Instructions】 : The instructions page, this feature is not opened.

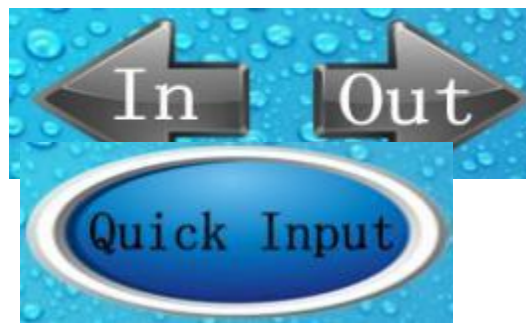
【I/O Test】 : Into the I / O test page.

【Enter】 : Save the current parameter values , and jump to the corresponding page.

【Copy】 : Copy the current group data.

【Paste】 : Paste the copied value of the parameter to the current group.

◆ Special function keys



【Reset】 : Red background with black text. System initialization.

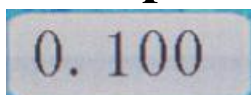
【 ← 】 : Gray background and white text. mobile.

【 → 】 : Gray background and white text. The winding frame outside mobile.

【Password】 : White background and red text. Input password.

【Quick Input】 : Input groups parameter quickly.

◆ Data input key





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White background and black text. After touched, modify data directly, or pop-up the numeric keypad to enter data, or jump to a more detailed description of the interface. Touch the "Enter" button to confirm the input data, Touch the "CL" button to abandon the input data

Chapter 3 System Initialization

Confirm the winding machine can be powered on, then clockwise rotation the power button, the initialization screen is displayed.



GREWIN v3.1

Winding Machine Control System with Touch Screen

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The system will read system parameters, user parameters, production parameters from the data memory after power on. Winding frame come back to the first group start position, the standby screen is displayed. To shutdown directly press the power button.



Display Description

- ◆ **1 – 1 (1)**: The current parameters of the frame in storage area 1, 1 group, start winding from the 1st group.
- ◆ **Set Output 0**: Set output production 0.
- ◆ **Produced 0**: Has produced 0.

If it is left and right winding model, the activity spindle "L" or "R" will be displayed on the upper right corner .

In standby mode, the "Brake" and "Release " keys control the spindle lock or release. The "Previous Group" and "Next Group" keys change the current group and winding frame position. Press the "Start" key to start winding. Press the "Reset" button, the system will be reset. Press the "Parameter setting" key to enter the function selection screen.



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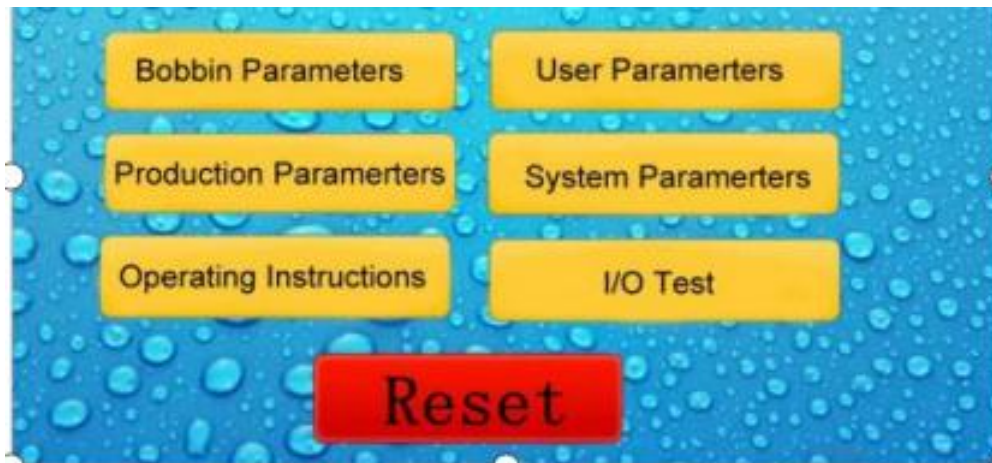
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Chapter 4 Function Selection

In standby mode, press the "Parameter Setting" key to enter the function selection page:



Function Description

- ◆ **Bobbin parameters:** Select the Bobbin parameter save area, input group quantity and parameters of each group.
- ◆ **Production parameters:** Set yield , modify production
- ◆ **User parameters:** The parameters of the user-level, winding function selection, the parameter adjustment when winding.
- ◆ **System parameters:** System-level parameters, parameter changes affect the system functions, incorrectly modify the system will not be able to run. Password to enter.
- ◆ **Instructions:** Controller documentation. Temporary no opening.
- ◆ **I/O test:** Input and output signal test interface. password to enter.

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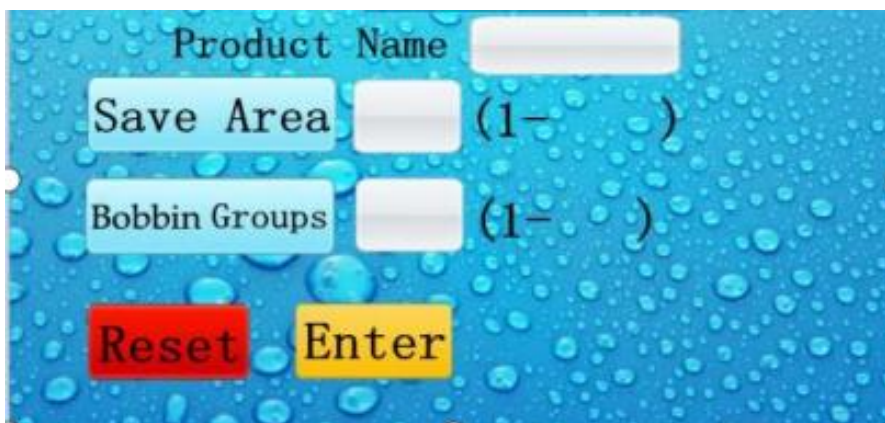


Chapter 5 Bobbin Parameters Input

Click "Bobbin Parameters ", the password page displayed.



Click on the "Password", pop-up numeric keypad, enter 8 bit correct password, into the "Save area" page. Press the "Reset", system reset. If user password is set "11111111", System will skip password page directly into the parameter save area page.



If it is left and right winding model, the activity spindle "L" or "R"



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will be displayed on the upper right corner .

Click on the data key, pop-up numeric keypad, enter the appropriate data. Press "Enter" key to enter the Bobbin group parameters input interface, press "Reset" key, system reset .
Bobbin Group parameters input interface.



Multiple groups, currently in the first group, "Quickly Input" will be displayed on the upper right corner.

Bobbin Parameters Description

- ◆ **Start Point:**Group winding start point, XXXX.XXmm.
- ◆ **Winding Width:**Winding winding width, XXXX.XXmm.
- ◆ **Wire Spacing:**The distance between wires, XX.XXXmm.
- ◆ **Turns:**Winding turns, XXXXX.X T.
- ◆ **Start Slow Turns:**The turns start with low speed, XXX.X T.
- ◆ **Stop Slow Turns:**The turns stop with low speed, XXX.X T.If the set is too small,it can damage the drive system. Generally set at 1%



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of the maximum spindle speed.

- ◆ **Spindle Stop Position:** The position of the spindle after winding end. X.X T , Greater than 0.9, the spindle no positioning action.

Press this button the machine will find the position you set.

- ◆ **Spindle Low Speed:** The speed of the spindle running slowly. Set too low, the spindle will not rotate. Set too high, can cause inaccurate positioning and turns.
- ◆ **Spindle High Speed:** The speed of the spindle running fast. If the winding speed is greater then MAX winding speed,spindle speed will automatically slow down. Spindle high speed must be greater than or equal to the low speed.
- ◆ **Winding Options:** Choices when winding, the status bits are described below:

X X X X X X XX

From left to right, respectively the first and the eighth bit.

- 1st Spindle direction:
= 1 CCW;
=0 CW.
- 2nd Winding direction
= 1 From inner to outer;
=0 From outer to inner
- 3rd Winding mode :
= 1 Winding continue;
=0 Winding layer
- 4th = 1 Next group auto
Automatically jump to the next group
=0 Next group manual

After press “ start” button, jump to the next group 5th

= 1 Auto start



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Automatically start winding

=0 Manual Start

After press "start" button, start winding

6th =1 Brake pause;

=0 Release pause

7th =1 High speed at both ends;

=0 Low speed at both ends.

8th =1 Winding normal;

=0 Winding previous

Holding winding direction, winding width and line spacing of the previous group

Click on the "Previous Group" "Next Group" to change the current group, and display the group data.

Click on the "Copy" to copy the data of the current group.

Click "Paste" to paste the copied parameter values to the current group.

Click Start point data key, pop up winding start point input page.



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◆ Click data key, pop-up numeric keypad,input data directly.

◆ Click "In" "Out" key,system can find start point automatic.

When click "In" or" Out , winding frame moving, click again, Winding frame stop, and display the start point value.

If the winding frame position is inconsistent with the start point,First click "In" or "Out" , winding frame move to the start point,then stop waiting for a keypress.

◆ Click "Enter",save the current settings, back to group parameters input page.

◆ Click "Reset",abandon the current settings, the system is reset.

Click winding width data key, pop up winding winding width input interface.



◆ Click data key, pop-up numeric keypad,input data directly.

◆ Click "In" "Out" key,system can find winding width automatic.

When click "In" or "Out" , winding frame moving,click again,winding frame stop, and display the winding width value.

If the winding frame position is inconsistent with the start point,first click "In" or "Out" , winding frame move to the start



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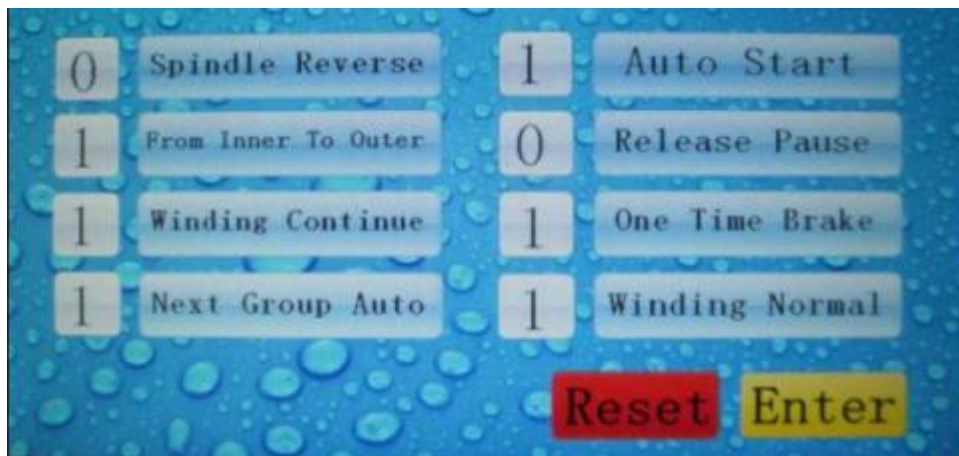
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point,then stop waiting for a keypress.

- ◆ Click "Enter",save the current settings, back to group parameters input page.
- ◆ Click "Reset",abandon the current settings, the system is reset.

Click winding options data key, pop up winding options input page.



- ◆ Click data key, change data directly. Functional description change at the same time.
- ◆ Click "Enter",save the current settings, back to group parameters input page.
- ◆ Click "Reset",abandon the current settings, the system is reset.



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Chapter 6 Production Parameters Input

Click "Production Parameters",the password interface displayed.



Click on the "Password" ,pop-up numeric keypad, enter 8 bit correct password , into the "Production Parameters" interface. Press the "Reset", system reset. If user password is set "11111111", skip password interface directly into the Production Parameters interface.



If it is left and right winding model, the activity spindle "L" or "R" will be displayed on the upper right corner .

- ◆ **Set output:** Set target yield, the winding machine work how many



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times.

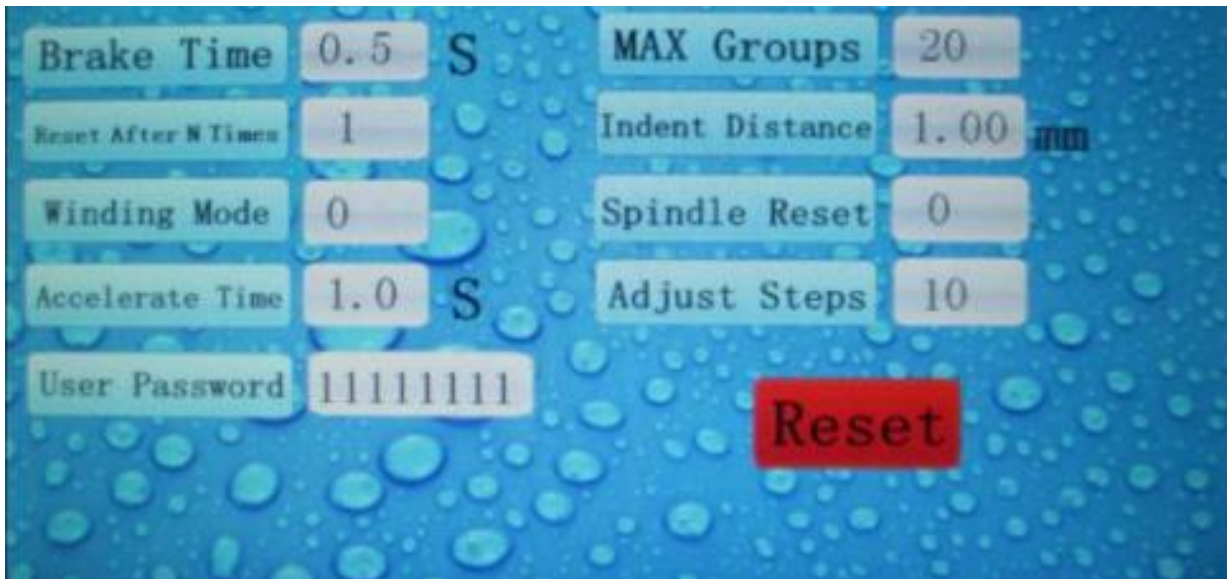
- ◆ **Produced:** the current yield of winding machine. If the working yield is greater than the set times, each complete a buzzer alert.
- ◆ Click data key, pop-up numeric keypad, modify the data.
- ◆ Click "Reset", the system reset.

Chapter 7 User Parameters Input

Click "User Parameters", the password page displayed.



Click on the "Password" ,pop-up numeric keypad, enter 8 bit correct password , into the "User Parameters" interface. Press the "Reset", system reset. If user password is set "11111111", skip password interface directly into the User Parameters page.



User Parameter Description

- ◆ Brake Time: Brake active time when the motor is stopped ,X.X s
- ◆ MAX Groups: Maximum groups in each storage area XX
- ◆ Reset After N Times: Wound N times, the winding frame looking for the origin position, to eliminate the accumulated error. XX
- ◆ Indent Distance: Reduce distance of winding width .X.XXmm
- ◆ Winding Mode: Select Wound mode. Pattern Description:
 - 0 Normal mode
 - 1 Indent both ends
 - 2 Antenna winding
 - 3 Indent single end
- ◆ Spindle Reset: 1. Find spindle origin after power-on 0. Do not look for the origin
- ◆ Acceleration time: Time required for the spindle from the low speed to high X.X s.
- ◆ Adjust steps: Winding frame adjust steps each click.xxx
- ◆ User Password: 8 digital, factory set to 12345678. If set to 11111111, the input for frame parameters, production parameters,



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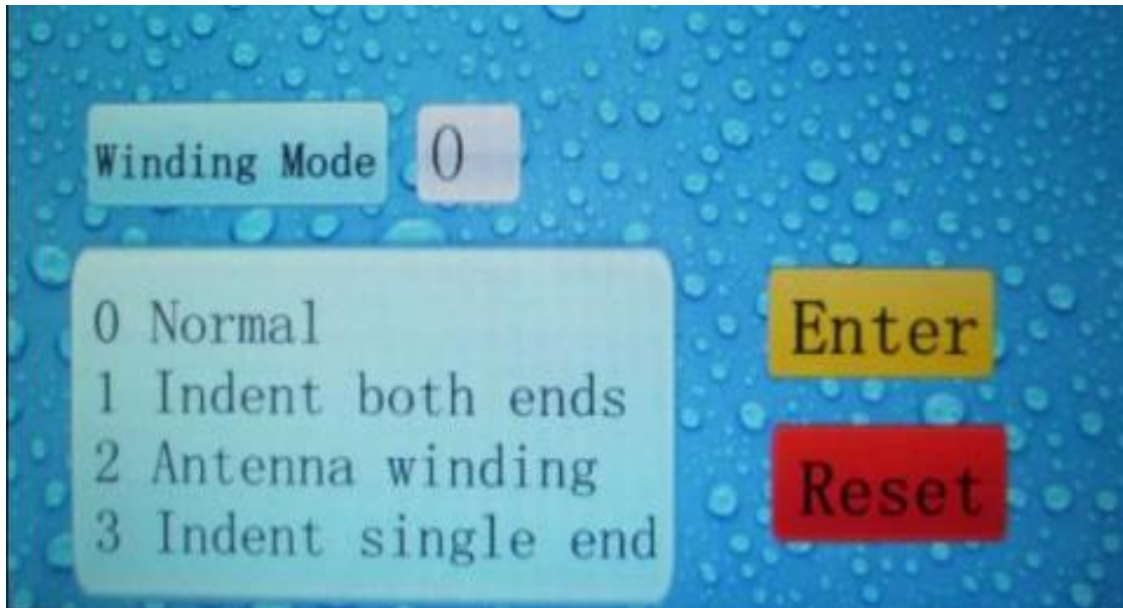
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user parameters will skip the password input page.

Click on the winding mode data key, enter the detailed description interface.



- ◆ Click data key, pop-up numeric keypad,input data directly.
- ◆ Click "Enter",save the current settings, back to user parameters input page.
- ◆ Click "Reset",abandon the current settings, the system is reset.

Chapter 8 System Parameters I/O Test

Click "System Parameters" or "I/O Test",the password page displayed.

Click on the "Password" ,pop-up numeric keypad, enter correct password , into corresponding interface. System parameters and I / O test do not open to ordinary users.



Chapter 9 Bobbin Parameters Input Techniques

◆ Multi-slot Bobbin parameters set

If the slot winding distance is small, the line can not be successfully pulled from the alignment position the next slot, set a group for slot action alone, set the appropriate start point and turns (The same anchor point, turns less than 1, the anchor points difference of 180 degrees, turns less than 0.5) the wire smoothly into the slot, and then back to the slot start point.

◆ Winding layer

If the third bit of the status bit is set to 0, the system will automatically start slow and stop slow each layer, after winding a layer ,waiting for start button. Set this feature in debugging, you can see from the wire spacing setting is appropriate. Click "Layer" on touch screen cancel this function.



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◆ **Winding previous**

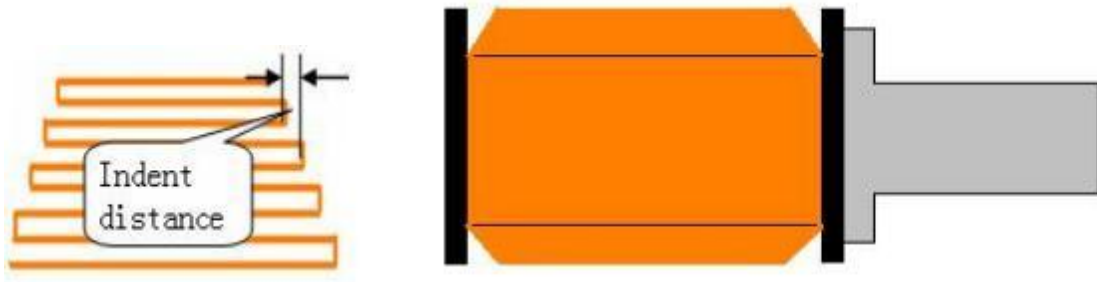
If eighth bit of the status bit is set to 0, the system will automatically according to the width ,wire spacing and the final winding direction of the previous group. Suitable for the multi-tap winding of the same wire diameter.

◆ **Two times brake**

If the seventh bit of the status bit is set to 0, the system brakes when 1 turn remaining, through brake time, continue to wound the rest.Stable spindle speed to ensure accurate spindle positioning.

◆ **Reduce at both ends**

Select reduce at both ends, and set reduce distance ,The pagoda shaped coil wound.



reduce at both ends

Appearance of Figure

◆ **Winding as an antenna**

Select antenna mode, and set reduce distance ,The antenna shaped coil wound.



Winding as an antenna



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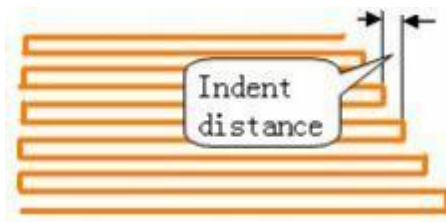
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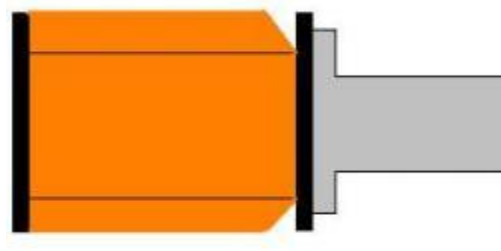


◆ Reduce at single end

Select reduce at single end mode, and set reduce distance ,The triangle shaped coil wound. .



Reduce at single end



Appearance of Figure

◆ Next group manual

The fourth status bit is set to 0, a pause after the end of the group , press the start button into the next group. Suitable for transformer tapping.

◆ Manual start

The fifth status bit is set to 0, a pause at the begain of the group , press the start button start winding. Suitable for transformer tapping.

◆ Parameter input quickly

In addition to start point, the other parameters are the same, setting a fast input method. When the interface in the first group of the frame parameters, click "Quick input" , pop-up a wall thickness input interface, modify data and click "enter", the system will automatically calculate groups start point, the other parameters will be copied from the first group.

Bobbin parameter graphical representation

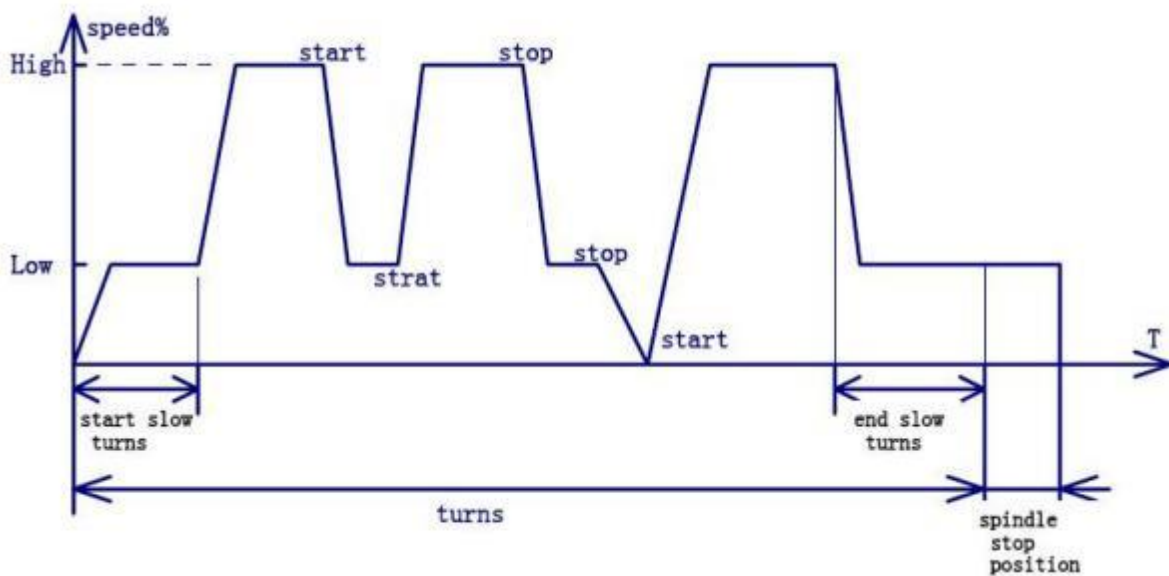
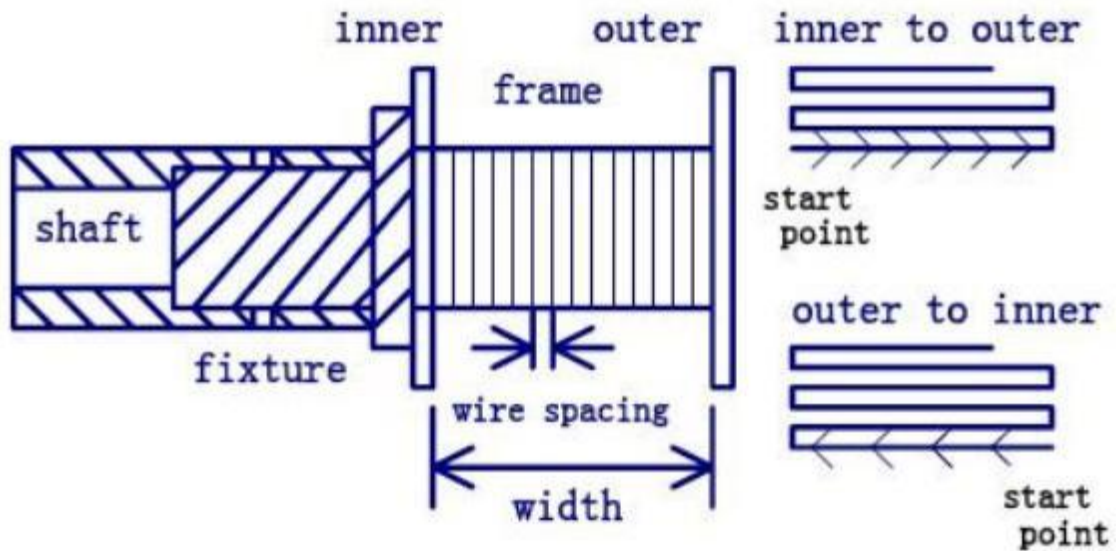


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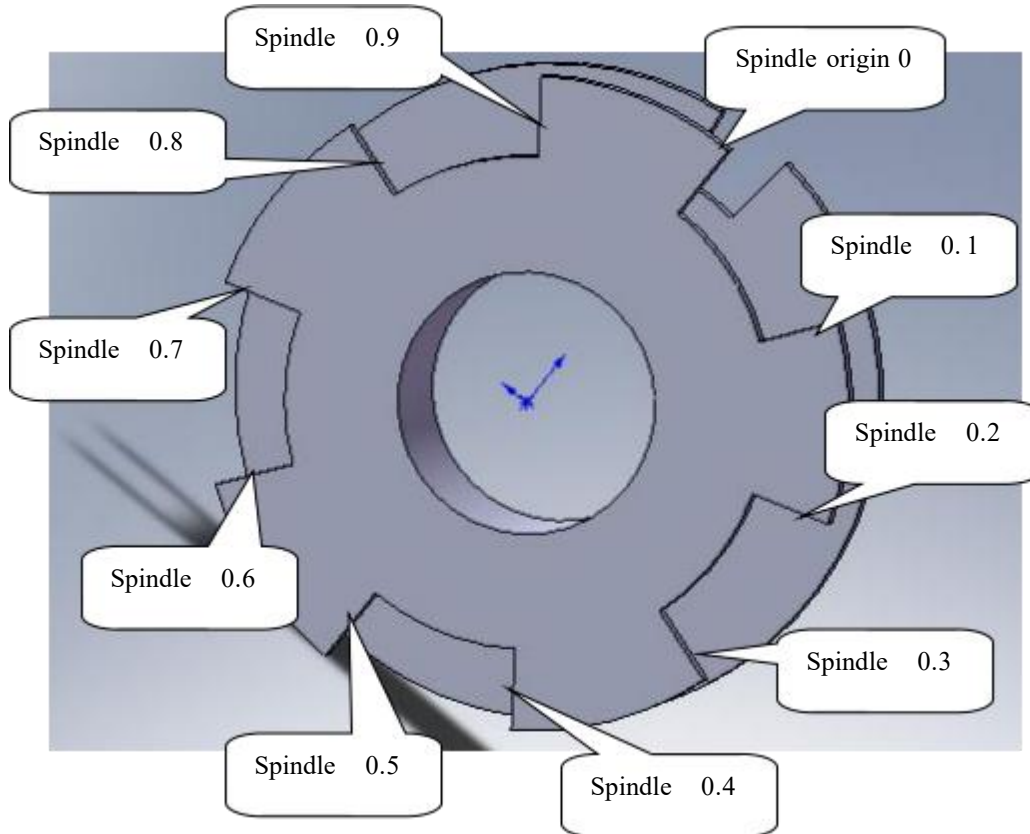
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Chapter 10 Coil Winding

In the standby mode, click "next group" the current group increase, click "previous group" the current group decrease, the winding frame come to start point of the current group. Click "Start", the system begin winding from current group.

Power failure suddenly, the system will save the current winding data ,after power is restored, the system jumps to continue winding screen. Click "start", the spindle is running at low speed;click "start" again, normal winding; click "reset", the system reset.



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Winding page:continue



Winding page:high speed



Winding page:low speed

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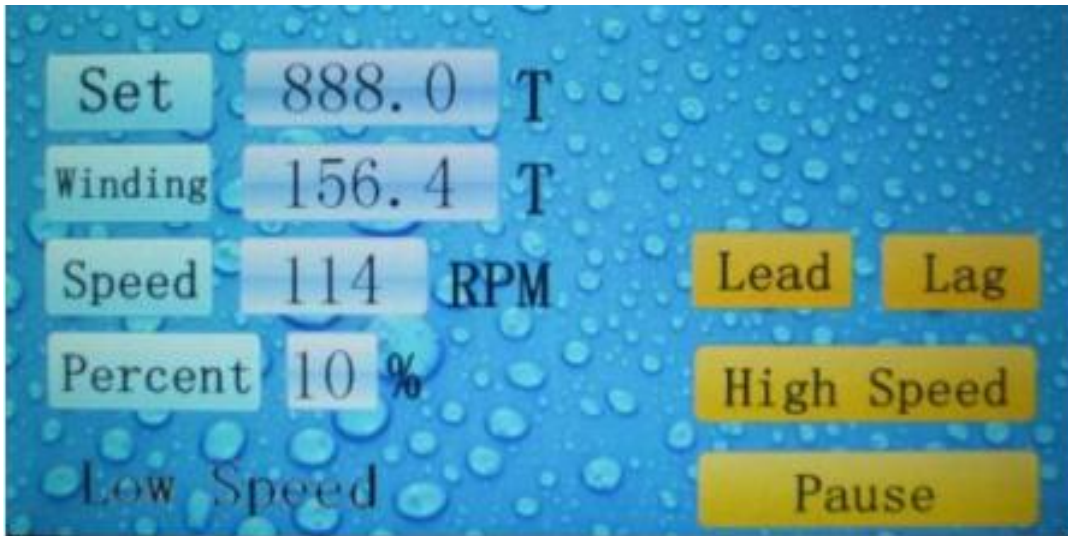
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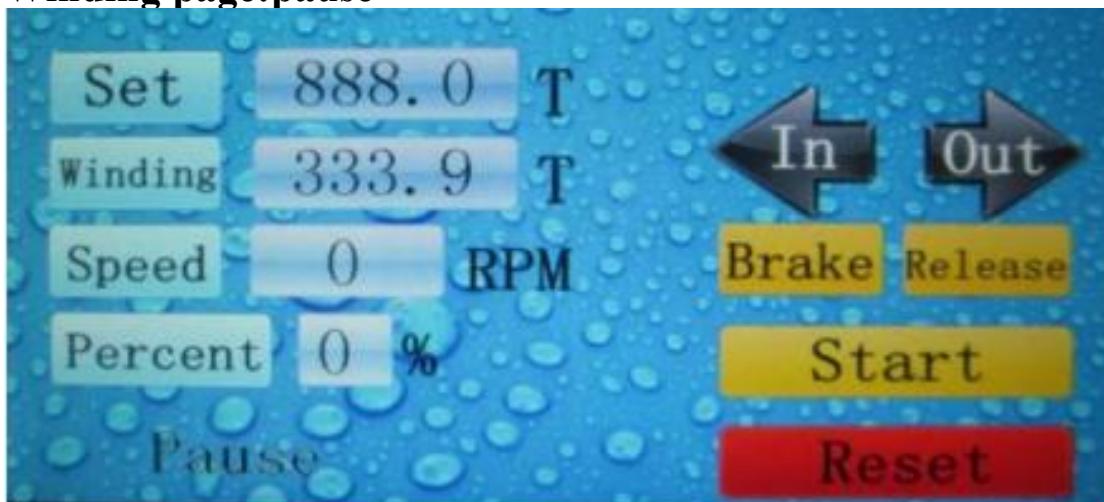
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Winding page:pause



In winding process, click "stop" , if the spindle in a high-speed, switched to low-speed; if the spindle in a low-speed , spindle pause. click "start" , the spindle is running in high-speed or low-speed . Click "speed up" or "speed down" to adjust the spindle high speed. In winding process, you can manually adjust the winding frame



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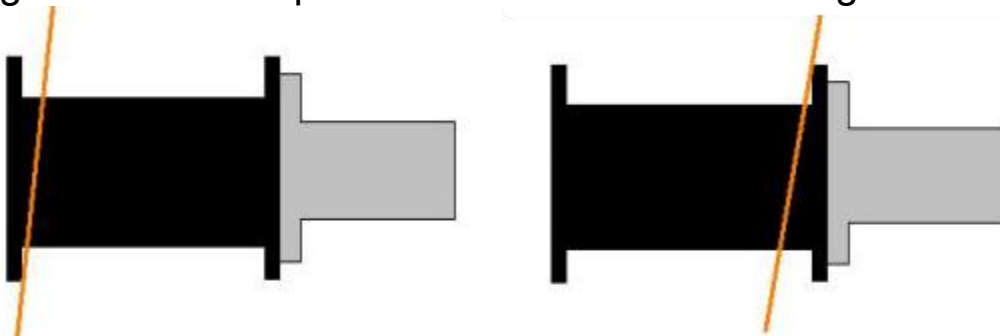
position. In high or low speed, if winding frame lag,click "lag", if winding frame lead,click "lead",winding frame move adjustment steps. In pause , click "in" or "out",winding frame move in or out adjustment steps.

After the completion of the coil winding, winding frame automatically back to the start point of the first group. If arrive accumulated reset value, find winding frame origin point before back to the start point of the first group. Production increase, if the yield is greater than or equal to the set value, the buzzer beep.

Chapter 11 Bobbin debugging

The trial of a product generally as follows.

1. According to the frame and operation process, making the fixture.
2. the fixture is fixed to the winding shaft.
3. enameled correct path through the tension, and adjusted to the proper tension.
4. Input the frame parameters.you can set "winding layer" mode and a few turns.
5. Try to wind.Modified based on the appearance ,you can modify start point,winding width, wire spacing , until satisfied. Recognized the start point is suitable before winding.



outer to inner,start point increase inner to outer,start point increase

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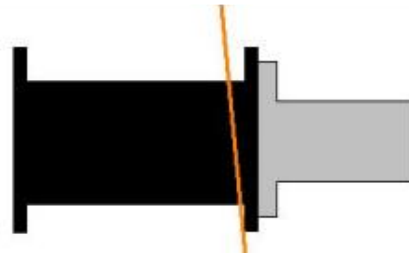
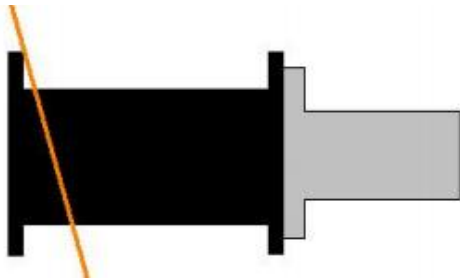
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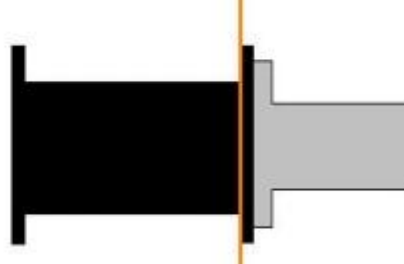
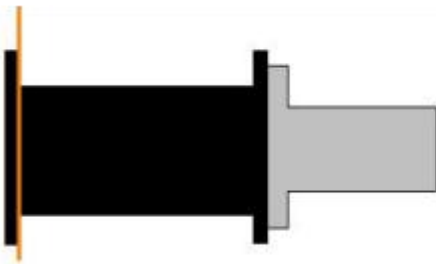
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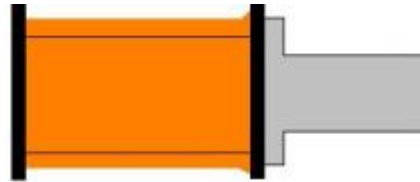
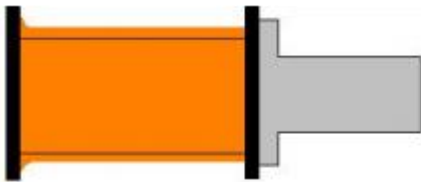


outer to inner,start point decrease inner to outer,start point decrease

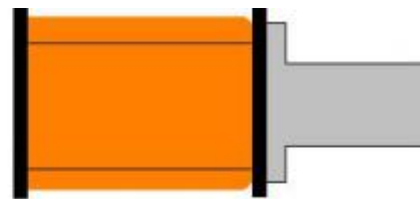
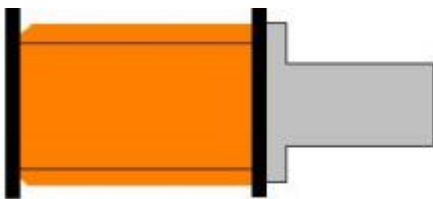


outer to inner,start point ok inner to outer,start point ok

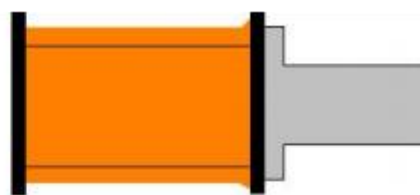
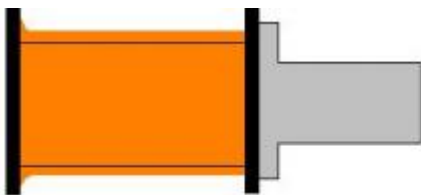
Recognized the start point is suitable after winding.



outer to inner,start point decrease inner to outer,start point increase



outer to inner,start point increase inner to outer,start point decrease
Recognized the winding width is suitable after winding.



inner to outer,width decrease outer to inner,width increase



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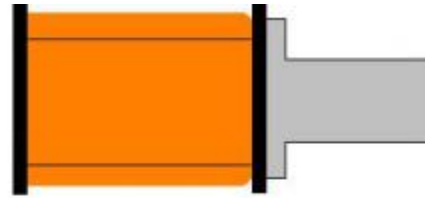
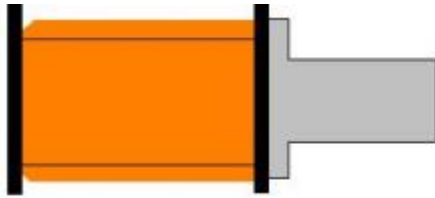
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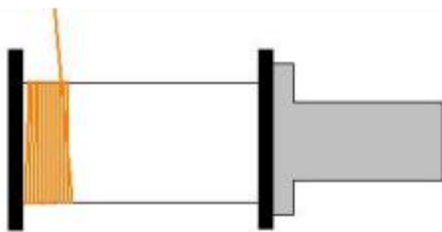


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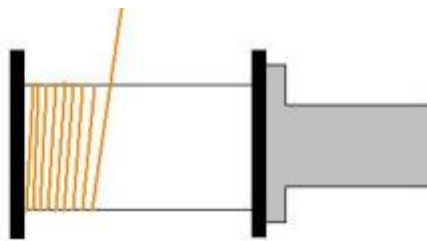


inner to outer,width increase outer to inner,width decrease

Recognized the wire spacing is suitable after winding(tight winding).



Wire spacing increase



Wire spacing decrease

6. Debug other shaft. Adjusting the the fine adjustment mechanism or fixtures.

7.Input the full parameters, adjustment end-low turns. Find the perfect combination of efficiency and quality parameters.

Chapter 12 Bobbin Parameter Input Instance

Understanding "parameter save area" and "maximum groups"

Users can set "parameter save area" up to 999.

Maximum groups is the groups which can be saved in a "parameter save area".

The system has 1450 groups parameter storage space, if a maximum groups is set to 50, the storage space is divided into $1450 \div 50 = 29$, the user can only choose "parameter save area" between



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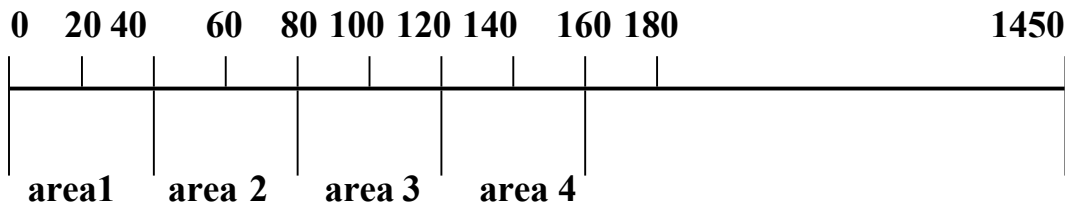
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1-29. If the maximum groups is set to 10, the storage space is divided into $1450 \div 10 = 145$. Because the user to select the "parameter save area" only three-digit, "parameter save area" greater than 999 is not available, that only 1 to 999 "parameter save area" available.

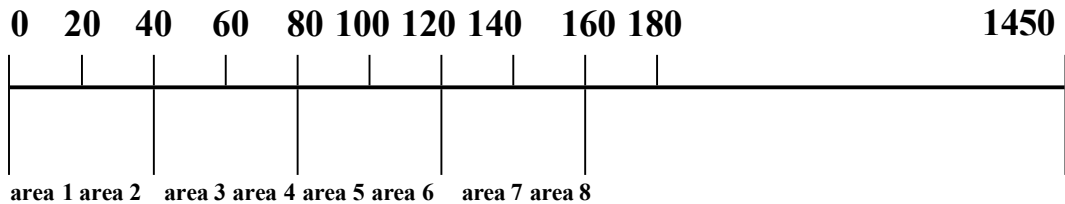
Each area can only save the parameters of a frame. Groups of frame can not exceed the maximum groups. If you exceed the maximum groups, will occupy the area. Examples: the maximum groups is 10, the current area is 5, Groups of frame set to 25, the frame parameters will actually occupy 5th 6th 7th area; 6th 7th area can not save another frame parameters, otherwise it will destroy the current frame parameters.

Different "Maximum groups" set corresponding area is illustrated below:

Maximum groups 40:



Maximum groups 20:



If maximum groups modify, the number of data storage area and frame parameters will change too. You must confirm the useful the frame parameters have been recorded before edit maximum groups. The factory default value is 20, it can meet the needs of the general multi-slot frame.

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Frame recognition



Single Slot frame



9 Slots frame

5 Slots frame



2 Slots frame

Under normal circumstances, the actual slots is consistent to groups



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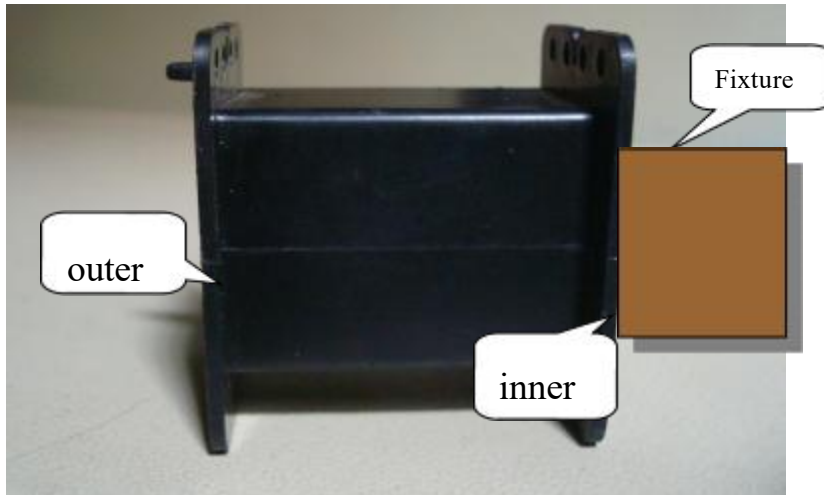
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of the frame . Also some frame's groups is more than slots, such as the ignition coil, high-frequency transformer.

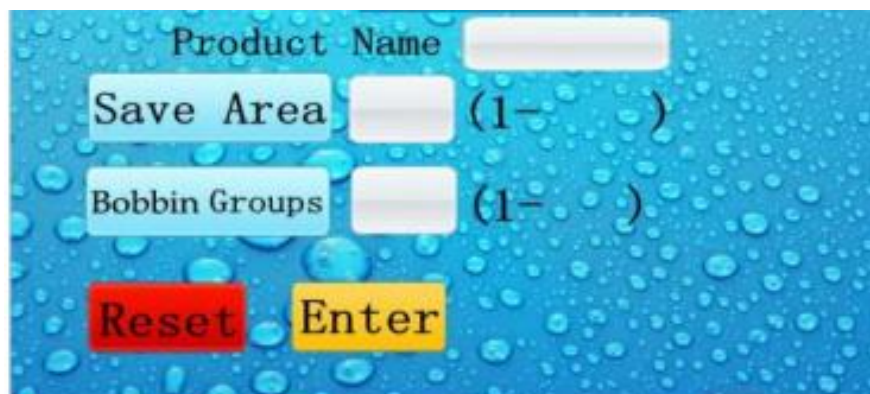
The single slot frame parameters input



Shown here is a single-slot frame, requirements winding from inner to outer.

Frame parameters input steps detail describes as below.

In standby click "parameter setting", select the "frame parameters", enter the correct password to enter the "save area" interface. .



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Click "save area" data key, enter the save area 1.
 Click "Bobbin groups" data key, enter the skeleton group 1.
 Click "Enter" to enter the Bobbin parameters input interface.



Enter the following form parameters

area	1
groups	1
Start point	50
width	40
Wire spacing	0.1
turns	1000
Start low turns	1
End low turns	50
Spindle position	1
Low speed	6
High speed	60
Winding option	10111111

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Low speed set too low, the spindle will not rotate. Set too high, can cause inaccurate positioning and turns.

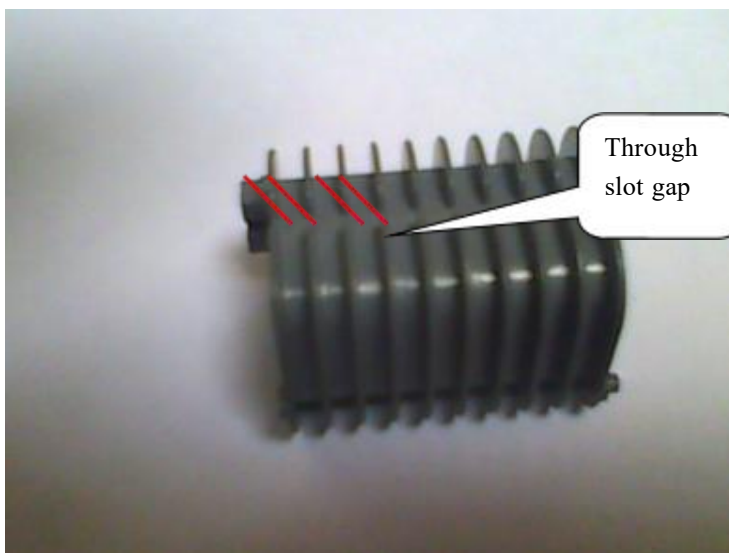
First commissioning a winding shaft, set suitably turns, adjust the starting point, width, wire spacing, adjust the tension, until winding qualified products. After commissioning the first winding shaft, the parameter is fixed . Next one by one to debug the rest of the winding shaft , Adjusting the fine adjustment mechanism or fixtures.

After all shafts can work at the same time, set the correct turns, modify the start low turns, end low turns, low-speed, high-speed. quality assurance, while improving efficiency.

Narrow multi slots frame parameters input

Winding multi-slots frame is much more complex than the single-slot frame. But by the following example, I believe you will become a winding special list.

The following figure is a 9-slots Ignition coil frame.



There is a gap between slots, the wire is pulled to the next slot through the gap (red-line position), not through the other position. If

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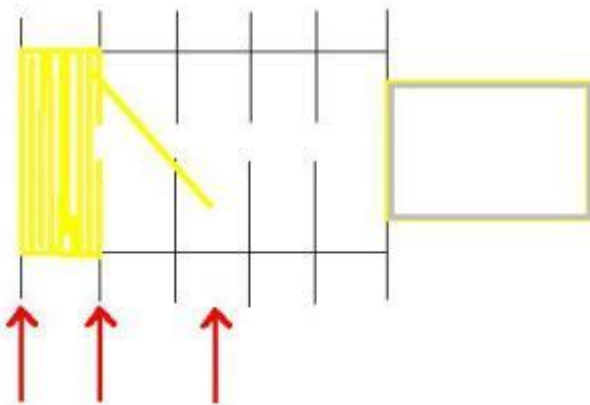
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the wire is directly pulled to the next slot start position, can not be guaranteed the wire pulled from the gap, also causing turns disorder between slots.

How to solve this problem?The manually simulated through slot action found wire can through the gap while the wire far away from the start position.Add an auxiliary group to help winding machine to carry out this action, the auxiliary group start position is far away from the slot start position.the distance is usually slightly larger than the slot width + wall thickness.



The left red arrow is the first slot start point, the middle red arrow is the second slot start point, the right red arrow is the auxiliary group start point from the first slot to the second slot. The first slot winding end, wire move to the the auxiliary group starting point, winding the set turns, and then moved to the second slot start point. the auxiliary group turns rule: the gap only one direction, set the turns ≤ 1 ; two directions, set the turns ≤ 0.5 . the turns is too small, can not guarantee a smooth through, the turns is too larger, may be winding to other slot. General Setting 0.5 turns.。

In accordance with the above method, winding the 9 slots frame, you need to set 17-groups. 9 groups is the slot parameters, and the

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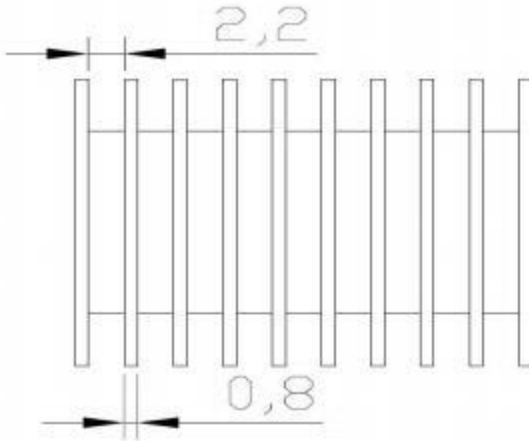
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remaining 8 groups is auxiliary arameters.

each group must set the starting point and the width ,if input with intelligent,it will spent too much time. Strongly suggest input with the mechanical size . Under Figure is the mechanical size of 9 slots frame.



Debugging of multi-slot frame contains the following steps.

Debugging the first slot start point and the point of spindle .

Debugging method according to the single slot , adjusted the first slot start point. Pause brake, spindle position 0. Run once ,the spindle position is locked.loosen the screws of the fixture and rotation fixture, make slot gap upward, that is at the 12 o'clock position, as shown.

Adjust the other fixtures to the same position.

According to the first slot start position and the mechanical dimensions of the frame,



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input all parameters of the frame. Select the frame parameter storage area. Here select the second area. ◦

Change the frame groups from 1 to 17.

The parameters shown in the following table. The first slot start point is 28.2mm .◦

slots	groups	start point	width	space	turns	start turns	end turns	spindle position	low speed	high speed	options
1st	1st	28.2mm	2.2mm	0.06mm	1100	0.2	27	0	7	70	10111111
auxiliary	2nd	21.2mm	2.2mm	0.06mm	0.5	0.2	0.1	1	7	70	10111111
2nd	3rd	25.2mm	2.2mm	0.06mm	1150	0.2	27	0	7	70	10111111
auxiliary	4th	18.2mm	2.2mm	0.06mm	0.5	0.2	0.1	1	7	70	10111111
3rd	5th	22.2mm	2.2mm	0.06mm	1150	0.2	27	0	7	70	10111111
auxiliary	6th	15.2mm	2.2mm	0.06mm	0.5	0.2	0.1	1	7	70	10111111
4th	7th	19.2mm	2.2mm	0.06mm	1150	0.2	27	0	7	70	10111111
auxiliary	8th	12.2mm	2.2mm	0.06mm	0.5	0.2	0.1	1	7	70	10111111
5th	9th	16.2mm	2.2mm	0.06mm	1150	0.2	27	0	7	70	10111111
auxiliary	10th	9.2mm	2.2mm	0.06mm	0.5	0.2	0.1	1	7	70	10111111
6th	11th	13.2mm	2.2mm	0.06mm	1150	0.2	27	0	7	70	10111111
auxiliary	12th	6.2mm	2.2mm	0.06mm	0.5	0.2	0.1	1	7	70	10111111
7th	13th	10.2mm	2.2mm	0.06mm	1150	0.2	27	0	7	70	10111111
auxiliary	14th	3.2mm	2.2mm	0.06mm	0.5	0.2	0.1	1	7	70	10111111
8th	15th	7.2mm	2.2mm	0.06mm	1150	0.2	27	0	7	70	10111111
auxiliary	16th	0.2mm	2.2mm	0.06mm	0.5	0.2	0.1	1	7	70	10111111
9th	17th	4.2mm	2.2mm	0.06mm	850	0.2	27	0	7	70	10111111

You can use "copy" and "paste" function to quickly input parameters.

The distance between the auxiliary group and winding group is usually slightly larger than slot width + wall thickness, in this 9 slots skeleton, is 4mm.

Problems often encountered in the multi-slot frame winding process.

1. The coil loose or break: adjust the tension.



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2. Coil uneven: adjustment start point or width. Reference manual.
3. All wire through position is not in the gaps: on the left of gap, the ccw rotation fixture a little ; on the right of gap, cw rotation fixture a little (release the fixture screws manually fine-tuning)
4. Someone slot wire through position is not in the gap: fine-tuning the auxiliary group start position.
5. Wire through position is not regular: low speed too fast, reduce low-speed ; end low turns too little , increase end low turns.。

Wide multi-slot frame parameter input

The narrow multi-slot frame added auxiliary group, guaranteed accurate through gap, but there is a loss of efficiency. In wide multi-slot frame, remove the auxiliary group. The following figure is a 5 slots frame.



Debugging method is the same as previous multi-slot frame. Debugging the first group starting position and spindle point. Then



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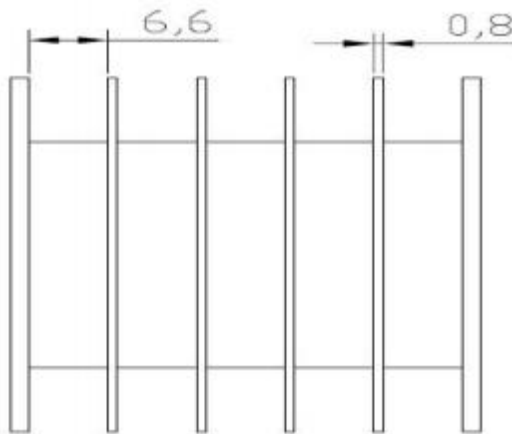


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change the frame groups to 5, input remaining groups parameter according to the mechanical dimensions.



The following table is the parameters of groups, good debugging the first slot start point is 40mm.

slots	groups	start point	width	space	turns	start turns	end turns	spindle position	low speed	high speed	options
1st	1st	40mm	6.6mm	0.08mm	800	1	40	0	7	80	10111111
2nd	2nd	26mm	6.6mm	0.08mm	800	1	40	0	7	80	10111111
3rd	3rd	18.6mm	6.6mm	0.08mm	800	1	40	0	7	80	10111111
4th	4th	11.2mm	6.6mm	0.08mm	800	1	40	0	7	80	10111111
5th	5th	3.8mm	6.6mm	0.08mm	800	1	40	0	7	80	10111111

The start point should be far away from the through gap, so as to ensure a smooth through.

Motor coil mould and wide multi-slot frame are similar. Mouldle picture as follows:

Winding head is 8, mold is also supporting 8 sets, eight motor coils can be winding once. A mold has



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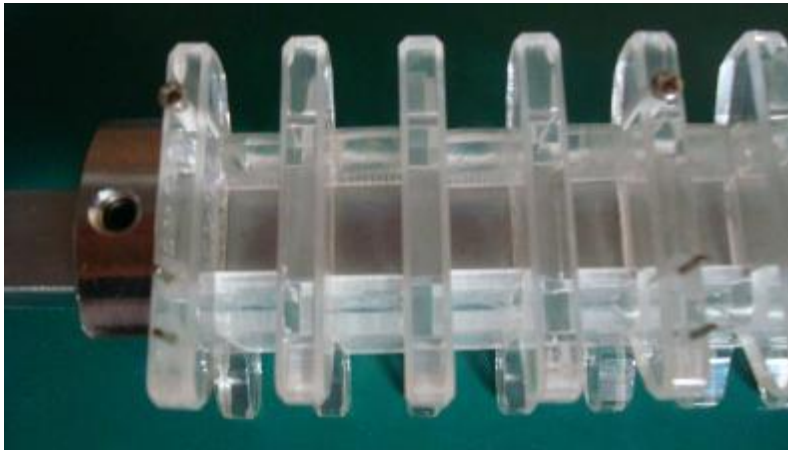
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four winding slot, equivalent to 4 slot frame, mold picture as follows:

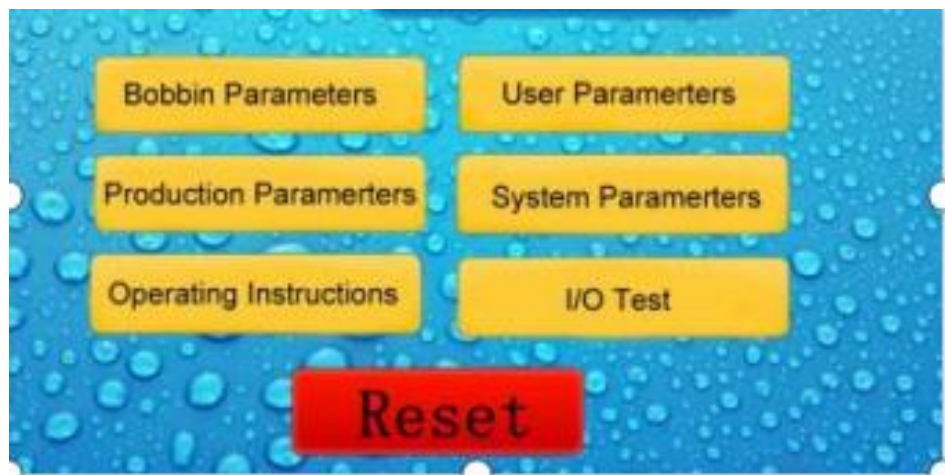


Select the frame parameters

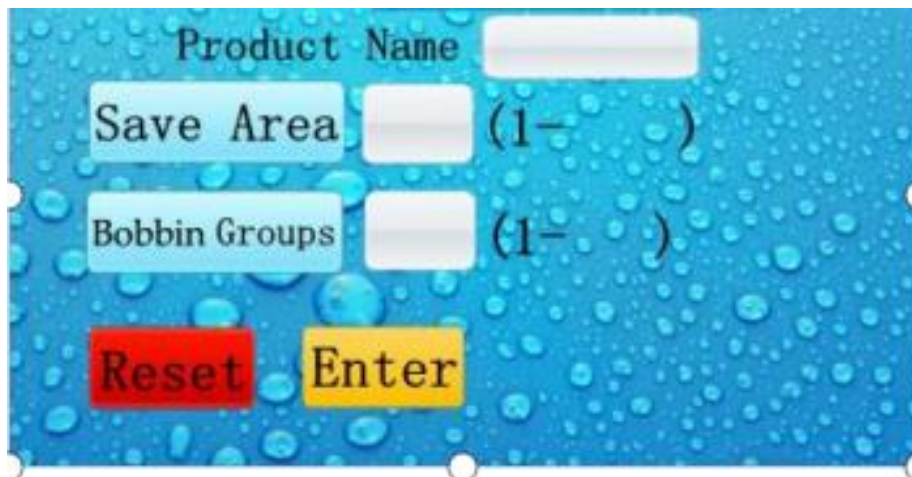
System saved many frames parameter, how to choose the parameters to wind?

Such as area 1 and area 2, area 3 saved different frame parameters ,now wind coils as the 2nd area parameters ,Steps as follows::

In the standby mode,click "Parameter set" ,enter the function selection page.



Click "Bobbin parameter", enter the correct password to enter the parameter area page.



Click "save area" data key, pop-up numeric keypad, input 2. Click "reset" , system initialization. In standby mode, you can see the current area becomes 2. Next coil will be wound in accordance with the parameters in area 2. .

In left-right winding models, you can choose the same area, and can also choose different area. The left-right convert switch is turned to the left ,"L" appears in the upper-right corner, according to the above steps to select the parameters of the left side . The left-right convert switch is turned to the right ,"R" appears in the upper-right corner, according to the above steps to select the parameters of the right side .

Chapter 13 Maintenance and Troubleshooting

Maintenance

Please keep the outside of the machine clean and tidy. Do not piled up debris on the machine. Do not use organic solvents to clean the equipment.

Lubrication guide rod, screw regularly. Recommended guide



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rod once a month, screw a quarterly.。

Clean the control box, counting photoelectric sensor regularly.
Recommended quarterly.。

Check the mechanical and electrical connections regularly.
Recommended halfyear.

Non-professionals do not take apart screw box and winding shaft.

Non-professionals do not take apart and maintenance circuit board.

Troubleshooting

Failure phenomenon	Cause	Solution
Power on,no display or action	Power socket problem	Check the power outlet
	Power switch screws loose	Tighten screws
	Control box fuse bad	Replace the fuse
	Stepper/power board bad	Replace stepper/power board
	Main board bad	Replace main board
Power on,no display or display not normal, action normal	Monitor plug contact bad	Seated plug
	Monitor bad	Replace the monitor
	Main board bad	Replace main board
After power-on, the display is normal, no action	Stepper motor plug loose	Seated plug
	The stepper control signal plug loose	Seated plug
	Stepper/power board bad	Replace stepper/power board
No response	Touch panel is dirty	Clean with a soft cloth

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to touch buttons	Touch panel bad	Replace Touch panel
Display data memory bad	Data memory contact bad	Re-inserted
	Data memory bad	Replace data memory
Display screw origin failure	Screw origin sensor plug loose	Seated plug
	Screw origin sensor dirty	Clear sensor
	Screw origin sensor bad	Replace sensor
Count not accurate or no count	Count sensor plug loose	Seated plug
	Count sensor dirty	Clear sensor
	Count sensor bad	Replace sensor
Spindle is not positioned	position plug loose	Seated plug
	Position sensor dirty	Clear sensor
	position sensor bad	Replace sensor
Start and stop button no response	Button plug loose	Seated plug
	Screw loose	Tighten screws
	Button bad	Replace button
Brake ineffective	brake gap is too large	Adjust the gap to 0.5mm
	Brake friction plate is damaged	Replace brake
Mechanical noise larger	Lack of lubrication of the transmission parts	Lubricate transmission parts
	Drive belt loose	Adjust to suitable
	Bearing damage	Replace bearing
Spindle does not turn	Inverter control plug loose	Seated plug
	Inverter protection	Shutdown restart
	Belt break	Replace belt



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The warranty period is one year from the date of purchase(except for human factors and machine damage caused by force majeure). Out of one year the maintenance need only appropriate material fee and maintenance labor costs.

If you have comments or suggestions, if you want to customize the winding machines and non-standard automation equipment, please contact us.

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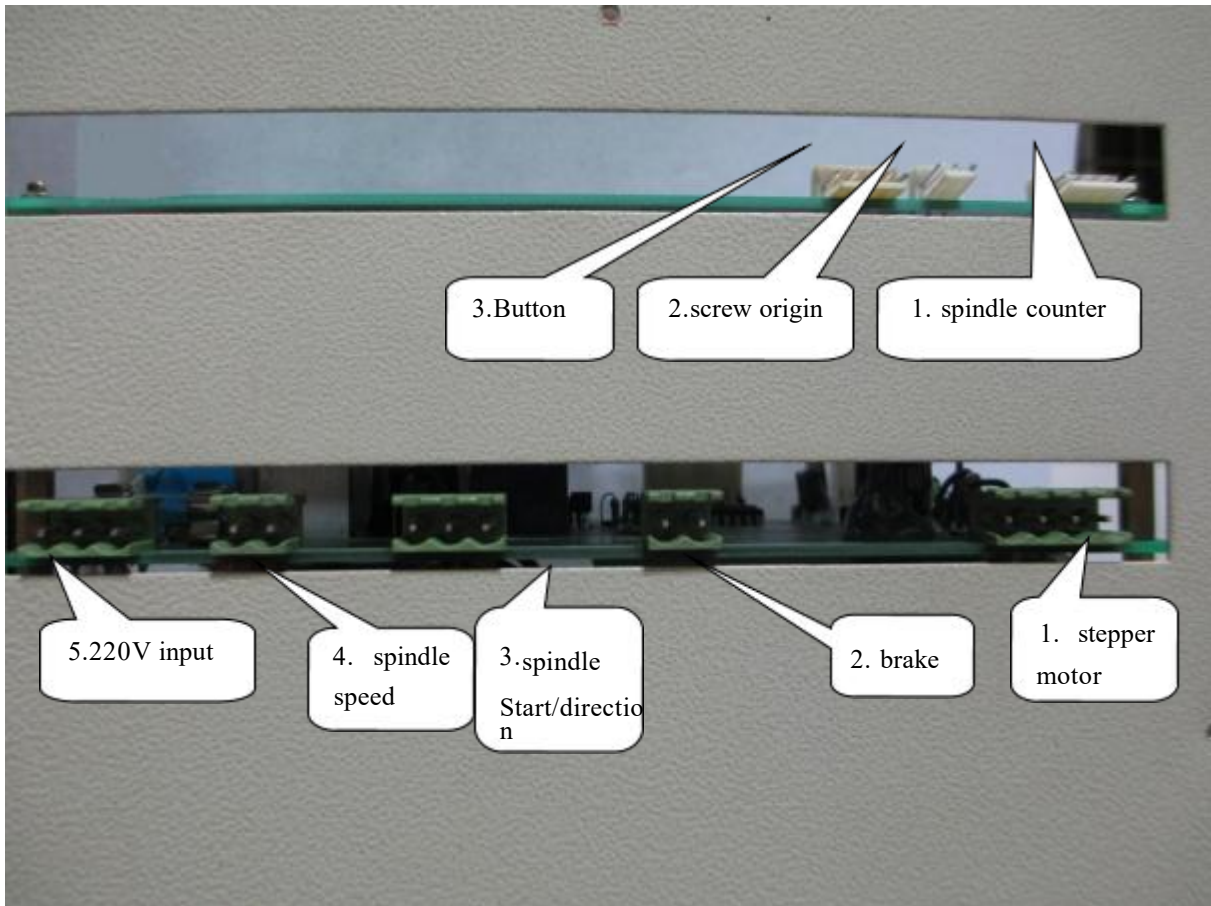


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Attachment 2 Controller Interface 1





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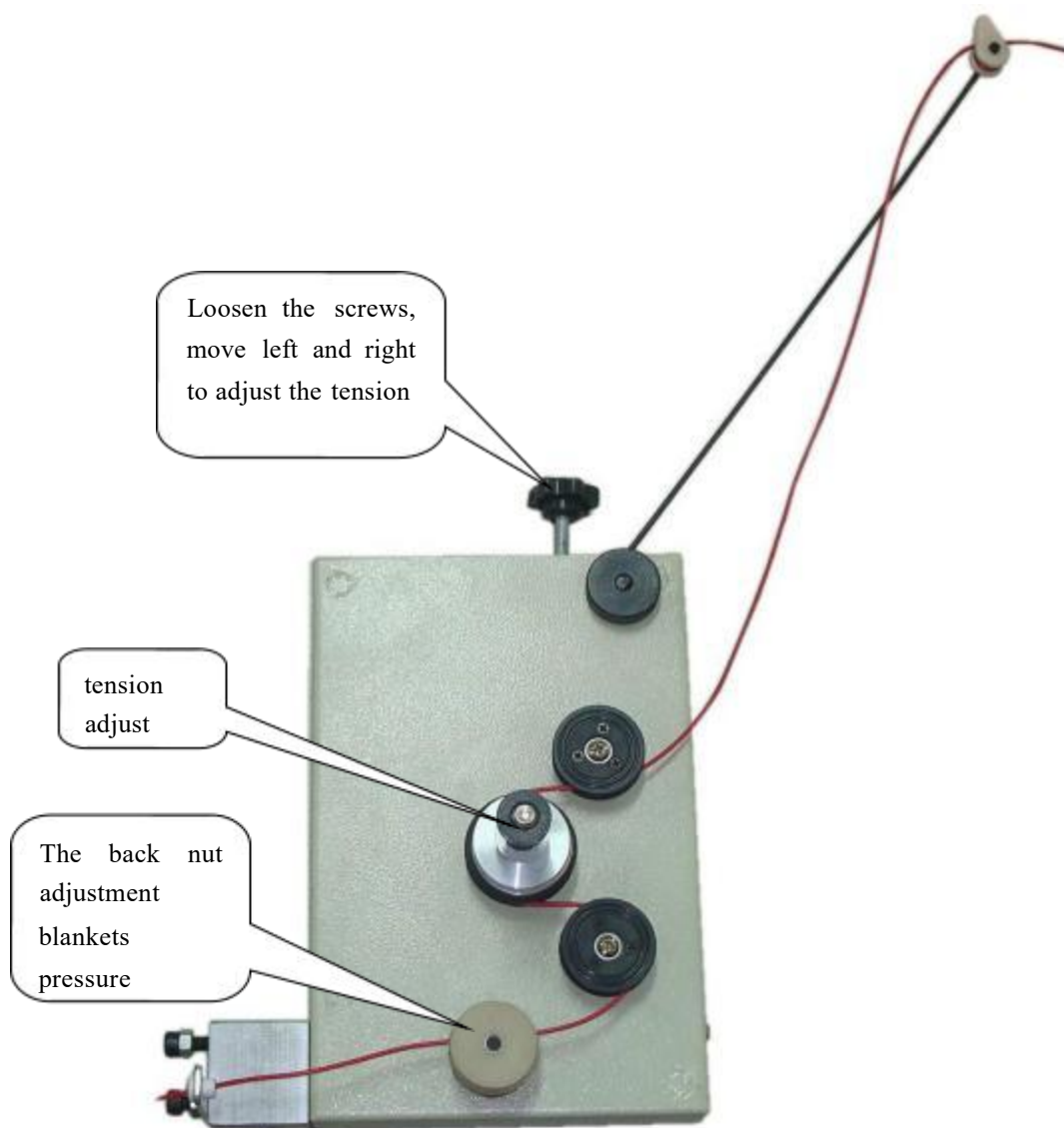
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Attachment 3

Wire through diagram and tension adjust for thin wire tensioner





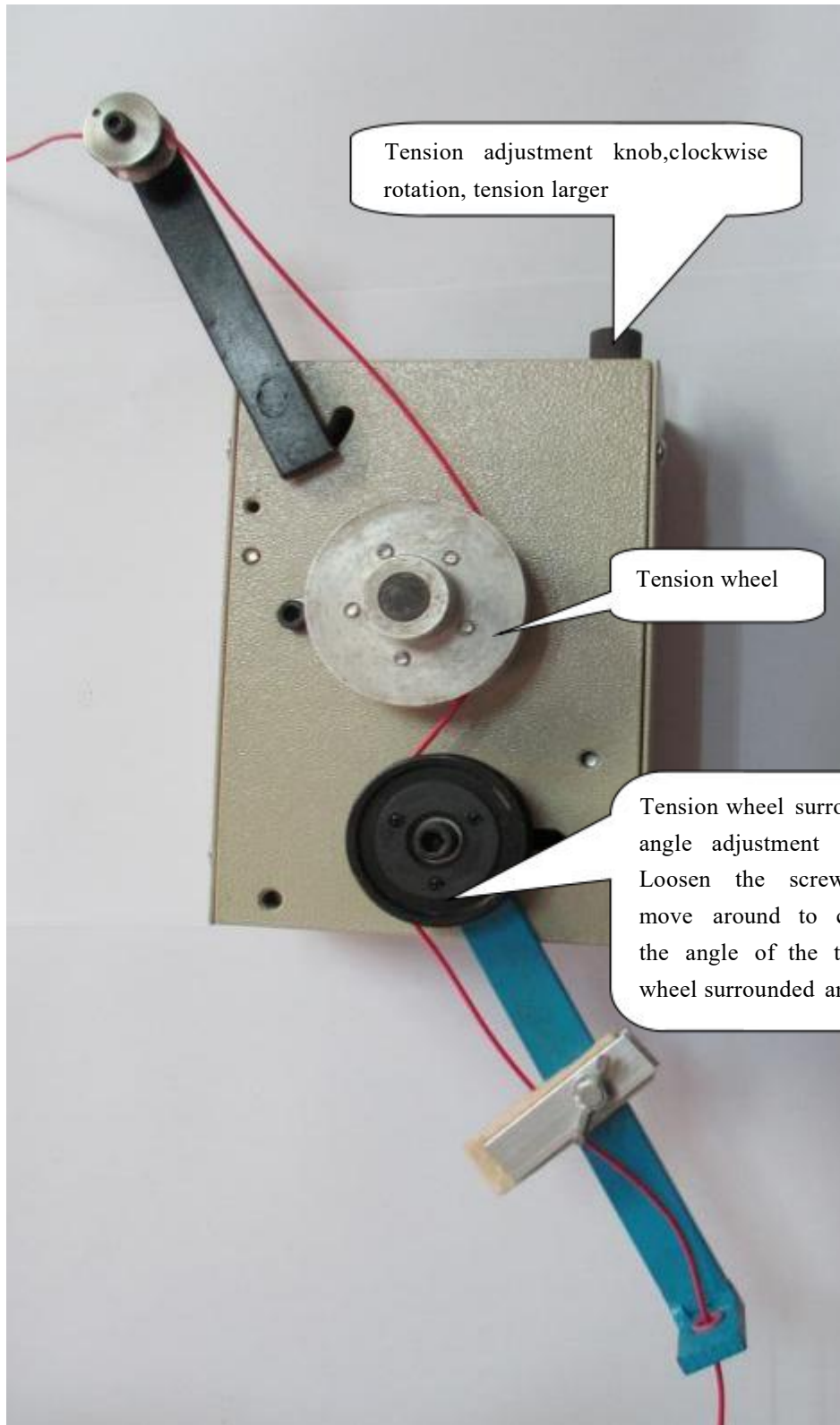
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Attachment 4

Wire through and tension adjust for thick wire tensioner





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Attachment 5

Winding frame fine-tuning device

