

Automatic Conveyer Needle Detecting Machine



2300 Instruction on Use and Maintenance

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■ Notes on Safety Use

Pay attention to Safety Use

- Please read the instruction carefully so you can use it in a correct way before you use it. Please keep the instruction for reference. If it is lost, please contact our company for a new one
- To ensure safety, power connector plug must have grounded to prevent static or electriferous operation. Be careful not to plug the wrong plug.
- Notes on Wear during Operation

Never wear Necktie, shawl (including decorative ones) and other things that easily droop. You should also pay attention to sleeve or skirt in case they get rolled into conveyer belt, O-type belt. Never wear metal decorations, watches, magcard, BP to prevent interference.

- Notes on Cleaning Work

Please make sure the instrument clearing and checking work after work, first turn off the power, the plug should be plugged out. After the cleaning work, cover the instrument with cloth.

■ Structure and Names of Figuration



About the Function Key settings, Please see Page 12.

1、 Where to Place the Machine

Preparation

1、 Notes on Where to Place and Use the Machine

1-1、 Anti-shakings

Choose the place without shaking, flat cement floor or terrazzo is the best choice.

1-2、 The impact of metal products on machines

Don't pack tables, chairs, boxes and shelves of metal material within 1 meter. Sewing machine, cutting machine, carrying machines should operate about 4 meters away.

1-3、 Electric wave impact

No sling fan or other rotating machines should be installed above needle detecting machine. High-pressure transformer, high-frequency packing machine can easily produce strong electromagnetic field and should be placed more than 10meters away. Avoid places where cars and buses comes frequently.

1-4、 Environmental conditions around

Please place the machine where there are little temperature and humidity change as well as little dust.

1-5、 Impact on other things

Inspection department produces strong magnetism, so watches, VCDs, credit cards, driving licenses, BPs and mobile phones that easily are affected by magnetism should be kept away.

2、 Power Usage

This instrument uses 220V±10V 50HZ unilateral power, so please equip with unilateral grounded socket. Frequently check whether the connection is good in case the connection problem leads to components of electric machine and electric circuits burning out.

3、 Notes on Moving Machines

If you have to move the instruments, first you have to loosen the 4 adjustment bolts M16 nut, raise idler wheels, adjust the position on horizontal level if you want to move it in short distance and keep plane level. If you want to move it for long distance, you have to fix it on flat or moving vehicles.

Note: Don't push or pull shaft while moving.

4、 How to fix the Machine

You have to fix it on flat cement floor and make 4 idler wheels by adjustment bolts 1.5-3 centimeters higher from the floor, and then you can rectify horizontal level. Or it is easily to cause belt slanting and consequent wrong warning problems.

5、 How to clean the Machine

There might be some little metal grains, dusts and remains after check outside or inside conveyer belt, as well as in joint part and channel detection part, which will cause wrong warning and torn belt problems.

Note: You must cut the power and plug out before you do the cleaning work .

2. How to Use the Machine

Use

- 1、 Plug in the special socket of 220V with grounded devices.
- 2、 Press the red power button (upper right of the computer). Watch the red signal lamp to check if the power connection is good. The good connection is without twinkling.
- 3、 Open the power switch, power indicator light on, while the screen lights of the operation panel after three flashing shows the current time. And go in the standby state.
- 4、 Check if the sensitivity position instruction is right. The normal position is around 8 to 9 for ordinary check. For special check asked by clients, you can adjust to 0-7 or 10. Non-checking staff shouldn't change it.
- 5、 Press Start/Stop button and machine runs right, press the button again, machine stops.
- 6、 The machine runs well, after 2 seconds delay (the delay device is installed to prolong machine life term, lower electric shock) you can place the attached standard product to be detected on the conveyer belt for detection to check the detecting.

function; you have to repeat 2-3 times and see if it is automatically reversed to the right position; if it need adjustment, press the button beside power button in upper right part of the computer. Please notice 5-2 about the rewind time setting.

What's more, you should take away the product and find out the magnetic matter (broken needle). You have to inspect again in case there are more than one broken needles.

After inspection or work, remember to press run button, turn off power, plug out. Do the cleaning work and cover the machine with cloth or nylon cover.

The standard product for detection should be kept in proper place.

3、 Daily Maintenance & Protection

1. For better use

- 1-1、 The one in charge should teach the operators correct operation ways and make them familiarize the instructions。
- 1-2、 Sewing needles must be of steel material。
- 1-3、 If any broken needle is detected during sewing, you must find it out and change new needle. Never loose the regulation。
- 1-4、 The metal decorations (including buttons and slide fasteners) must be completely demagnetized before it is sewn。

2. Is it possible that it sends out warnings without broken needles or irons pieces?

Yes

- 2-1、 The closely-arranged metal buttons or slide fasteners might be not well demagnetized and can be detected and incur warning。
- 2-2、 Scissors (including those for machine use) may leave metal powder after grinding together with deep-colored chalk power on clothes, which can also be detected and incur warning. Therefore scissors should be kept clean after grinding。
- 2-3、 The product with smear can easily absorb metal powder, which can be detected and incur warning。
- 2-4、 Product with adhibit metal rust can be detected and incur warning 。
- 2-5、 Deep-colored dyestuff with iron component can stain the dyed cloth with iron, which can be detected and incur warning. Therefore contracts concerning dying should give clear indication of such problems。

3. Inspection and Protection

- 3-1、 During running, you should check carefully if it floats away. If so, it means the 4 adjustment bolts is loosened and you should readjust it on horizontal level before fixing。
- 3-2、 To check if there are metal matter operating within 4 meters away from the machine。
- 3-3、 To check without load, to see if shaft and other rotating part send out strange sounds, if so, clean with clean cloth or towel and lubricate the shaft and the connection between adjustment bolts and shafts with 2-3 sewing machine oil。
- 3-4、 To check once unloaded whether it is unstable and if the sensibility signal lamp twinkles. In serious case, it will send wrong warning. Please do the following check:
 - 3-4-1、 To check if the channel part which outstands has stained with metal. Please clean with clean and dehydrated clean towel。
 - 3-4-2、 To check if there are stains or metal pieces, powder on conveyer belt. If nothing obvious, you can carefully scrub and wash the two sides with clean wet towel!
 - Remember to cut the power before you do the cleaning.**
 - 3-4-3、 To check if conveyer belt get slanted. Due to long time operation and sometimes things to be detected is placed slanted or machine itself is not in horizontal level, conveyer belt might get slanted. If so, you can correct it to the center and be careful that both ends is corrected in the same time, or it won't run correctly. You can adjust the 4 fixing feet to make it balance. Or ask an expert to adjust the driven shaft with the attached inner hexagon spanner, the angle of rotation should be small。
- 3-5、 Don't pack things or sitting on the machine。
- 3-6、 During use, please cover the machine with nylon or cloth cover to prevent dust or metal powder get into the machine。

4、 How to Set the Function Key

- 1、 Press Function keys, enter the year, month, day, time, rewind time settings, first click Function keys, the display shows "Y200X", in which X constantly flashing means to select, X is actually a figure such as the "5" "2" "3" . Click on the arrow keys from top to bottom of the year choice, after selected click Function keys to confirm, the year on the set complete. At this time display shows "daabb", and "aa" constantly flashing means to select, "aabb" show the same actual figures, "aa" said the month as "01" "03", also click on the same sensitivity up or down arrows to select the month, after selected click Function keys to confirm, the month completed the set. At this point screen "bb" in the twinkling..... And the like to set the date and time
- 2、 Rewind time settings: press the Function keys, the display shows "n = x.y", "x.y" also means a figure, such as "1.6" "1.8." For example, "1.8" said the rewind time is 1.8 seconds. "X.y" flashing, and so you choose, the choice of the sensitivity up or down arrows, each time plus or minus 0.2 seconds, after selected click Function keys to confirm.
- 3、 Press settings: the same Function keys to the display shows "P = C or P = E", and constantly flashing, press the print button at this time test results will be printed. "P = C" that means the Chinese print, "P = E" that print in English, press Function keys to display "P = C or P = E", according to the sensitivity arrow keys can choose from top to bottom.
- 4、 Testing standards settings: by the same Function keys to display $F = 0.5$, or $F = 0.8$ At this time press arrow keys from top to bottom to select the testing standards, $F = 1.0$ means that the testing standards of the machine is $F_e = \phi 1.0$ of the steel ball. From the $F = 0.5$ to $F_e = 4.0$ for a total of 11 detections supplied for different needs.
- 5、 Press Start/Stop key to run the machine, as required press Function button to select "b" or "c"-type, the screen will show you choose on the left side of the state. If the height of the product to be detected less than 2 cm, please select "b" type, or the machine will take it as nothing for mistake, the alarm will not work. If the height is more than 2 cm, both "b" or "c"-type can be selected. Counting by switching select "qualified" and "checkout" and "total" and the corresponding indicator light up.

6. Clear the count: in the standby state, press the count switch key to clear the target, hold the count switch key , wait until the figures begin flashing on the screen, Clear then release, click count switch again to eliminate it.
7. The use of Automatic/Manual key: the key is to choose start automatic or manual start. In automatic mode, once detected, the conveyer belt will stop automatically and reverse automatically, it's no need to press the start key again.
8. Location broken needles accurately, so workers can quickly find out the broken needles by using small hand-held needle detector .
9. In automatic mode, the machine possesses protection circuit, without the product to be detected within 10 minutes, it will automatically go into standby status, which can save power and prolong machine life term. In the manual state, the machine needs to manually shut off.

5、 Technical Specification & Working Principle

Special Standard

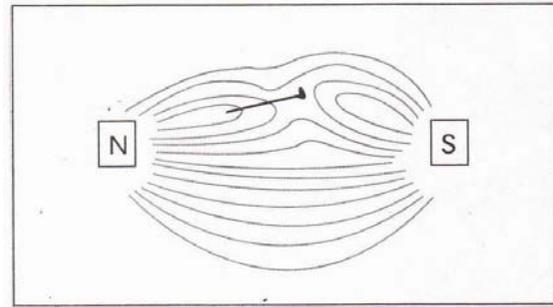
In terms of the production technology and quality inspection standard for needle detecting machine, no research has been carried out in this field. Therefore, Technical Inspection Department doesn't have the set regulations when examining and checking production plants. Under such circumstance, the company, to take responsibility for customers, has drafted the enterprise standard for needle-detecting machine producing companies with our long years of working experience and Japanese national legislation on inspection standard for reference for approval of Regional Technical Inspection Bureau as well as set the record with the NO: Q/SS001—1999。

Basic Technical Parameter

Project	SY-2300	
Rated Voltage	AC220V 50HZ \pm 10%	
Power (W)	<100W	
Detection Width (mm)	2200mm	
Detection Height (mm)	35mm	
Detection Capacity (Iron Ball Φ mm)	Fe0.8	
Continuous Velocity (m/min)	26	
Measure (Length*Width*Height)mm	2500*600*1580mm	
Weight (kg)	300kg	

Working Principle

In static magnetic field, the broken needle or iron matter pass and it will cause magnetic field confusion. The magnetic wave signal is magnified, which leads to electric shock, and thus sound warning.



P.S.: Extending two lines which are long-closed contact from our machine to do series connection with your machine's stop button

7、 Problems & Solutions

Phenomenon	Cause	Solution
Under Type C: After starting, sensitivity red signal lamp flashes. Under Type B: Without load, the machine send out warning and stop running after starting.	<ol style="list-style-type: none"> 1. Outside Interference 2. Dunghill on conveyer belt 	<ol style="list-style-type: none"> 1. Check if there are iron matters (sling fan for instance) moving around, or newly installed equipment is too near and beyond the safety distance. 2. Refer to the instruction as well as the mark on the machine, and clean the conveyer belt.
Can't start the machine after turning on the power.	<ol style="list-style-type: none"> 1. Bad connection 2. There are something wrong with pushbutton, motor and capacitor 3. Power supply voltage is low 	To check if the power connection is ok, change pushbutton, motor and capacitor.
After machine sends out warnings, the machine continue to run without stop.	<ol style="list-style-type: none"> 1. Relay failure 2. Signal warning system failure 3. Power supply voltage is low 	<ol style="list-style-type: none"> 1. Lift the box lid, try to exchange the two relays, or change relay 2. Inform supplier aftermarket service for help
The machine is ok but some product can pass inspection while some others fail.	There is too much iron molecule in raw materials.	<ol style="list-style-type: none"> 1. Lower the machine sensitivity in terms of the floor level of inspection. 2. Reduce the number of products to be inspected on the conveyer belt.