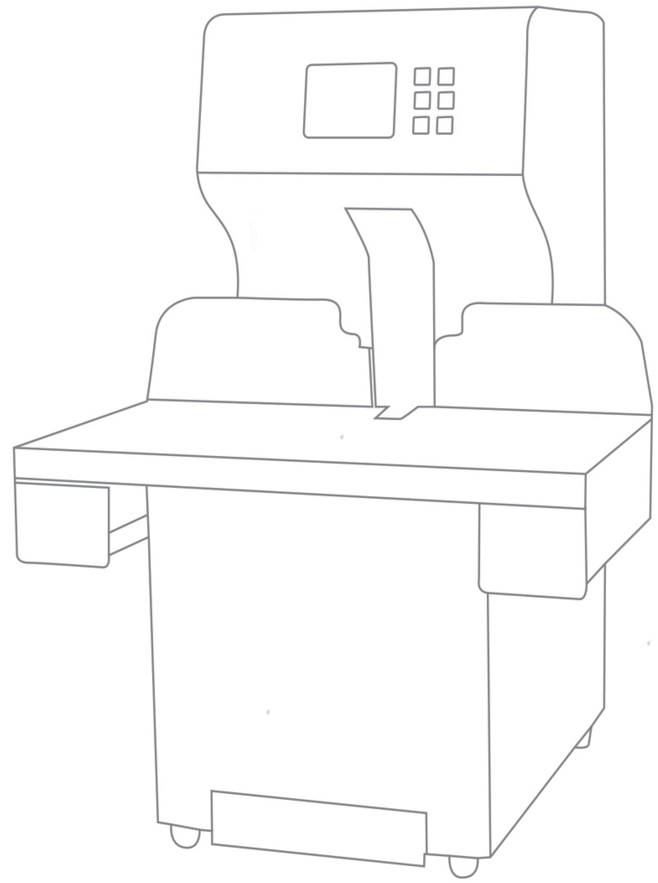
Fully Automatic Bninding Machine

Operating Manual



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III.Installation & Operation

1.Installation

Before installation, ensure the binding machine at a proper table firstly, should also leave enough operation space. Please pay more attention to the following points:

1)Place the machine stably on the work table to avoid over vibration

2)Keep the working area clean, avoid too much dust;

3)Avoid abnormal high temperature and over humidity. Control the ambient temperature

0−40℃，room relative humidity 0%−85%

4)Avoid the machine directly in the airflow of cool or warm air blower

5)Away from direct sunshine

6)Keep well−ventilation

During installation, the following tips should be paid attention：

1)Make the guide rod in the front of worktable aiming at two sides of base, make the front worktable slide to the correct position, then fasten it by lock pin of work table.

2)Assembly location of front worktable anddust box, pls refer to Figure 2

3)Gasket and Tubes are spare parts，assembly location pls refer to Figure 2.

4)Power supply: regulated power supply 220+/− 5% V/50Hz, avoid using the same power supply with

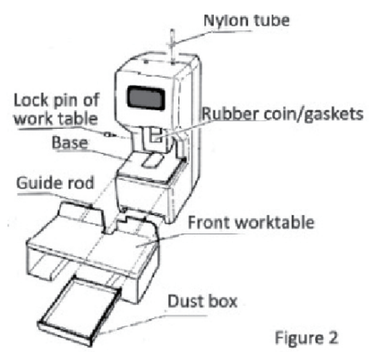


Figure 2

other loads. The power socket of binding machine should be well−grounding for safety consideration.

2.Operation

1)Install the drill, procedures please see “V. Consumables Replacement” section 4 "Install the drill bit".

Use the T−wrench provided with the machine to check whether the drill bit is reliably positioned in the drill sleeve.

【Note: If the positioning is unreliable, the drill bit may loosen during drilling and may even damage the machine】

2)Check whether the gaskets are properly placed, see "V. Replacement of Con−sumables", Article 7 "Use of Rubber Pads" for details.

3)First power on, press “ON” in “ON/OFF”, the LCD screen open, the pre−heating start.

【WARNING: AFTER CONNECTING POWER, DO NOT PUT HANDS OR OTHER PARTS OF THE BODY INTO THE SHIELDS. DRILLS AND PRESSING ARM ARE MOVABLE PARTS, WHICH MAY CAUSE INJURY】

4)Plug in Nylon tubes from Tube entrance to the bottom correct place.(“Tube?” indicator disappear)

5)Drill location

This Binding machine use laser location method, laser crossing point is the center place of drilling. The laser crossing line will show in the “Reset” status; Once the e drill/Bind starts, the laser crossing line disappear.

To make the machine run at the best status, we hope customers:

➢ Appoint special person be responsible for the use and maintenance of the machine.

➢ Read this User Guide carefully before operation

I.Machine Construction

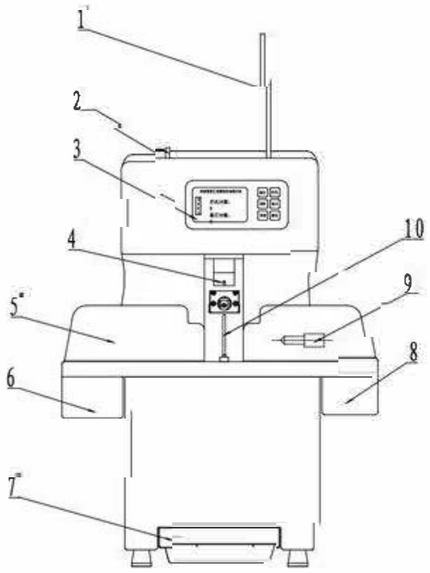


Figure1 Machine Construction

1. Tube Entrance 2.Brake release lever 3.Operation Panel

4.Rubber coin/Gasket 5.Work Table 6.Consumables Box

7.Dust Box 8.Tools Box 9. Lock pin of work table

10.Drill punch

II.Technical Parameter

No.	Items	TR-70
1	Binding Method	Riveting of Nylon Pipe by Heating
2	Drill Thickness	1-70mm thickness (paper weight≤ 75g/m)
3	Pre-heating Time	1 ~ 2mins
4	Binding Speed	≤28s
5	Working Noise	≤ 65db
6	Drill specification	ϕ 7x70mm Hollow drill
7	Power Supply	AC220V ±10% 50Hz
8	Power Consumption	≤ 300W
9	Work table size	440 mm (Length) x 235 mm (Width)
10	Outer Size	440 mm (Length) x 440 mm (Width) x 635 mm (Height)
11	Net.Weight	44Kg

6)Set the distance of binding hole apart from paper margin

The required distance between binding hole and paper margin is as Figure 3, its range should be from 6−30mm. Loose the lock pin of the worktable, move the worktable forward or backward to confirm the binding hole location, then fix the worktable by lock pin after confirmation hole location.

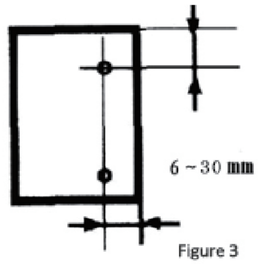


Figure 3

7)If binding needed, please first put the documents put on the worktable, the red laser light shows the drilling position, then press [Bind], the machine can bind automatically.

8)If only drilling needed, please first put the documents on the worktable, the red laser light shows the drilling position, then press [Drill], the drilling will be finished automati−cally and reset automatically.

9)Paper scraps caused by drilling will fall down to the Dust Box(Refer to Figure 4), please clear it f requently in time.

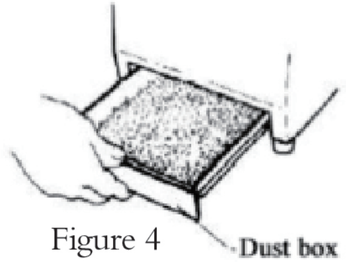


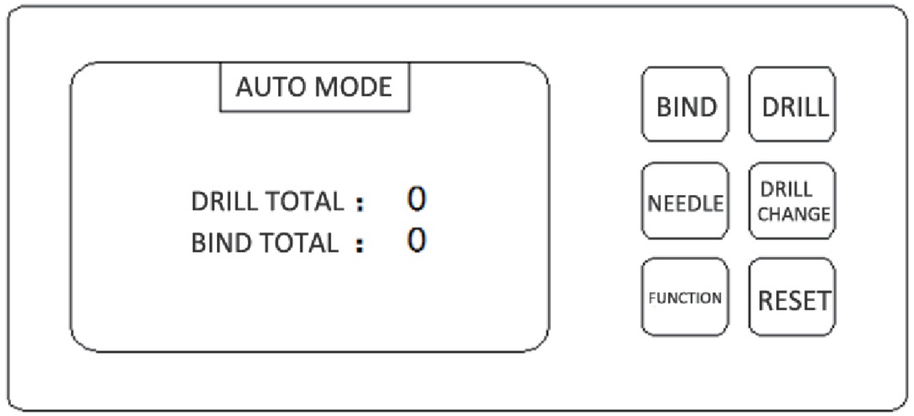
Figure 4

IV.Operation Panel

1.LCD screen of Operation Panel

The LCD screen is the communication window for the operator and the machine. During the working process, the LCD screen not only displays the current working mode, punching and binding counts, but also guides the operator how to do it when the machine fails or alarms. If there are any failures,text instructions are showed on the LCD screen.

Key Functions of Operation Pa



There are 6 Keys on the operation panel, among them, [BIND] [DRILL] [NEEDLE] [DRILL CHANGE] has secondary function.

A. “Auto” Mode

[BIND]−−−Finish the drilling and binding full set actions

[DRILL]−−−Finish drilling action.

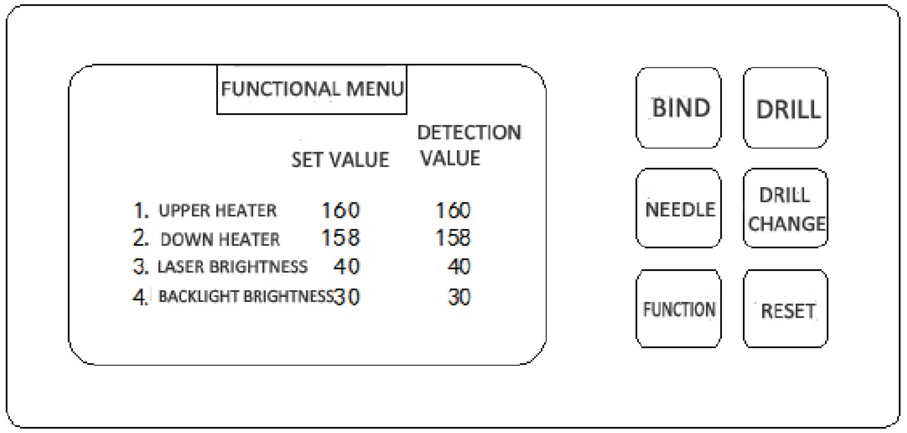
[NEEDLE]−−−Press this key once, will show you to move the binding documents, Press it again, the needle will be ascend.

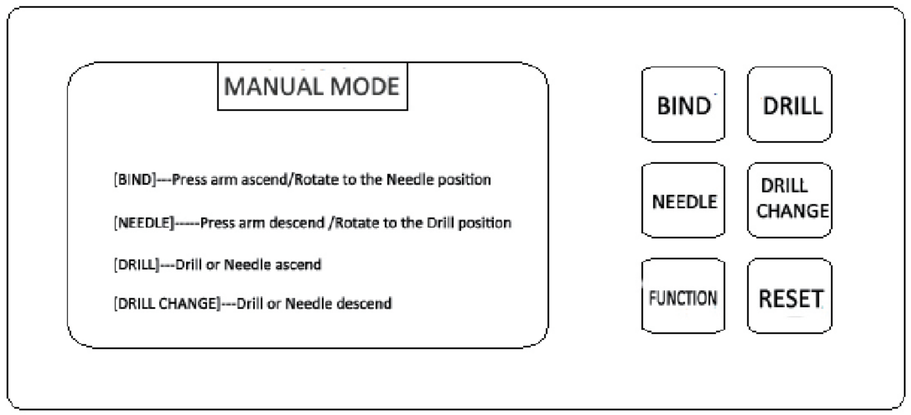
[DRILL CHANG]−−−Press this key one, will show you to move the binding documents, Press it again, the drill ascend, now we can change drills.

[RESET]−−−−Press this key, the machine go the original status during working process

[FUNCTION]−−−Switch modes from Auto, Manual, Functional Menu.

When power on, the default “Auto mode” start, then press [Function] enter into Functional Menu mode; press [Function] by 3 seconds enter into “Manual mode”. Press [Reset], then enter into “Auto mode”.





B. FUNCTIONAL MENU

[BIND]---Press [Bind] once, it will choose the last item.

[NEEDLE]---Press [Needle] once, it will choose the last item.

[DRILL]---Press [Drill] once, the set value add one.

[DRILL CHANGE]---Press [Drill Change]once, the set value minus one

C. "Manual" Mode(This function is NOT allowed to operate without authorization by users)

[BIND]---Press arm ascend/Rotate to the Needle position

[NEEDLE]-----Press arm descend /Rotate to the Drill position

[DRILL]---Drill or Needle ascend

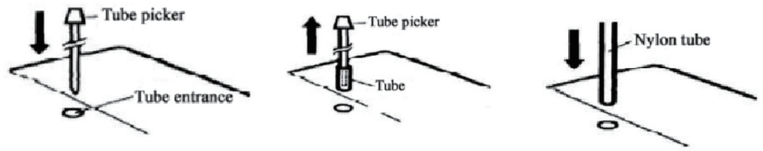
[DRILL CHANGE]---Drill or Needle descend

V.Consumables Replacement

1.Nylon Tubes Replacement

1)When the remaining nylon tube is insufficient for binding again, there will be tube feeding alarm, meanwhile the remaining tubes will be automatically discharged before last completed binding process and reset.

2)If the remaining tubes can't discharged automatically, please insert the reclaiming needle into it, and gently rotate it clockwise to make the remaining tube fit on the needle and pull it out from tube entrance together with the needle; Insert a new nylon tube and put it in place.

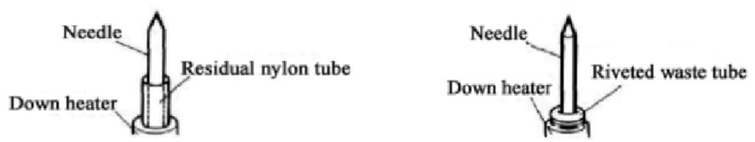


2.Remove residual nylon tube

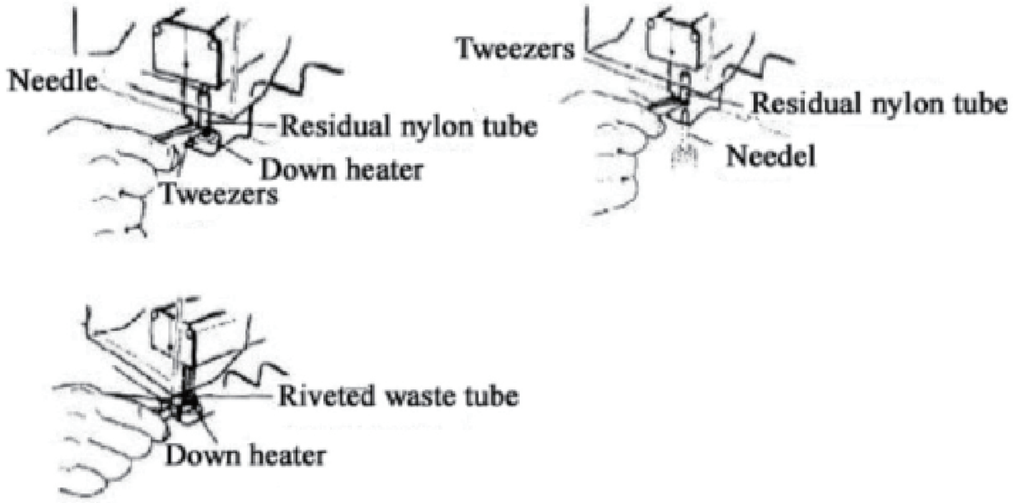
1)When there is waste nylon tube on the needle, the LCD screen will show "Please take away the binding documents, and then press [Needle] to check whether there is any remaining tube on the needle."

2)Take away the binding documents, press [Needle], LCD show "Please take away binding documents, then press Needle again, the needle will be ascend, press Reset to cancel"

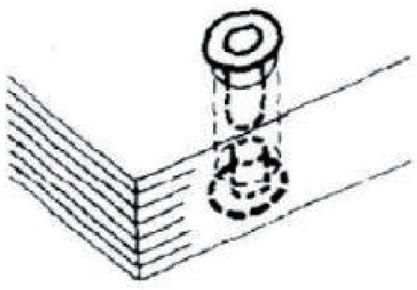
3)Press [Needle] again, the waste Nylon tubes or riveted waste tubes will be ejected by needle.



When the residual tube is removed by needle, return the needle, then clamp the residual tube with tweezers, making the tubes move in the opposite direction of 4)the needle, this can take off the residual tubes.



【ATTENTION：IF YOU BIND AGAIN WHEN THE WASTE TUBES IS NOT REMOVED,YOU MAY FACE FOLLOWING SITUATION AS BELOW PICTURE.】



【WARNING: NEVER TOUCH THE UPPER OR DOWN RIVETING HEATER GROUPWARE WITH HANDS, TEMPERATURE OF THESE PARTS IS VERY HIGH, THUS WILL SCALD YOUR SKIN】

3.Take off the drill

Take away the binding documents, press [Drill Change], LCD show "Please take away the binding documents, then press [Drill Change] the drill ascend,1)press [Reset] to cancel"

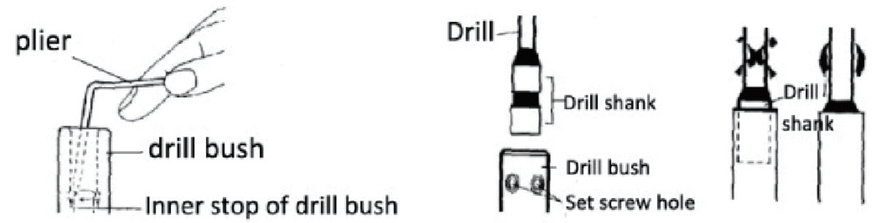
2)Press [Drill] again, drill ascend, you can replace drill.

3)Loosen the drill bit set screw with a T-shaped wrench and remove the drill bit

【WARNING: THE DRILL TIPS IS VERY HOT AND SHARP, DO NOT TOUCH IT!】

4.Drill Installation

1)Use plier to clear the inner of the drill bush.(See Left below picture)



2)Insert the drill bit until the end of the drill shank touches the metal impact sound of the inner stop of the drill bush (above right);

3)After the drill shank is fully inserted into the drill bush, tighten the two set screws with a T-shaped wrench

【ATTENTION: ONLY WHEN THE DRILL SHANK IS COMPLETELY INSERTED INTO THE DRILL SLEEVE CAN THE DRILL BIT BE POSITIONED RELIABLY.】

5.Rubber Coin/Gasket Usage



Rubber coin is a consumptive part in the process of binding, thus reasonable usage method can prolong its service life. Refer to the Figure right, each location of rubber coin can be binded 40 times, but one rubber coin has 6 locations, thus one piece can be binded 240 times in total. Rubber coin has two sides, please ensure the smooth side downward during usage.

Change the locations of gaskets or replace new one according to the following steps:

a 【ON/OFF】OFF;

b Lever up the gasket from the slot of rubber coin positioning plate with L-shaped nager, then pull it out ;

c Check if it's at a proper position when rotate gasket direction or replace new gasket.

VI.Cautions.

No drilling in the following situations:

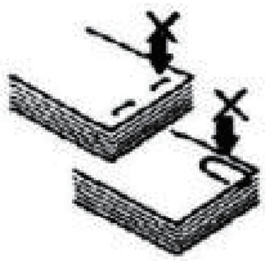
▲ The distance between drill location and paper margin is less than 6mm



▲Papers are slant, unequal height



▲ Staples or paper clips are mixed in the papers



▲Colloids or stamps adhere to paper or papers have folds.

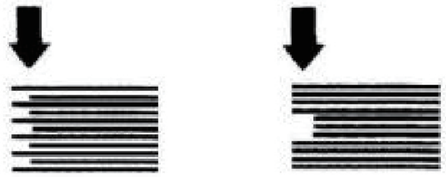


▲ drill the drilled part of papers.



If you find paper scraps are not round when drilling, possible reasons are:

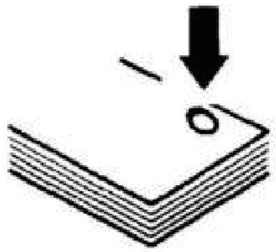
▲The margins of paper is not aligned



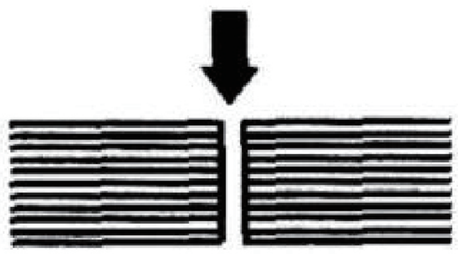
▲folds of paper is folded in half



▲Drill at the same drilling hole repeatedly



▲Drill along the edges of two piles of papers



VII. Trouble Shooting

Phenomenon	Check points	Measures
Drill alarming: LCD show “Failure in drilling process” (-Check in listed order)	Whether the cavity of the drill bit is blocked	Remove the drill bit and clean up the paper debris in the drill bit cavity
	Whether the drill bit becomes blunt	Replace drill
	Whether the cutting edge of the drill is damaged	Replace drill
	Is the punching position too close to the edge	Re-adjust the punch position
	Whether the chip in the inner cavity of the drill sleeve is unobstructed	Clean the inner cavity of the drill sleeve
Needle protection alarm: LCD displays "Needle protection! Please carefully remove the paper scraps in the needle hole of the upper riveting head, and then press the reset button.	Check whether the needle protection sensor is damaged	Replace sensor
	Whether there is paper scraps in the punched hole	Remove paper scraps
	Whether the needle is aligned with the upper riveting hole	Adjust the needle to align with the upper rivet
	Whether the binding documents slides away from the binding position	Reorganize the paper
Riveting head protection alarm: LCD shows "Riveting head protection! Please confirm the movement of the upper riveting head is barrier-free, and then press the reset button."	Check whether there is any paper scraps in the slideway of the upper riveting.	Remove paper scraps
	Check whether the rivet head protection switch is damaged	Replace switch
The LCD shows "Please remove the binding documents, and then press the Needle to check if there is any remaining tubes on the needle"	Check if there is remaining tubes on the needle	Take away the binding documents, press “Needle”, then press “Needle” again, remove the remaining tubes(Please refer to Consumables Replacement)
	Check whether the rotation right sensor is damaged	Replace sensor
LCD shows “Transposition action is time out”	Check whether the drill slider and the pressure riveting slider are descend in correct place	Press “Function” for more than 3 seconds to switch to the “Manual mode”, press “Needle” to lower the upper press arm to the reset position, and then press “Drill” to raise the drill bit slider, then remove foreign objects under the block of drill bit, and then press the “Reset”.
	Check the left and right limit sensors	
	Check whether the transposition steel wire is broken	Replace steel wire
The LCD shows “the drill or needle is NOT reset, please reset before operation	Check whether the reset sensor is damaged	Replace sensor
LCD display “Drill or Needle action time out”	Check whether the reset sensor is damaged	Replace sensor

Warm reminder: LCD displays “please replace the gasket on the drilling position, and then press reset to continue”		Rotate gasket to change its working position Or Replace gasket
Warm reminder: LCD shows “grind the drill bit or replace with a new drill, then press reset to continue”		Please replace new drill

VIII. Safety Tips

1.When power on, DO NOT stretch your hands or other parts of body into working area, otherwise easy to get injury.

2.When clearing residual nylon tubes, DO NOT touch upper or down heater, otherwise easy to be scalded.

3.When taking off the drill, DO NOT touch drill top bit to avoid scratches or scalds.

4.To ensure the drill reaches the bottom of tool apron and tighten it, otherwise the drill will get loose when working, even damage the whole machine.

5.Please don’t disassemble the machine for maintenance without permission. When machine in abnormal situation, please contact dealer.