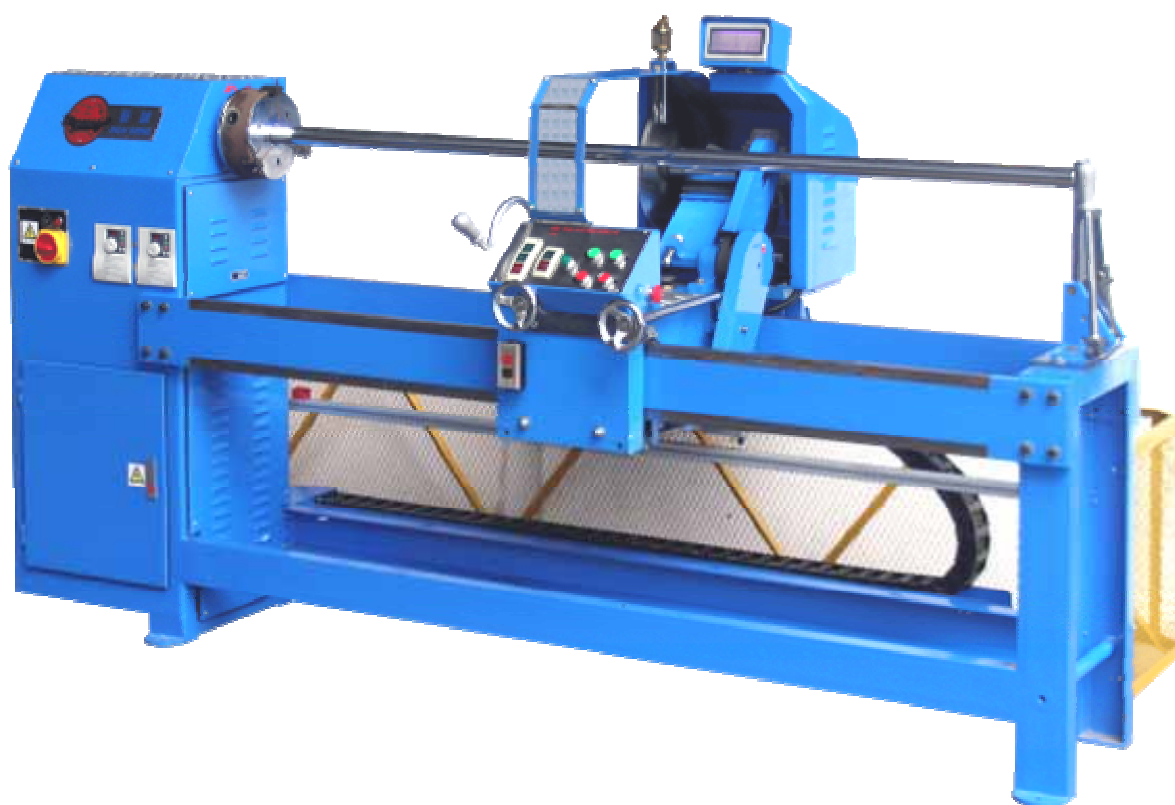


NS-1132

Digital Control Semi-automatic Ribbon Cutting Machine with Sharpening Device

Operation Manual



藝誠（余氏）發展有限公司
NGAISHING DEVELOPMENT LIMITED

Preface

We appreciate it very much that you purchase Ngai Shing **Digital Control Semi-automatic Ribbon Cutting Machine with Sharpening Device**. Ngai Shing Development Limited was founded in 1954, is a manufacturing company specialized in producing garment machineries. Ngai Shing headquarter is located at HongKong. Ngai Shing has 25000 square meter work plant in Shenzhen China. We have several technology patented design on heating elements, heat transfer system and pressing system. Our distribution networks and service partners cover more than 40 countries and areas over the world.

All our products have been inspected and tested strictly before delivery. For the purpose of users' profit, check the machine immediately after the machine has reached your factory. Firstly, you should check whether the data shown on the nameplate of the machine is in accordance with the order. Then you should check whether the machine has been damaged or deformed by bumping during transportation. You should also check all the fixture of the machine for looseness or disengagement. If the machine has been damaged or has any other troubles, please contact our agency or our company on 00852-27419981.

In order to use the machine safely, reliably, and for a long term of service you should read this Operation Manual carefully before installation and debugging. If you are doubted about the operation or use of this manual, please consult with our company immediately. We will serve you wholeheartedly.

Copyright Declaration

1. We protect all technologies and patent contained in this machine and reserve the right for future improvement and perfection in product design. Specifications and parts may be revised in the future, we are not going to re-inform unless otherwise required.

2. For any special requirements to our products please contact us for our engineer's confirmation. We are very glad to fulfill your special need!

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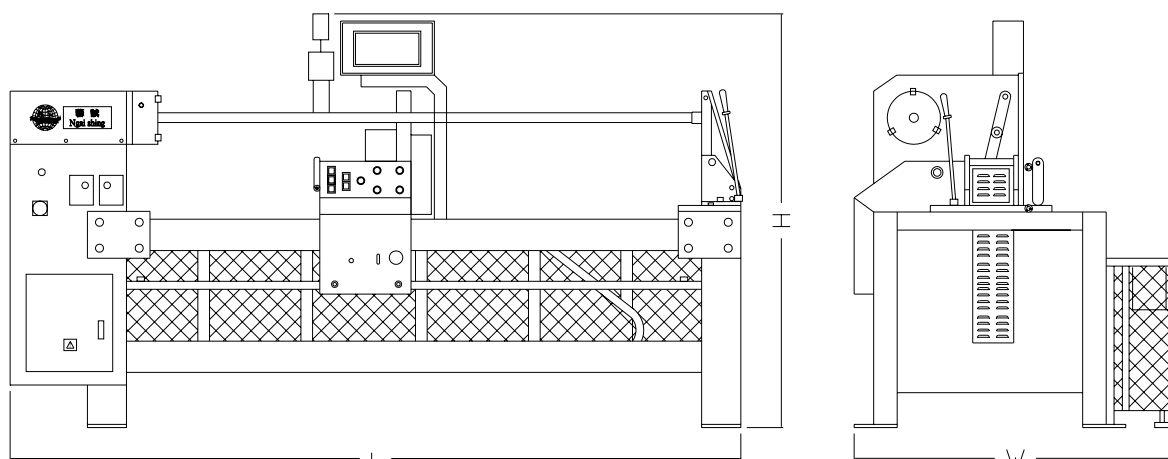
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I. Introduction

A. Functional Parameter List

Model	NS-1132 Digital Control Semi-automatic Ribbon Cutting Machine with Sharpening Device		
Working Width (inch)	60	72	90
Voltage	380V / 3PH /50Hz + N + E		
Power (kw)	3	3	3
Max. Diameter of fabric roll (inch)	10	10	10
Slow Move Speed (m/min)	0.08	0.08	0.08
Fast Move Speed (m/min)	0.36	0.36	0.36
Machine Size (L x W x H) (mm)	2585x1160x1400	2840x1160x1400	3350x1160x1400
Net weight (kg)	620	670	720

B . Machine Size



Machine Size Illustration

C. Function

It is digitally controlled to cut ribbon in semi-automatic mode.

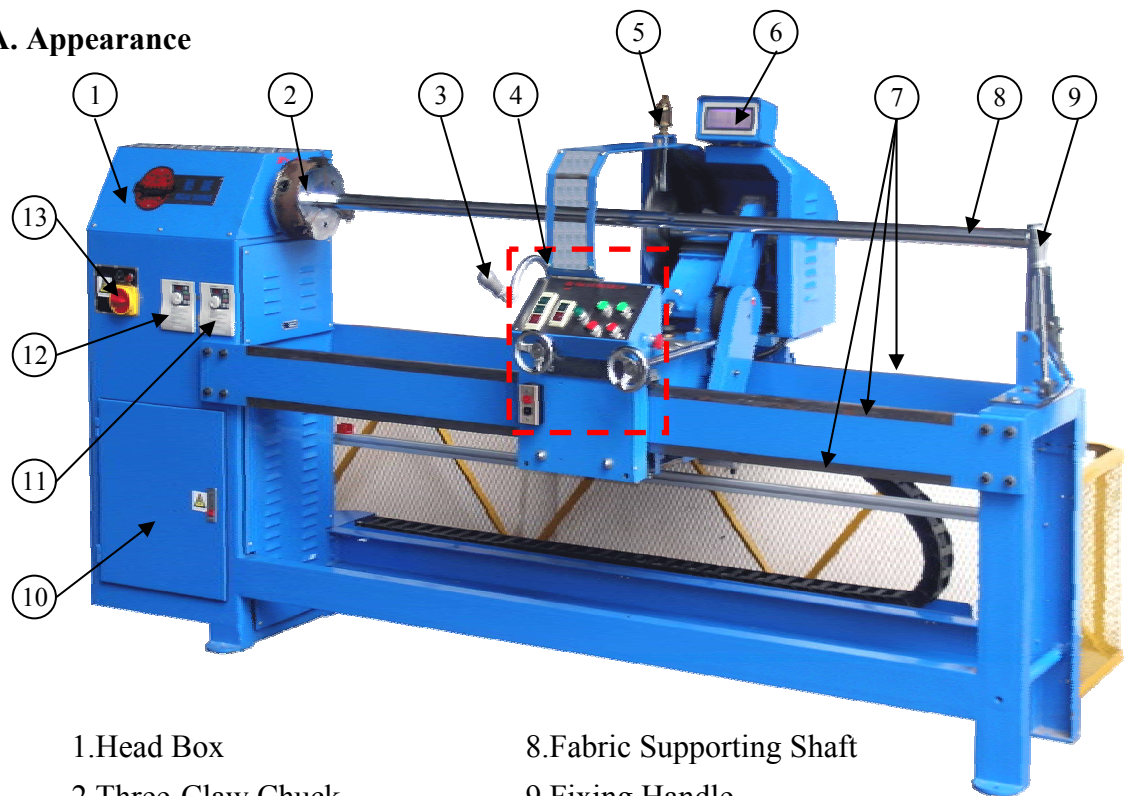
It is equipped with PLC and touch screen. It can cut ribbon automatically. Cutting accuracy for ribbon width could be 0.1 mm. Manual control is also available.

Equipped with sharpener to sharpen the cutter.

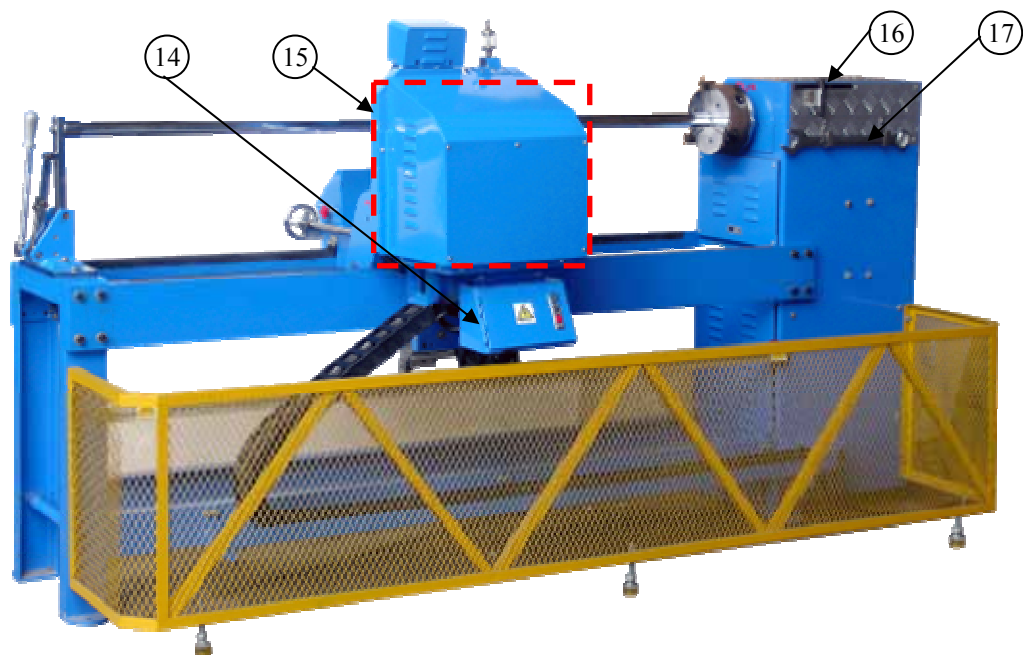
The machine is easy to operate and maintain a high productivity.

II. Main Parts

A. Appearance

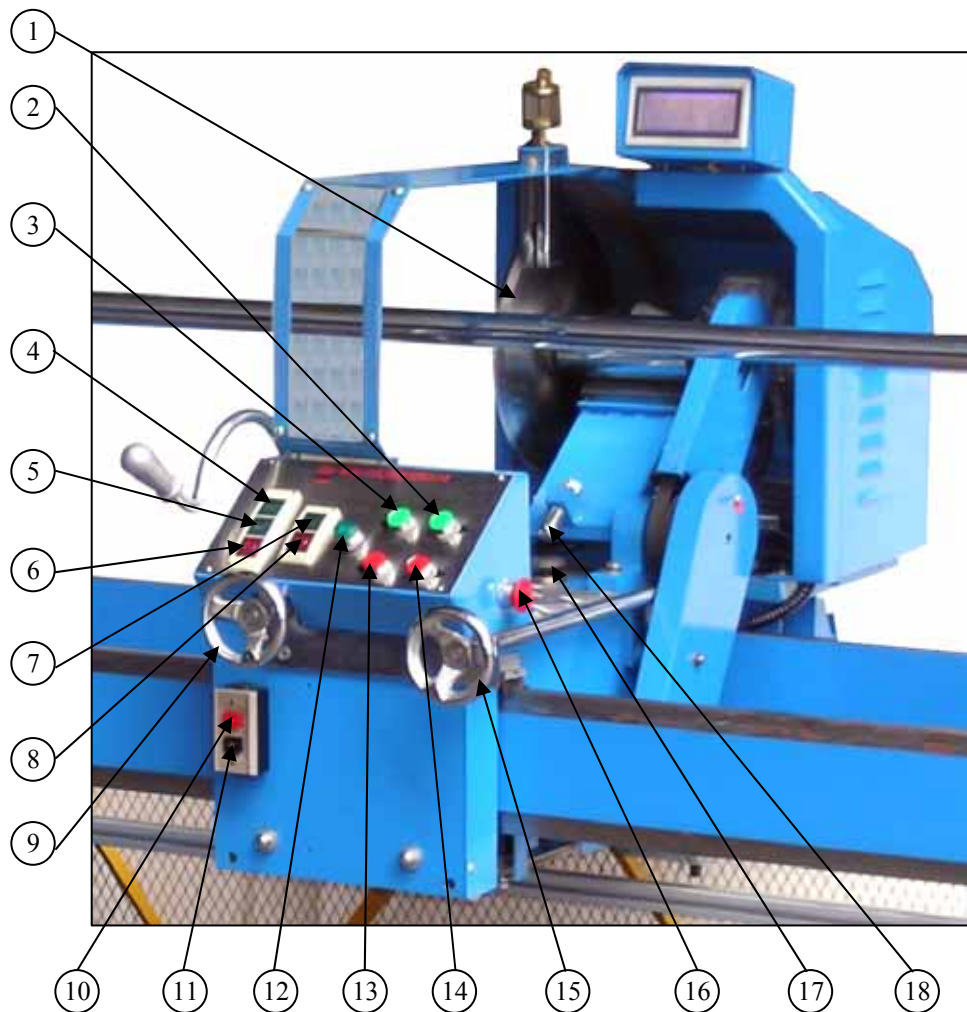


- | | |
|--------------------------------------|---------------------------|
| 1.Head Box | 8.Fabric Supporting Shaft |
| 2.Three-Claw Chuck | 9.Fixing Handle |
| 3.Cutter Handle | 10.Electric Box |
| 4.Operation and Control Section | 11.Cutter Speeder |
| 5.Cutting fluid container (Optional) | 12.Main Axis Speeder |
| 6.Touch Screen | 13.Main Power Switch |
| 7.Guideway | 14.Wiring Box |
| | 15.Sharpener |
| | 16.Spanner for Chuck |
| | 17.Spanner for Cutter |



II. Main Parts

B. Operation and Control

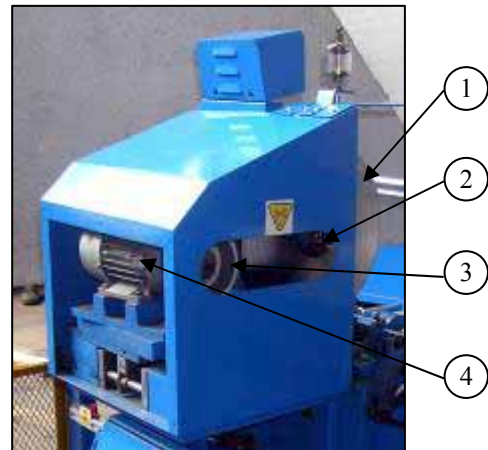


- | | |
|---|---|
| 1. Cutter | 10. Sharpener Stop Button |
| 2. Slow Rightward Jog Button for Cutter | 11. Sharpener Rotation Button |
| 3. Slow Leftward Jog Button for Cutter | 12. Run Button – Auto-Cutting |
| 4. Forward Rotation Button for Main Axis | 13. Fast Leftward Movement Jog Button for Cutter |
| 5. Backward Rotation Button for Main Axis | 14. Fast Rightward Movement Jog Button for Cutter |
| 6. Stop Button of Main Axis | 15. Sharpener Radial Movement Handwheel |
| 7. Cutter Rotation Button | 16. Emergency Stop Button |
| 8. Cutter Stop Button | 17. Cutting Sensing Switch |
| 9. Sharpener Axial Movement Handwheel | 18. Cutting depth adjusting screw |

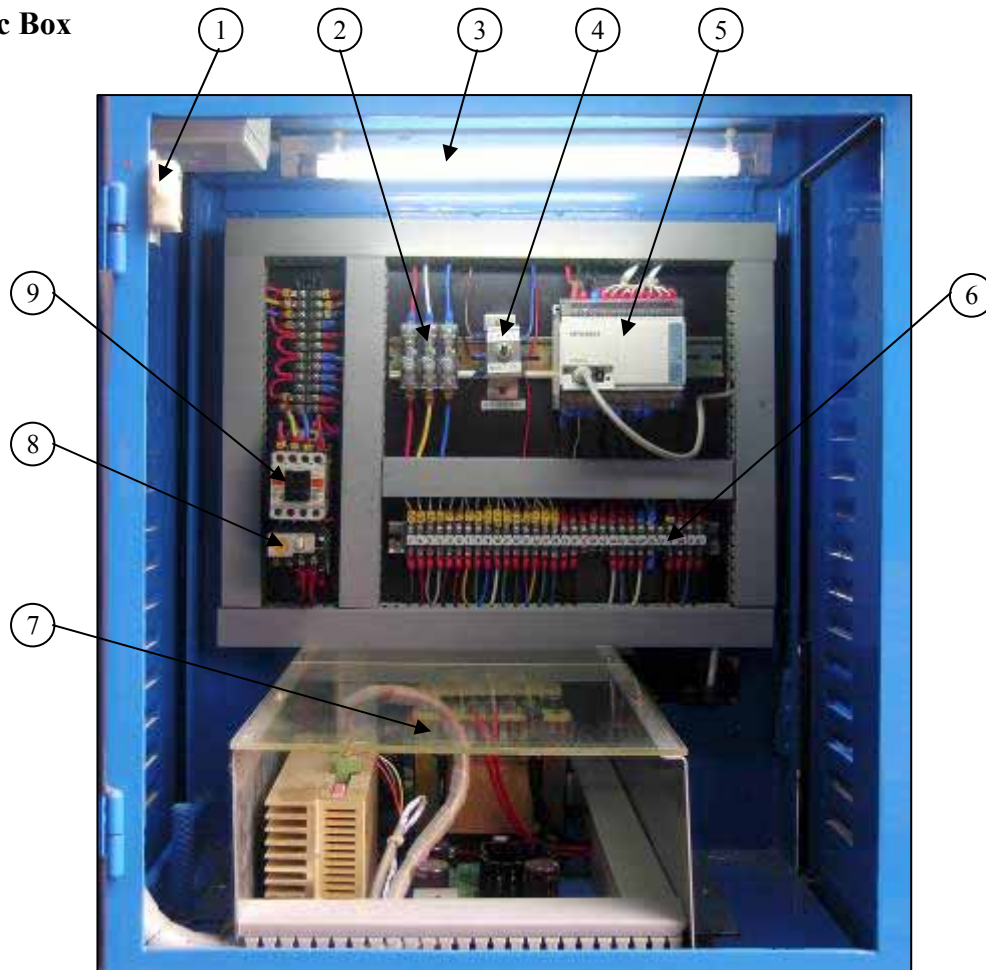
II. Main Parts

C. Introduction to the Sharpener

1. Cutter
2. Lock Nut for Cutter
3. Bowl Shaped Sand Wheel
4. Sharpener Motor



D. Electric Box



- | | |
|--------------------------|---|
| 1. Switch | 6. Wiring Terminal Plate |
| 2. Fuse | 7. Step Motor Controller |
| 3. Light | 8. Over Current Relay for Sharpener Motor |
| 4. Work/ Repair Selector | 9. Contactor of Sharpener Motor |
| 5. PLC | |

III. Installation

A. Position

No special requirements but solid and flat floor are needed for the installation of this machine. Accidented place must be paved.

To facilitate maintenance and repair Min. 800 mm between machines and at least 500 mm from machine back to the wall should be kept.

B. Power Connection

Before connecting power supply, make sure inner electric circuits are connected properly.

Referring to “Wiring Description” to connect to the 380V/3Ph/50Hz+N+E power supply. Make sure neutral and ground wire are connected properly. Each model has its own power requirements, please select in the following list.

Wiring Description		
Name	Color	Connection
L1	Red	Fire wire, to the 1st phase of power supply
L2	Black	Fire wire, to the 2nd phase of power supply
L3	White	Fire wire, to the 3rd phase of power supply
N	Blue	Neutral wire, to N wire
GND	Yellow	Ground wire, connect to the earth

Model	NS-1132		
Working Length (inch)	60	72	90
Power Supply	380V/3PH/50Hz+N+E		
Rated Electricity (A)	8	8	8
Rated Power (Kw)	3	3	3
Outer Air Switch (3PH) (A)	15	15	15
Wire Size mm ²	2.5	2.5	2.5

A separate fuse is provided to the inner control circuit, while an outer separate air switch (please refer to the above list) is still needed to be installed to the main power to protect the electric devices.

Each machine must be connected to a separate branch circuit, never share with lightening loop or other devices.

For safety reason and proper running of the machine, users have to follow local standards and regulations to select power supply devices and the machine must be grounded properly.

After connecting the power supply, check rotation direction of the motors, it must be in accordance with the arrow marked on the belt cover.

Note:

Power supply must be cut off before maintenance, repair, installation and when disassembling the front panel of electric devices.

IV. Set Up the Touch Screen

Set Up the Touch Screen

1) Standby Picture and Set Cutting Width


Switch on main power, Fig. 1 will display and dwell for 2 seconds, then proceed to Fig. 2 “standby picture”, the present setting of the machine could be shown in the picture.



“**width**” gives the present ribbon cutting width.

“**unit exchange**”: press “unit exchange” to exchange unit between “Inch” and “millimeter” for the ribbon length.

Press “**language**” to select system language.

Set cutting width

Use direction key  to shift between digits of ribbon width when use inch as a unit. The cursor is flickering at the current set digit.

Use direction key  and  to set value of width, the maximum value should not be bigger than 80 Inch.


 key is used to confirm the set value.



Fig. 1



Fig. 2

2) Unit Exchange

Fig.2 and Fig.3 are for unit exchange between Inch and millimeter of cutting width. Press “unit exchange” to exchange unit.

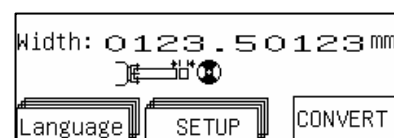


Fig. 3

3) System Language

Press “language” in Fig. 2 and 3 to proceed to Fig. 4 for system language selection picture.

Press “English”, it will proceed to English language system, press “return” to confirm your choice.



Fig. 4

IV. Set Up the Touch Screen

Set Up of the Touch Screen

4) Set Parameter

Press “set parameter” in Fig. 2 and 3, it will proceed to Fig. 5 or Fig.6.

It displays both numbers for ribbons of cut and set, press “clear” key to clear the cut number to zero.

Two ways to set ribbon number which is “limited” and “unlimited” and they will display alternately on the screen.

If select “limited”, press “confirm” to proceed to Fig. 7 to set number.

When finish set up by the touch screen, return to standby picture. Then you can follow the steps to cut ribbons.

Cutted:	0123	Clear	Back
]0000*			
Roll:	0123	Limit	

Fig. 5

Cutted:	0123	Clear	Back
]0000*			
Roll:	0123	Not Limit	

Fig. 6

Cutted:	012	7	8	9	
		4	5	6	
		1	2	3	AC
Roll:	012	0	-		ENT

Fig. 7

5) Prompts In Operation

1) Ribbon length should not be set as “0”, otherwise it will lead to Fig.8. Ribbon length should not be bigger than 80 inch or 2032mm, otherwise it will lead to Fig.9.

2) During cutting, if cut number ribbon equals to the set limit, it will proceed to Fig.10. Please follow the prompts to resolve the problem.

3) When it is in manual operation under standby picture, press the cutter handle, it will proceed to Fig.11. Press “run” button on operation panel to proceed to “ automatic move” mode.

Attention: Min Width Can't be Zero Confirm it.

Fig. 8

Attention: Max is 80 Inch Max is 2032 mm
--

Fig. 9

Please Set at <NO Limit> OR Input Roll Number,AND Then Push Run Key;Otherwise The Machine Won,t Star Semi Automatic Running

Fig. 10

Press Run Key Auto Move Status

Fig. 11

IV. Set Up of the Touch Screen

Set Up of the Touch Screen

4) During cutting, if press “cutter slow/ fast left / right move ” button on operation panel, it will proceed to Fig.12, please press “run” button on operation panel to exit automatic mode and proceed to manual mode.

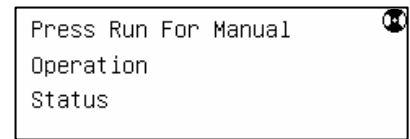


Fig. 12

5) During cutting, if release “cutter handle” before the fabric is completely cut off, it will proceed to Fig.13 to remind you to cut again until it is completely cut off provided the machine is in normal condition. Otherwise please check whether “cut off sensing switch” is in normal condition.

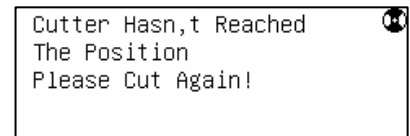


Fig. 13

6) If the Inch Motion Motor is overloaded, it will lead to Fig.14. Please check the motor.

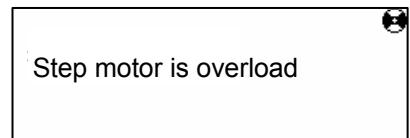
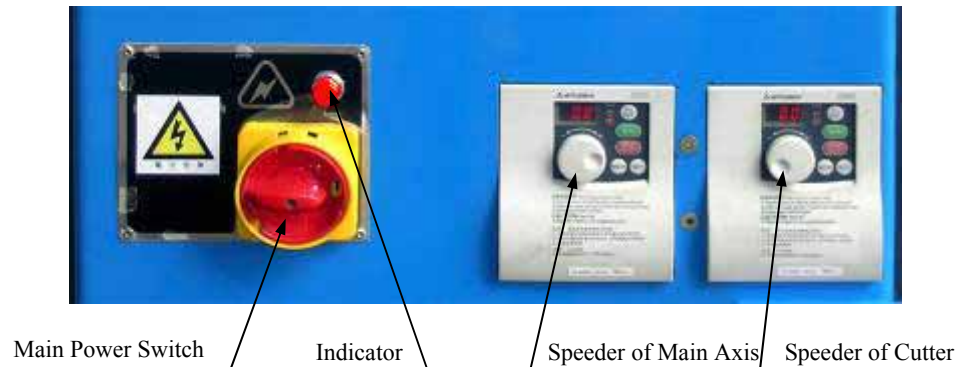


Fig.14

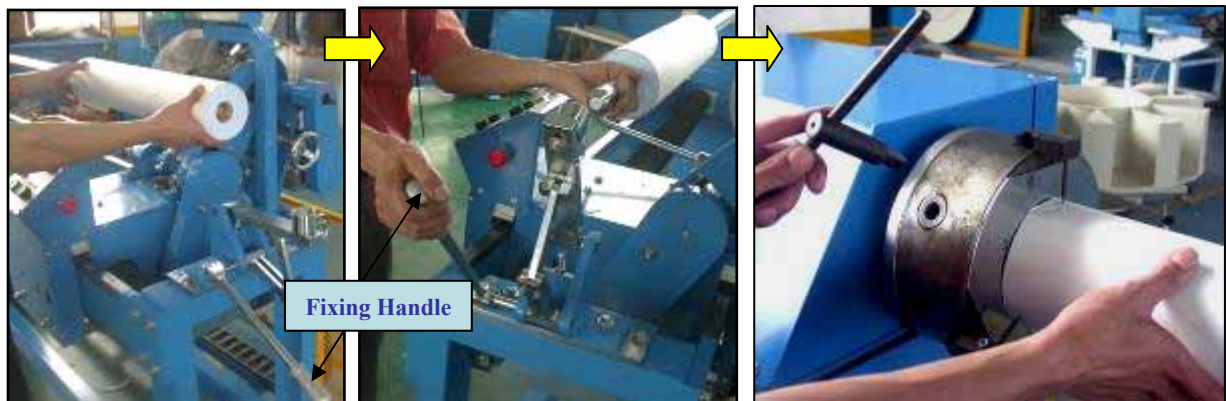
V. How to Operate the Machine

Operation

1. Switch the main power from “0” to “1”, the indicator 2 will lighten.



2. Open the fixing handle and load the fabric (as shown in Fig. a), fix the handle (as Fig. b), then fasten the fabric roll end by the three-claw chuck (as Fig. c).



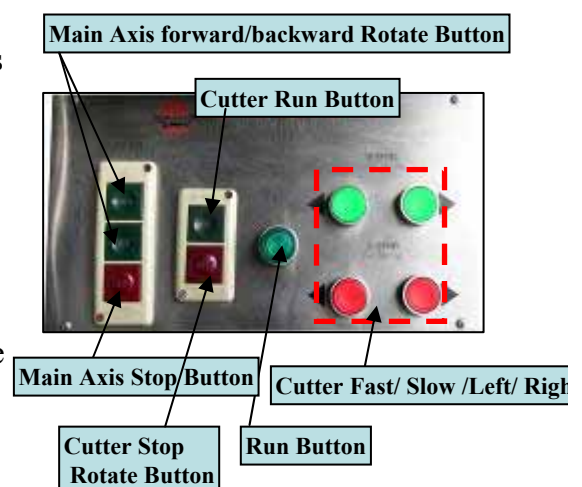
3. Set up operation including length and roll number, etc. See detail in “ set up of the touch screen”.

4. Make sure there is no obstacle around the machine, guideway and cutter and that fabric roll is fastened, press “forward or backward rotate button of main axis (direction as needed) to start rotate. Adjust its speed by “speeder of main axis”

5. Press “cutter rotate button” to have the cutter start running. Adjust its speed by “cutter speeder”.

6. Press “ cutter fast/slow/left/right/ move button” to have the cutter access the fabric, adjust cutter with the ribbon end face to locate the first cutting position.

Cut about 3-5mm of the fabric end to make it evenness.



V. How to Operate the Machine

Operation

6. Press “Run” button on the operation panel. The button will lighten.

Now, slightly press the handle to cut as shown in Fig. d. When finish, release completely, cutter will automatically move to the next position for cutting.



Fig. d

7. When set as “ limited”, the machine will move automatically and stop when set number is reached, for “unlimited” mode, operator has to operate manually.

Note: when the main axis is rotating while the rolls remain still, cutting is finished.

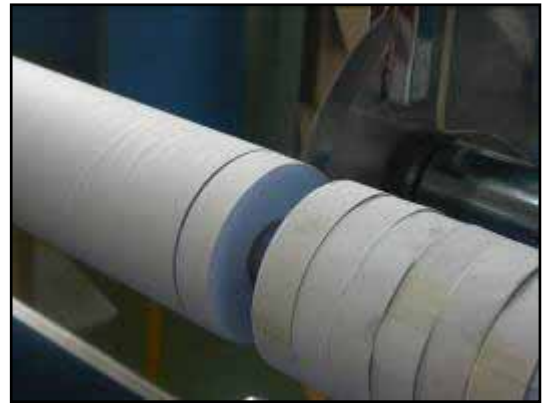


Fig. e

8. Whenever in trouble, press emergency button (as shown in Fig. f) to stop.



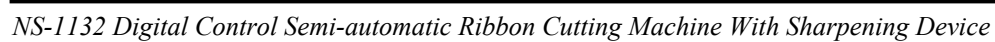
Fig. f

When finish one roll, press the “ cutter stop button” and “main axis stop button” to stop. Then release the fixing handle and unload ribbons.

Repeat the steps for next cutting.

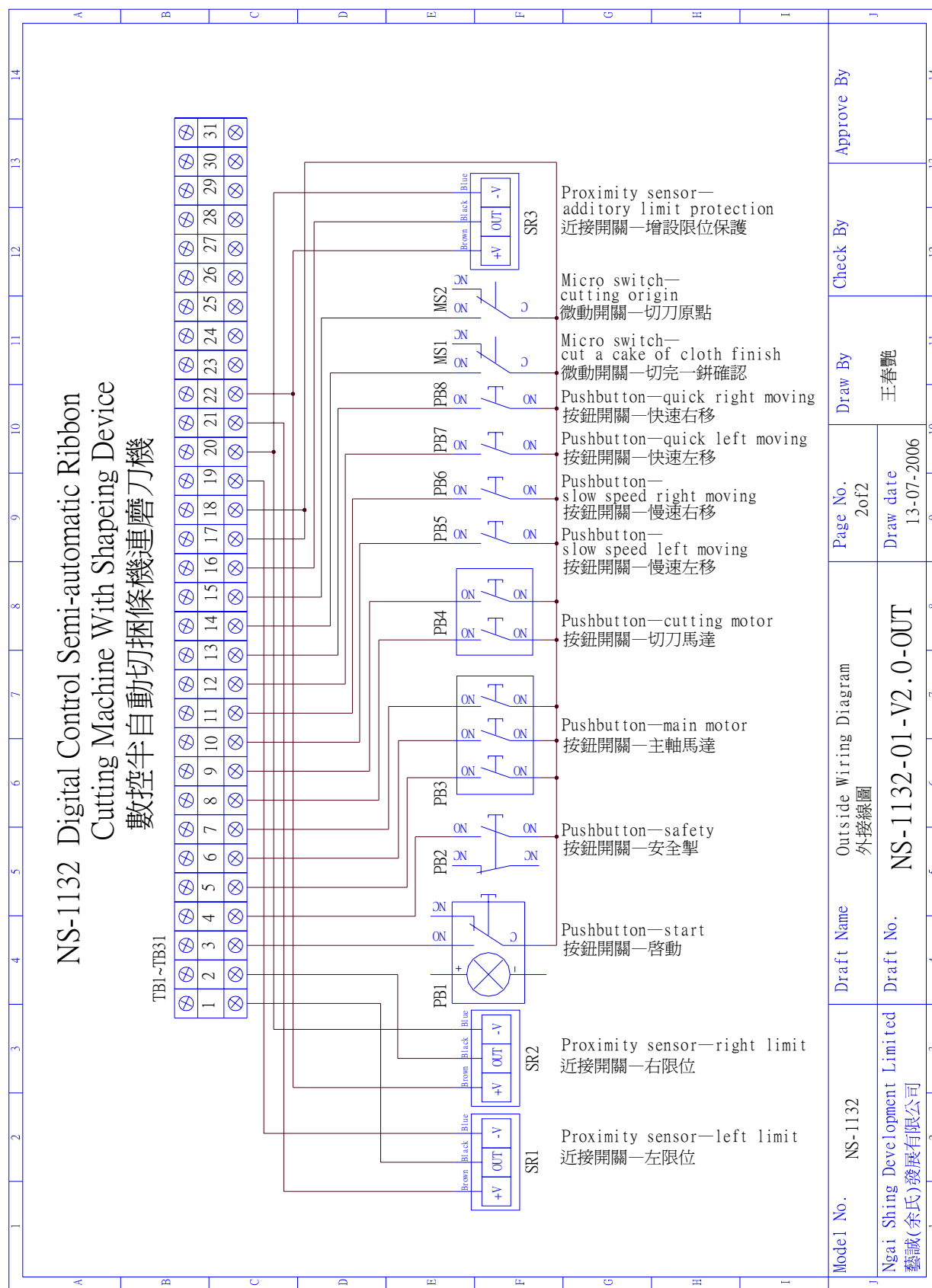
When finish working, switch off the main power supply.

A. External Wiring Diagram



VI. Technical Data

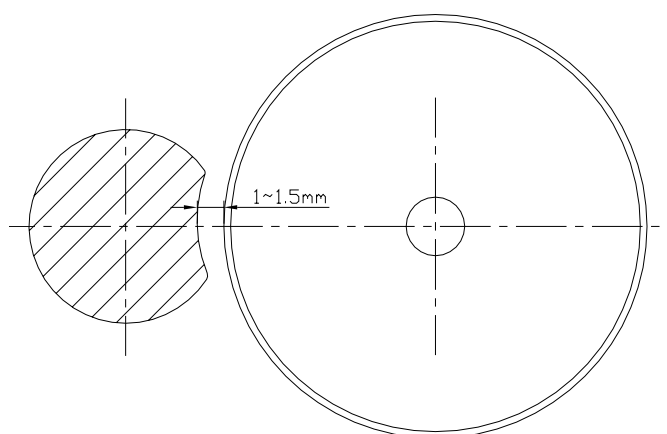
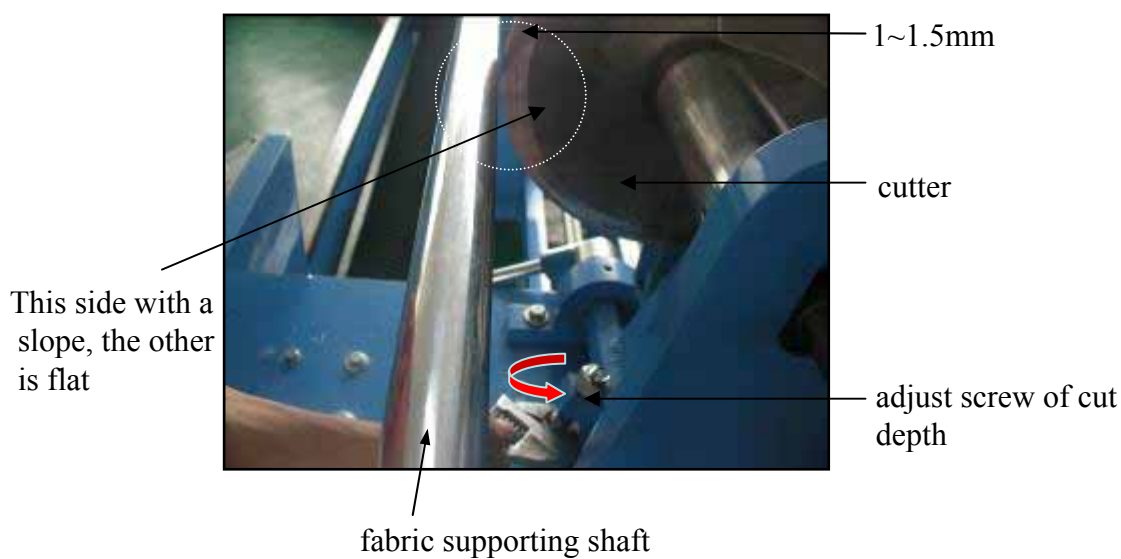
A. External Wiring Diagram



VI. Technical Data

B. Installation of the Cutter

When install the cutter, keep a distance of 1-1.5mm between cutter and supporting shaft in order to avoid interference. If necessary, use a spanner to adjust “adjust screw of cut depth”. Turn in the direction as the arrow in the figure to decrease the distance and in reverse direction to increase.

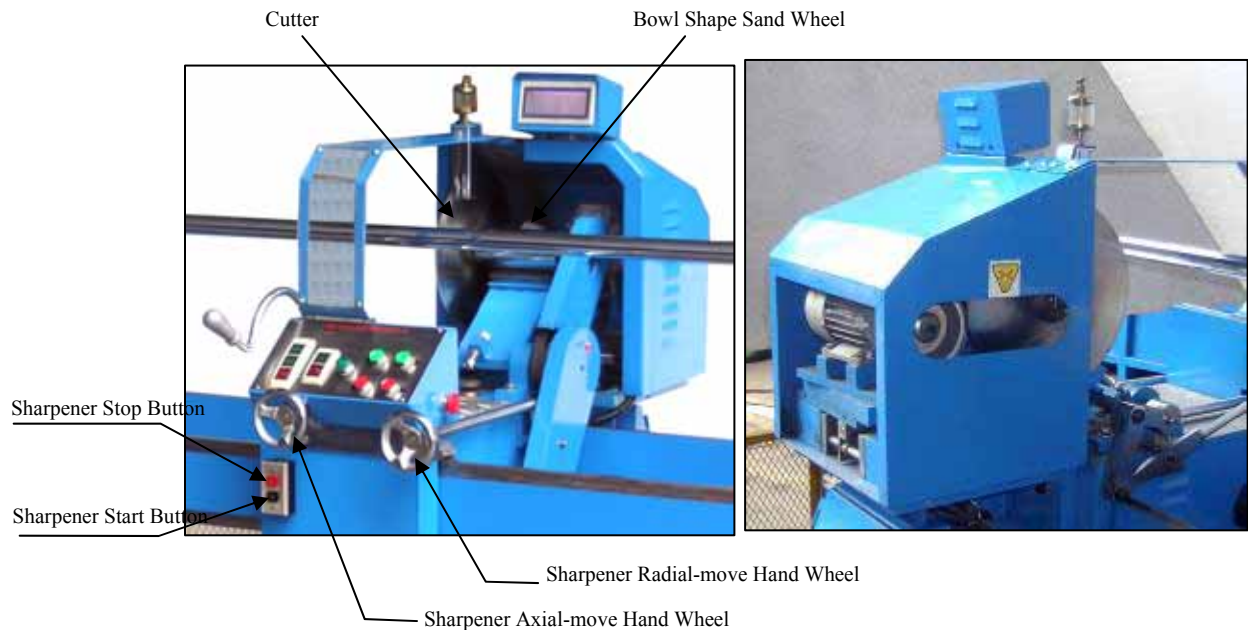


Note: Don't install the cutter in reverse direction!

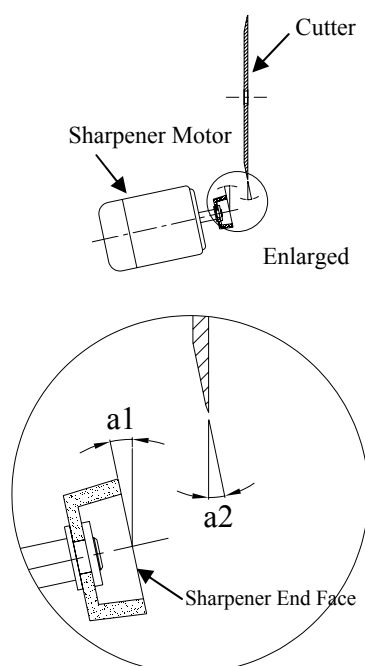
VI. Technical Data

C. Sharpen the Cutter

During operation, regularly check the cutter blade. When necessary, follow the steps to sharpen it.



1) Before sharpening the cutter, please first check the end face of the bowl shaped sand wheel for evenness and flatness, if not, repair it or replace a new one. Also, check if it runs stably.



2) Adjust Angle1 and Angle2 the same by the screw on the sharpener motor base. Though it has been adjusted before delivery, please re-adjust in you plant.

3) Slowly turn “axial or radial move hand wheel” to have the sharpener access the cutter. Press “cutter rotate button” and “ sharpener rotate button” to have them run.

4) Start to sharpen. We suggest the operator to use a protective glass and adjust to a proper rotate speed of the cutter. Slowly turn the axial or radial move button to sharpen the cutter.

VI. Technical Data

C. Sharpen the Cutter

5) Pay Attention:

a Please pay attention to the sparkles when sharpen the cutter, if it is not continuous, it may be due to the irregular contour of the cutter or existence of gaps.

b When sharpening the blade, same problem to be cared. When checking sharpening result, first turn the axial or radial axis in anti-clock wise to separate sand wheel and cutter, then press “cutter stop button” and “sharpener stop button”.

Note: if press the “cutter and sharpener stop button” before the cutter and sand wheel are separated, it may take the risk of damaging the cutter and sand wheel.

For safety reason, check only when the cutter and sand wheel are completely stopped. If result is not satisfactory, repeat above steps to sharpen again.

c Adjust the speed of the cutter by “cutter speeder”, rotate speed should not be too high in order to avoid overheating the blade. This may affect its stiffness or lead to deforming.

6) When finish, please lock the “adjust screw of cut depth” in a proper position. This is to prevent the cutter with a smaller diameter due to attrition from being unable to cut off the fabric roll.



Adjust screw of cut depth

VII. Maintenance

Maintenance

To maintain the stable operation and high efficiency of the machine, please pay attention to the followings:

- 1) Clean the machine every working day to keep it clean.
- 2) Add lubricating oil to the guideway every time before working.
- 3) Regularly add lubricating oil through oil inlet to rotate parts of the main axis.
- 4) Check nuts for every running parts, fasten them if necessary.
- 5) Check V type transmission belt regularly, adjust to proper flexibility, replace if broken or failed.
- 6) Check regularly the power supply for 380V/3PH +N+E.
- 7) Cutter should all the time be sharp, sharpen it if necessary.
- 8) Repair the bowl sand wheel if necessary, if worn out, replace with a new one.

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