

AMC

AMC INDUSTRIAL DEVELOPMENT COMPANY LIMITED

OPERATION MANUAL

Tube Production Line
Model: TSJG-200

REV 09/19

US

English



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Chapter 1: SAFETY

This document is aimed for the people, who, for different reasons, directly or indirectly are responsible of the machine handling. The people who interact with the machine, have different levels of training and expertise. In that way, in order to ensure a high level of security, it's necessary that the people that directly interact with the machine, are well trained and with experience.

The customer has to make sure that the operator is adequately qualified and trained for the tasks he performs. This manual is intended for anyone who is involved in the use of the machine. As far as general safety standards are concerned, this document is aimed to the machine operator and the user, who are the most prone to accidents, as well as the people who interact directly with the machine.

A) General

1. Users are recommended to carefully read this manual and follow general instructions.
2. This document is a tool necessary for the previous understanding of the **AMC Tube Production Line TSJG-200** that is going to be used.
3. Its reading and understanding are mandatory before using the machine, as it is necessary to know all its operation, maintenance and safety aspects.
4. Correct operation shall be determined by its appropriate installation and use.
5. Any modification carried out on this mechanical or electrical parts can compromise the safety parameters arranged by **AMC Industrial Development Company Limited**. **AMC Industrial Development Company Limited** declines all responsibilities as accidents or damages caused by safety systems tampering attempts concerns.
6. It is recommended to use only replacement parts recommended by the manufacturer. In case of detecting any shortcoming, the manufacturer must be informed to solve it.
7. Repair of this machine as well as its periodical maintenance, should be performed by qualified professionals.
8. Before commissioning, cleaning or making any adjustments in the machine, be sure all moving parts are in standby.
9. In case of detecting any deficiency, the manufacturer must be informed in order to solve it.
10. Necessary information shall be provided to workers using the machine, as well as a specific training for its use.
11. This instruction manual shall be made available imperatively to the workers.
12. Appropriate individual protective equipment's recommended by the manufacturer shall be provided to each worker. A documental record of maintenance, revisions and malfunctions of the machine shall be carried out.

B) Safety Warning Labels

It is important to know that in this document **AMC Industrial Development Company Limited** gathers all the information necessary to use the machine in safety conditions, it cannot however obviate them in the whole.

As a complete and capillary test on every machine always shows residual dangers, that is to say those dangers that can not be avoided or sufficiently reduced through planning and against which protections are not completely effective, **the operator must take the safety warning labels applied on the machine and the following advices into serious considerations:**

1. The Operators must memorize the exact position of control devices able to stop the machine in case of emergency.
2. The Operators must control their workmates in case they are operating in dangerous area.
3. It is forbidden to perform maintenance works on the machine before interrupting voltage, or before the starting up device of the part to be inspected or on which maintenance has to be carried out is deactivated.
4. Each foreign object placed on parts in movement such as keys, screw drivers, bolts must be removed before machine is started up.
5. The machine working signaling must be kept cleaned and easily legible, in particular the warning one.
6. It is recommended not to remove barriers and protection devices restricting the access to the machine components.
7. Periodically check the efficiency of safety device in order to keep them reliable in case of necessity.
8. Do not use the machine until all security devices have been restored.
9. Guards and panels opened or removed in order to carry out repairs must be always closed and replaced.
10. It is forbidden to execute repairs or adjusting operations on operation parts. Whenever it is necessary to perform such operations, safety precautions must be adopted in order to protect workers.
11. When an emergency occurs, press the "emergency stop switch" to cut off electrical power boxes and stop the machine action.
12. Wear proper work clothing, protective helmets, gloves.
13. Wear rubber shoes to avoid electrical shock.
14. Always follow the instructions on warning labels applied on the machine.

15. Never touch the switches with wet hands.
16. Before operating any switch, always confirm its position and function.
17. Before running the machine, always tidy up your work area to ensure safe conditions.
18. Be sure that there are not other persons or obstacles in the protective covers or rotary parts.
19. Always enter the machine after having stopped completely.
20. In order to protect the operator, all the driving parts of the machine are equipped with protective cover.
21. If you have noticed any unusual noise, vibration and/or electronic control system fault of the machine, immediately stop the machine.
22. The electric part must have a good grounding protection when the machine is being installed.
23. If the machine is not working, please check whether the power is good or check whether the fuse is blown.
24. The working voltage must be in compliance with the specification.
25. In case the machine must be used after a transfer or a long period of inactivity, it is advisable to ask for the assistance of **AMC Industrial Development Company Limited**.
26. In case you are not able to remove a failure by yourself or in case you are in difficulties, do not make risky repairs attempts, please call an agent of **AMC Industrial Development Company Limited** of your district.

The following safety warning labels are applied to this machine. The operators and maintenance personnel should follow the safety warnings. If any of the safety warnings has come off or become unidentifiable, always apply a new warning label.

Safety Warning Labels are used on the machine and procedures in this manual, they alert you to its existence and relative degree of hazards, it contains important information about personal safety during operation or near the machine.

Understanding safety alert symbols guarantee operator safety, review carefully following symbols.

Safety Alert Symbols

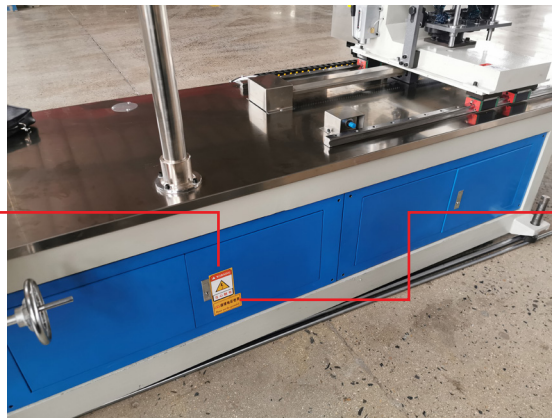
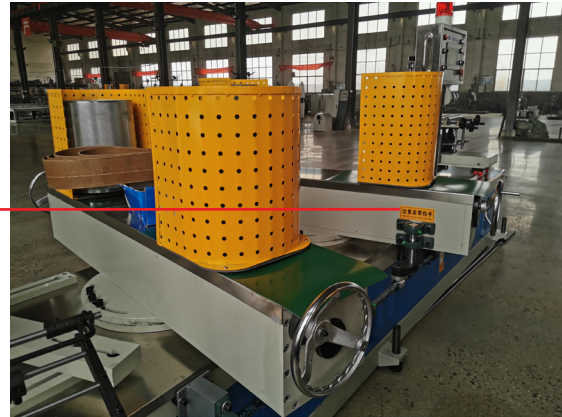
	Potentially destructive situation which if not avoided, may result in damage or reduce the longevity of the equipment.
	Potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
	Potentially hazardous situation, which if not avoided, could result in death or serious injury.

Review the safety warning labels that are applied on the machine, which shows the warning positions:

	ALWAYS keep hands away from machine when is running.
	ALWAYS be aware of your hands, to avoid any serious injury.
	ALWAYS lock out power before servicing to avoid electrical shock.
	ALWAYS make sure to connect the ground wire, for the good function and development of the machine.
	ALWAYS remind to keep the machine parts lubricated with oil, in order to keep good maintenance of the machine.



注意皮带伤手
Attention, belt may hurt your hand

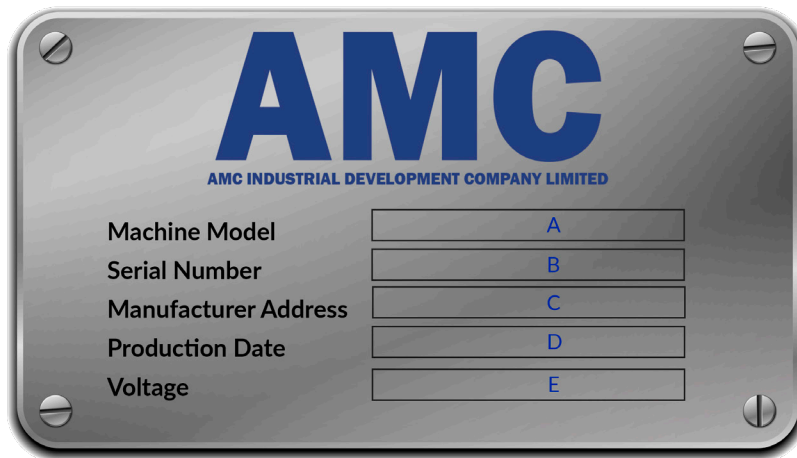


请接地后使用
Please connect ground wire

Chapter 2:

MACHINE IDENTIFICATION

A) Plate Identification



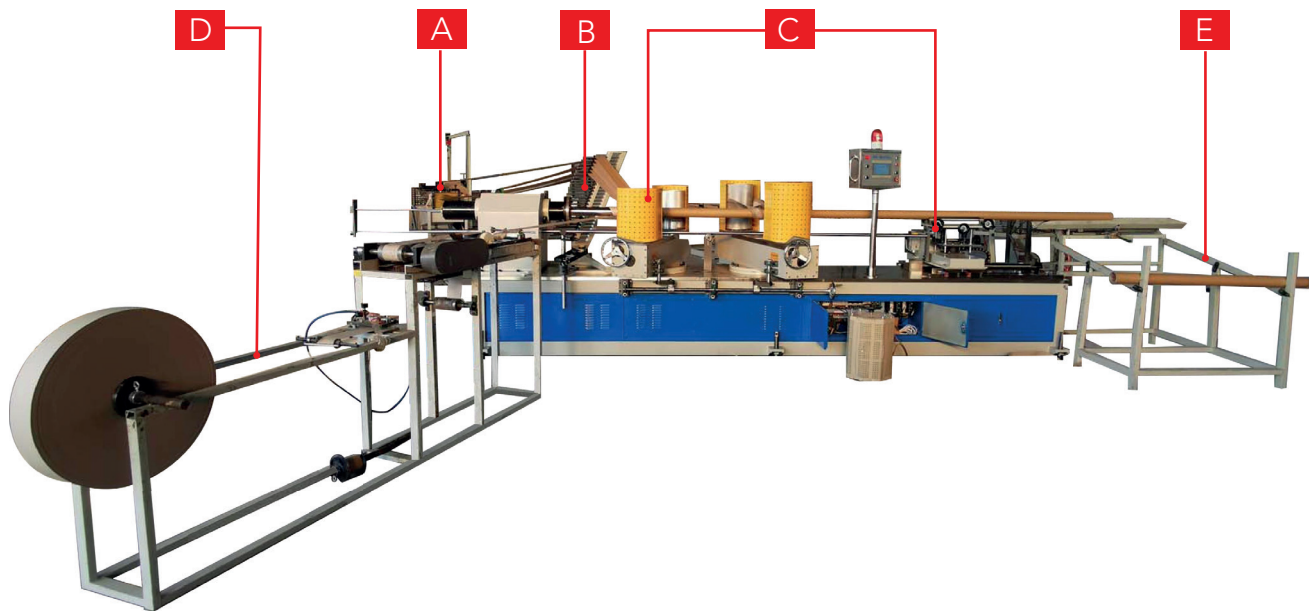
Here after you can take note of the name plate applied on our machines. It is generally placed on the top, on the left or right side it can be consulted by customers each time it is necessary.

The following data are reported on the name plate:

Code	Description
A	Machine Model
B	Serial Number
C	Manufacturer Address
D	Production Date
E	Voltage

Chapter 3:

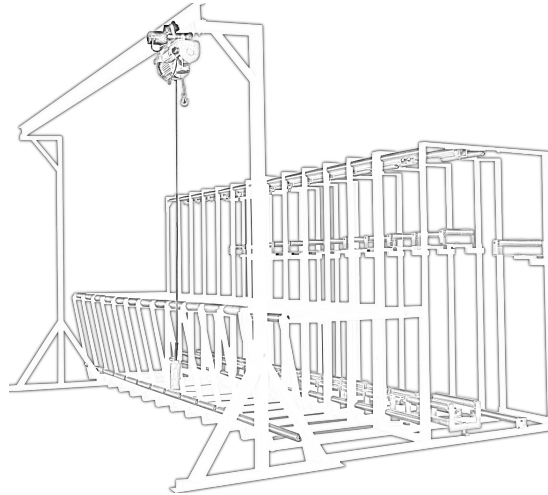
MACHINE DESCRIPTION



Code	Description
A	Inner Paper Stand
B	Gluing Unit
C	Wrapping Unit & Cutter Unit
D	Surface Paper Stand
E	Paper Tube Collector

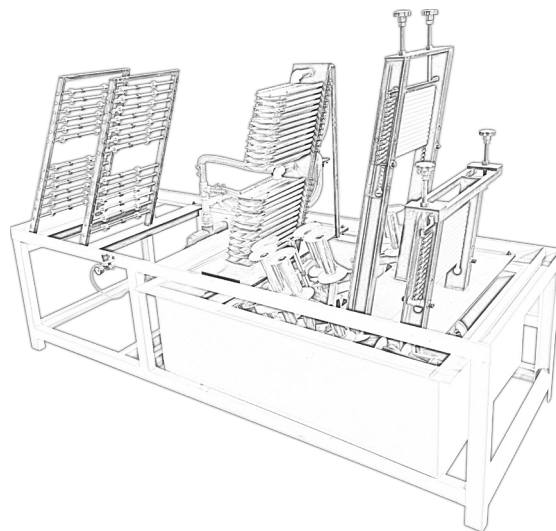
A) Paper Stand

Used for holding inner paper rolls of kraft paper, equipped with an electronic hoist to help load paper in order to reduce work intensity.



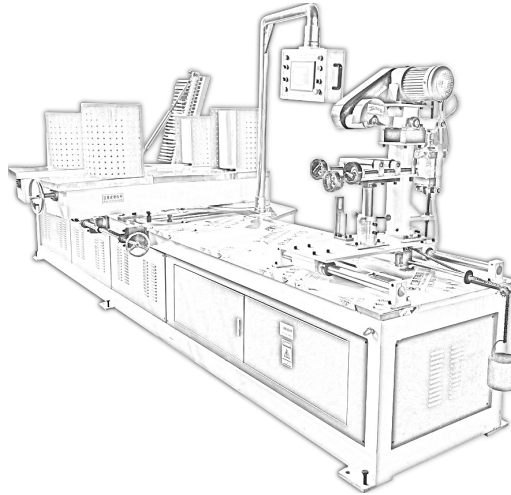
B) Gluing Unit

Cascade type gluing system, with automatic feeding by diaphragm pump, which make the plies stay together and keeps the final product from falling apart or collapsing.



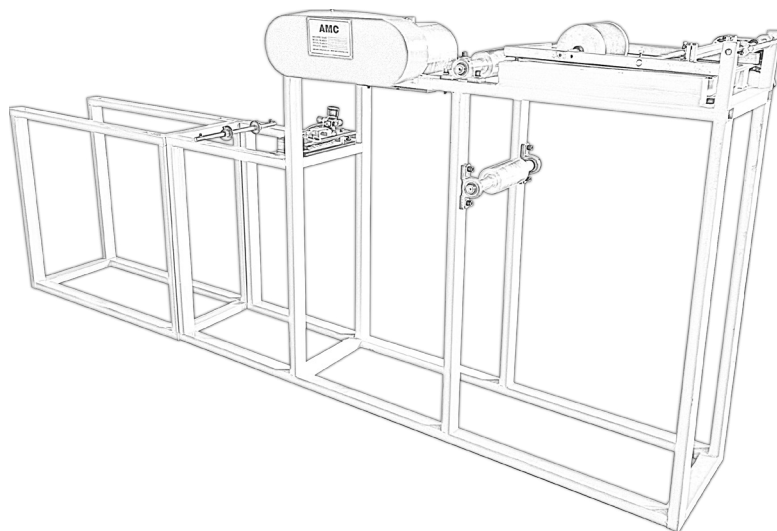
C) Wrapping & Cutting Unit

This unit is to winding the plies of paper around the mandrel. The part that gathers the different plies of paper and wraps them around the mandrel (metal bar) is called the winder, so this step in the process is referred to as "winding". The paper tube is being directed into the cutting unit, which cut it to length.



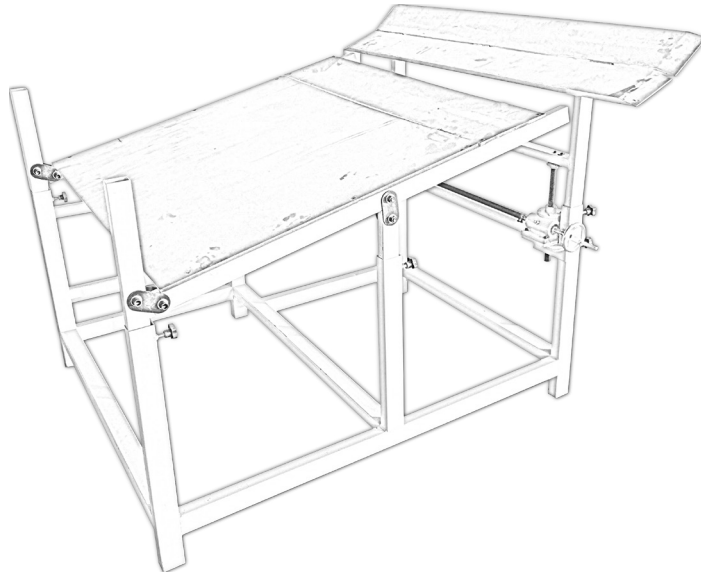
D) Surface Paper Stand

Is an independent paper stand, used for holding the surface layer paper roll for making the paper tube.



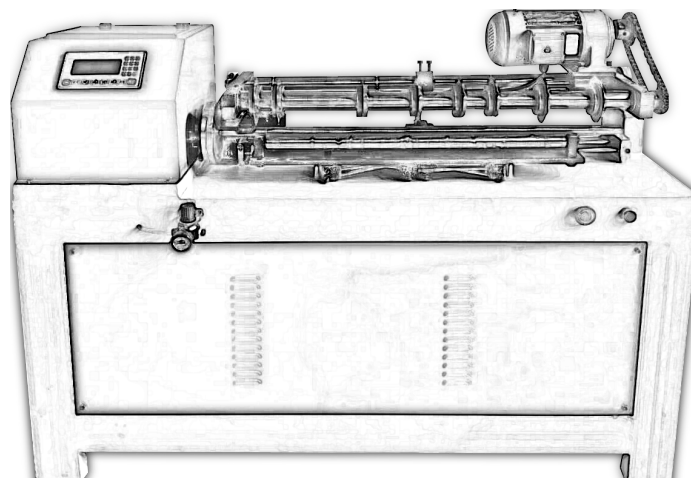
E) Paper Tube Collector

This unit will collect the paper tubes or cores after cutting off.



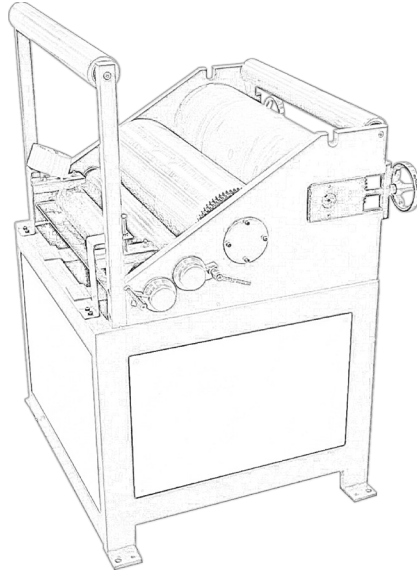
F) Special Cutter TSJQ-70 (Optional)

TSQJ-70 Special Cutter it is used for cutting small diameter core from 30 to 70mm diameter.



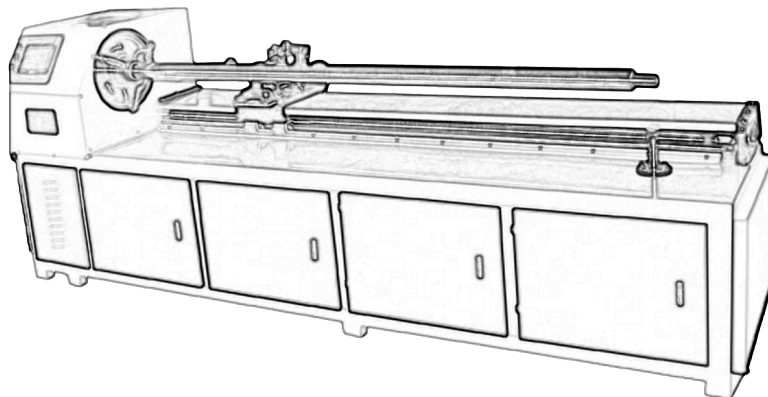
G) Inline Flexo Printer

The inline printer is designed for single color printing only, simple structure make it easy to operate.



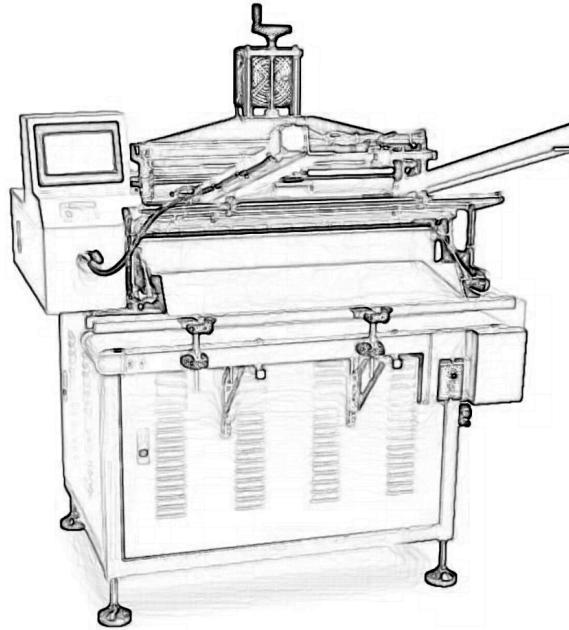
H) Special Cutter TSJQ-S (Optional)

TSJQ-S Special Cutter it is used for cutting very short paper tubes, minimum length 10 mm.



I) Label Laminator SLTB-600X (Optional)

TSJQ-S Special Cutter it is used for cutting very short paper tubes, minimum length 10 mm. Label Laminator SLTB-600X it is used for laminating printed paper on paperboard tubes.



Chapter 4:

TECHNICAL PARAMETER



AMC INDUSTRIAL DEVELOPMENT COMPANY LIMITED

PAPER TUBE PRODUCTION LINE Model TSJG-200

Electrical Requirements		Product	Paper Tubes
		Brand	AMC
Voltage	220V / 380V / 440V	Model	TSJG-200
Phase	2PH / 3PH	Origin	China
Frequency	50HZ / 60HZ	Application	Making Paper Tubes
Operating Conditions		Dimensions	
Operating Temperature (°C)	10°C - 50°C	Length	9000 mm
Operating Temperature Maximum (°C)	50°C	Width	2100 mm
Ambient Temperature Installation (°C)	10°C - 50°C	Height	1900 mm
Relative Moisture	No More 70%	Weight	5600KG
Altitude (m)	100m	Required Floor Area	
		23000 x 15000 mm	
Technical Specifications			
Inner Diameter of Paper Tube		30-200mm	
Thickness of Paper Tube		1-15mm	
Paper Layers		3-25 Layers	
Production Speed		0-20 MPM	
Main Motor Power		15KW	
Cutter		Circular Blade	
Length-Control Method		Sensor Control	
Wrapping Head Quantity		4 Head	
Cutting Blade Motor Power		0.4KW	
Glue Unit		Multilayer Gluing Type	
Paper Reel Stand		Cross Type	
Operator		2-3 Persons	
Head Dimension		294mm, Height 360mm	
Two Head Distance		1000-1250mm	

Chapter 5:

INSTALLATION INSTRUCTIONS

A) General

The machine is usually installed by **AMC Industrial Development Company Limited** technicians. In case it must be removed, the operation must be performed by skilled and authorized personnel. Once they have reached the customer, our technicians begin the machine/plant loading/unloading operations. Afterwards, they must control that packings are undamaged, it means, that the machine has not suffered any damages caused by shocks, wrong handling or atmospherically agents.

The technician will check the integrity of the equipment also during the phases subsequent to the packing first opening. The technician also must control the foundations conditions and relative pre-arrangements necessities to installation; it means: the accuracy of foundations wholes wherever required suitable cement quality through a drilling test on the area where the rails are going to be installed. **When apply.**

Prearrangements must be provided: water supply distribution, compressed-air distribution, the presence of power supply cable, and the installation of a line side isolate. The installation starts, with the installation of main tracks, using the suitable tools for subsequent levelling.

The technician concludes the mechanical assembling and check that each part is closed, adjusted, tightened and it can perform its final functions.

Now nothing is left but supply power to the main control panel, so its required that the customer provide an adequately electric infrastructure.

Each group of functionality at this point, is tested and it is advisable that from now on and for on, your maintenance personnel and your production manager or operator, support our technician, because, it is very useful for them, to follow functional test operations in order to know the functions of each operation, mechanisms and even the ones that in the future the operator will never have to adjust or repair.

Beginning from the group, the technician, makes sure that each button of the control panel corresponds with the suitable function: Start, stop, acoustic signal, pressure raising or lowering, movements, etc.

Those operating mechanisms responsible for the safety of workers assigned to the machine or plant are very carefully controlled: Stop button and alarms to signalize that photocells limiting the access are working.

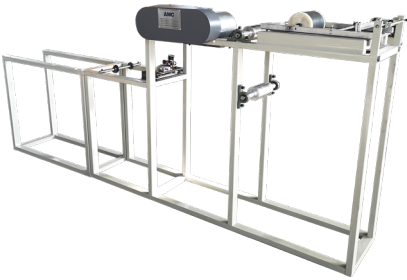
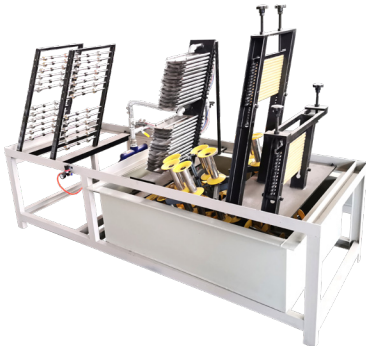
According to us, the operations above mentioned must be performed with the assistance of your personnel, in this way, will become familiar with troubleshooting problems that often occur during this phase. In order to achieve a correct professional personnel training, the technician himself, will perform adjusting, inspecting and working operations.

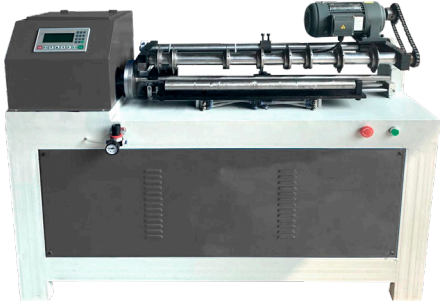
The technician will mention the dangerous maneuvering for the safety of workers. The operator must maintain a safe distance from the machine and not to stand under the fastening bands or under the machine.

The personnel have to learn all production cycles in order to become familiar with the machine main functions and its operating mechanism until it is self-sufficient, always under technician's control.

The technician will also simulate with personnel possible emergency conditions, in order to control that operators perfectly remember the position of stop and emergency buttons at the plant.

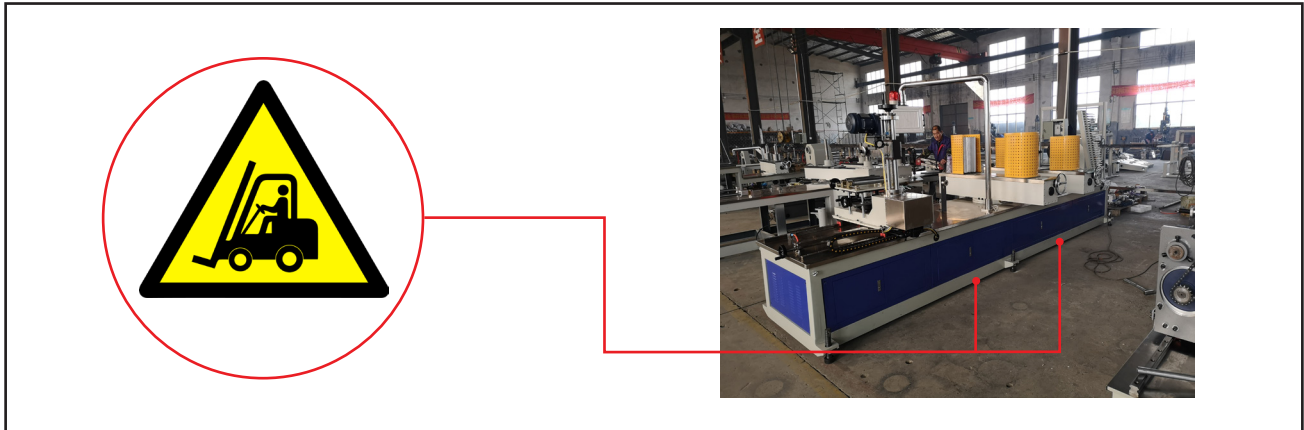
The machine arrives to customer's facilities, unassembled in 8 pieces, each one, must be unloaded separately, according to the following **Unloading Equipment Requirements**, the operator must keep a safe distance from the machine and not to stand under the fastening bands or under the machine.

Photo	Description	Unloading Equipment Requirements
	Inner Paper Stand	Forklift 5 Ton. or Crane 5 Ton.
	Surface Paper Stand	Forklift 3 Ton.
	Gluing Unit	Forklift 3 Ton.

	Wrapping & Cutting Unit	Forklift 3 Ton.
	Paper Tube Collector	Forklift 3 Ton. Dolly Skate 8,000 Lbs
	Special Cutter TSJQ-70	Forklift 3 Ton.
	Inline Flexo Printer	Forklift 3 Ton. Dolly Skate 8,000 Lbs

	Label Laminator SLTB-600X	Forklift 3 Ton.
	Special Cutter TSJQ-S	Forklift 3 Ton.

Make sure to do the unloading of the Forming unit, Cutter unit and Stacker unit, from the unloading points already determined, which are located in each unit, please see the photos below.



B) Pre-Installation

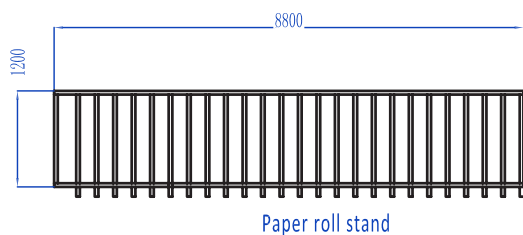
- 1) Remove the plastic film.
- 2) Check each unit of the machine and in case of find any unit damaged, take some pictures and get in touch with an agent from **AMC Industrial Development Company Limited**.

C) Installation

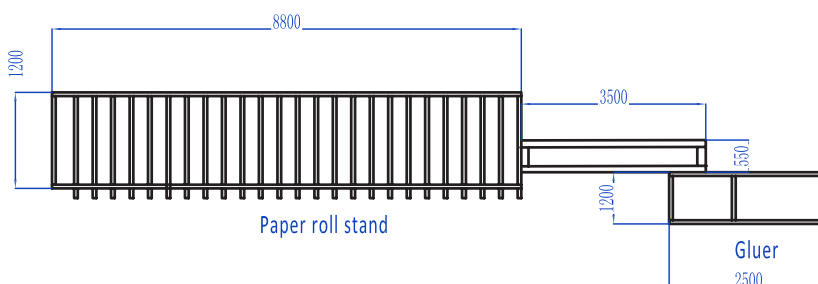
In order to install the **AMC Tube Production Line TSJG-200**, it is not required any type of special equipment, it should be installed on a flat concrete ground.

I.- Steps for installation

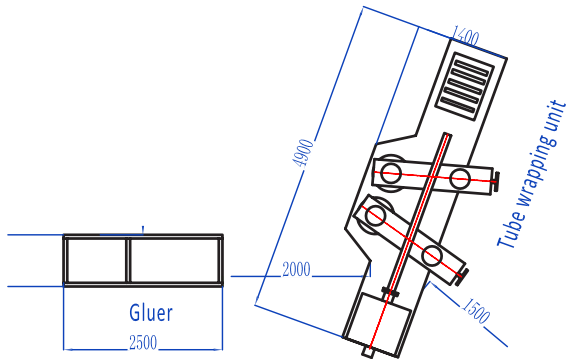
- 1) Determine the area on the floor according with the Layout.
- 2) Place the Inner Paper Stand Unit on the floor.



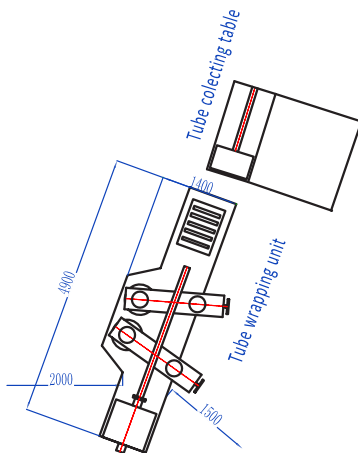
- 3) Place the Gluing Unit after the Inner Paper Stand Unit, keeping a distance of separation between each other of 3000 mm.



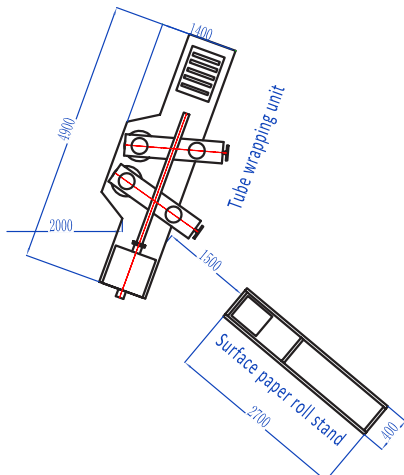
4) Place the Wrapping & Cutting Unit after the Gluing Unit, keeping a distance of separation between each other of 3000 mm. The Wrapping & Cutting Unit must be placed forward parallel to the Gluing Unit. Please use the below photo as reference:



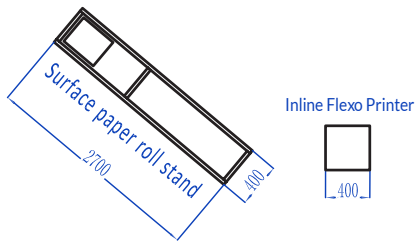
5) Place the Paper Tube Collector Unit after the Wrapping & Cutting Unit, keeping a distance of separation between each other of 1000 mm. The Paper Tube Collector Unit must be placed backward parallel to the Wrapping & Cutting Unit. Please use the below photo as reference:



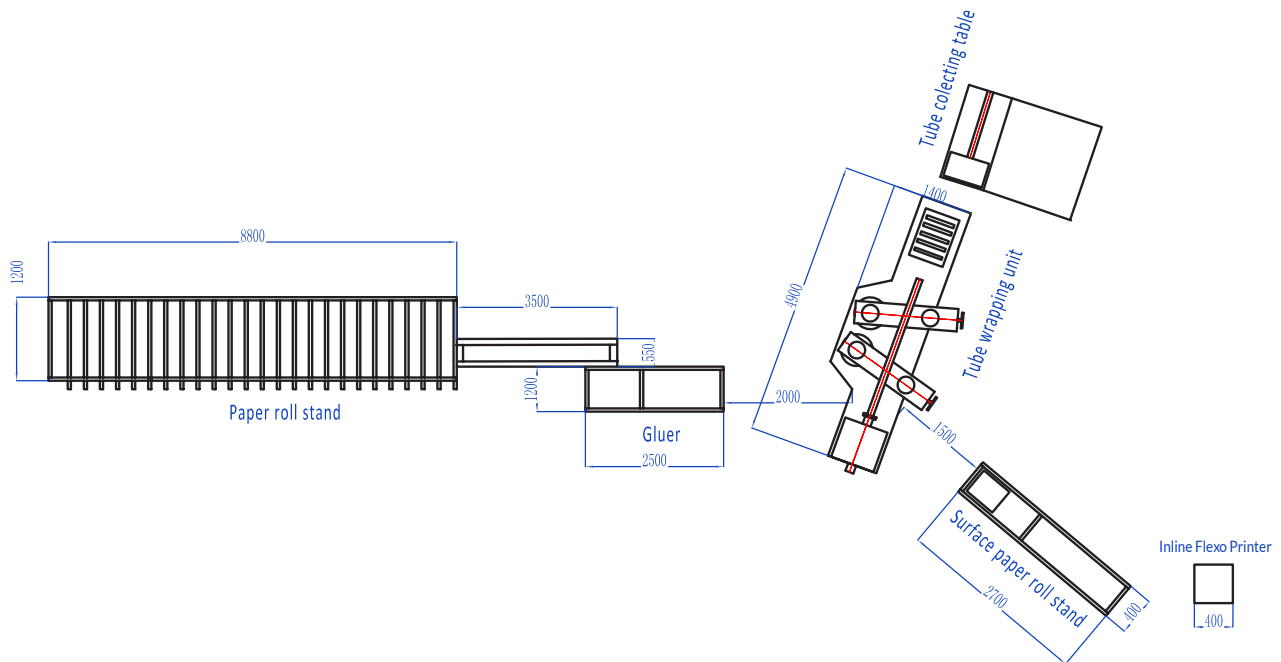
6) Place the Surface Paper Stand Unit next to Wrapping Unit, keeping a distance of separation between each other of 1500 mm. The Surface Paper Stand Unit must be placed forward parallel to the Wrapping Unit. Please use the below photo as reference:

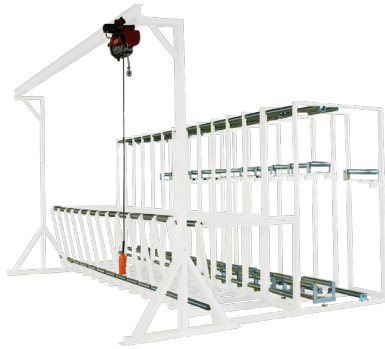


7) Place the In Line Single Color Printer Unit before the Surface Paper Stand Unit, keeping a distance of separation between each other of 500 mm.



8) The 6 Units must be placed as the following Layout.





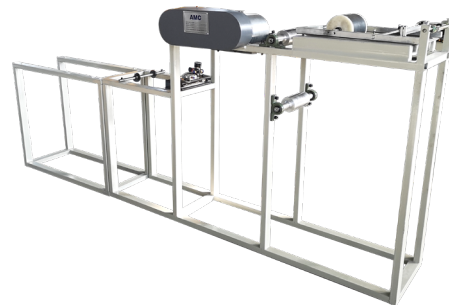
Unit 1
Inner Paper Stand Unit



Unit 2
Gluing Unit



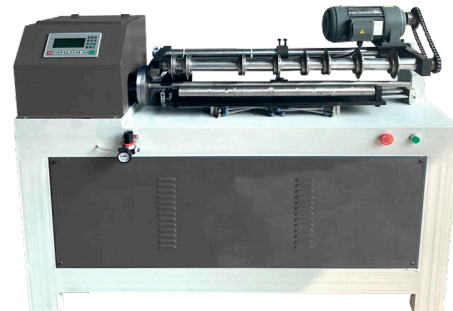
Unit 3
Wrapping & Cutter Unit



Unit 4
Surface Paper Stand



Unit 5
Paper Collector Unit



Unit 6
Special Cutter TSJQ-70

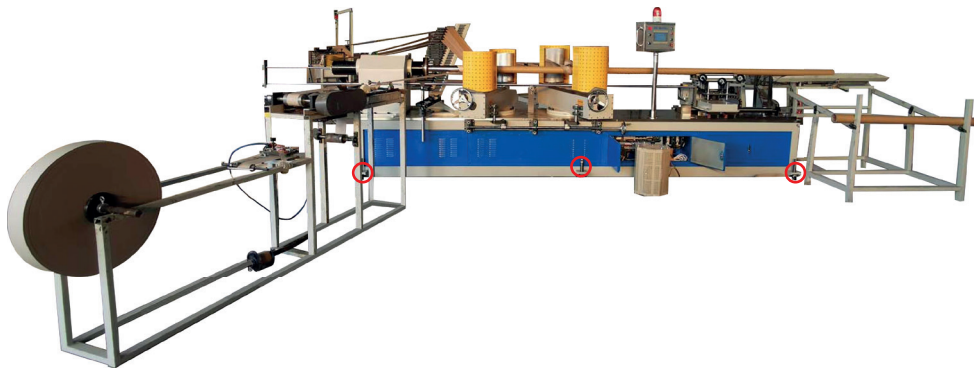


Unit 7
Inline Flexo Printer

9) Make sure that the Inner Paper Stand Unit keep the grating towards Gluing Unit's center in a straight line centered and straight. You can consider the following photograph as a reference.



10) The level of the Wrapping Unit must be adjusted horizontally, you need to adjust the screws found in the bases of each unit.



11) Connect the air conduct and the electric cable in order to test if the connection is correct.

D) Preparation

- 1) Clean each unit and then add lubricant oil.
- 2) Check if all electric cables and air conducts that are well connected.
- 3) Check, if the two edges of the cutting blade, fits well into the anvil of the blade.
- 4) Add lubricant oil in each point that is necessary, always keeping a constantly lubrication.

E) Test without load

The test without load is for checking the following elements:

- 1) All cylinders can turn easily.
- 2) All air conducts are lack of leaks.
- 3) All air cylinders work well.
- 4) The information in the touch screen, show that the blades are working well.

F) Test with load

The test with load is for checking the following elements:

- 1) All cylinders can turn easily.
- 2) All air conducts are lack of leaks.
- 3) All air cylinders work well.
- 4) The information in the touch screen, show that the blades are working well.

Chapter 6:

OPERATION INSTRUCTIONS

WARNING

The machine must be started up and used only after that service and maintenance personnel has carefully read the present manual. The entrusted personnel must have fully read and understood its contents. The firm **AMC Industrial Development Company Limited** declines all responsibility for each failure occurring in consequence of improper and incautious operations, not in conformity with the present manual directions, carried out by unskilled or skilled personnel.

The present instructions are addressed to qualified or experienced operators. In order to prevent damages to people or things, **AMC Industrial Development Company Limited** recommends Customers to adequately inform operators about the risk deriving from the use of the machine. In case the machine is used by inexperienced personnel, it would be advisable that qualified personnel support inexperienced one using the machine. The operator must always make use of his personal protection means by law and what the employer places at his disposal.

Personnel responsible for the equipment maintenance must be practiced and fit for the kind of duties, he must show the necessary reliability in order to ensure safety and scrupulous controls and maintenance works.

A) Inner Paper Stand

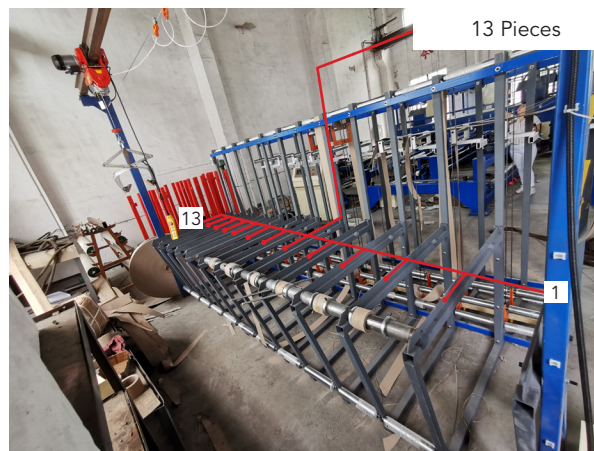
I. Inner Paper Stand Assemble Instruction

The Inner paper stand consist in 7 parts:

- 1) Short Paper Roll Holding Stand.
- 2) Tall Paper Transmitting Stand.
- 3) Short Connecting Bar.
- 4) Long Connecting Bar.
- 5) Damping Rollers.
- 6) Paper Transmitting Roller – Bottom.
- 7) Paper Transmitting Roller – Top.

1) Short paper roll holding stand

This section contains 13 pieces. Each one is identified, the piece number 1 and the piece number 13 cannot change position. Le remaining points (11 pieces in total) can be installed in any position.



2) Tall paper transmitting stand

This section contains 13 pieces. Each one is identified, the piece number 1 and the piece number 13 cannot change position. The installation of the pieces, must be consecutive; from piece 1 to 13.



3) Short connecting bar

This section contains 2 pieces, which, can be identified in the following photograph.

Section	Number of Pieces
Short Connecting Bar 1	1 Piece
Short Connecting Bar 2	1 Piece



4) Long connecting bar

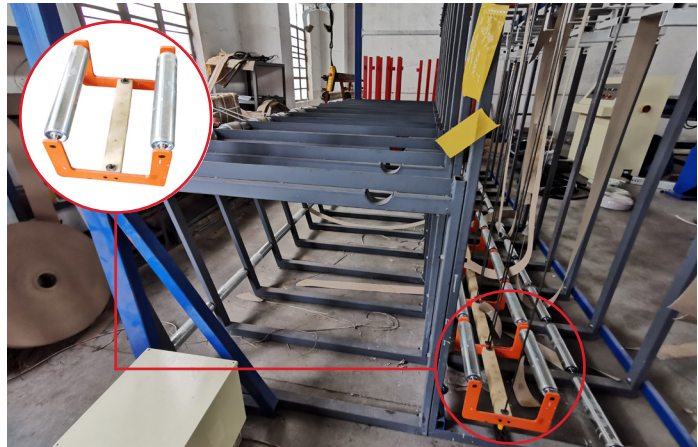
This section contains 4 pieces, which, can be identified in the following photograph.

Section	Number of Pieces
Long Connecting bar A	1 Piece
Long Connecting Bar B	1 Piece
Long Connecting Bar C	1 Piece
Long Connecting Bar D	1 Piece



5) Damping Rollers package

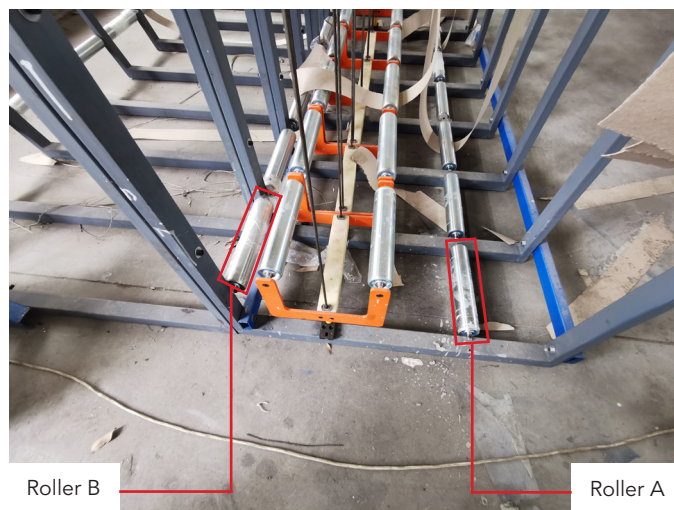
This section contains 13 pieces. Each one is identified, the piece number 1 and the piece number 13 cannot change position. The installation of the pieces, must be consecutive; from piece 1 to 13.



6) Paper transmitting roller – Bottom

This section contains 24 pieces, 12 belongs to section A, and the remaining 12 belongs to section B. These ones, must be installed consecutively, there is no restriction in the order.

Section	Number of Pieces
Section A	12 Pieces
Section B	12 Pieces



7) Paper transmitting roller – Top

This section contains 36 pieces, 12 belongs to section C, 12 belong to section D, and the remaining 12 belongs to section E. These ones, must be installed consecutively, there is no restriction in the order.

Section	Number of Pieces
Section C	12 Pieces
Section D	12 Pieces
Section E	12 Pieces



II.- Inner Paper Stand Loading

1) Put the hook on the mini crane, at both sides of the steel tube, that goes through the inner layer paper stand.





- 2) Charge the internal roll paper and safe the ends, using the steel rings.
- 3) Put the inner layer paper in the short paper roll holding stand.

B) Surface Paper Stand

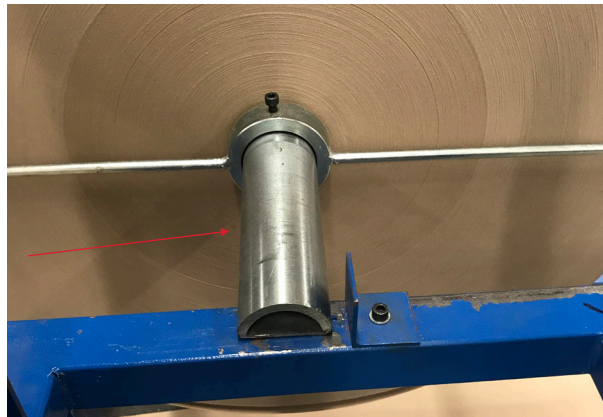
- 1) Put the surface paper roll over the support platform.



- 2) Turn on the air switch in order that the platform lift ups, so that the core of the surface paper roll stand have a height greater than the support beam.



3) Place the steel tube which passes through the surface paper roll inside the core of the surface paper roll and adjust both sides with the steel rings.

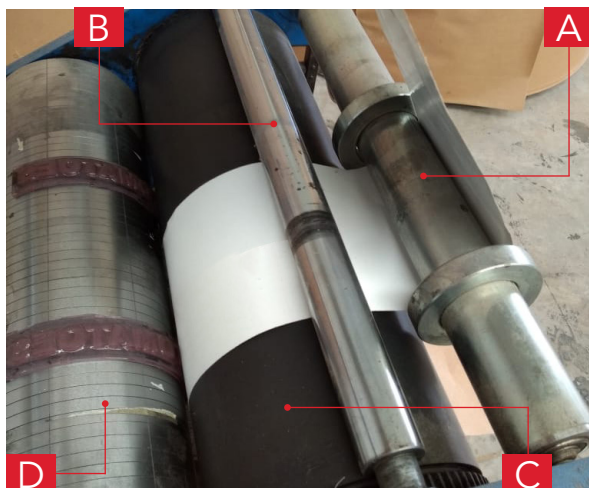


4) Turn off the air switch and allow that the steel tube rest over the support beam.



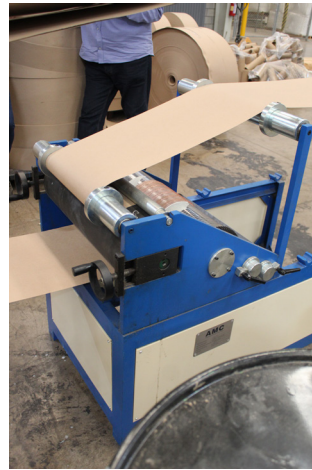
C) Flexo Printer Inline

1) The flexo printer inline operates mechanically, the operating mechanism consists of the following parts:

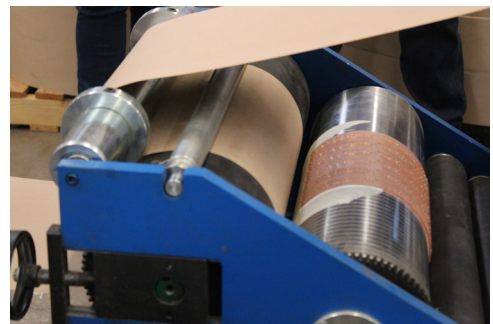
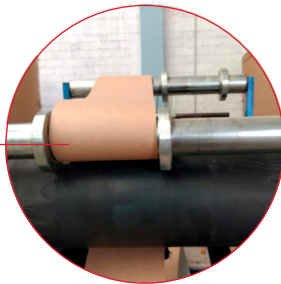


Code	Function
A	Guide Rolls
B	Support Bar
C	Rubber Roller
D	Printing Roller

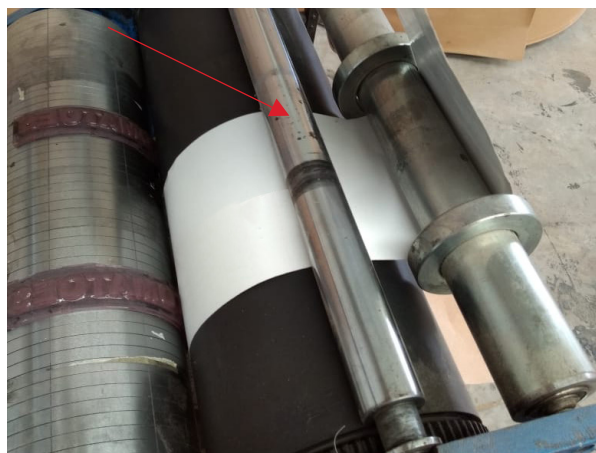
2) Remove the support bar and insert the superficial paper through the guide roll.



3) Pass the superficial paper over the back of the rubber roller, so it will be in contact with the printing roller.



4) Put the support bar in its initial position.



D) Gluing Unit

1) The gluing unit does not require disassembling, the inner paper must be put in the gluing's rack for inner paper, the number of layers goes in function of the thickness of the edge board to be manufactured.



Gluing's rack
for Inner Paper

2) The superficial paper must be put in the gluing's rack for superficial paper.



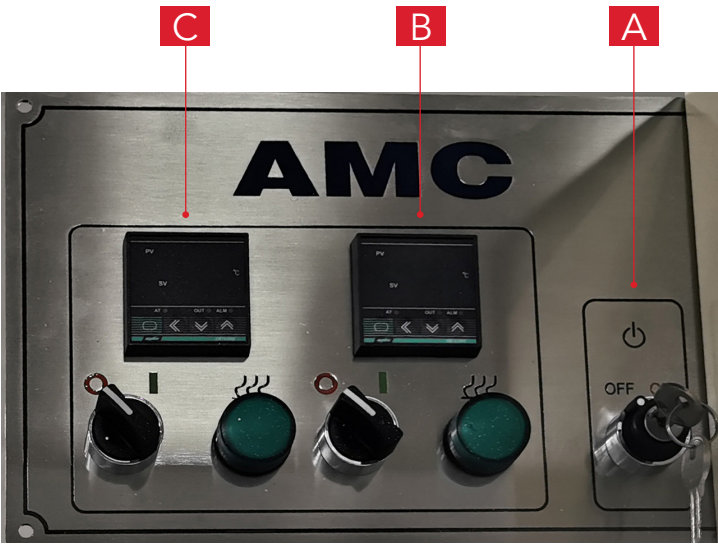
Gluing's rack
for Superficial Paper

3) The heating control should only be enabled when the ambient temperature is below 5°C, the heat produced by the heating chambers will allow the glue has enough fluidity to achieve adequate gumming.



Heating Control

4) The heating control panel consists un the following parts:



Code	Function
A	TURN/OFF KEY
B	TEMPERATURE CAMERA CONTROL SWITCH 1
C	TEMPERATURE CAMERA CONTROL SWITCH 2

5) The following steps must be performed for power on:

A) Turn the key in the position ON.



B) Turn the TEMPERATURE CONTROL CAMERA SWITCH to the right, for each one of the cameras 1 and 2 (TOWARDS THE CLOCKWISE).

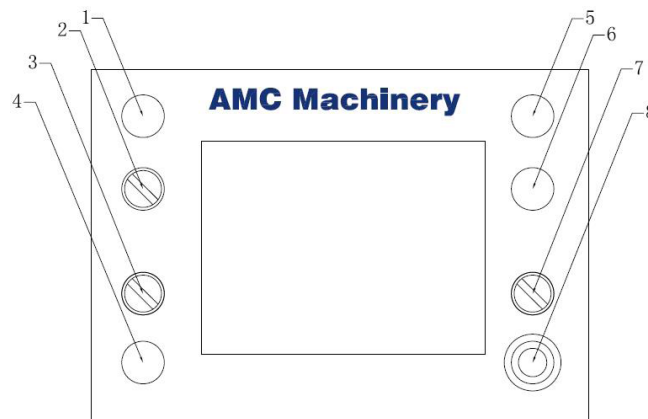


C) Once that the TEMPERATURE CONTROL CAMERA SWITCH, is in the position ON, the button will stay light on for each of the heating cameras.



E) Wrapping Unit Control Panel

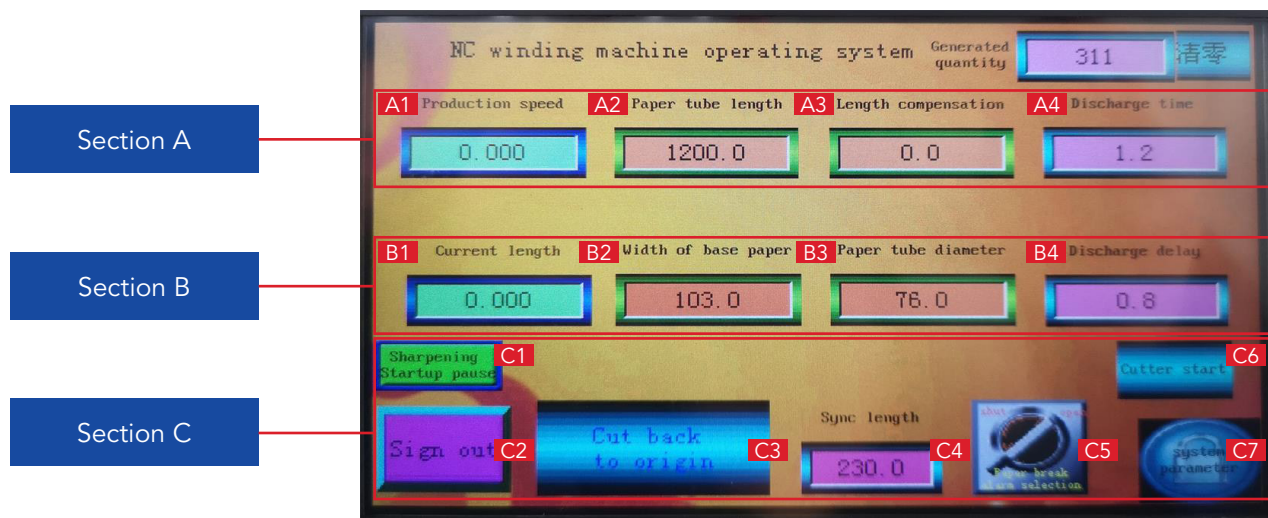
1) Watch the panel and start being familiar with the functions, listed as below:



Code	Function
1	Power Light
2	Power Switch
3	Knob Cutter Model
4	Manual Cut
5	Start Main Motor
6	Stop Main Motor
7	Knob Speed Control

2) Switch the Power Supply of the machine. Then, it will turn visible the touch screen, as below:

a) The touch screen is divided in 3 sections:



Code	Function
A	A1 Production Speed
	A2 Paper Tube Length
	A3 Length Compensation
	A4 Discharge Time
B	B1 Current Length
	B2 Width Of Base Paper
	B3 Paper Tube Diameter
	B4 Discharge Delay
C	C1 Sharpening Start Up / Pause
	C2 Sing Out
	C3 Cut Back To Origin
	C4 Sync Length
	C5 Paper Break Alarm Selection Shut / Open
	C6 Cutter Start
	C7 System Parameter

3) The section A has 4 functions, describe as below:

A1.- Production Speed

Displays the machine's live running speed.

A2.- Paper Tube Length

For select the tube length as is required per order.

A3.- Length Compensation

After the selection of paper tube length, this function allows to do the cut of one piece, and check if it's the required, if not you are able to do some length compensation adjustment.

A4.- Discharge Time

For select the tube's discharging time according to the machine's speed.

4) The Section B has 4 functions, describe as below:

B1.- Current Length

Displays the tube's length live while working.

B2.- Width of Base Paper

For input the width of the surface paper.

B3.- Paper Tube Diameter

For input the diameter of the inner paper tube.

B4.- Discharge Delay

This function, allows the operator to release with some delay the tube's discharging on the unloading plate.

5) The section C has 7 functions, described as below:

C1.- Sharpening Startup / Delay

To make the cutting blade keep running and operator can grind the blade with grinding tool.

C2.- Sign Out

This function log you out from the control page.

C3.- Cut Back to Origin

This function reset the input data of the tube size; returning the value to "0". For execute this function well, first you have to play the "Knob cutter model" to a stop point, then you may click on this function "Cut back to origin". And you will be able to input a new tube size, after this step, play the "Knob cutter model" to NC point again.

C4.- Sync Length

For input a bigger tube diameter value than the actual one.

C5.- Paper Break Alarm Selection Shut / Open

For shut or keep on the alarm when the paper breaks.

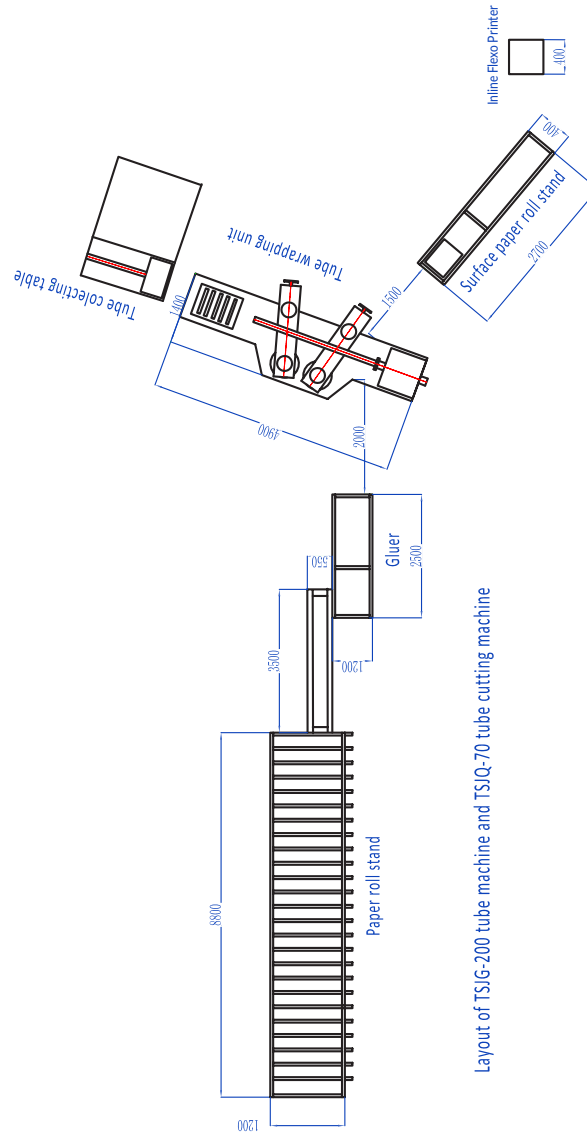
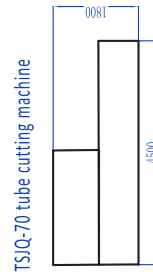
C6.- Cutter Start

For start or stop the cutting blade from running.

C7.- System Parameter

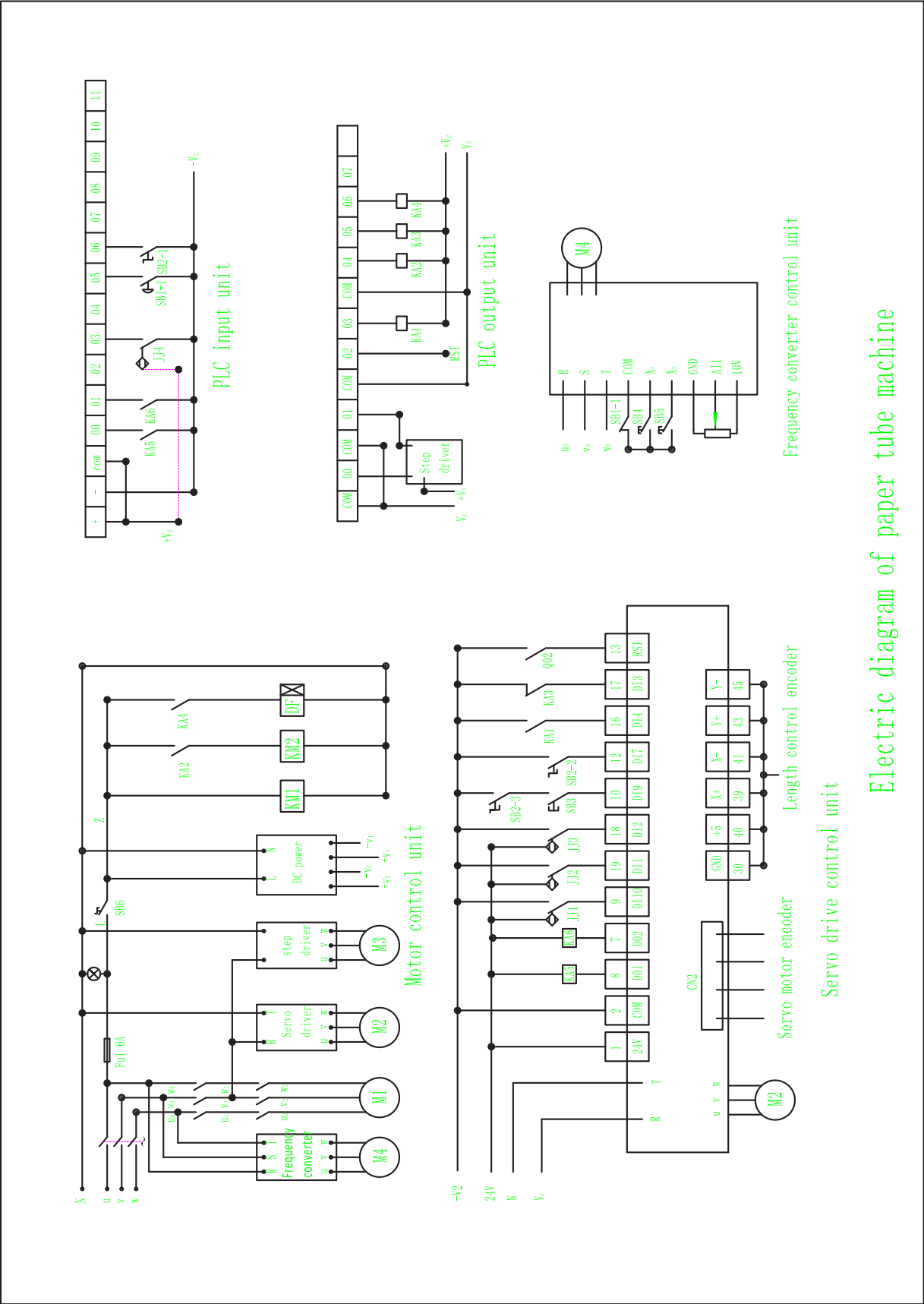
This button is just for display the parameter of the computer system. The operation doesn't need to be adjusted.

Chapter 7: LAYOUT



Chapter 8:

ELECTRICAL DIAGRAMS



Electric diagram of paper tube machine

Chapter 9: MAINTENANCE

A) Maintenance Spare Parts

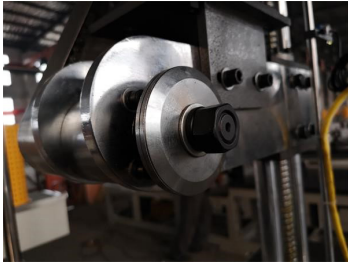
The pieces of the machine are classified in two types:

A) The ones that can be used almost permanently at least they are damaged.

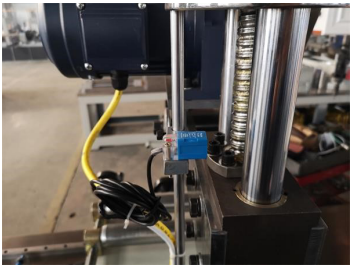
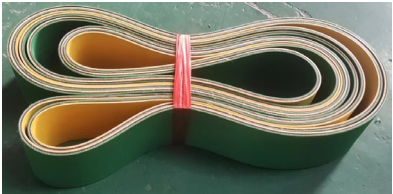
B) Consumables, which are divided into parts that can be stored in case of a failure, and the pieces that changes periodically, the well manage of the consumable pieces is essential.

In order to keep and operate the machine in the best conditions, emphasis is placed in the importance of preventive maintenance, as well as, to keep an inventory of consumable pieces in order to avoid prolonged machine shutdown due to absence of consumable pieces.

List of Recommended Consumable Parts

Piece name	Code's name	Picture	Quantity	Notes
Cutting Blade #1	SP-001 TSJG-200		8 Pcs	For TSJG-200
Cutting Blade #2	SP-002 TSJG-200		2 Pcs	For TSJG-200
Glue Tank Heating Tube	SP-003 TSJG-200		2 Pcs	For TSJG-200

Brown color rubber tube	SP-004 TSJG-200		20 m	For TSJG-200
Air Cylinder	SP-005 TSJG-200		1 Pcs	For TSJG-200
Air pipe connector with air release valve	SP-006 TSJG-200		2 Pcs	For TSJG-200
Sensor 1	SP-007 TSJG-200		1 Pcs	For TSJG-200
Sensor 2	SP-008 TSJG-200		1 Pcs	For TSJG-200
Sensor 3	SP-009 TSJG-200		1 Pcs	For TSJG-200

Sensor 4	SP-010 TSJG-200		1 Pcs	For TSJG-200
Electromagnetic valve	SP-011 TSJG-200		2 Pcs	For TSJG-200
Button Green	SP-012 TSJG-200		1 Pcs	For TSJG-200
Belt	SP-013 TSJG-200		1 Pcs	For TSJG-200
Button Red	SP-014 TSJG-200		1 Pcs	For TSJG-200
Positioner	SP-015 TSJG-200		1 Pcs	For TSJG-200

Chapter 10:

WARRANTY CONDITIONS

1. AMC Industrial Development Company Limited warrants that the equipment is guaranteed to be free from defects in material and workmanship at time of shipment. If during the first year of the date of shipment, the buyer establishes to the seller's satisfaction that any parts manufactured by **AMC Industrial Development Company Limited** were defective at the time of shipment, **AMC Industrial Development Company Limited** will, at its own expense, repair or replace (but not install) replacement parts.

Sellers liability under this warranty is limited to replacement parts only and the seller will make no allowance for corrective work done unless agreed to by the seller in writing. Charges for correction of defects by others will not be acceptable, unless authorized in writing, prior to the work being performed, by an officer of the company.

Damage caused by deterioration due to extraordinary wear or by improper maintenance or lubrication or improper storage prior to installation, shall not constitute defects. Failure to install equipment properly shall not constitute defects. Warranty does not cover consumable items. Warranty does not cover adjustment to installation or periodic adjustment that may be required during normal operation.

2. The term of guarantee is equal to 12 (twelve) months from the date when the installation and commissioning of the equipment fulfilled. Within one year from the date of accomplishing the installation and commissioning of the equipment fulfilled (don't guarantee the serving life of the wearing parts).

Within the period of quality guarantee, in case of any defects or malfunctions of mechanical parts, which have been proven to be caused by seller's poor materials and assembly technology, upon receipt of the buyer's information in writing and photos, the seller will post spare parts which were mentioned by the buyer as soon as possible at its own cost and the spare parts should be installed by the buyer. The expense of the spare parts and the freight will be borne by the buyer.

3. The following components are not covered by the warranty;

- a. The repair, service and/or installation of any electric component or related replacement part for use with the equipment.
- b. The consumables, that are parts that have limited life expectancy and are designed to be replaced.

4. AMC Industrial Development Company Limited has made no representation, warranties, or guarantees, expressed or implied, not expressly set forth on above paragraph. **AMC Industrial Development Company Limited** shall not be liable hereunder for any consequential damages, losses of profit, loss of production, or contract, financial, economic or any other indirect loss or consequential damage that in any form could suffer the other party.

5. No representative of **AMC Industrial Development Company Limited** has been conferred with any authority to waive, alter, vary or add to the terms of the warranty state herein, without prior authorization in writing executed by an officer of the company.

Chapter 11:

CONTACT INFORMATION

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