

HB-320 AUTOMATIC MEAT SLICER
OPERATION MANUAL

Thank you for purchasing our semiautomatic meat slicer.

The meat slicer, produced by our company sharing advantages of the similar meat slicer at home and aboard, is easier and more safe to operate.

The meat slicer is specifically designed for food use, it can cut ham, frozen meat without bone, fresh meat (beef, lamb), vegetables (such as ginger, potatoes, carrots, sweet potatoes, etc.), suitable to use in restaurants, hotels, supermarkets and food processing plants.

The machine should work in a environment with relative humidity not more than 85%.

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1. Notices

- The power must comply with electric requirements on the label rating. If improperly use, fire or series trouble may be occurred.
- The machine must be earthed when using, it is dangerous to get an electric shock if not earthed or not reliable to be earthed.
- Please turn off all switches and cut off power when emergency happens.
- The hands or other parts of body are not allowed to enter workspace when the machine is running, otherwise people may get hurt..
- The machine should be repaired by manufacturer or agents if it is broken.
- We are not responsible for injurys or equipment faults if machine is modified by users themselves.
- When the electric wire is damaged, it must be changed immediately.
- The electric wire must be special soft wire bought from manufacturer or repairing department.
- The machine can not be flushed by water, for it is not waterproof structure, otherwise it will cause an electric shock and damage the electric parts.
- Please turn off all switches when machine is not operated and cut off the power.
- Please stop operating and turn off the machine when cleaning the machine.
- Must stop the machine when it is found operating abnormally.
- Loose clothes cannot be wired when operating the machine, and long hair should be covered by a cap.
- The machine must be operated by nominated personals, non-professional or children should not get close.
- If other objects are to be equal potentially connected, equipotential connection must be executed.
- Often check blade-cover, carrier, blade and other parts in case of getting loose or damaged
- Frozen meat with temperature below -6°C cannot be cut.
- Please attach this operation manual when resell the machine.
- Please contact us when the manual operation is damage or lose.
- Please contact us when you meet other problems which have no detail in the manual operation.
- The machine is not allowed to be operated by the disable, children or people without experience, unless they are under supervision or instruction of professional personal who can make sure the safety.

The safety labels on the machine



Reliable earth wire must be connected to avoid personal injury due to leakage.



Keep hands off the workplace when machine running, in case of injury.



Be careful when clean and change blade, and keep hands off the blade edge in case of injury.

2. Main Technical Specifications

Rated voltage: 210V-230V or 380V

Rated frequency: 50Hz or 60Hz

Rated input power: blade motor: 0.37KW Reciprocating motor: 0.37KW

Slicing time: 42times/min inlimited

Slicing thickness: 0-15mm adjustable

Blade diameter: 320mm

Weight: 88kgs

Diamention: 820mmX740mmX580mm(LXWXH)

Max slicing width: 250mm

3. Operation Instructions

3.1 Ready suitable place for meat slicer

The slicer should be placed on sturdy, flat platform or desktop and set aside adequate space for the slicer in order to operate, maintain, and ventilate.

Power requirements of the slicer

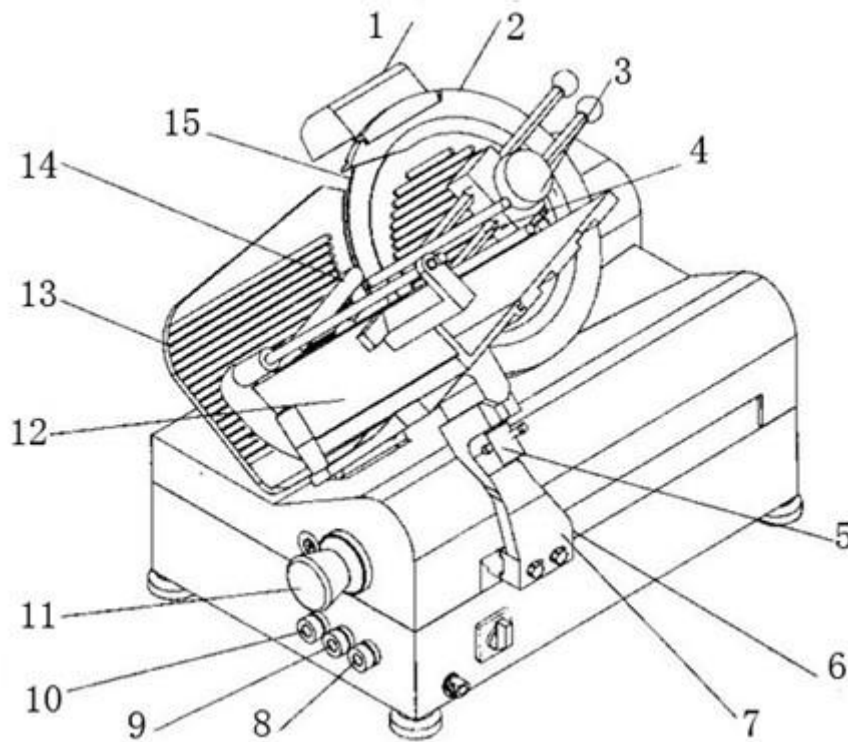
Power condition: AC, 1 phase, 210V-230V/AC, 3 phase, 50/60Hz. The slicer for 1 phase power is attached with it a standard triangle plug with earth wire, the power socket must be the standard triangle.

3.2 Unpacking

Before installation, please check all items attached with the machine. If anything missed, please contact the supplier.

3.3 Machine parts and their locations

Attention: In order to ensure the machine can be used successfully, please carefully read this chapter and get familiar with the parts and their locations.



- 1.sharpener 2. blade cover 3. proping bar clamping handle 4. proping bar
 5.carrier clamping nut 6.oil inlet hole 7.slide bracket 8.stop button
 9.reciprocate button 10. blade button 11.thickness adjusting handle 12.carrier
 13.locking board 14.pressing rock 15. blade

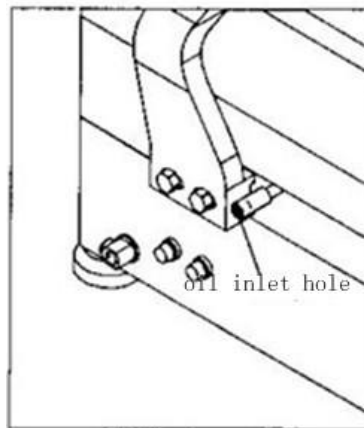
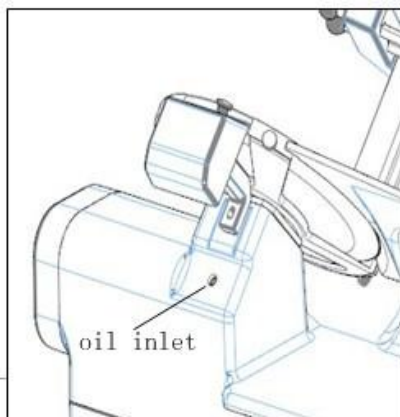
3.4 Lubrication

3.4.1 No. 18 hypoid gear oil is used for the worm reducer. Grease is added by the manufacturer before sale, and it should be exchanged every year.

3.4.2 Lubrication between slide and guide.

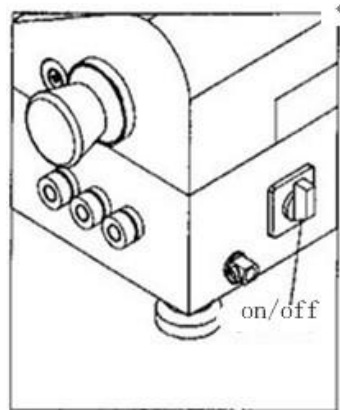
Refuel from the oil inlet hole at the right of the slide bracket two times per shift, and press the oil gun for 4-5 times each time. Sewing machine oil is used as the lubricative oil.

Reciprocating should be stopped while adding oil, in case of injury.

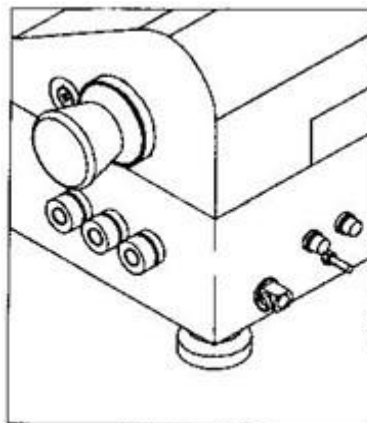


3.5 Power wire connection

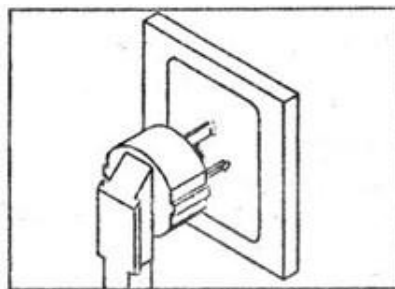
3.5.1 The switch of 3-phase slicer locates on the lower left in front of the machine. Turn the switch to “0” the slicer is turned off.



3.5.2 No power switch is set on 1-phase slicer, but two fuses and one ground terminal are set. When use a 2 phase plug, it should be reliably earthed.



3.5.3 Connect the slicer plug with a power socket on wall, and the current of the socket must be not less than 16A.



3.6 Test-run the machine without loading

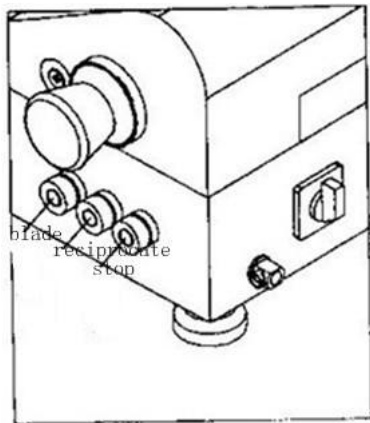
3.6.1 Before test-run the machine, you should carefully check the tightness and damage of blade cover, carrier, blade and other parts, and lubricate from the oil inlet hole on the right side of the slide bracket with an oil gun.

3.6.2 Press “BLADE” button (press “BLADE” and “STOP” buttons alternatively) to examine if the blade works or not, and if there is something unusual happens.

Attention: Pay attention on the blade rotating direction (according to the arrow), especially when voltage is 380V.

3.6.3 Press “RECIPROCATE” (press “RECIPROCATE” and “STOP” buttons alternatively) to examine if the carrier works or not, and if it collides with other parts.

3.6.4 If there is nothing unusual happens, you can use the machine after 10 minutes unloading work.

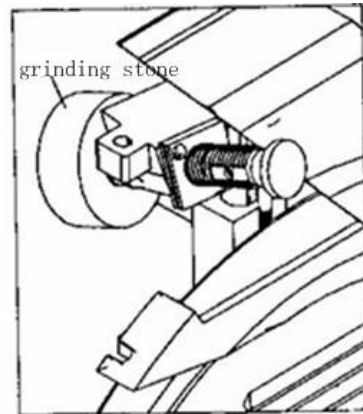


3.7 Blade grinding

3.7.1 The round blade of the meat slicer is made by high-quality wear-resistant tool steel, the edge of the blade has been sharpened by the manufacturer before sale.

3.7.2 The round blade may turn dull after use and you can choose the grinding stone carried with the equipment to regrind, repeatedly and timely. Before sharpening the blade, you should clean the oil spill to avoid it stains on the wheel, if the wheel is stained by the oil, you can use brush and alkaline water to clean the grinding stone.

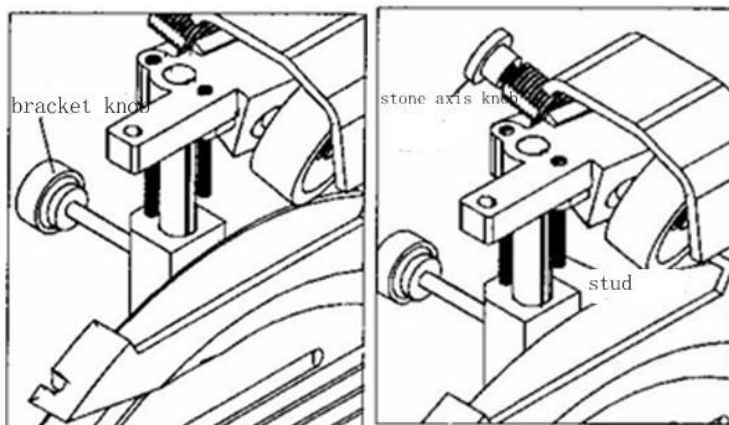
3.7.3 When the sharpener is not working, grinding stone should be kept away from blade, when it works, it should get close to the blade.



The method to change the position:

Loosen the knob on the bracket, hold the wheel cover to the proper height, rotate 180 ° and then press the locking knob.

Attention: The height of the sharpener is limited by a stud, and elongation of the stud can be adjusted.



3.7.4 Press “BLADE” to make it rotate, and clockwise rotate the rear of stone axis to make the grinding stone touch the blade, and rotating blades driven wheel, then the blade can be sharpened.

Attention:

Before start-up, please check if there is gap between the grinding stone surface and blade. If the stone touches the blade, please counter-clockwise rotate the rear of stone axis to keep a 2mm gap.

Slightly press the grinding shaft, better to produce little spark.

If the stone is found to grind on the front edge of the blade, but not the whole sharp surface, then the position of the whole sharpener should be adjusted as per 3.7.3.

3.7.5 Sharpening effect

Loosen the stone axis and press button to make the stone out of the blade, press “STOP” button , to stop the blade, and observe the sharpening effect

If the blade edge appears sharp burr, it proves that the blade is sharp enough and sharpening can be finished. Otherwise you can repeat the process until you feel satisfied.

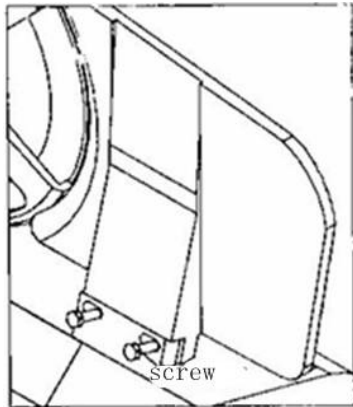
Attention: Please don't use finger to test whether the blade is sharp or not, in case of the finger gets hurt.

3.7.6 Clean the steel and grinding stone ash on the machine.

When clean the blade, you can remove the protection cover.

Attention: Please don't use water to flush, either can not use cleanser that harmful to human health.

3.7.7 After repeated regrinding, the diameter of the blade will become smaller. When the distance between locking board and the edge of the blade is more than 5mm, you should loose the screw on the back of the locking board, move the locking board towards the blade and keep their distance at 2mm, then tighten the screw.



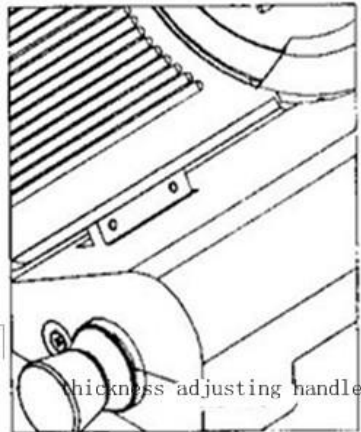
Attention: The blade needs to be changed when the blade diameter is less than 308mm.

3.8 Slicing thickness adjustment

3.8.1 The slicing thickness is the distance between the blade and locking board.

3.8.2 Counterclockwise the handle bar, the slice becomes thick, clockwise the handle bar, slice becomes thin.

3.8.3 When you adjust the thickness of the slice to thick, please remember to eliminate the transmission gap. The solution is first enlarge the slicing thickness then decrease to the desired thickness. When adjust the thickness of the slice to thin, you do not need to eliminate the transmission gap, directly adjust to the desired thickness.



3.9 Melting meat

3.9.1 If the frozen meat is too hard, it is easy to appear fragments when cut thin slices; when cut thick slice the resistance may too large and likely to cause motor stall, or even burn the motor, so the meat must be melt (put frozen meat in the incubator, the process that the temperature of the meat both inside and outside rise slowly called melting the meat.

3.9.2 Meat thickness less than 1.5mm, suitable meat temperature both inside and outside is -4°C (put the frozen meat in the refrigerator that has been cut off power for eight hours) .

Press the meat with a fingernail ,the surface of the meat may appear impression

3.9.3 Slice thickness more than 1.5mm, the meat temperature should be higher than -4°C . And as the thickness increases, the temperature of meat should also be increased correspondingly.

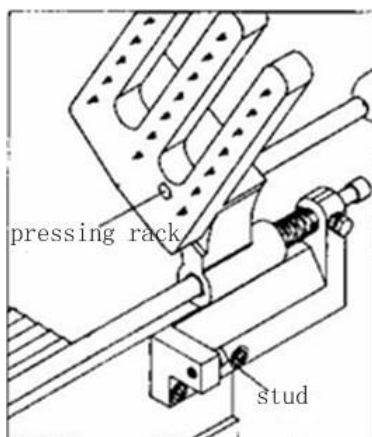
3.10 Slicing

Attention:

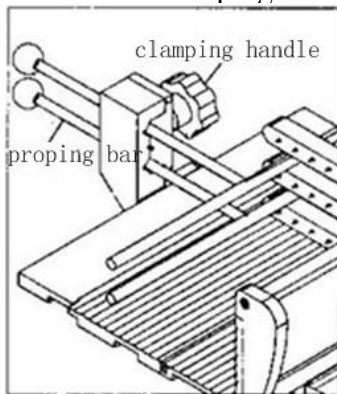
Meat with temperature below -6°C cannot be cut, either any thing too hard or with water dropping.

Reciprocating must be stopped when take or bring meat. It is forbidden to take or bring meat while carrier is runing.

3.10.1. Pull the pressing rack to the top of carrier, then hang it on the carrier stud.



3.10.2. Loosen the clamping handle on proping bar, and pull the bar outside.



3.10.3. Put the meat with suitable hardness on the carrier, and prop slightly with the proping bar, then screw the clamping handle.

Attention: The clamping handle cannot be screwed too tight, otherwise slicer cannot work normally.

3.10.4. Put the pressing rack on top of the meat, firstly press“BLADE” button, then press“RECIPROCATE” button, try to slice several pieces, then press“STOP” button to check if the meat thickness is suitable. Please check 3.8 to adjust slicing thickness. If thickness is suitable, the slicer can begin to work continuously.

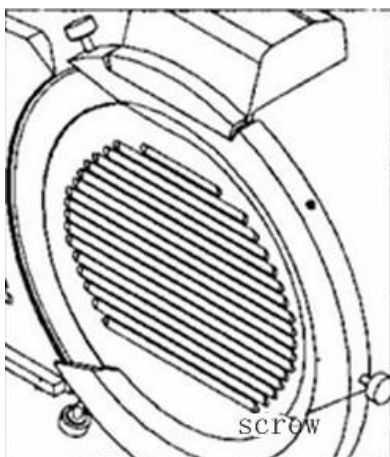
3.11 Change the blade

3.11.1 Remove the blade cover

Remove the carrier away from the blade.

Unscrew the screw on the right of blade cover.

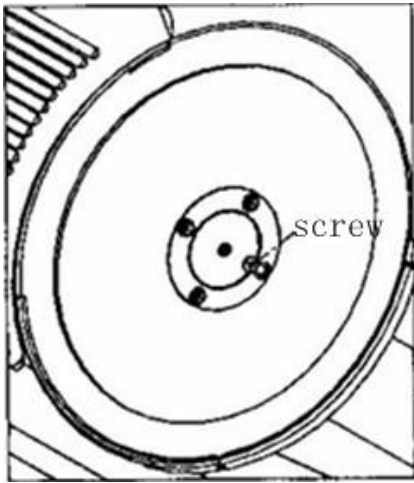
Unscrew the two screws (one up and one down) on left side of the blade cover and take it off



3.11.2 Remove the sharpener

3.11.3 Take off the blade

Unscrew the four screws, remove the blade evenly.



3.11.4 When install the blade, wipe out the locating surface and the blade, gradually tighten the four screws.

Attention: When replace the blade, the machine must be turned off and power must be cut off.

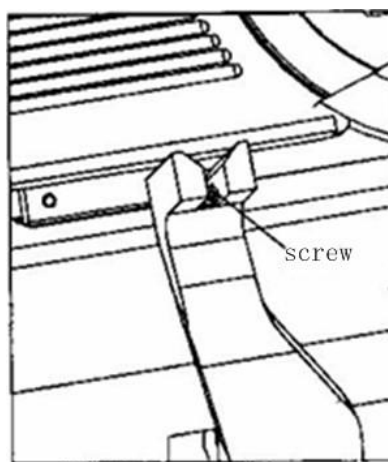
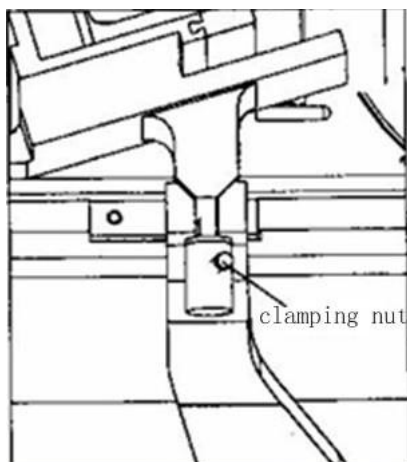
When replace the blade, please wear protective gloves, and take care of the sharp edge when remove or install the blade.

3.12 Adjust the gap between carrier and blade cover

3.12.1 The gap between carrier and blade cover is 2-3mm, which is adjusted by manufacturer before sale.

3.12.2 If the gap is to be adjusted, firstly unscrew clamping nut on the carrier, then take off the carrier to adjust the screw height in the slot of slide bracket.

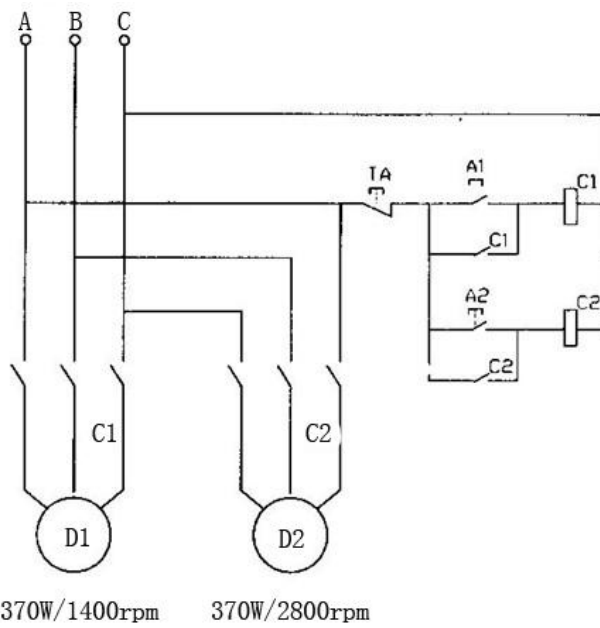
3.12.3 Install the carrier, and check the gap, then tighten the clamping nut if the gap is suitable.



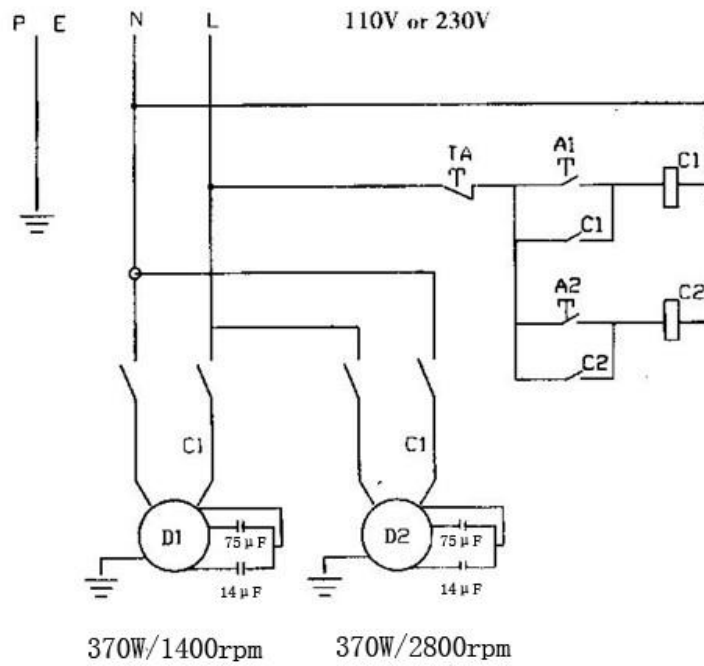
4. Circuit Diagram

4.1 Circuit Diagram

4.1.1 3-phase power slicer

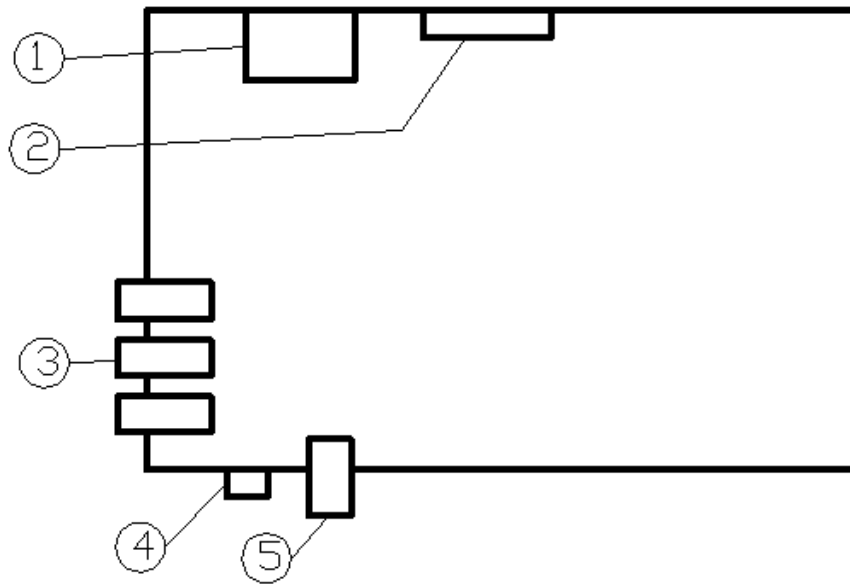


4.1.2 1-phase power slicer



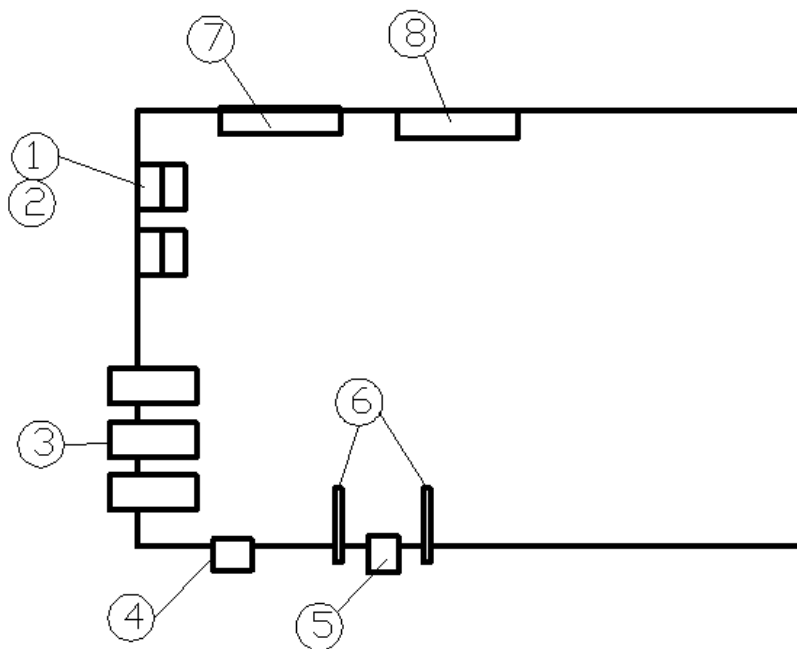
4.2 Location of electrical elements

4.2.1 3-phase power slicer



No.	Code	Name	Quantity	Material
1	CJX2-1210	AC Contactor	2	
2	TD-1515	terminal board	1	
3	Φ 22LAY16 (LB)	Button Switch	3	
4		Cable wire cover	1	Plastic
5	LW32-20/QJ22/2	Universal switch	1	

4.2.2 3-phase power slicer



No.	Code	Name	Quantity	Material
1	NC6-0610	AC Contactor	2	
2	X3-2020	Plastic terminal	2	
3	Φ 22LAY16 (LB)	Button Switch	3	
4		Cable wire cover	1	Plastic
5		Earthing terminal	1	
6		Fuse	2	
7		Capacitance (blade)	1	
8		Capacitance (reciprocate)	1	

5. Trouble Shooting

The machine must be repaired, maintained by professionals and non - professionals are not allowed to repair, so as not to cause personal injury or mechanical, electrical fault.

Common troubles and solutions are shown in Table 1

When troubles are not listed in the table or solutions do not work, please contact the agent or the manufacturer

Table 1

Troubles	Solutions
1.The machine cannot be started up	<ol style="list-style-type: none"> 1. Check whether the machine connects reliable power 2. Check if the fuse knob is loose or damaged 3. Check if the 3-phase power is connected
2. The machine can not cut meat or the meat slices is irregular	<ol style="list-style-type: none"> 1.The blade is not sharp , please read the chapter3.7 and grind the blade correctly 2.Meat is proped too tight by the propping bar thus it cannot slide freely. The prop bar is to be adjusted again to let it slide freely and stably. 3.Meat is too rock, please read chapter3.9 and melt meat 4.Locking board loosens, please read appendix 1 to adjust. 5.The gap between square orbit and its adjusting nut is too large, please adjust according to appendix 2.
3.The blade edge is not sharp	<ol style="list-style-type: none"> 1.Check the grinding stone installation height and grinding angle, please read chapter 3.7 and use the correct method to grind the blade 2. The grinding stone is not pressed , tighten the screw to fix the stone.
4.Fuse damaged once 1-phase slicer starts up, or“BLADE”, “RECIPROCATATE” starts up slowly	<ol style="list-style-type: none"> 1. Check if the start-up(75uf) and running capacitances(14uf) on blade motor and reciprocating motor become loose or damaged. 2. Check if the slide guid is try, and lubricate according to chapter 3.4.

<p>5. Blade rotates, but reciprocating doesn't work</p>	<p>1. Check reciprocating motor: Check if the start-up and running capacitances on blade motor and reciprocating motor become loose or damaged(for 1-phase slicer); Check if the contact gets loose or damaged; Check if the switch gets loose or damaged.</p> <p>2. If motor rotates, check if the tri-angle belt gets loose or broken.</p> <p>3. The square orbit adjusting screw is too tight, please adjust the gap between screw and orbit according to appendix 2.</p>
<p>6. Blade doesn't work, but reciprocating works</p>	<p>1. If the motor doesn't work, check the capacitance(for 1-phase slicer), contact and switch.</p> <p>2. If the motor works, check if the worm and gear transmission work normally(blade pouch gear may be damaged, worm flat key may be cut off)</p>
<p>7. The machine works slowly or the blade rotates slowly</p>	<p>Take off the bottom board, and adjust the tensioning belt as shown in picture below(belt in new machine should be adjusted every 2-3 months, belt in old machine should be adjusted when necessary. The warranty period of the new belt is 9 months).</p>

1. Take off the bottom board



2. Regulating the screw to adjust belt tension.



6. Appendix

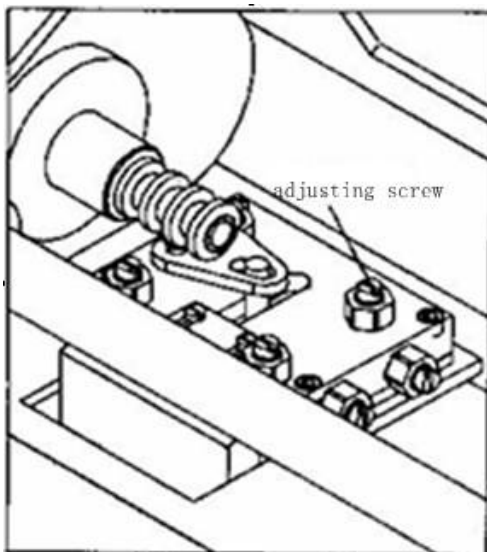
6.1. Appendix 1

6.1.1 Press “RECIPROCATE” button to stop the carrier in a place far from the switch, turn off all the switches, cut off the power, and remove the carrier.

6.1.2 Turn over the machine(the side installed with carrier up), take off the protective panel beside the motor bottom board, and thickness adjusting device can be found).

6.1.3 4pcs of M12 adjusting screws are on the bottom, and 2pcs of M12 adjusting screws are on the two sides, which can be used to regulate the gaps between left and right, up and down.

6.1.4 Use a 18ram wrench to loosen the screws, clockwise rotating the screw to make the orbit gap smaller, the suitable gap should make sure the orbit slide freely, then tighten the screw when gap is suitable.



6.2 Appendix 2

Adjusting method for the gap between square orbit and its adjusting screw

6.2.1 Press “RECIPROCATE” button to stop the carrier in a place far from the switch, turn off all the switches, cut off the power, and remove the carrier.

6.2.2 Turn over the machine(the side installed with carrier up), take off the protective panel beside the motor bottom board, and thickness adjusting device can be found on the slider).

6.2.3 Use a 14mm wrench to loosen the screws, clockwise rotating the screw to make the orbit gap smaller, the suitable gap should make sure the orbit slide freely, then tighten the screw when gap is suitable.

