



**BONE SAW
OPERATION MANUAL**



PICTURE FOR REFERENCE ONLY

CONTENTS

I TECHNICAL DATE	3
1.1 APPLICATION RANGE	3
1.2 TECHNICAL PARAMETERS	3
II GENERAL INSTRUCTIONS	3
III ENVIRONMENT	4
3.1 PACKING.....	4
3.2 CLEANING.....	5
3.3 DISPOSAL.....	5
IV INSTALLATION	5
4.1 UNPACKING	5
4.2 PLACEMENT.....	6
V CONNECTION	6
5.1 ELECTRICAL CONNECTION.....	6
5.2 REQUIREMENTS FOR CABLES	6
5.3 CIRCUIT BREAKER	7
VI OPERATION INSTRUCTIONS	8
6.1 CONTROL SWITCH.....	8
6.2 REPLACEMENT OF SAW BELT	8
6.3 START USE.....	9
6.4 STAORAGE AFTER USE.....	11
VII CLEANING	11
7.1 EXTERNAL COMPONENTS	11
7.2 INTERNAL COMPONENTS	12
VIII MAINTENANCE	12
8.1 COMMON TROUBLES SHOOTING GUIDE	12
8.2 MAINTENANCE PLAN	13
IX ANNEX	13
9.1 CIRCUIT DIAGRAM.....	13

9.2 PACKING LIST	14
9.3 EXPLOSIVE VIEW	14

I Technical date

1.1 Application Range

The machine is designed to cut fresh meat & bone, and frozen meat & bone.

Different saws belts should be selected to cut different material. The service life of the saw belt depends on the products to be cut and the pressure during cutting. Generally, a standard saw belt is expected to cut 1000 to 2000 kgs of products. The corrugated saw belt can be selected to cut fresh meat without bones, so that the service life of the saw belt can be longer, because the saw belt can be turned over to use its other tooth side.

The machine is widely used in hotels, food processing factories, school restaurants, etc.

1.2 Technical Parameters

Use environment: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$; Relative humidity: $<85\%$;

Power condition: 100-120V□/ 220-240V□/380V□, 50Hz□/ 60Hz□

Noise level: $\leq 70\text{dB(A)}$.

Model	Power(W)	Saw Belt Length(mm)	Remark
18mchls-1650	750	1660	Stainless steel body

II General Instructions

- Please read this manual carefully before installation.
- Please keep the manual well for reference in future.
- Fire prevention-please make sure that there are no inflammable and combustibile objects around the machine, and keep the inflammable objects away from the machine.
- Lack of ventilation will cause suffocation. Please do not block the ventilation system around the machine, and do not block the ventilation holes or ducts of other equipment.

- This machine is designed for commercial use, and it is inappropriate to use it in other occasions.
- People(including children) who do not have normal sensory ability or intelligence defects, or who lack of experience and knowledge cannot use this machine.
- The operator must be trained before use, and the machine must be watched while using.
- Please turn off the machine if failure or wrong operation.
- Do not use chlorine containing products (even diluted) to clean the surface, including sodium hypochlorite, hydrochloric acid, chlorination calculation, etc. Do not use metal products to clean steel parts, including wire brush, cleaning ball, etc.
- Do not let grease flow into the gap of plastic parts.
- Do not let the dirt, grease, food or other residues deposit one the surface of the machine.
- Do not spray water directly to clean the surface.

!!! Failure to comply with the above will not guarantee the safety of the equipment, and will not enjoy the warranty service.

III Environment

3.1 Packing

Packaging materials are harmless to the environment and can be safely incinerated and then stored.

Recyclable plastic parts are marked as following:



PE Polyethylene: external packaging, bag for operation manual.



PP Polypropylene: top packaging panel, binding belt.



PS . Foam plastics: corner protection.

3.2 Cleaning

In order to reduce the amount of dangerous substances discharged into the air, when cleaning the machine (external and internal if necessary), the liquid medicine with more than 90% degradable components shall be used.

3.3 Disposal



Do not discard it anywhere. More than 80% (by weight) of recyclable metals (stainless steel, iron, aluminum, zinc plating, copper, etc.) are used in our machine production.

Shut down the machine by cutting off the power supply and then isolate it or place it in a sealed device (if any) to avoid people trapped in it.

IV Installation



Please read the installation and maintenance steps in this instruction manual before installing the machine.

If the correct installation and replacement steps are not carried out, it may cause damage to the machine and danger to people, which is not covered by the production warranty.

4.1 Unpacking



Attention! Any damage during transportation shall be checked immediately.

Do not damage the machine and wear protective gloves when unpacking.

Carefully remove the protective film from the metal panel and remove the traces left by the glue with proper solvent.

Ensure all parts supplied with the machine are available.

4.2 Placement

Attention must be paid to avoid hurting while moving the machine.

Sufficient space shall be provided for the machine for operation, maintenance and ventilation.

It is forbidden to store or use inflammable articles or liquids around the machine.

Check to make sure the machine is at water level after placement.

V Connection

Installation or maintenance must be carried out by professional and licensed technicians.

Make sure the power supply is consistent with the nameplate parameters.


Make sure the direction is correct before use.

5.1 Electrical Connection

Warning: before electrical connecting, make sure that the rated voltage and frequency are consistent with the parameters marked on the nameplate.

The cable of the machine must be connected by professionals. The used cable must be with sufficient current capacity, and it must be installed firmly with screws tightened.

To make sure the safety of the machine and personal life, the zero line can ground line cannot be shared, and the ground line shall be reliably grounded.

The screw with  symbol is equipotential node, please be sure to connect it reliably.

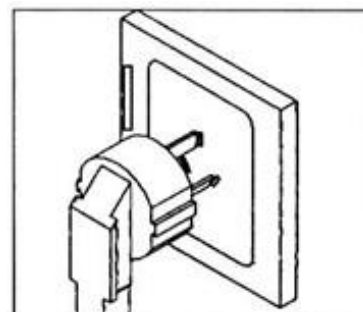
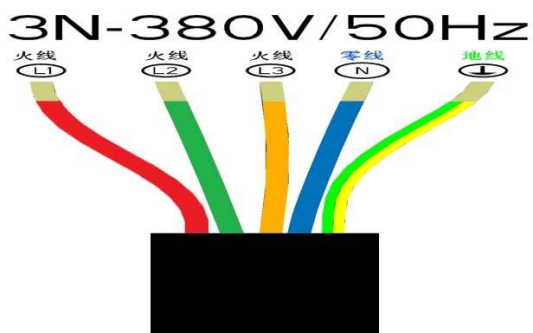
5.2 Requirements for Cables

The external cable of the machine must be protected by metal or hard plastic pipe, and the access of the protection pipe must be reinforced by special cable gland.

The connection must be according to the circuit diagram sticking on the machine body, and data on the product nameplate must be carefully checked to ensure the correction.

The machine is equipped with standard triangle power plug with ground line if without special request.

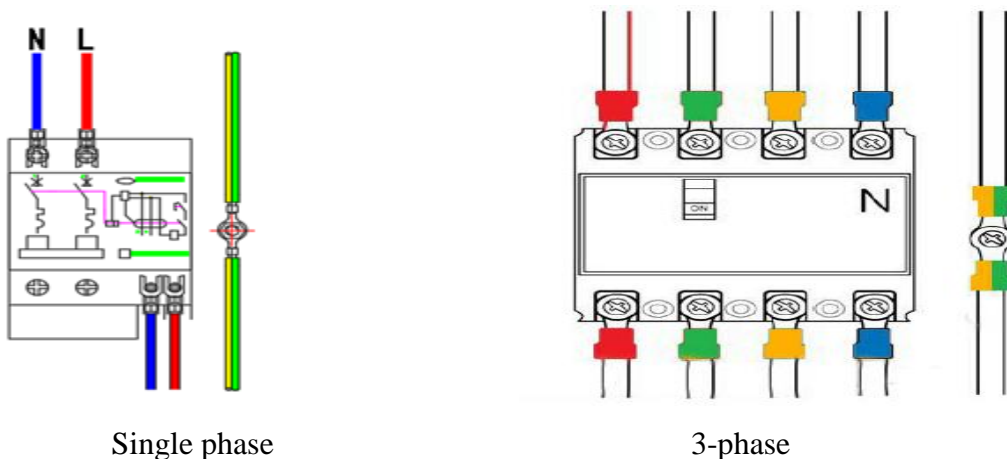
If the power condition is 3-phase, please distinguish the live line L1, live line L2, live line L3, zero line N and ground line PE.



5.3 Circuit Breaker

The upstream of the circuit must be installed with leakage protection device, with leakage action value as 30mA and action time $<0.1S$.

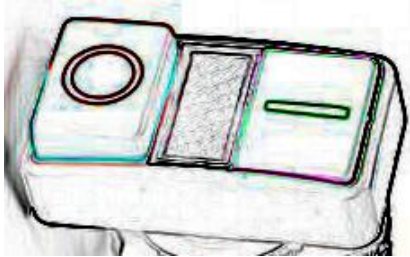
The power supply of the machine needs to be connected to the power grid through the leakage protection switch with enough current capacity, and can be easily disconnected independently. The ground line must be reliably grounded and cannot be controlled by the switch, as shown in the figure



!!! Failure to comply with the above will not guarantee the safety of the equipment, and will not enjoy the warranty service.

VI Operation Instructions

6.1 Control Switch



18mchls-1650 Control switch

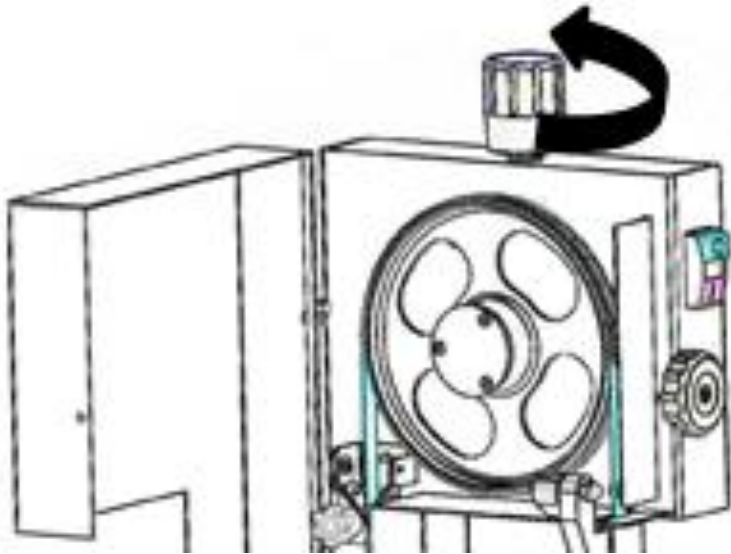
I — Start up

O — Stop

6.2 Replacement of Saw Belt

6.2.1 Dismantle the saw belt

Open the cover door, adjust the tension handle on the top anticlockwise, loosen the upper pulley, and then remove the saw belt.



6.2.2 Installation of saw belt

Put the saw belt on the upper and lower pulleys, pay attention that the saw tooth should go down clockwise, and ensure that the edge of the tooth peak is in a straight line with the leading edge of the pulley.

Ensure the saw belt is correctly installed between the scraper, upper pulley, lower pulley and the central plate, and can pass through the middle guide groove.

Adjust the tension handle on the top at clockwise direction until the ratchet wheel loosens and

makes a sound, which means that the saw belt has been properly tensioned.

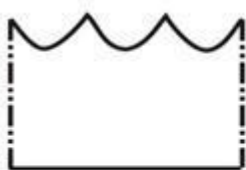
If the saw belt is not in line with the pulley, it must be adjusted. The tilt knob can be adjusted as follows.

The nut can be loosened by means of a lever to release the tilt knob. It can be found that when the saw belt is adjusted manually while the knob is tightened, the tooth will move backward. Similarly, when the knob is loosened, the tooth moves forward. The center operation must be carried out by loosening and tightening the knob to minimize the installation error of the saw belt and prevent it from falling off. Turn the pulley by hands while adjusting the tilt knob.

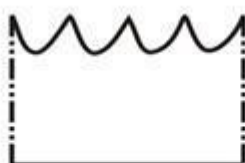
6.3 Start Use

Please cooperate according to procedures as follows:

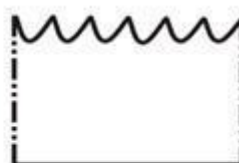
6.3.1 Select different types of tooth according to different type of food, see details as follows:



3P – frozen fish



4P – frozen meat

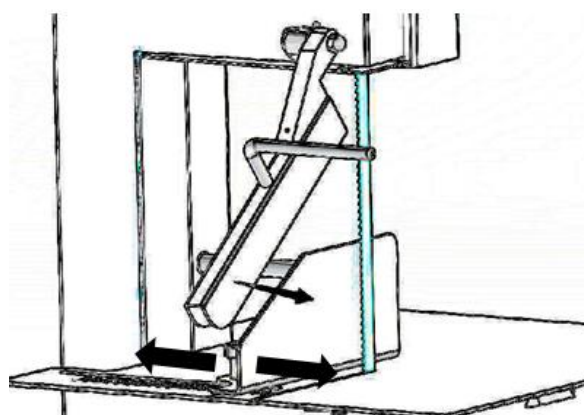


6P – bone

6.3.2 Place the processing food on the working table, and adjust the cutting thickness by moving the sizing plate left and right.

6.3.3 Press the start-up button to start the machine.

6.3.4 Put the meat product between the saw belt and the pushing device, hold the handle of the pushing device with one hand, and hold the meat product with the other hand, start to apply a constant pressure on the pushing device, push the meat product to be cut to the saw belt, and cut it into slices.



When sawing small pieces of meat, it is necessary to hold the meat indirectly with a transition object, push the meat with a meat pushing board or extrusion device, and it is strictly forbidden to cut

the meat directly with hands.

Only when the pushing device reaches the end point and maintains the vertical position, the meat product that has been cut into slices can be taken out. Then grasp the pushing device again and pull it in its own direction, and put the objects to be cut in a proper position to prepare for the next cutting.

When cutting meat products with bone, pay attention to apply more pressure when cutting the bone than when cutting meat to protect the saw belt and prevent excessive wear of the motor.

The cutting direction is forbidden to be changed while cutting, so as not to break the saw belt and attack people, and also to avoid pulley and belt slipping.

The meat products should always be kept at proper position to make sure the meat part to be cut earlier than the bone part.

6.3.5 When finishing, press the stop button to stop the machine.

6.3.6 Unplug the cable to cut off the power after use.

6.3.7 Do clean the machine carefully and keep it dry every time after use.

Attention:

When installing the saw belt, pay attention to the direction of the saw blade, with the saw tooth tip on the right cutting surface facing down.

The scrubber should press on the saw belt, but do not touch the saw tip, otherwise it will increase the noise and shorten the service life of the saw belt.

When the bone saw is not in use, it is better to loosen the tension handle of the saw belt on the top of the machine for two turns, and then tighten the handle when the machine is turned on next time, so as to increase the service life of the saw belt.

When the door of the bone saw is opened, the safety switch will stop the machine, but the saw belt will continue to rotate for a while because of the inertia effect, at this time, do not touch the saw belt with hands.

It is recommended to wear safety gloves during operation.

Never cut meat by hand without any protection, especially when cutting smaller meat products, such as pig's hooves. The saw belt with high-speed operation will hurt fingers even if

gloves are worn. Gloves can only delay and reduce the injury. During operation, the operator should be concentrated and pay full attention on it.

6.4 Storage after Use

If the machine is not to be used for a period of time, the following measures shall be taken:

Disconnect the power/air supply, and remove the accessories.

Clean the machine.

Store it in a dry and ventilated place.

Do double-check it before using it again.

VII Cleaning

Warning: cut off the machine power before cleaning.

Do not submerge electrical parts in water!

Improper operation may cause permanent deformation and damage to the machine!

It is recommended to lubricate the guide of the tensioning device with edible lubricating oil by every 200 hours. Remove the tensioner and lubricate its spring and thread as mentioned above, and it is recommended to replace the pulley bearings by every 5000 hours.

7.1 External Components

After use, use soapy water, cloth or sponge with or without detergent to remove the dirt and residue on the steel surface, and dry the surface fully after cleaning.

In case of being covered with dirt and food residue, wipe the dirt with a cloth or sponge along the polishing direction and rinse it frequently.

During circular wiping, the dirt on the cloth / sponge may damage the polished surface of the

steel body.

Metal objects can damage or damage steel surfaces: damaged steel surfaces are more likely to become dirty and corroded.

7.1.1 Open the door, loosen the adjusting device and unload the saw belt. Loosen the scraper protection knob to remove the scrapers and clean them with a stiff brush and hot water.

7.1.2 Use wet cloth, hot water and neutral detergent to clean the interior and exterior of the door and machine body, as well as saw belt and its protection device, etc. Finally, dry it with a dry cloth.

Special care should be taken to clean debris that has accumulated in dead corners of the machine, pulleys, pulley grooves, bottom scrapers, and rear bearing caps.

The bottom pulley is a left-hand thread, which can only be loosened by turning it clockwise.

7.2 Internal Components

Important! The following operations can only be carried out by professionals(every 6 months).

Check the internal components.

Check and remove the residue and dirt inside the machine.

Attention! In special circumstances (such as frequent use of machines, salt spray environment, etc.), the above cleaning work needs to be done frequently.

VIII Maintenance

8.1 Common Troubles Shooting Guide

In order to avoid unnecessary personal injury or mechanical equipment failure, the machine must be maintained and repaired by professionals. Non professionals are not allowed to repair without authorization.

Common faults and troubles shooting methods:

Fault Description	Probable Cause	Solution
Meat products cannot be cut	Saw belt wear	Replace the saw belt
Saw belt drops	Saw belt is not clocked tightly	Turn the tension handle clockwise to tension the saw belt

If the problem cannot be solved, please contact the service center.

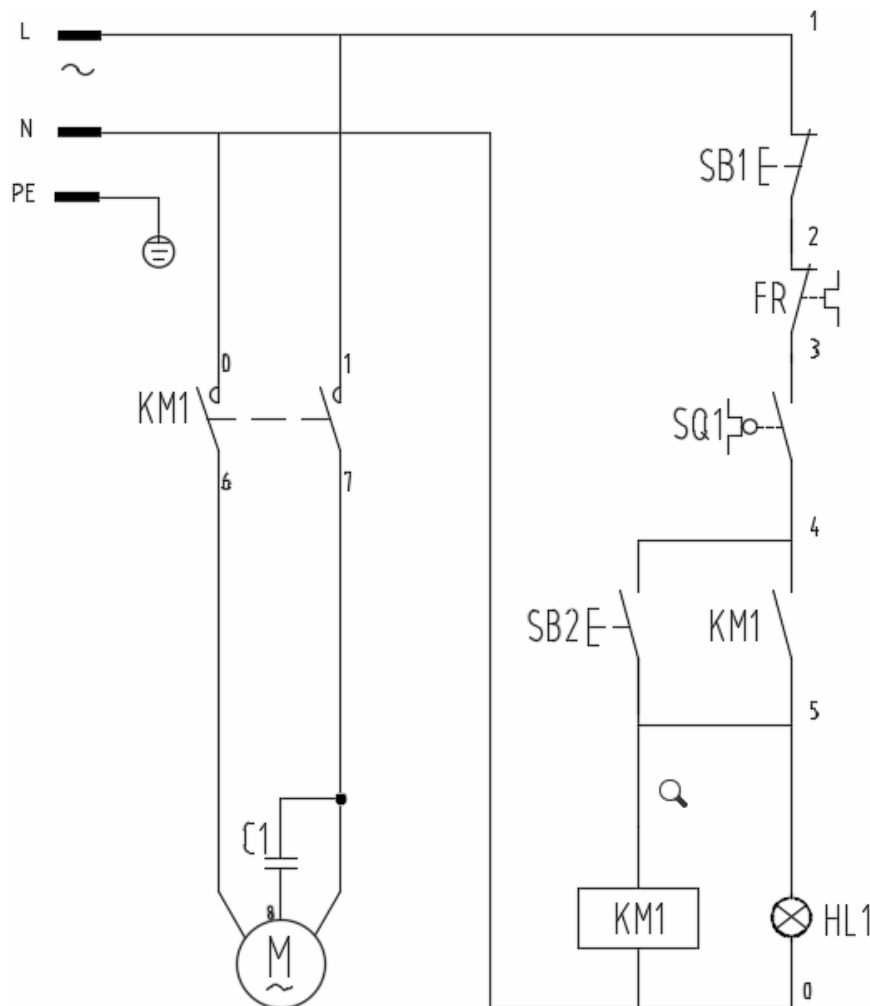
8.2 Maintenance Plan

It is suggested that the machine to be inspected at least every 12 months by professional and authorized personal.

IX Annex

9.1 Circuit Diagram

Circuit diagram for 18mchls-1650



KM1: Contactor

SB1: Stop button

SB2: Start-up button

M: Motor

FR: Overload protection

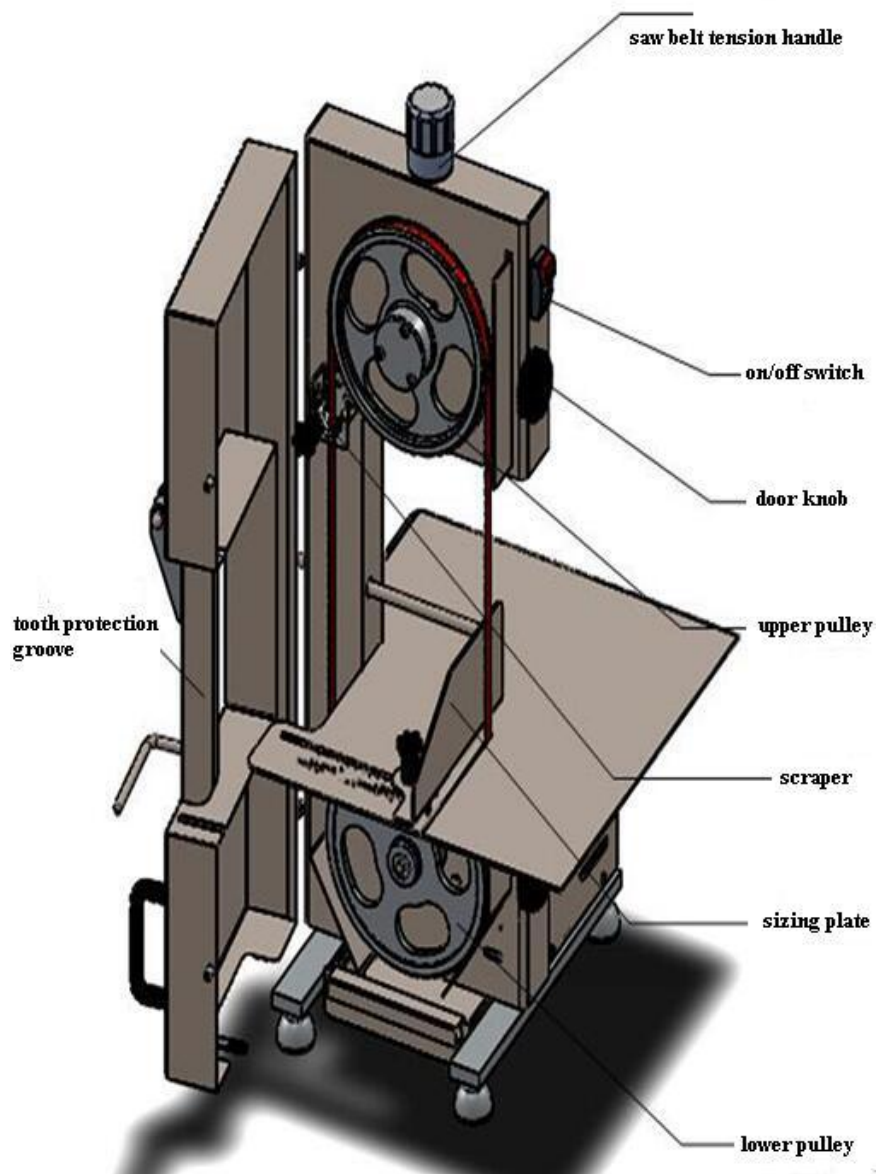
HL1: Instruction light

C1: Capacitance

SQ1: Position switch

9.2 Explosive View

HLS-1650



9.3 Packing List

- | | | |
|----|------------------|---------|
| 1. | Bone Saw | 1 piece |
| 2. | Operation Manual | 1 piece |