



# ***INSTRUCTION MANUAL***

## ***MEAT TENDERIZER***

# ABSL

# ***Instructions Manual***

## ***SUMMARY***

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Problems	Causes	Solutions
* The processed product gets stuck inside the machine	* Combs are not in the machine.	* Put the Combs as indicated on items 3.2 of this manual.
* The rollers stop during the operation..	* Power shortage.	* Check electricity supply network.
	* Excessive wearing of worm and crown.	* Call technical assistance.
	* Bad connection on plug or electric cable.	* Check if the electric cable is not broken and check the plug pins.
	* The machine is unplugged.	* Plug the machine.
* Smoke or burn smell.	* Motor problem.	* Call technical assistance.
* The machine turns on but the rolls take too long to spin.	* Problem with the motor start capacitor.	* Call technical assistance.
* Strange noises.	* Incorrect position of rollers.	* Invert the position of the rollers.
	* Problem with ball bearings.	* Call technical assistance.
* The machine does not turn on.	* The Protection Lid and/or the Meat collector are not properly set on the Meat Tenderizer.	* Set the Protection Lid and/or the Meat collector on the correct position.

# 1. Introduction

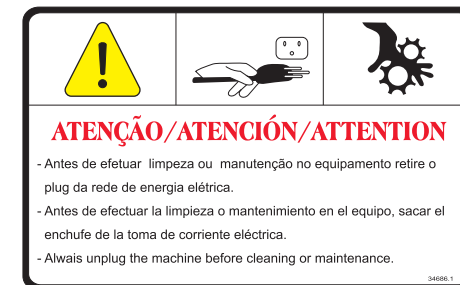
## 1.1 Safety

When incorrectly used, meat tenderizers are potentially DANGEROUS. NEVER put your hands through the opening of the Protection Lid N°05 (Pic-04), especially if it is turned on. This attitude may lead to serious injuries to the user. The removal of any part for cleaning or any maintenance service must be made only by properly trained personnel, following the instructions below to avoid accidents:

- 1.1.1 – Always unplug the machine for cleaning, maintenance or any other service.
- 1.1.2 – Handle the Tenderizing Rollers N°03 (Pic-02) with care, because they have sharp knives. Use the Rollers Extractor N°01 (Pic-02) for this operation.
- 1.1.3 – Never make use of any tool or instrument to help passing the meat through the Protection Lid N°05 (Pic-04).
- 1.1.4 – Never remove the Protection Lid N°05 (Pic-04) without being sure that the Tenderizing Rollers N°03 (Pic-02) have stopped completely.
- 1.1.5 – Never spray water directly upon the machine. Use a wet cloth to clean the non-removable parts.

### IMPORTANT

The Meat Tenderizer ABSL is equipped with a safety system. This way, you can only turn the machine on if the Protection Lid N°05 (Pic-04) and the Meat Collector N°06 (Pic-04) are properly attached.

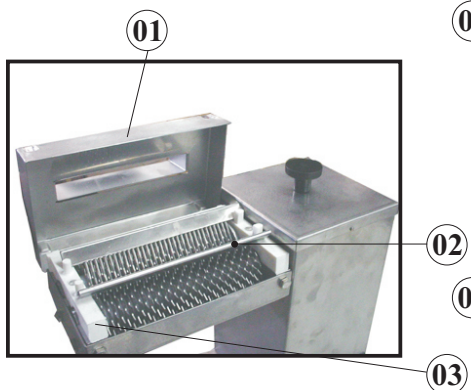


## 1.2 Main Components

The Meat Tenderizer model ABSL is a bench machine capable of processing several kinds of meat without bones and not frozen.

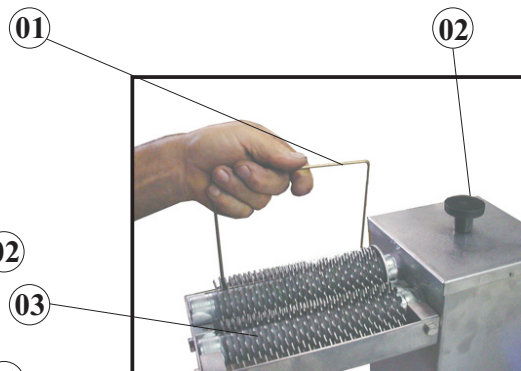
Most components of this machine are made of high grade materials such as aluminum, stainless steel and high durability non-toxic plastic.

Picture 01



- 01 – Protection Lid
- 02 – Combs
- 03 – Comb Support

Picture 02



- 01 – Rollers Extractor
- 02 – Knob
- 03 – Tenderizing Rollers

## 4.6 Maintenance

### 4.6.1 Danger

Any maintenance with the machine in working situation is dangerous. **TURN IT OFF BY PULLING THE PLUG OFF THE SOCKET DURING MAINTENANCE.**

### IMPORTANT

**Always unplug the machine when emergency cases arise.**

## 4.7 Advice

Electrical or mechanical maintenance must be done by qualified personal for such operation. Person in charge has to be sure that the machine is under TOTAL SAFETY conditions when working.

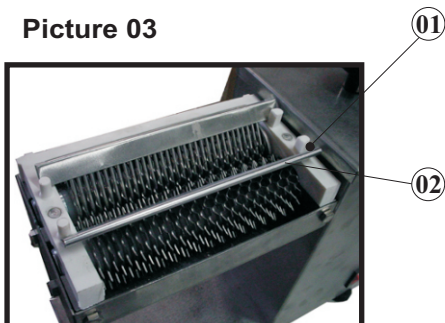
## 5 Analysis and Problems Solving

### 5.1 Problems, causes and solutions

The Meat Tenderizer model ABSL was designed to operate with minimum maintenance but the natural wearing caused by long time use of the equipment may eventually cause some malfunctions.

If you have any problem with your Meat Tenderizer, check the Table 02 next, on which the most common situations are listed with recommended solutions.

Picture 03



- 01 – Combs
- 02 – Comb Support

Picture 04



- 01 – Rollers Support
- 02 – Housing
- 03 – Base
- 04 – ON/OFF Switch
- 05 – Protection Lid
- 06 – Meat Collector

## 4.3 Routine Inspection

### 4.3.1 Advice

When checking the tension of the belts or chains, DO NOT introduce your fingers between the belts and the pulleys and nor between the chain and the gears.

### 4.3.2 Precautions

Check if motors and sliding or turning parts of the machine produce abnormal noises.

Check the tension of the belts and chains and replace the set when belt or chain show signs of being worn out.

When checking tensions of belts or chain DO NOT introduce your fingers between belts and pulleys, nor between the chains and gears. Check protections and safety devices to make sure they are working properly.

## 4.4 Operation

### 4.4.1 Advice

Be sure your hair is not loose in order to avoid getting caught by turning parts which could lead to a serious accident. Tie your hair well up and/or cover your head with a scarf.

The operation performed by not trained or skilled personnel shall be forbidden.

Never touch turning parts with your hands or in any other way.

NEVER operate machine without all original safety devices under perfect conditions.

## 4.5 After Finishing The Work

### 4.5.1 Precautions

Always TURN THE MACHINE OFF by removing the plug from the socket before cleaning the machine.

Never clean the machine unless it has come to a COMPLETE STOP.

Put all components back to their functional positions before turning it ON again. DO NOT place your fingers in between belts and pulleys nor chains and gears.

## 1.3 Technical Characteristics

Table - 01

Characteristics	Unit	ABSL
Average Production	[kg/h]	até 400
Voltage(*)	[V]	110ou220
Frequency(*)	[Hz]	50 ou 60 (*)
Power Rating	[CV]	0,33
Consumption	[kW/h]	0,24
Height	[mm]	455
Width	[mm]	420
Depth	[mm]	185
Net Weight	[kg]	22
Shipping Weight	[kg]	24

(\*) The frequency and the voltage of the motor shall be only the one indicated on the motor label .

## 2. Installation and Pre Operation

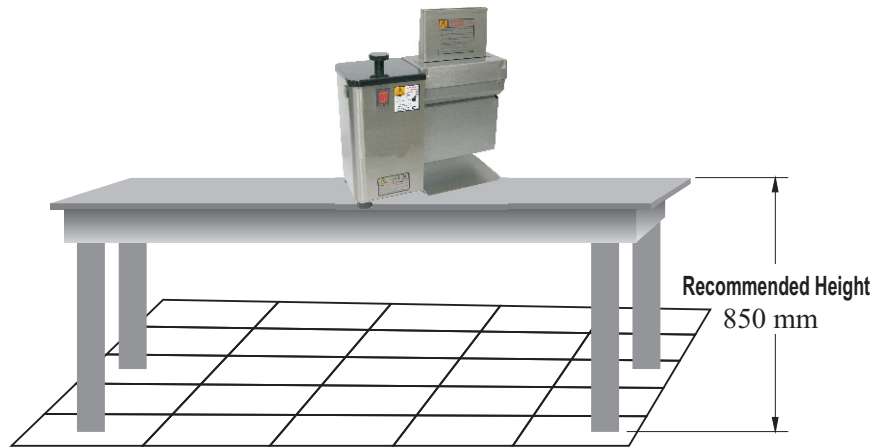
### 2.1 Installation

For a good performance, the Meat Tenderizer ABSL must be placed onto a leveled stable surface approximately 850mm high (Pic-05).

Control the voltage , it shall be the same voltage as the electric network .

The electric cable brings a plug with 2 (two) flat pins and 1 (one) round pin (ground wire). It is mandatory that the 3 (three) pins are properly connected before using the machine.

Picture - 05



## 2.2 Pré Operation

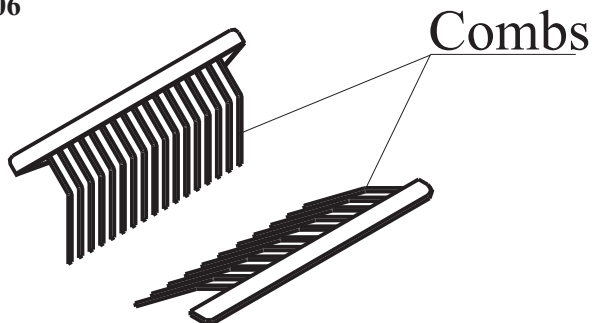
Check if the Meat Tenderizer is firm in its position. Before using the machine, wash all food-contacting parts with hot water and liquid soap. Dry the parts before putting them back into the machine.

The Combs (Pic-06) prevent the meat from winding around the Tenderizing Rollers N°03 (Pic-02) and consequently helps on its way out. Use the Rollers Extractor N°01 (Pic-02) to safely remove the Tenderizing Rollers N°03 (Pic-02).

### IMPORTANT

**Always use the Combs (Pic-06) when processing any kind of meat.**

Picture - 06



### 4.1.3 Advices

In case of power shortage, immediately turn the machine OFF.

Use recommended or equivalent lubricants, oils or greases.

Avoid mechanical shocks as they may cause failures or malfunction.

Avoid penetration of water, dirt or dust into mechanical or electrical components of the machine.

DO NOT MODIFY original characteristics of the machine.

DO NOT REMOVE, TEAR OFF or MACULATE ANY SAFETY or IDENTIFICATION LABELS stuck on the machine. If any label has been removed or is no longer legible, contact your nearest dealer for replacement.

### 4.2 Safety Procedures and Notes Before Switching Machine ON

#### IMPORTANT

**Carefully read ALL INSTRUCTIONS of this manual before turning the machine ON. Be sure to be familiar with the instructions and that you have well understood all information contained in this manual. If you have any question contact your supervisor or your nearest Dealer.**

#### 4.2.1 Danger

An electric cable or electric wire with damaged jacket or bad insulation could cause electrical shocks as well as electrical leak. Before use, check conditions of all wires and cables.

#### 4.2.2 Advices

Be sure ALL INSTRUCTIONS in this manual have been thoroughly understood. Every function and operational procedure have to be very clear to the operator. Contact your nearest Dealer for further questions.

Any manual command (switch, button or lever) shall be given only after being sure it is the correct one.

#### 4.2.3 Precautions

The electric cable has to be compatible with the power required by the machine. Cables touching the floor or close to the machine need to be protected against short circuits.

## 4. General Safety Practices

### IMPORTANT

If any item from the **GENERAL SAFETY NOTIONS** section is not applicable to your product, please disregard it.

The following safety instructions are addressed to both the operator of the machine as well as the person in charge of maintenance. The machine has to be delivered to the operator in perfect conditions of use by the Distributor to the user. The user shall operate the machine only after being well acquainted with the safety procedures described in the present manual. **READ THIS MANUAL WITH ATTENTION.**

### 4.1 Basic Operation Practices

#### 4.1.1 Dangerous parts

Some parts of the electric devices are connected to high voltage points. These parts when touched may cause severe electrical shocks or even be **FATAL**.

Never touch commands such as buttons, switches and knobs with wet hands, wet clothes and/or shoes. By not following these instructions operator could be exposed to severe electrical shocks or even to a **FATAL** situation.

#### 4.1.2 Warnings

The operator has to be well familiar with the position of ON/OFF Switch to make sure the Switch is easy to be reached when necessary. Before any kind of maintenance, physically remove plug from the socket.

Provide space for a comfortable operation thus avoiding accidents. Water or oil spilled on the floor will turn it slippery and dangerous. Make sure the floor is clean and dry.

Before giving any manual command (switch, buttons, turn keys or lever) be sure the command is the correct one. Check this manual for further details if necessary.

Never use a manual command (switch, buttons, lever) unadvisedly. If any work is to be made by two or more persons, coordination signs will have to be given for each operation step. Every step of the operation shall be taken only if the sign has been made and responded.

## 2.3 Feeding Procedure

### ATTENTION

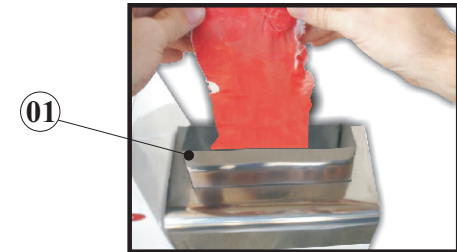
Under no circumstances use any instruments to push the meat into the Protection Lid N°01 (Pic-07).

The Meat Tenderizer ABSL is a machine that works in **LOW SPEED**. Its utilization is simple but requires total attention from the operator to avoid accidents.

Put the meat to be processed through the opening of the Protection Lid N°01 (Pic-07) dropping it loose inside the machine.

The ABSL tenderizes meat up to 20cm wide and with thickness up to 1,3cm.

Picture - 07



## 3. Operation

### 3.1 Starting

Make sure the Protection Lid N°01 (Pic-07) is properly attached. Start the machine by switching **ON** the ON/OFF Switch N°04 (Pic-04) located on the Housing N°02 (Pic-04).

### 3.2 Placement and Removal of the Rollers Set

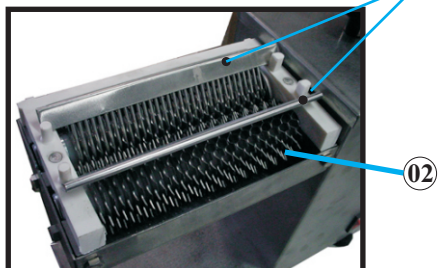
### IMPORTANT

Always unplug the machine when you need to remove any removable part. Wait until the Tenderizing Rollers N°03 (Pic-02) have come to a complete stop before removing the Protection Lid N°01 (Pic-07).

This is a simple operation, however it requires carefulness from the operator in order to avoid accidents.

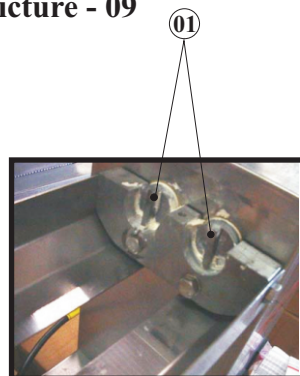
Turn the Maniple N°02 (Pic-02) until the forelocks of the Driving Shafts N°01 (Pic-09) are in vertical position. Then, use the Rollers Extractor N°01 (Pic-02) to lay the Tenderizing Rollers N°03 (Pic-02) on their respective forelocks until the end of their course. Place the Combs N°01 (Pic-08) through the Tenderizing Rollers N°02 (Pic-08) on a position that allows the perfect attachment of the protection lid. Finally place the Protection Lid N°01 (Pic-07).

Picture -08



01 – Combs  
02 – Tenderizing Rolls

Picture - 09



01 – Driving Shafts

### 3.3 Cleaning

#### IMPORTANT

Never clean the machine when it is connected to a power point, always unplug the machine before cleaning. Before removing the Protection Lid N°01 (Pic-07), make sure the Tenderizing Rollers N°02 (Pic-08) have come to a complete stop.

All the parts in contact with the meat must be removed and washed with hot water and liquid soap. After washing, dry the parts before putting them back on the machine. The other external parts of the frame can be cleaned with a wet cloth.

Find hereafter the procedures to remove the machine removable parts:

3.3.1 With the machine unplugged, remove the Protection Lid N°01 (Pic-07) and the Combs N° 01 (Pic-08). Turn the Knob N° 02 (Pic-02) until the forelocks are in vertical position. Use the Rollers Extractor N°01 (Pic-02) to remove the Tenderizing Rollers N°03 (Pic-02) vertically, being extremely careful with the sharp edges of the tenderizing knives.

#### IMPORTANT

Note the position of the Tenderizing Rollers before removing them, and replace them the same way.

3.3.2 Wash all removable parts with hot water and liquid soap. Rinse and dry the parts before resetting them on the machine.

3.3.3 Never use hard objects such as knives, forks and others to remove pieces of meat stuck between the Tenderizing Knives. Use a nylon brush to do so.

### 3.3.1 Cautions with Stainless Steel:

The Stainless Steel may present rust signs, which ARE ALWAYS CAUSED BY EXTERNAL AGENTS, especially when the cleaning or sanitization is not constant and appropriate.

The Stainless Steel resistance towards corrosion is mainly due to the presence of chrome, which in contact with oxygen allows the formation of a very thin protective coat. This protective coat is formed through the whole surface of the steel, blocking the action of external corrosive agents.

When the protective coat is broken, the corrosion process begins, being possible to avoid it by means of constant and adequate cleaning.

Cleaning must always be done immediately after using the equipment. For such end, use water, neutral soap or detergent, and clean the equipment with a soft cloth or a nylon sponge. Then rinse it with plain running water, and dry immediately with a soft cloth, this way avoiding humidity on surfaces and especially on gaps.

The rinsing and drying processes are extremely important to prevent stains and corrosion from arising.

#### IMPORTANT

Acid solutions, salty solutions, disinfectants and some sterilizing solutions (hypochlorites, tetravalent ammonia salts, iodine compounds, nitric acid and others), must be AVOIDED, once it cannot remain for long in contact with the stainless steel:

These substances attack the stainless steel due to the CHLORINE on its composition, causing corrosion spots (pitting).

Even detergents used in domestic cleaning must not remain in contact with the stainless steel longer than the necessary, being mandatory to remove it with plain water and then dry the surface completely.

#### Use of abrasives:

Sponges or steel wool and carbon steel brushes, besides scratching the surface and compromising the stainless steel protection, leave particles that rust and react contaminating the stainless steel. That is why such products must not be used for cleaning and sanitization. Scrapings made with sharp instruments or similar must also be avoided.

#### Main substances that cause stainless steel corrosion:

Dust, grease, acid solutions such as vinegar, fruit juices, etc., saltern solutions (brine), blood, detergents (except for the neutral ones), common steel particles, residue of sponges or common steel wool, and also other abrasives.