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- Besides this equipment, a complete range of other products are manufactured, consult our dealers.  
- Due to the constant improvements introduced to our equipments,  
the information contained in the present Instruction Manual may be modified without previous notice.

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INSTRUCTIONS MANUAL



MEAT TENDERIZER HEAVY DUTY STAINLESS STEEL

MODEL  
**ABN-HD-N**

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## 1. Introduction

### 1.1 Safety

When incorrectly used this equipment is a potentially DANGEROUS machine. Maintenance, cleaning or any other service shall be performed by a duly trained person and with the machine unplugged.

To avoid accidents respect the following instructions:

1.1.1 Read completely these instructions.

1.1.2 To avoid to risk electric shocks and damage to the equipment never use it with wet clothes or shoes and/or standing on wet floors. Do not plunge it into water nor any other liquid, do not spray water directly to the equipment.

1.1.3 When the equipment is in operation the operator shall supervise it, principally when children might be near.

1.1.4 Unplug the equipment when: It is not in use, before to clean it, before to remove or to place some accessory before maintenance or any other service.

1.1.5 Do not operate the equipment if the cord or plug are damaged. Do not lean the cord on table edges, nor let them lie on hot surfaces.

1.1.6 When the equipment may have fall , have been damaged any way, or simply does not work, take it to Technical Assistance to check.

1.1.7 The use of accessories not recommended by the manufacturer may cause corporal damages.

1.1.8 Keep the hands or any other object away from moving parts while the equipment is in operation.

1.1.9 During operation, never wear loose clothes with wide sleeves principally around the wrists.

1.1.10 Make sure the equipment voltage and the network voltage are the same, and the equipment has been solidly grounded.

1.1.11 Handle with care the Rolls #.06 (Pic.01) because they have sharp edge knives.

1.1.12 Never use instruments to help to place the meat inside the Protection Lid #.01 (Pic.01).

1.1.13 Never remove the Protection Lid # 01 (Pic.01) before to be sure the Rolls #.06 (Pic.01) are totally stopped.

## IMPORTANT

**For mayor operator protection this equipment is provided with a safety system not allowing to be involuntary switched ON after an eventual energy shortage.**

## IMPORTANT

**Make sure the cord is in perfect conditions for use. If it is not, change it for a new one in accordance with the technical specifications and safety rules.  
The substitution shall be made by a qualified professional, and shall respect the local safety norms.**

## IMPORTANT

**This equipment must not be used by children or any persons with reduced physical or mental aptness, lack of experience or knowledge, unless they are under supervision or have received from the person responsible for safety, proper instructions on how to use the equipment.**

## IMPORTANT

**Children shall be watched in order to avoid them to play with the equipment.**

## IMPORTANT

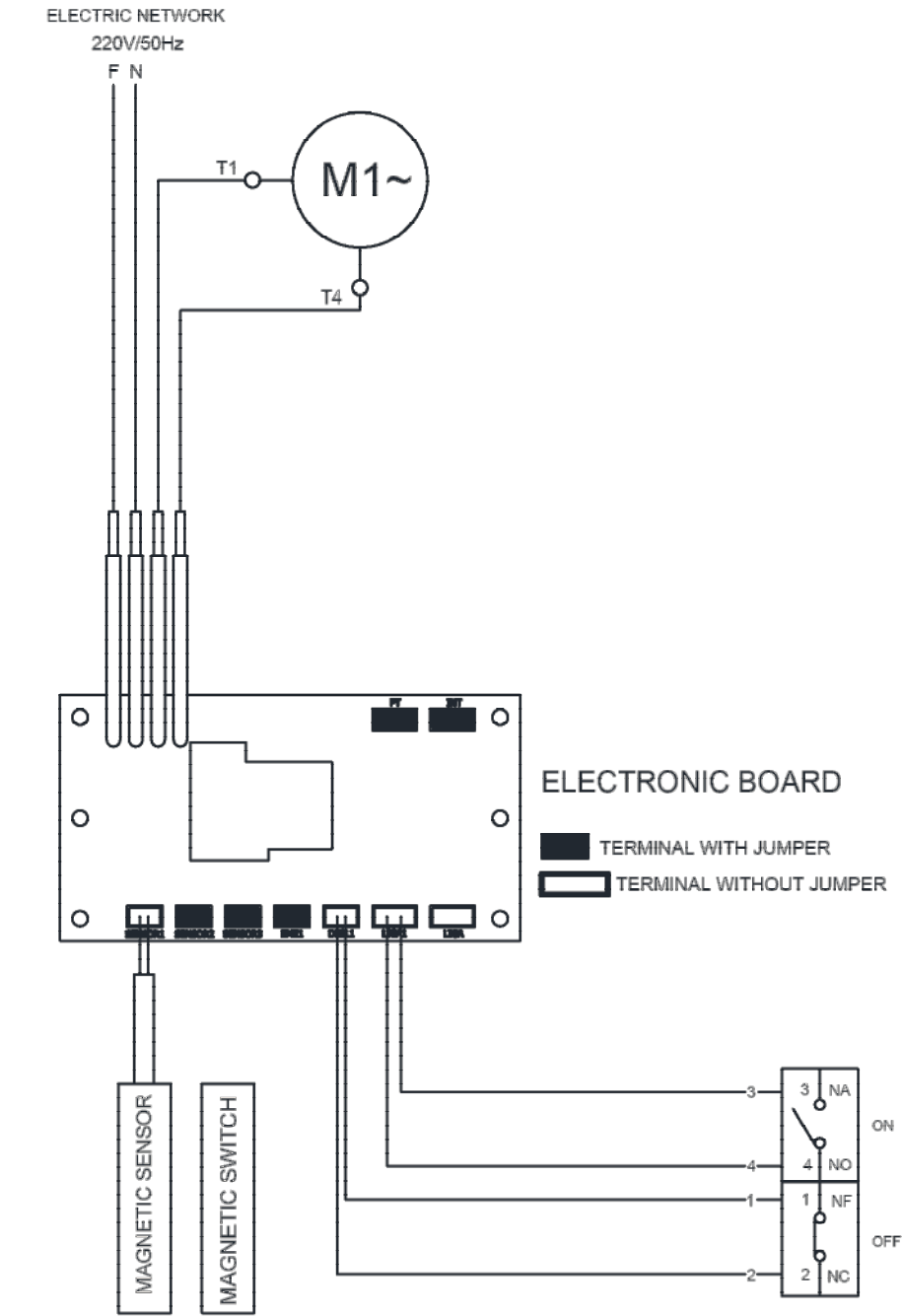
**In case of emergency take off the plug from its socket.**

## IMPORTANT

**Never spray water directly on to the equipment.**

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

7. Electric Diagram

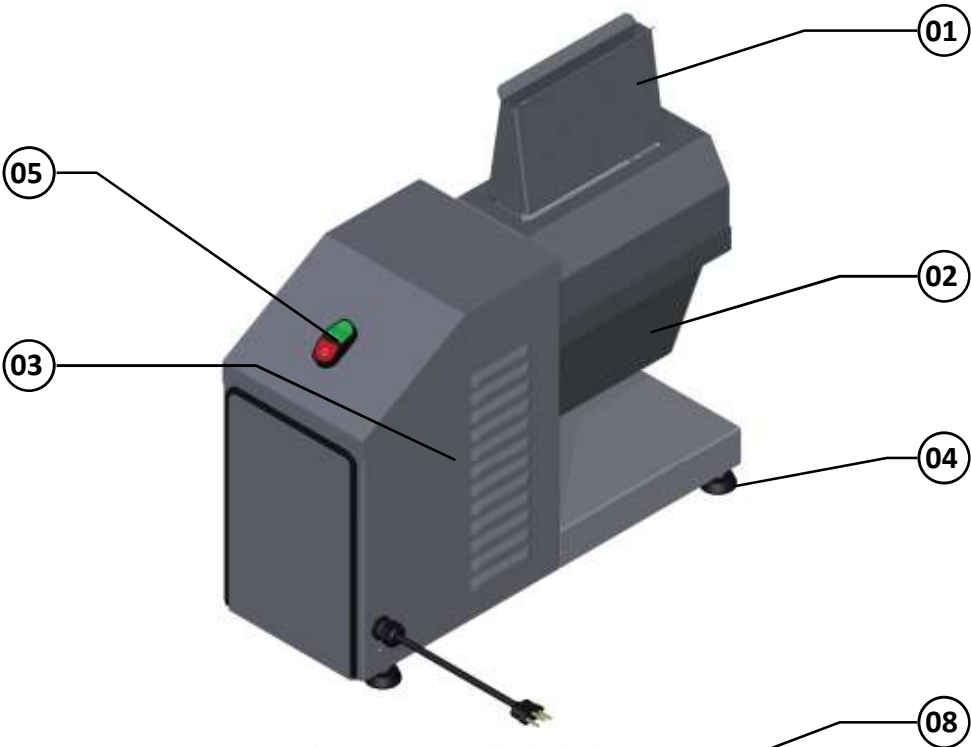


Electrical Diagram code: 49745.2  
Version: 01

1.2 Main Components

All components of this equipment were designed and manufactured using carefully selected materials to their proper functions, according to test standards and experience of Siemens.

PICTURE 01



- 01 - Protection Lid
- 02 - Rolls Support
- 03 - Housing
- 04 - Foot
- 05 - ON/OFF Switch

- 06 - Rolls
- 07 - Comb
- 08 - Safety Switch

### 1.3 Technical Characteristics

**TABLE 01**

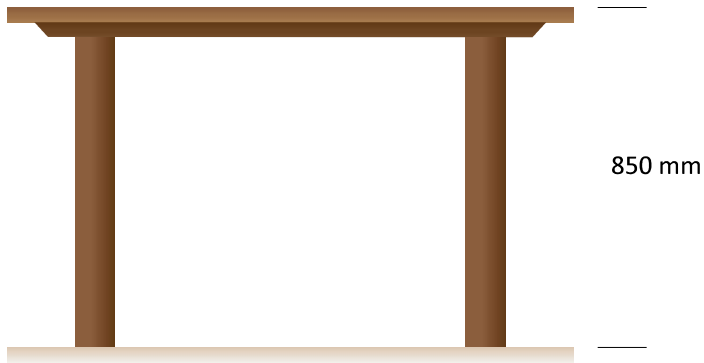
CHARACTERISTICS	UNIT	ABN-HD-N
Average Production	kg/h	up to 400
Voltage	V	220
Frequency	Hz	50
Power Rating	CV	0,5
Consumption	kW/h	0,37
Height	mm	560
Width	mm	580
Depth	mm	250
Net Weight	kg	28,5
Shipping Weight	kg	35

## 2. Installation and Pre Operation

### 2.1 Installation

#### 2.1.1 Placing

The equipment must be placed on to a levelled stable surface approximately 850 mm high.



#### 2.1.2 Electrical Installation

The equipment has been designed to operate 220 Volts. When you receive the equipment check the voltage indicated on the cord label.

The power plug has 3 pins the middle pin is the ground. All the 3 pins must be properly connected.

## 6. Maintenance

Maintenance must be considered a set of procedures with the purpose to keep the equipment best operating conditions, therefore increasing the equipment life and safety.

\* Cleaning – check item 3 5 Cleaning.

\* Wiring - Check all wires regarding deteriorate conditions as well as all electric contacts (terminals) regarding tightening and corrosion.

\* Contacts – ON/OFF switch, emergency button, reset button, electronic circuits etc, check the equipment in order to assure that all components are correctly working and the equipment operation is normal.

\* Installation – make sure the installation followed item 2.1 instructions.

1 - Each month check:

- Check the electrical installation;
- Measure the voltage at the socket;
- Measure the working current and match it with the nominal current;
- Check the tightening of all electric terminals to avoid bad contacts;
- Check electric motor shaft clearance;
- Check the wiring for overeating, insulation failures and mechanical damages;

2 - Each three month checks:

- Check electrical components such as ON/OFF switch, emergency button, reset button, electronic electric circuits, overeating, insulation failings, or mechanical damages;
- Check bearings clearances;
- Check retainers, O’rings, V’rings and other seals.

**TABLE 02**

PROBLEMS	CAUSES	SOLUTIONS
- The machine does not switch on.	<ul style="list-style-type: none"> <li>- Lack of electric power;</li> <li>- The Protection Lid is not correctly placed;</li> <li>- Problems with electrical circuit;</li> </ul>	<ul style="list-style-type: none"> <li>- Check if plug is connected to its socket or if there is electric shortage;</li> <li>- Replace the Lid;</li> <li>- Call Technical assistance;</li> </ul>
- Smoke or burnt smell.	<ul style="list-style-type: none"> <li>- Problems with the electrical circuits;</li> </ul>	<ul style="list-style-type: none"> <li>- Call Technical assistance;</li> </ul>
- The equipment switches ON but when the product is placed it stops or turn slowly.	<ul style="list-style-type: none"> <li>- Problem with the motor;</li> </ul>	<ul style="list-style-type: none"> <li>- Call Technical assistance;</li> </ul>
- Damaged cord.	<ul style="list-style-type: none"> <li>- Damage during product transportation;</li> </ul>	<ul style="list-style-type: none"> <li>- Call Technical assistance;</li> </ul>
- Unusual noises.	<ul style="list-style-type: none"> <li>- Damaged bearings;</li> <li>- Rolls not correctly placed;</li> </ul>	<ul style="list-style-type: none"> <li>- Call Technical assistance;</li> <li>- Revert Rolls position;</li> </ul>

**IMPORTANT**

**Make sure the network voltage is the same as indicated on the cord label.**

## 2.2 Pre Operation

Before to use the equipment all the parts to be in contact with the product shall be washed with water and neutral soap (see item 3.5 Cleaning).

Make sure the equipment is stable on the working surface.

## 3. Operation

### 3.1 Starting

To start the equipment:

- 1 – Plug the equipment on the power point;
- 2 – Press the ON/OFF Switch #.05 (Pic.01) to position “I”.

### 3.2 Operation Procedures

**ATTENTION**

**Under no circumstances use any instrument to feed the meat inside the Protection Lid # 01 (Pic.01).**

The meat tenderizers are machines working at LOW ROTATION.

Simple to be used, they however must call the operator total attention to avoid what ever accidents might occur.

Place the meat inside the Protection Lid opening, and let it fall freely inside the machine. See picture 02.

The equipment does not operate if the Protection Lid # 01 (Pic. 01) is not correctly placed.

Processed meat pieces may have up to 20 cm large and 2 cm thick.



## 5. Analysis and Problems Solving

### 5.1 Problem, causes and solutions

The equipment has been designed to operate with the need of minimum maintenance but the natural wearing caused by longer use of the equipment may occasionally cause some malfunctions.

If such problem occurs with your equipment, refer to Table 02 in which the most common situations are listed with recommended solutions.

#### **IMPORTANT**

**The product to be processed must be cooled. Do not process FROZEN meat nor meat with bones.**

### 3.3 To remove the Comb with the Rolls and Replace them

#### **IMPORTANT**

**Unplug the machine before to remove any part. Wait for Rolls # 06 (Pic.01) complete stillness before to remove the Protection Lid # 01 (Pic.01).**

#### 3.3.1 To remove the Comb with the Rolls

This is a simple operation however it does require a careful attention in order to avoid accidents.

After removing the Protection Lid # 01 (Pic.01):

- The Comb and the Rolls will be shown, picture # 03;
- Articulate the Rolls Lock # 01 (Pic.04);
- Remove the Comb # 01 (Pic.05) with the Rolls lifting first the back side, such as to leave bending the Rolls Support # 02 (Pic.05), and put then the Comb on a flat surface. The equipment will then be seen as Picture # 06.

## 4.6 Maintenance

### 4.6.1 Dangers

Any maintenance with the machine in working situation is dangerous.

TURN IT OFF BY PULLING THE PLUG OFF THE SOCKET DURING MAINTENANCE.

#### IMPORTANT

Always remove the plug from the socket in any emergency situation.

### 4.7 Warning

Electrical or mechanical maintenance has to be undertaken by qualified personnel.

The person in charge of maintenance has to be sure that the machine is under TOTAL SAFETY conditions when working.

PICTURE 03



PICTURE 04



PICTURE 05



PICTURE 06



### 3.3.2 Removing and replacing the Rolls

- Be aware that each Roll has a NUMBER written on the back side indicating its right position on Comb # 01 (Pic.07);
- Remove one Roll at each time (Pic 08 and 09).

PICTURE 07



PICTURE 08



PICTURE 09



#### ATTENTION

To replace the Rolls inverse the above path. Observe correctly the Roll position, and replace the Roll in its original position in accordance with the indicated number # 01 and # 02.

### 3.4 Safety System

The equipment has a Safety System to avoid an automatic starting after an electric shortage. If a shortage occurs, to start the machine follow the procedure item 3.1.

The equipment does not operate if the Protection Lid # 01 (Pic. 01) is not correctly placed.

### 3.5 Cleaning and Sanitizing

#### IMPORTANT

**Never clean the machine when it is connected to the power point, always unplug the machine before cleaning.**

#### IMPORTANT

**Before to remove the Protection Lid No 01 (Pic.01) make sure the Rolls # 06 (Pic.01) are completely stopped.**

The equipment shall be totally cleaned and sanitized:

- Before to be used first time;
- After every day's operation;
- When it has not been used during a long time;
- Before to operate it after a long period unused.

Some parts of the equipment may be removed for cleaning, such as:

- The Protection Lid;
- The Comb;
- Roll # 01;
- Roll # 02.

Removing the Protection Lid:

Lift the Protection Lid vertically, see picture 10.

#### ATTENTION

**To lift the Protection Lid # 01 (Pic.01) move it only vertically up. Lateral movements will damage the machine. Before to remove the Protection Lid make sure the machine is totally still, and unplug it.**

### 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. 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 up well and/or cover your head with a scarf.

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

NEVER operate machine without any 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.

#### 4.1.3 Precautions

En el caso de falta de energía eléctrica, desligue inmediatamente la llave prende/apaga. Use solamente óleos lubricantes o grasas recomendadas o equivalentes. Evite choques mecánicos, ellos pueden causar fallas o malo funcionamiento. Evite que agua, suciedad o polvo entren en los componentes mecánicos y eléctricos de la maquina.

No altere las características originales de la maquina.

No sucie, rasgue o retire cualquier etiqueta de seguridad o de identificación. Caso alguna esté ilegible o fuera perdida, solicite otra al asistente técnico mas cercano.

Lea atentamente y con cuidado las etiquetas de seguridad y de identificación contenidas en la maquina, así como las instrucciones y las tablas técnicas contenidas en este manual.

#### 4.2 Safety Procedures and Notes before Switching the Machine ON

##### **IMPORTANT**

**Carefully read ALL INSTRUCTIONS of this manual before turning the machine ON. Be sure to well understand all the 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 might cause electrical shocks as well as electrical leak. Before use, check the 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 has to be thoroughly clear to the operator.

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.

**PICTURE 10**



Removing the Comb with the Rolls

Read the instructions item 3.3 to place and to remove the Rolls.

Clean all the parts that might get in to contact with the meat with water and neutral soap, wash and dry before to assemble them. The other parts may be cleaned with a damp cloth.

Never use hard objects as knives, forks or other to remove meat pieces from the Rolls knives.

Use a nylon brush.

##### **IMPORTANT**

**Never spray water directly to the equipment.**

### 3.6 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.

### 4. General Safety Practices

#### IMPORTANT

**If any recommendation is not applicable to your equipment, please ignore 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 only 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 areas of the electric device have parts that are connected or have parts connected to high voltage. These parts when touched may cause severe electrical chocks or even be fatal.

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

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 a sign has been made and responded.