

04/2013

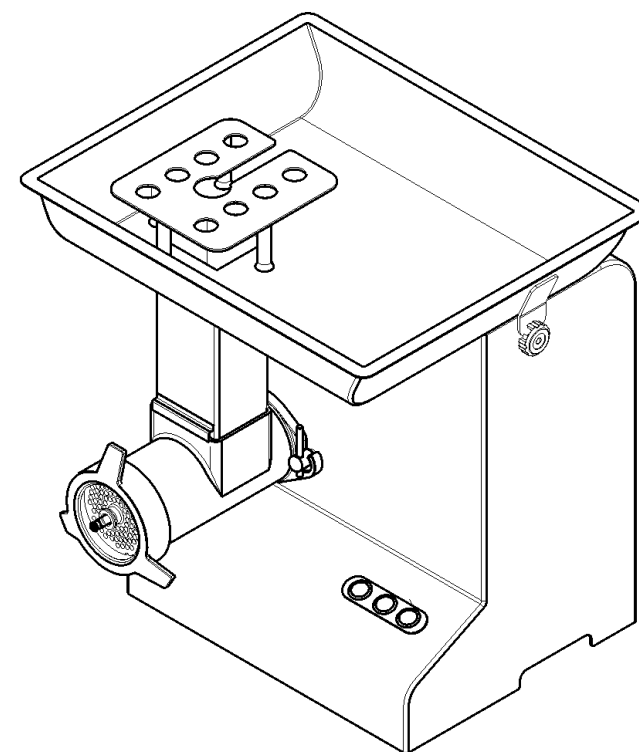
Mod: TMGD-32/CA

Production code: 213212P12F + LF039770



Diamond
catering equipment

INDUSTRIAL MEATGRINDER



USE AND MAINTENANCE MANUAL

Indice

1. Delivery and warranty	5
1.1 Foreward.	
1.2 Keeping and using this manual	
1.3 Warranty	
1.4 Machine description	
1.5 Foreseen use	
1.6 Prohibited uses	
1.7 Machine identification	
1.7.1 Warning and danger plates	
1.8 Safety protections and devices	
1.9 Work position	
2. Technical features	10
2.1 Main parts	
2.2 Technical features	
2.3 Machine dimensions and weight	
2.4 Noise level	
2.5 Electrical diagrams	
2.5.1 Three-phase and single-phase electrical diagram	
2.5.2 Three-phase and single-phase electrical diagram with optional overcurrent protection	
2.6 Optionals	
2.6.1 Optional trestle with wheels	
2.6.2 Optional polyethylene tray	
3. Commands and indicators	13
3.1 List of commands and indicators	
4. Testing, transport, delivery, and installation	14
4.1 Testing	
4.2 Delivery and moving the machine	
4.3 Installation	
4.3.1 Package disposal	
4.3.2 Moving the machine	
4.4 Connecting the electrical system	
4.4.1 Three-phase machine	
4.4.2 Single-phase machine	
5. Start up and stop	15
5.1 Checking the correct electrical connection	
5.2 Checking the presence and efficiency of protection devices	
5.3 Checking the efficiency of stop button	
5.4 Starting the machine	
5.5 Stopping the machine	

6. Using the machine	16
6.1 Warnings	
6.2 Setting up the outlet	
6.3 Using the meatgrinder	
7. Maintenance	17
7.1 Lubrication	
7.2 Cleaning the machine	
7.3 WEEE Waste of Electric and Electronic Equipment	
8. Problems and solutions	19
8.1 Problems, causes and solutions	

1 - Delivery and warranty

1.1 - Foreward

ATTENTION!

The symbols used in this manual are meant to draw the reader's attention to points and operations that can endanger the personal safety of operators or risk damaging the machine. Do not use the machine unless you are certain that you have correctly understood these warnings.

ATTENTION!

For greater clarity certain illustrations in this manual show the machine or parts of it with panels or carters removed.

Do not use the machine in these conditions; all protections must be correctly fitted and in perfect working order.

This manual may not be reproduced, even partially, and its contents cannot be used for purposes other than those permitted by the manufacturer.

Any violations of the above are punishable by law.

1.2 - Keeping and using this manual

The purpose of this manual is to instruct the user, through texts and figures, on the warnings and essential criteria concerning transport, movement and use and maintenance of the machine itself.

The manual must therefore be carefully read before using the machine.

Keep this manual in a safe place near the machine so that it can be easily and quickly reached for any future reference.

If the manual should be mislaid or damaged, ask your dealer or manufacturer for a copy.

If the machine is sold, inform the manufacturer of the name and address of the new owner.

The manual reflects the state of technology at the time the machine is sold and cannot be considered inadequate if it is subsequently updated on the basis of new knowledge.

For this purpose the manufacturer reserves the right to update its products and related manuals without being obliged to update previous products and manuals barring exceptional cases. If in doubt, consult the nearest servicing center or the manufacturer.

The manufacturer's aim is to continuously optimize its product therefore it is pleased to receive any comments or suggestions on improvement of the machine and/or the manual.

The machine is delivered to the user under warranty conditions in force at the time of purchase.

Contact your supplier for any clarifications required.

1.3 - Warranty

The user is not authorized for any reason to tamper with the machine. If a fault occurs contact the manufacturer.

Any attempts at dismantling or tampering with any part of the machine in general by the user or unauthorized personnel will bring about the lapse of the **Declaration of Conformity** written according to the **Directive EEC 2006/42**, will render the warranty null and void and will exempt the manufacturer from responsibility for any damage either to persons or things due to such tampering.

The manufacturer is also exempt from all responsibility in the following cases:

- Incorrect installation;
- Improper use of the machine by inadequately trained personnel;
- Failure to comply with the regulations in force in the country the machine is installed in;
- Lack of or insufficient maintenance;
- Use of unoriginal spare parts and spare parts not specifically designed for the model;
- Total or partial failure to follow the instructions.

1.4 - Machine description

The meatgrinder you have purchased is a simple, compact, powerful, and high performance machine.

- Since it must be used to grind food products, the components that can come into contact with the product have been carefully chosen to guarantee maximum hygiene. The casing is made of stainless steel.
- The hopper is made of stainless steel to guarantee maximum hygiene and to facilitate cleaning procedures.
- The utensils are made of stainless steel to guarantee a long life and maximum hygiene.
- The mouths in stainless steel casting have the possibility of applying a total or partial UNGER system.
- The rotation direction of the propeller can be inverted by means of a pushbutton panel.
- Rigid blocking of the mouth to improve the cutting of the meat and to prolong the life of the plates and blades.
- Ventilated motors, both three-phase and single-phase, with the following advantages:
 - highly consistent yield and long motor life;
 - increase of effective work time due to few interruptions;
 - low heating index to always keep the meat fresh and unaltered.

The models represented in this manual have been built in compliance with the **Directive EEC 2006/42** and adaptations. In case of accident, the manufacturer is not responsible if the machine has been modified, tampered with, removed of safety protections and devices, or used for purposes not foreseen by the manufacturer.

1.5 - Foreseen use

The machine has been designed and built to grind meat and similar products. It must be used in professional environments and the personnel designated to use the machine must be a qualified operator in the field and have read and understood this manual.

Only use the machine when it is securely placed on a solid work table.

The dimensions of the meat to be ground must be such to be able to completely fit in the loading mouth; the product must not come out of the hopper.

1.6 - Forbidden uses

The machine must only be used for purposes foreseen by the manufacturer, in particular:

- **Do not** use the machine to grind food products different from meat or the like.
- **Do not** use the machine if it has not been correctly installed with all the protections intact and correctly assembled to avoid the risk of severe personal injury.
- **Do not** access electrical components without having previously disconnected the machine from the electrical supply: **risk of electrocution**.
- **Do not** work with products that are larger than what can completely fit inside the loading hopper.
- **Do not** wear clothing that does not conform with accident prevention laws. Consult the employer for safety prescriptions in force and safety devices to be used.
- **Do not** start the machine if it is not working correctly.
- Before using the machine make sure that any condition which endangers safety has been opportunely eliminated. If any irregularity occurs, stop the machine and notify the head of maintenance.
- **Do not** allow unauthorized personnel to operate the machine.
Emergency treatment in case of accident caused by the electrical current, first remove the victim from the conductor (as he will usually be unconscious). This operation is dangerous as the victim is a conductor in this case and touching him can cause electrocution.
You should therefore disconnect the contact directly from the power line supply valve or, if this is not possible, distance the victim using insulating material (wooden or pvc sticks, fabric, leather, etc.). A doctor should be promptly called and the patient taken to the hospital.

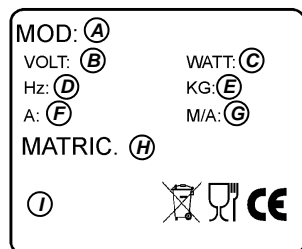
1.7 - Machine information

An exact description of the "**Model**", the "**Serial number**" and the "**Year of manufacturing**" of the machine will facilitate fast and efficient responses on behalf of our servicing department. It is advisable to indicate the model of the machine and the serial number each time you contact the servicing department. The data is reported on the plate shown in fig. 1.7.1. As a memorandum, we suggest reporting the data for the machine you have purchased in the table below:

WARNINGS!

Do not alter the data reported on the plate for any reason.

Meatgrinder model.....
 Serial number.....
 Year of manufacturing.....
 Type.....



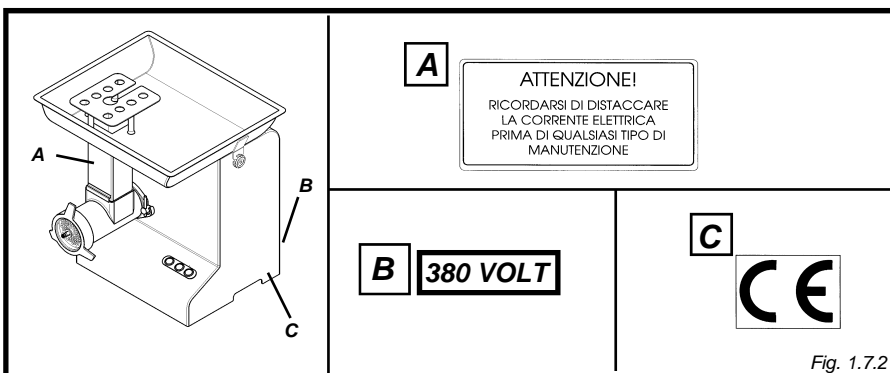
A = machine model
 B = motor frequency volt
 C = motor power Watt
 D = motor frequency Hz
 E = machine weight kg
 F = Ampere
 G = month and year of production
 H = serial number
 I = manufacturer

Fig. 1.7.1

1.7.1 - Warning and danger plates (fig. 1.7.2)

WARNINGS!

Do not intervene on the electrical components while the machine is connected to the power supply. Risk of electrocution. **Observe the warnings on the plates. Failure to observe them can cause personal injury.** Make sure the plates are fitted and legible. If they are not, fit or replace them.



1.8 - Safety protections and devices

WARNING!

Before using the machine make sure the devices are correctly positioned and in perfect condition. At the beginning of each work shift check that they are fitted and working efficiently; if not, notify the head of maintenance.

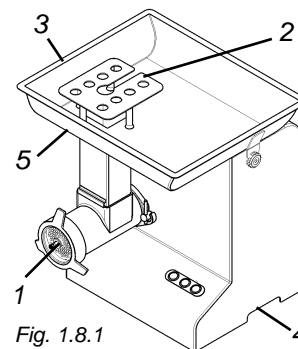


Fig. 1.8.1

1. Product outlet, with plate holes smaller than 8 mm. In this case introducing fingers into the mouth is impeded. Upon request an outlet plate with holes having a diameter greater than 8 mm can be installed. In these cases the user will be responsible for the installation of a proper protection on the mouth.
2. Hand guard.
The hopper has the protection "2" Fig.1.8.1 in compliance with the circular from the Ministry of Work and Social Security n° 66 dated 05/09/79.

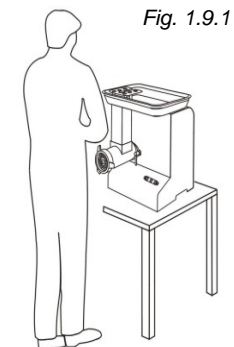
3. The stainless steel hopper is firmly blocked at the loading mouth.
4. Protection carters for electrical components.
The lower part of the machine is closed by a carter, blocking involuntary access to electrical components inside of it.
5. Micros on the hopper.
A magnet corresponding to the safety sensor is assembled in the lower part of the hopper.

ATTENTION!

Do not tamper with the safety devices in any way or for any reason.

1.9 - Work position

The correct work position for the operator to optimize working with the machine is indicated in fig. 1.9.1.



2 - Technical features

2.1 - Main parts

To facilitate understanding the manual the main parts of the machine are listed and represented in fig. 2.1.1.

1. Pestle - tool used to introduce the meat into the grinding group
2. Machine commands
3. Outlet for the ground meat
4. Loading hopper
5. Loading mouth

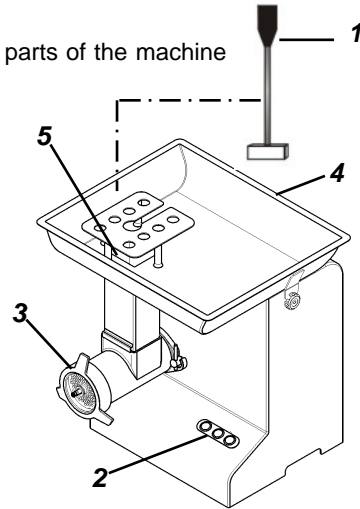


Fig. 2.1.1

2.2 - Technical features

	Motor	Feed	Hourly production	Outfitted plates
	watt/hp		kg/h.	ø mm
TC 32 Hp 3	2208/3	230-400V/50Hz	700	6
TC 32 Hp 4	2940/4	230-400V/50Hz	700	6

2.3 - Machine dimensions and weight

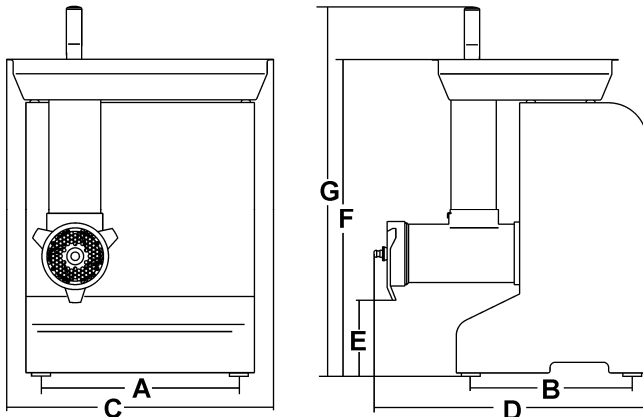


Fig. 2.3.1

	A	B	C	D	E	F	G	Net weight
TC 32	385 mm	315 mm	535 mm	505 mm	140 mm	610 mm	710 mm	65 kg

24 - Noise level

Measurements of the noise emitted by the machine indicate that the equivalent noise level is lower than 70 dBA.

Upon request the manufacturer can supply a copy of the noise test.

2.5 - Electrical diagrams

2.5.1 - Three-phase and single-phase electrical diagram

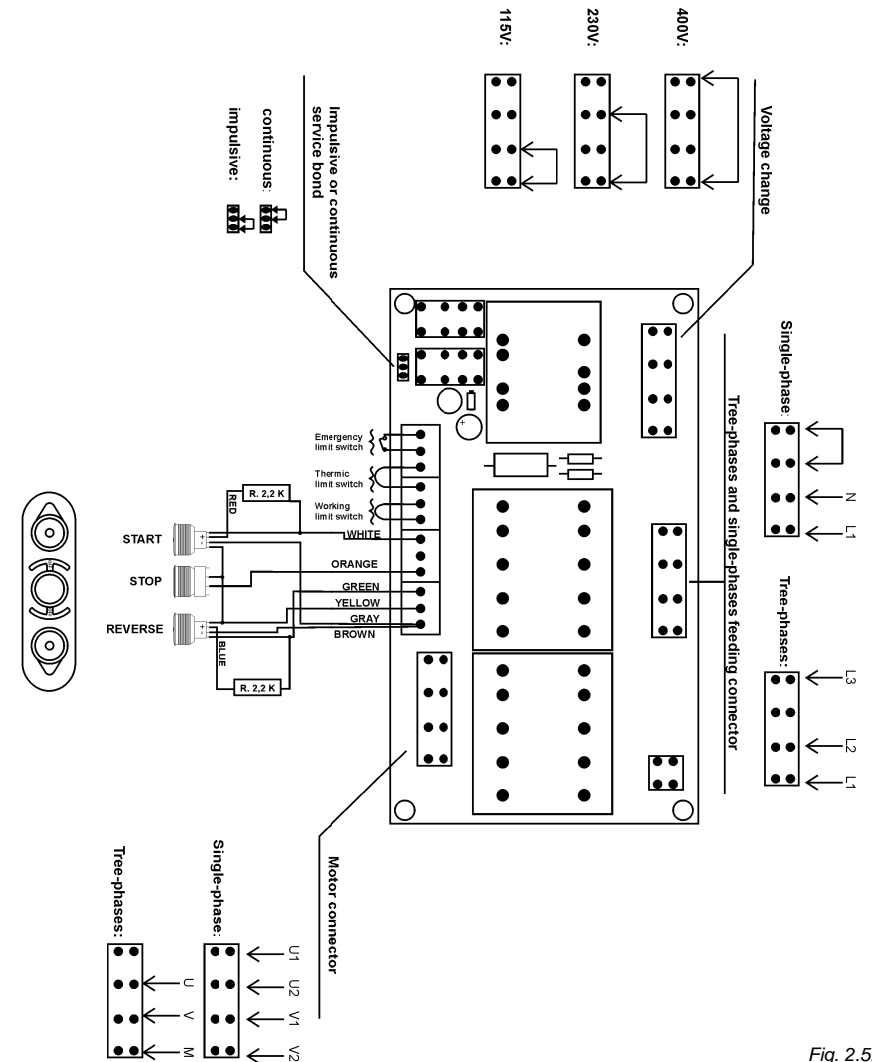


Fig. 2.5.1

2.5.2 Three-phase and single-phase electrical diagram with overcurrent protection optional

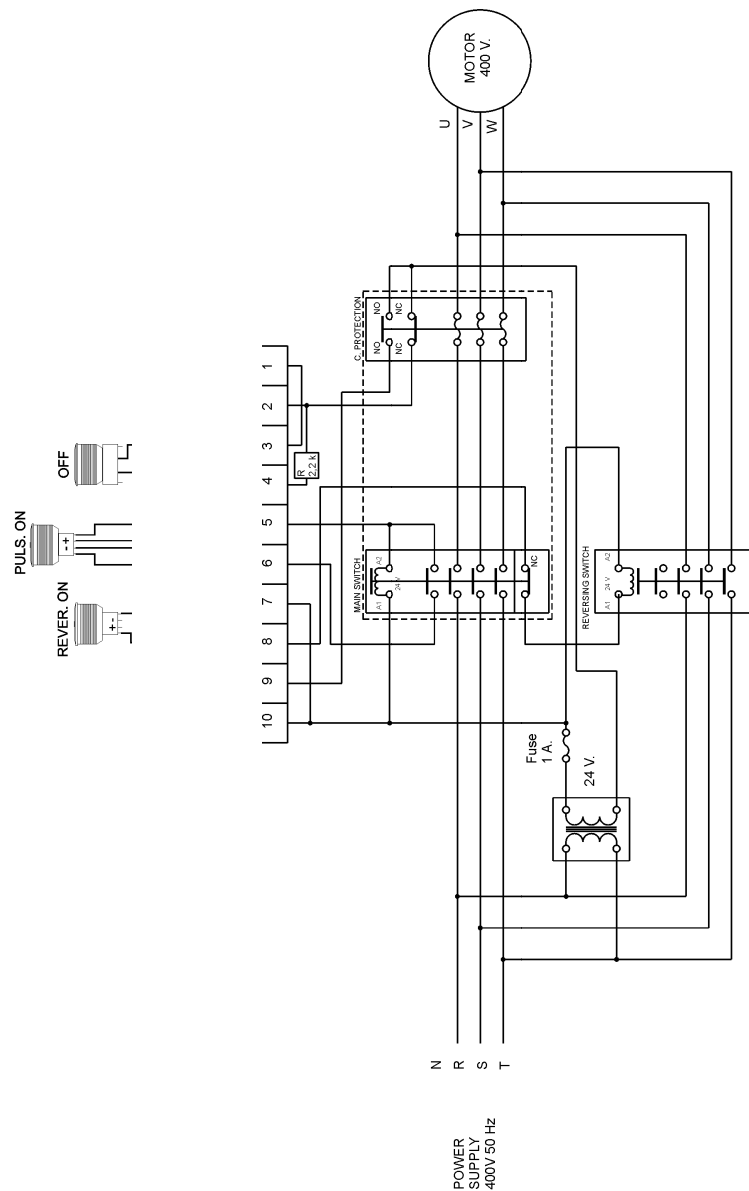


Fig. 2.5.2

2.6 - Optionals

2.6.1 Optional trestle with wheels (A fig. 2.6.1)

Pay attention in moving machine with legs and wheels.

First of all remember to **RELEASE THE WHEELS** before move the machine, otherwise it could fall towards the operator causing injuring and damaging the machine itself.

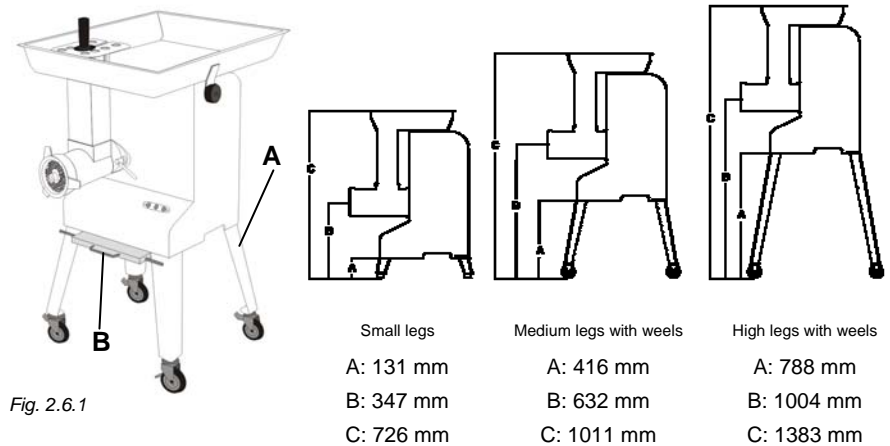


Fig. 2.6.1

2.6.2 Optional poliethylene tray (B fig. 2.6.1)

The poliethylene extracting tray is suitable to support a weight **NOT SUPERIOR** of Kg. 12.

3 - Commands and indicators

3.1 - List of commands and indicators

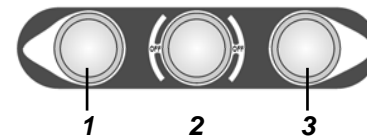


Fig. 3.1.1

1 - Start pushbutton (continuous)

- Press to start the machine.

2 - Stop pushbutton

- Press to stop the machine.

3 - Gear inversion pushbutton (discontinuous)

- Enables inverting the rotation direction of the propeller.

4 - Testing, transport, delivery, and installation

4.1 - Testing

The machine you have purchased has been tested on our premises to ensure it is correctly running and regulated.

4.2 - Delivery and moving the machine

All the material shipped has been carefully checked before delivery to the forwarding agent. Unless otherwise stipulated by the client or hindered by particularly burdensome transport, the machine is packaged on a pallet and wrapped in cardboard. Upon receipt of the machine check that the packaging is intact. Should the packaging be damaged, sign the shipping agent's transport documents, noting that, for example: "I accept, but ..." and the reason. Once the package has been opened, should it be found that components of the machine have truly been damaged, declare such damage to the shipping agent within three days of the date indicated on the transport documents.

4.3 - Installation

ATTENTION!

The area in which you wish to install the machine must be solid and the surface it rests on must guarantee safe support.

Furthermore, it is necessary to position the machine, leaving ample space around it. This allows for better maneuverability while working and guarantees access for periodic maintenance.

Ensure that there is sufficient lighting around the machine to guarantee good visibility for the operator of the meatgrinder.

4.3.1 - Package disposal

Package components such as cardboard, nylon and wood are compatible with solid urban waste and can therefore be disposed of freely. Nylon is a pollutant material; if burned it produces toxic fumes. Do not burn and do not dispose of in the environment but dispose of according to laws in force. If the machine is delivered in countries in which there are no particular laws, dispose of the packaging according to what is prescribed by the laws in force.

4.3.2 - Moving the machine

ATTENTION!

Handle the machine carefully and with extreme ATTENTION, avoiding that it accidentally falls, which could seriously damage it. Due to the solid weight of the machine, at least two people are required for moving it.

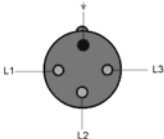
4.4 - Connecting the electrical system

ATTENTION!

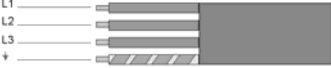
Check that the electrical supply line corresponds with the data reported on the machine identification plate.

Each intervention must be carried out only by qualified personnel who are expressly authorized. Make the connection to a network outfitted with an efficient floor plug.

4.4.1 - 380 Volt-50Hz three-phase machine and 220 Volt-50 Hz three-phase machine



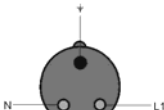
In these set ups the machine is outfitted with a feeding cable with a section of 4 x 1.5 mm.




This is a connection to a three-pole + grounding three-phase plug. Connect the cable to the three-phase feeding network, interplacing a 16-Amp magnetothermic differential switch.

4.4.2 - 220 Volt-50 Hz single-phase machine

In this set up the machine is outfitted with a feeding cable with a section of 3 x 1.5 mm.



This is connected to a three-pole single-phase plug. Connect the cable to the 220 Volt-50 Hz single-phase feeding network, interplacing a 16-Amp magnetothermic differential switch.



N: usually it is of blue colour or by N° 4 indicated

In set ups with voltages different from those mentioned, consult the manufacturer.

If the feeding cable must be prolonged, use a cable with the same section as the one installed by the manufacturer.

5 - Start up and stop

5.1 - Checking the correct electrical connection

Connect the plug to the electrical outlet;

Press the start pushbutton ("1" Fig. 3.1.1), checking the rotation direction of the tools (in the 380 three-phase version).

The rotation direction must be counter-clockwise.

If the rotation direction is incorrect, disconnect the machine from the electrical supply and contact the dealer in your area.

Note:

For the machines connected to a single-phase line and made for such feeding, the correct rotation direction is directly defined by the manufacturer.

5.2 - Checking the presence and efficiency of the protection and safeties

1 - Product outlet.

Check that the plates on the product outlet have holes with a diameter smaller than 8 mm. If they do not, the outlet must be installed with a proper protection.

2 - Hand guard

The hopper must have a hand guard.

3 - Stainless steel hopper.

The stainless steel hopper is firmly welded onto the casing.

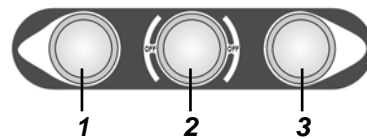
4 - Electrical component protection carters.

Make sure they are fitted, intact and correctly fastened to the internal parts of the machine.

5.3 - Checking the efficiency of the stop pushbutton (fig. 5.3.1)

Fig. 5.3.1

While the machine is connected to the power supply and the tool is moving, press the stop pushbutton "2" Fig. 5.3.1. The machine must stop.



5.4 - Starting the machine (fig. 5.3.1)

To start the machine just press the start pushbutton "1" Fig. 5.3.1 after having correctly connected the plug to the electrical outlet and the machine will start.

5.5 - Stopping the machine (fig. 5.3.1)

To stop the machine just press the stop pushbutton "2" Fig. 5.3.1 and the machine will stop.

6 - Using the machine

6.1 - Warnings

ATTENTION!

Only authorized personnel can operate the machine.

Before using the machine, the operator must make sure that all the protections are in place and that the safety devices are fitted and efficient. If not, turn off the machine and notify the head of maintenance. The product to be ground must be in pieces that can enter the loading mouth and they must be pushed with the help of a proper pushing utensil (pestle) **NEVER DO THIS WITH YOUR HANDS.**

6.2 - Setting up the outlet or the proper pushing device (pestle).

The machine can be set up in three different meat-cutting groups:

A - Enterprise or normal

B - Half UNGER

C - Total UNGER

- System -C-, (total UNGER), consists of : a propeller "1" to transport the meat, a hammer mill plate "2", a first blade "3" and corresponding perforated plate "4", a second blade "5" with the final perforated plate "6".

- System -B-, (half UNGER), substitutes the blade "5" and the plate "6" with the spacer "7".

- System -A-, (Normal), is the simplest method in that it is only composed of a transport propeller, a blade and an outlet plate.

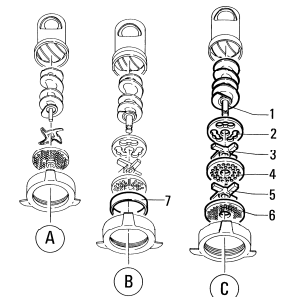


Fig. 6.2.1

It is not possible to assemble the plates from groups -C- or -B- on models with the grinding group -A-, instead the complete group must be changed.

6.3 - Using the meatgrinder

- 1 Make sure the feeding tension corresponds to the value reported on technical plate.
- 2 Lightly tighten the ring nut on the meatgrinder and put in a little meat, press the start pushbutton, making sure that the rotation direction of the propeller is counter-clockwise.
- 3 If the meat coming out is cut well then the nut has been sufficiently regulated; on the contrary, tighten the nut some more until reaching the perfect cut of the meat.
- 4 Stop the machine by pushing the stop pushbutton.
- 5 After thoroughly cleaning, first assemble the mouth and block it; these operations are necessary to assure that the machine runs correctly.
- 6 Now the propeller, the blade, the plate, and the nut can be reassembled.

7 - Maintenance

ATTENTION!

Every maintenance and cleaning operation must only be carried out with the machine at a standstill and disconnected from the electrical power supply.

The area in which maintenance will be done must always be clean and dry.

Do not allow unauthorized personnel to intervene on the machine.

Any possible replacement of parts, including the utensil, must be made with original spare parts at authorized workshops or directly by the manufacturer.

7.1 - Lubrication

The machine does not require any lubrication.

7.2 - Cleaning the machine

ATTENTION!

Disconnect the machine from the electrical power supply before cleaning it.

Do not clean the machine with jets of water.

Only use non-toxic detergents which are designated for cleaning components for food use.

7.3 - WEEE Waste of Electric and Electronic Equipment

Directive 2002/95/EC, 2002/96/EC and 2003/108/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment, and waste electrical and electronic equipment



This symbol, crossed out wheeled bin, on the product or on its packaging indicates that this product must not be disposed of with your other household waste.

Separate waste collection of this appliance is organised and managed by the manufacturer. It is the user's responsibility to contact the manufacturer and follow the waste treatment system the manufacturer has adopted for separate waste collection.

The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

8 - Problems and solutions

8.1 - Problems, causes and solutions

Problems

- 1 - The machine does not start
- 2 - The propeller turns clockwise (on the three-phase model)
- 3 - The product is not ground correctly

Causes

- 1.0 - The differential switch is in the "0" position.
- 1.1 - The plug switch is in the "0" position.
- 1.2 - The start pushbutton does not work.
- 1.3 - The electrical motor is faulty.

- 2.0 - Motor wire inverted.

- 3.0 - Plate and blade are not tightened correctly.
- 3.1 - Scoring on the plate or blade is not perfectly adherent (on the plate plane).
- 3.2 - Mouth is not perfectly fastened.

Solutions

- 1.0 - Put the switch in position "I".
- 1.1 - Put the switch in position "I".
- 1.1 - Contact servicing department.
- 1.2 - Contact servicing department.

- 2.2 - Ask technical assistance (dealer).

- 3.0 - Correctly tighten the plate and blade.
- 3.1 - Replace the faulty plate and blade pair.
- 3.2 - Correctly fasten the mouth.