

12/2010

Mod: TC22/ICE

Production code: TC 22 BARCELONA ICE 1F



Diamond
catering equipment

TC 12
TC 22

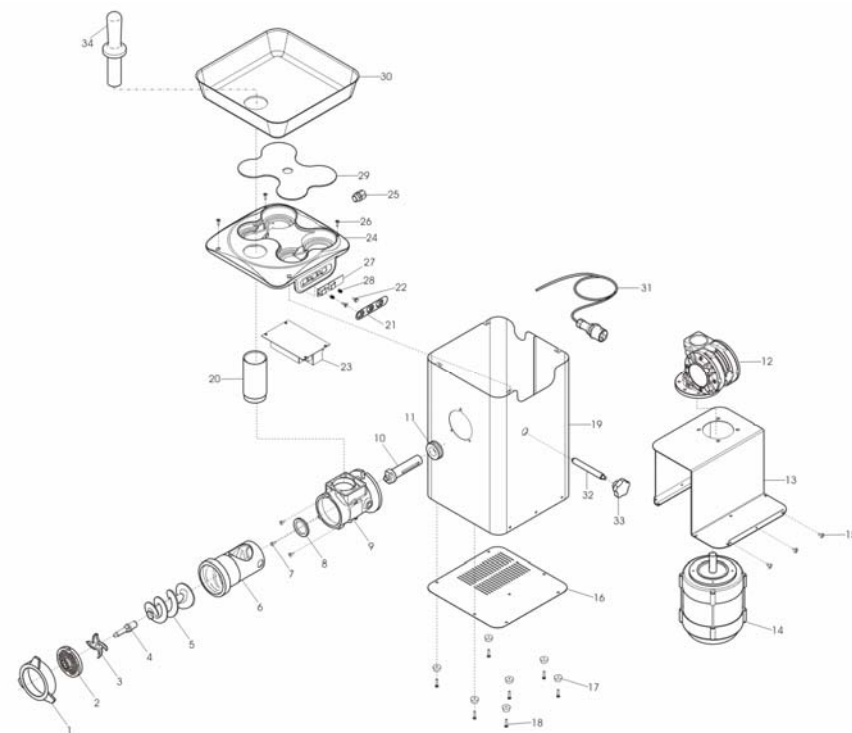
MINCER



USE AND MAINTENANCE MANUAL

***SERVICE CENTRE
AUTHORISED DEALER***

9 - Exploded view



RIF.	DESCRIPTION
31	PLUG EEC 3P + T
21	THREE PUSH-BUTTON PLATE
23	REVERSING CUT CARD.
11	THRUST BEARING 51205 TCR
8	O RING 35-50-5 TC REFR
33	KNOB PB6 M8
3	STAINLESS STEEL KNIFE
2	STAINLESS STEEL PLATE HOLE 4,5
14	MINCER MOTOR. TCX-TCR 22 380/50 HZ
1	STAINLESS STEEL RING NUT TC
04	SCREW PROPELLER PIN TC
34	PESTLE TC
30	HOPPER TC

19	STRUCTURE TC TIT
13	OMEGA MOT SUP. TC TIT
16	BOTTOM TC TIT
32	FEED OPENING FIXING PIN TC TIT
20	FEED OPENING HOLDER BODY NECK TC TIT
9	FEED OPENING HOLDER ALUMINUM BODY TC TIT
06	STAINLESS STEEL FEED OPENING TC TIT
05	SCREW PROPELLER TC TIT
24	UPPER COVER TC TIT
29	PLEX PLATE PROTECTION TC TIT
12	REDUCTION GEAR
10	SCREW PROPELLER PIN TC
27	CONTROL PANEL

7.3 - Putting the machine out of service

The machine has been manufactured using the following materials: stainless steel, aluminium alloy and copper which do not require special process to be eliminated. To eliminate the different parts of the machine in accordance with the different materials, ask special authorised centres for separate collection of waste.

8 - Troubleshooting

8.1 - Problems, causes, solutions

Problems

- 1– The machine does not start
- 2– The screw propeller does not turn in the sense indicated by the arrow (on three-phases model)
- 3– The product is not minced correctly

Causes

- 1- The differential switch is on position "0".
- 1– The outlet switch is on position "0"
- 1– The push-button "on" does not work.
- 1– The electrical motor is faulty.
- 2– The motor wires are inverted.
- 3– The plate and the knife are not tightened correctly
- 3- There is some rust on the plate and knife, they do not stick perfectly to each other (on the surface of the plate)
- 3- The feed opening is not installed correctly

Solutions

- 1- Turn the switch to position "I"
- 1- Turn the switch to position "I"
- 1- Call the technical service centre
- 1- Call the technical service centre
- 2- Call the technical service centre
- 3- Tighten correctly the plates and knife
- 3- Replace the faulty plate and knife
- 3- Install correctly the feeding opening

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6.3 - Use of the mincer

- 1 Check that the voltage corresponds to the value indicated on the rating plate.
The voltage indicator must be on to indicate the power supply connection.
- 2 Slightly tighten the ring nut of the mincer and introduce some meat, press start push-button checking that the screw propeller rotation sense is the same as the one indicated by the arrow (anticlockwise).
- 3 If the meat cut goes out well, the ring nut regulation is sufficient, if it is not, tighten the ring nut until you obtain a perfect meat cut.
- 4 Stop the machine pressing the stop push-button
- 5 To loosen the ring nut, it is not necessary to use a tool, just unscrew one turn and extract it.
- 6 Accurately clean the machine and then reassemble the feeding opening and fix it by means of the knob, these operations are necessary to make sure that the feed opening is correctly installed.
- 7 Now you can install the screw propeller, the knife, the plate and the ring nut.

7 - Maintenance

WARNINGS!

Any maintenance or cleaning operation of the mincer must be performed only if the machine is disconnected from the power supply.

The area where you perform maintenance operations must always be clean and dry.

Do not let unauthorised personnel to intervene on the machine.

Any parts, including the tool must be substituted by original spare parts.

7.1 - Lubrication

The machine does not require any lubrication.

7.2 - Cleaning of the machine

WARNINGS!

Before cleaning the machine, disconnect it from the power supply.

Never clean the machine with a water jet.

It is compulsory to use atoxic detergents, in respect with food hygiene regulations.

5.3 - Check the functioning of the stop push-button

Connect the machine to the power supply and make it work, then press the stop push-button "1". The machine has to stop.

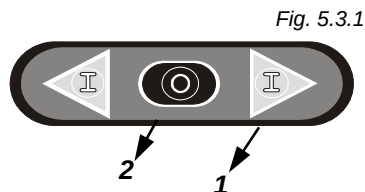


Fig. 5.3.1

5.4 - Start up of the machine

To start the machine, connect the plug in the power supply outlet and press push-button "on" (the top one with the arrow, "1" Fig. 5.3.1), the machine starts.

5.5 - Stopping the machine

To stop the machine, press stop push-button, "2" Fig. 5.3.1 and the machine stops.

6 - Use of the machine

6.1 - Prescriptions

WARNINGS!

Only the authorized personnel can intervene on the machine.

Before using the machine, the operator must check that all the protections and safety devices are correctly installed and working. Otherwise stop the machine and call the person in charge of the maintenance.

The shape and volume of the product must be adequate to enter in the feeding opening, it must be pushed inside by means of the pestle **NEVER DO IT WITH YOUR HANDS.**

6.2 - Installation of the exit opening and pestle.

The machine can be equipped with three kind of cut:

- A - Enterprise or normal
- B - Half UNGER
- C - Total UNGER

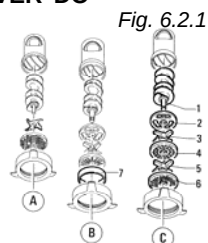


Fig. 6.2.1

- System -C-, (Total UNGER), consists of a: conveying screw propeller "1" to convey the meat, a hammer mill plate "2", the first knife "3" the correspondent drilled plate "4", the second knife "5" with the final drilled plate "6".
- System -B-, (Half UNGER), substitutes the spacer "7" to the knife "5" and plate "6".
- System -A-, (Normal), is the simplest method, as it only consists of the conveying screw propeller, a knife and an exit plate.

It is not possible to assemble the plate of unit -C- or -B- on the types with minced unit "A", it is necessary to substitute the whole unit.

1 - Delivery and warranty

1.1 - Introduction

WARNINGS!

These symbols have been used to draw the reader's attention to dangerous points and operations and to guarantee safety to the operator and the machine. Do not use the machine if you have not understood the warnings completely.

WARNINGS!

In some drawings of this manual the machine or parts of it are shown without the protective panels or casings in order to see the components better and to make it easier to understand.

Do not use the machine without all the necessary protections and carters correctly assembled.

It is prohibited to partially or fully reproduce the contents of this manual.

Any violation to copyright will Lead to prosecution.

1.2 - Storage and use of this manual

This manual is meant to provide users with information and details about the transport, installation, use and maintenance of the machine. For this purpose, this manual has been provided with descriptions and drawings.

Before using the machine, carefully read this manual.

Keep this manual carefully and in an easy place to reach near the machine, to permit a quick consultation if necessary.

If the manual is damaged or lost, ask our dealer for a new copy or directly to the manufacturer.

In case the machine should be sold, inform the manufacturer with the new owner's name and address.

The current specification of this manual corresponds to the present model, however, the manufacturer has the right to update its production and the relative manuals without updating former productions and manuals, except in specific cases.

In case of any doubts, address the nearest service centre or the manufacturer itself.

The manufacturer is continuously updating its product, therefore he will welcome any suggestions or ideas that could improve the machine or the manual.

The machine has been delivered to the user under the warranty conditions valid at the purchase. For any clarifications, consult your dealer.

1.3 - Warranty

For no reasons the user is authorized to tamper the machine. In case of any irregularity, he must call the manufacturer.

Any user or non authorized personnel that attempts to disassemble, modify or tamper any element of the machine will lead to the invalidity of the **Conformity Statement** which complies with EEC Directives 89/392, and the warranty will be voided, in this case the manufacturer is not liable for eventual damages caused to people or things due to this tampering.

Furthermore, the manufacturer is not liable in the following cases:

- an incorrect installation;
- improper use of the machine by unskilled personnel;
- use of the machine not in accordance with the regulations of the country where it has been installed;
- insufficient or wrong maintenance;
- use of non original or specific spare parts;
- not following fully or partially instructions given.

1.4 - Description of the machine

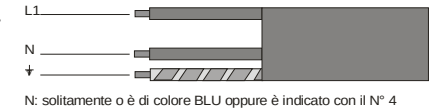
This mincer is a simple, compact and highly performing machine.

- As it has to be used to mince foodstuff, the parts in contact with the product have been chosen to ensure the highest degree of hygiene. The structure is made of stainless steel.
- The hopper is made of polished stainless steel to ensure the highest degree of hygiene and to facilitate the cleaning.
- The tools are made of stainless steel to ensure high resistance and hygiene.
- The machine has a modern design, it is solid and made of aluminium with the structure made of stainless steel.
- The feed openings are stainless steel casting with the possibility to apply the total or partial UNGER system.
- The machine is equipped with a reverse rotation sense of the screw propeller by means of a selector .
- The feed opening lock is rigid to give a better cut and to increase the life of the plates and knives.
- The three-phases and single-phase motors are ventilated with the following advantages:
 - maximum efficiency and life of the motor;
 - increase of the working effectiveness due to less interruptions;
 - low heating level to keep meat fresh and unchanged.

The models illustrated in this manual have been manufactured in compliance with **EEC Directives 89/392** and following amendments. In case of accidents, the manufacturer is not liable if the machine has been modified, tampered, if the safety protections have been removed or if the machine has been used improperly.

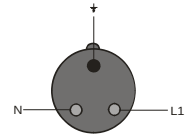
4.4.2 - Single phase machine 220 Volt-50 Hz

The mincer is equipped with a power supply cord with section 3 x 1,5 mm.



It is connected to a three poles single-phase plug.

Connect the cord to the single-phase power supply of 220 Volt-50 Hz by interposing a differential-magnetothermic switch of 16 Ampere.



For installations where the voltage is different from the one indicated before, consult the manufacturer.

If you need to lengthen the power supply cord, use a cord of the same section as the one provided by the manufacturer.

5 - Start and stop

5.1 - Check the electrical connection

Connect the plug to the power supply;

The pilot light ("6" Fig. 3.1.1 p. 13) must be on;

Press the on push-button ("1" Fig. 3.1.1 p. 13), and check the rotation sense of the tools (for the three-phase model 380).

The rotation sense must be as the one indicated by the arrow ("D" fig. 1.7.2 p. 9), anticlockwise .

If the rotation sense is not correct, disconnect the machine from the power supply and call the after-sale service.

Note:

For the machines connected to a single-phase line, the rotation sense is set by the manufacturer.

5.2 - Check the presence and efficiency of the protections and safety devices

1 - Product exit opening.

Check that the diameter of the holes of the product exit opening is smaller than 8 mm.

If it is not, the user must install an adequate protection on the opening.

2 - Stainless steel hopper.

The stainless steel hopper must be installed correctly on the feeding opening.

3 - Protective cover for electric parts.

Check the presence, the integrity and the correct fixing of the electric parts protective cover.

the supporting dimensions.

This makes things easier for the user to move while working and ensures access to the machine for maintenance purposes.

Install an adequate lighting around the machine to ensure good visibility to the operator of the mincer.

- Remove the cellophane which protects the machine and all the other wrapping inside the machine.

4.3.1 - Package disposal

The package material such as cardboard boxes, nylon, wood can be eliminated with urban solid waste; therefore they can be eliminated easily.

Nylon is a polluting material, if burned, it produces toxic smoke. Do not burn it and do not let it in the environment but eliminate it in compliance with the regulation in force.

If the machine is delivered in countries where there are special regulations, eliminate the package in accordance with the regulation in force.

4.3.2 - Handling of the machine

WARNINGS!

Handle the machine carefully, avoiding any accidental shock which could damage it seriously.

To avoid any sprain, when you lift the machine, stand firmly on your legs.

4.4 - Electrical connection

WARNINGS!

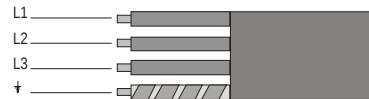
Check that the electrical power supply corresponds to the value indicated on the rating plate of the machine.

All these interventions must be performed exclusively by skilled technicians authorized by the responsible.

Connect the machine to a line equipped with an efficient ground installation.

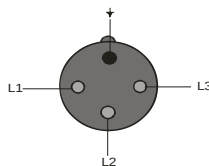
4.4.1 - Three-phases machine 380 Volt-50Hz and three-phase machine 220 Volt-50 Hz

The mincer is equipped with a power supply cord with section 4 x 1,5 mm.



It is connected to a three-phase + earth plug.

Connect the cord to the three-phases power supply by interposing a differential-magnetothermic switch of 16 Ampere.



1.5 - Use of the machine

The machine has been designed and manufactured to mince meat and foodstuff.

The mincer must be used in professional environment and the operators in charge of the machine must belong to this specific sector and he must have read and understood this manual. The machine must be used only if it is safely installed on a work table.

The pieces of meat must enter completely in the feed opening and they must not overflow the hopper.

1.6 - Improper uses

The machine must be used only for the specific purpose it has been manufactured for :

- **Do not** use the machine to mince foodstuff other than meat or similar products.
- **Do not** use the machine if all the safety devices are installed and function correctly to avoid any risk to be injured.
- **Do not** reach electrical elements if the machine has not been disconnected from the power supply: **there is a risk of electric shock.**
- **Do not** operate the machine with products that cannot completely enter the hopper.
- **Do not** wear clothes that do not respect safety regulation. Consult your employer to know the safety regulations in force and the accident prevention measures to adopt.
- **Do not** turn on the machine if it is broken.
- Before using the machine, make sure that any dangerous situations have been eliminated. If you notice any irregularity, immediately stop the machine and call the person responsible of the maintenance.
- **Do not** let unauthorised personnel intervene on the machine. If there is an accident due to electrical power supply, the first thing to do, is to remove the injured person from the conductor (he has probably lost his senses). This operation is dangerous.

In this case the injured person is a conductor: to touch him means to be electrocuted.

It is necessary to disconnect the machine from the power supply immediately, if this is not possible, remove the victim using insulating materials (wood or PVC, fabric, leather, etc.). It is necessary to call the medical assistance and hospitalise the patient immediately.

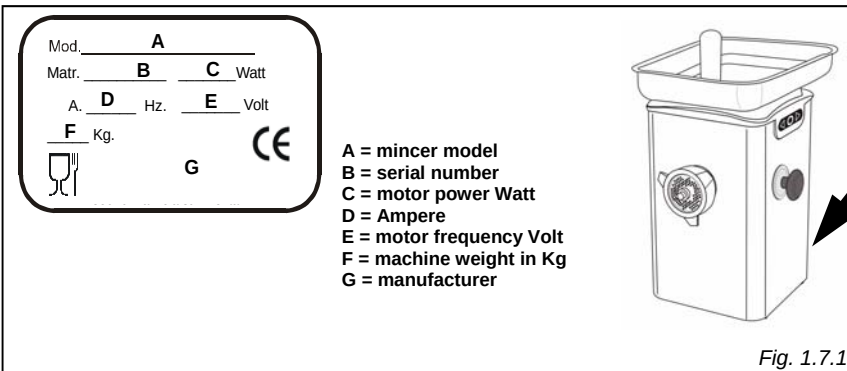
1.7 - Machine data

The description of the machine must be precise: “**Model**”, “**Serial number**” and “**Manufacturing year**”, this will make things easier for our service centre.
Communicate this data each time you contact this service.
Fill in the table of Fig. 1.7.1 with your machine data and use it as a memorandum:

WARNINGS!

Do not modify the indications of the rating plates.

Mincer model
Serial number.....
Manufacturing year.....
Type.....



1.7.1 - Danger and warning plates (fig. 1.7.2)

WARNINGS!

Do not perform any intervention on the electric parts when the machine is connected to the power supply.
There is a risk of electric shock.
Comply to the warning plates. The non respect of the warning plates can cause severe injuries.
Check that the warning plates are always installed and legible.
Otherwise install or replace them.

3 - Controls and pilot lights

3.1 - List of the controls and pilot lights

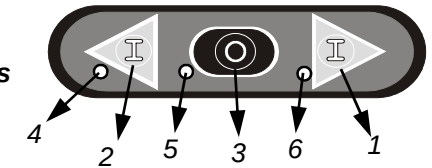


Fig. 3.1.1

1 - Push-button “on”

- Press it to start the machine.

2 - Stop push-button

- Press it to stop the machine.

3 - Reverse push-button

- Press it to invert the rotation sense of the propeller screw

4 - Testing, transport, delivery and installation

4.1 - Testing

Your machine has been tested on our site to ensure that it is in full standard working order.
During these working tests, we use the same foodstuff than the one used by the user.

4.2 - Delivery and installation of the machine

All the material delivered has been checked accurately before dispatching to the carrier.

Unless there are particular agreements with the customer, or for expensive delivery, the machine is packed in card board boxes and nylon.

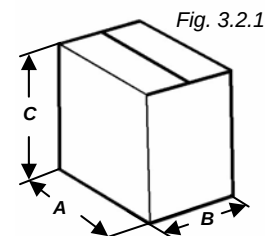


Fig. 3.2.1

	Packaging AxBxC		Gross weight
TC 12	650x470xH600	TC 12	31 Kg
TC 22	650x470xH600	TC 22	32 Kg

When the machine arrives, check the integrity of the package.
If the package has been damaged, sign the delivery note adding: “I accept with due reservations...” and indicate the reasons.

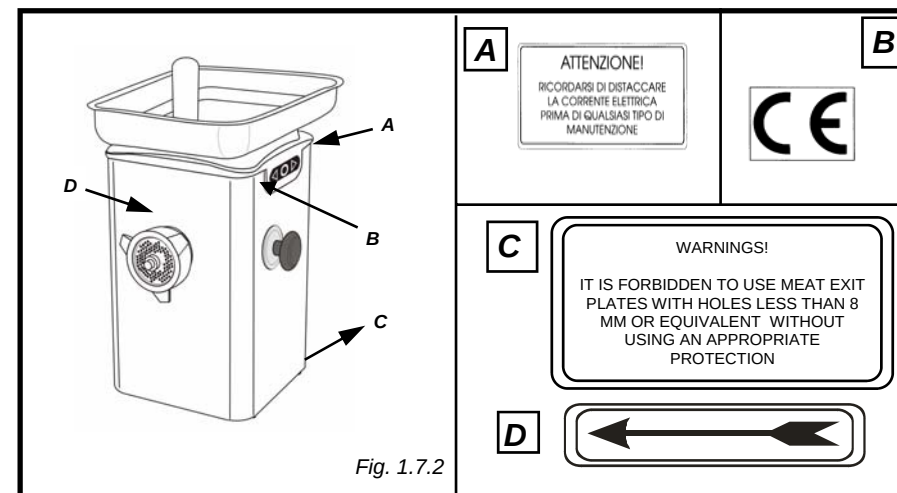
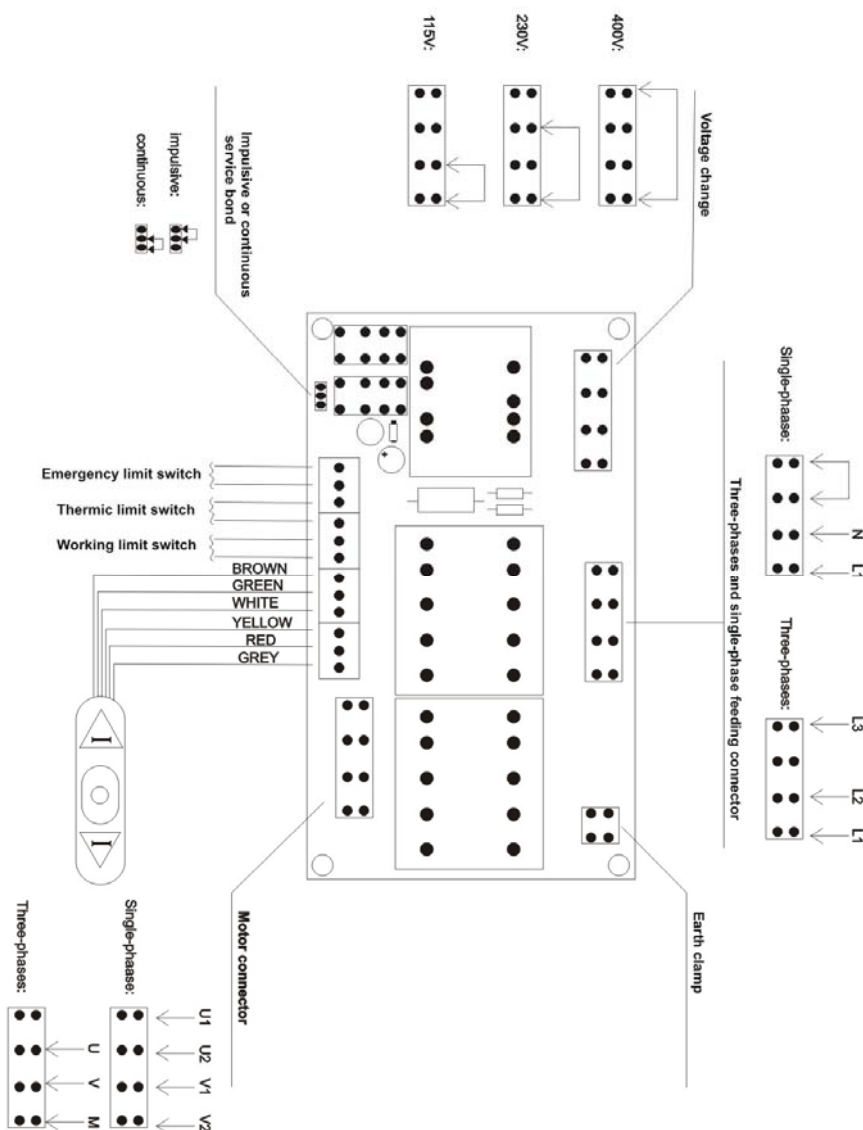
Open the package and if the material is really damaged, inform the carrier within three days from the delivery date indicated on the shipping documents.

4.3 - Installation

WARNINGS!

The area where you intend to install the machine must be horizontal and solid and the table must be adequate to support the machine safely.
Furthermore it is necessary to leave a free area around the machine considering

2.5 - Electrical circuit diagram

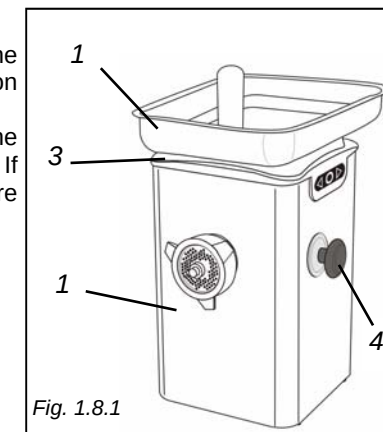


1.8 - Protections and safety devices

WARNINGS!

Before using the machine, make sure all the safety devices are installed and function correctly.

At the beginning of each shift check the presence and position of the safety devices. If they are not correctly installed or if they are missing, call the maintenance operator.



1. Meat exit, plate holes of less than 8 mm.

In this case the fingers cannot enter the holes.

On request, it is possible to install plates with outlet holes larger than 8 mm.

In this case the user must provide a protection for this opening .

2. Stainless steel hopper solidly fixed to the feeding opening

3. Protective device for electric elements.

The lower part of the machine is closed by a protection which prohibits anything entering to the electrical elements placed inside.

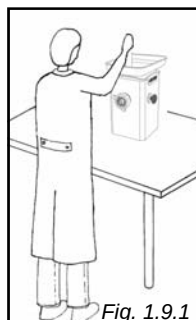
4. Fixing knob for the outlet opening of the minced meat
 - Turn the knob **anticlockwise** to disassemble the outlet opening and the details.
 - Turn the knob **clockwise** to fix the outlet opening in its working position making sure it is correctly installed.

WARNINGS!

Do never tamper the safety devices.

1.9 - Working position

The correct operator's position to grant an excellent work is indicated in fig. 1.9.1.

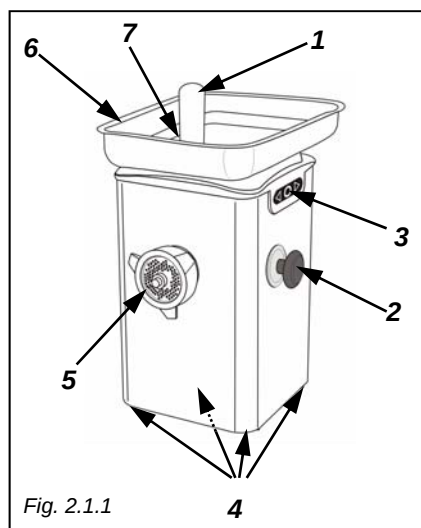


2 - Technical features

2.1 - Main parts

This is a list of all the main parts of the machine illustrated in fig. 2.1.1 to make this manual easier to understand.

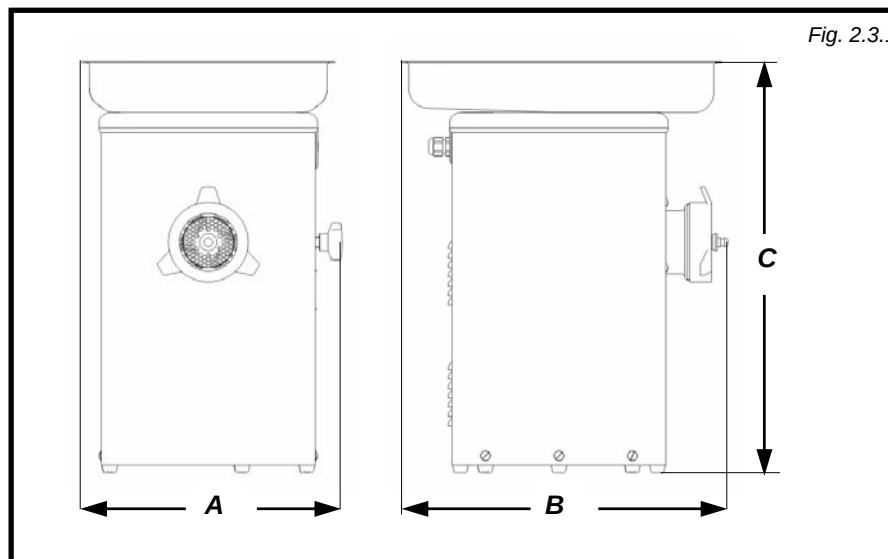
1. Pestle-tool
2. Outlet opening fixing knob
3. Controls of the machine
4. Feet
5. Minced meat outlet opening
6. Loading hopper
7. Feed opening



2.2 - Technical data

	Motor	Supply	Hourly production	Plates provided
	watt/hp		kg/h.	ø mm
TC 12	736/1	230-400V/50Hz	150	4,5
TC 22	1472/2	230-400V/50Hz	300	4,5

2.3 - Dimensions and weight of the machine



Note

All the dimensions are expressed in millimetres.

	Dimensions AxBxC	Net weight
	mm	kg
TC 12	310 x 350 x H530	29
TC 22	310 x 350 x H530	30

2.4 - Noise level

The measurement of the noise level indicates that the value is lower than 70 dBA. On demand, the manufacturer can provide a copy of the noise level test.