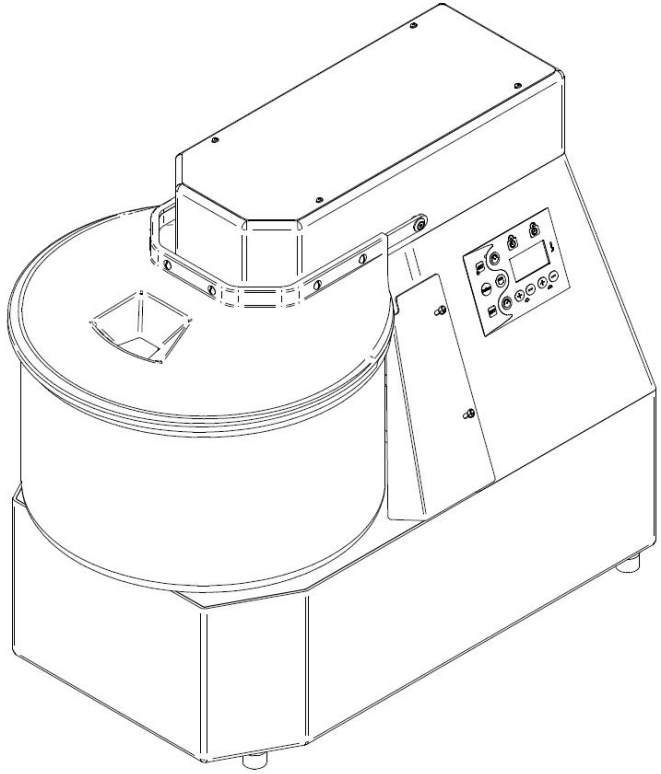
US Professional Spiral Dough mixers

HRC-BG 40 - 50



Ver. 001 - Ed. 12/2020

Use And Maintenance Instruction Manual

AFTER SALES CENTRE
AUTHORISED DEALER

guarantee lubrication of all chain links.

7.4 - POWER CABLE
Periodically check the wear of the cable and if necessary call the “AFTER SALES CENTRE” to replace.

7.5 - LONG PERIODS OF INACTIVITY
If having to leave the machine inactive for a long period of time, carefully clean and sanitize the machine. Protect it from dust using a clean dry cloth that can fully cover up to the base.

7.6 - PUSH BUTTON PANEL LABEL
Over time the push button panel could become marked and/or pierced. In this case call the “AFTER SALES CENTRE” to replace.

CHAP. 8 - DISMANTLING

8.1 - PUTTING OUT OF ORDER
If for any reason the machine is put out of order, make sure that it cannot be used by anybody: **disconnect the electric connections.**

8.2 - DISPOSAL

Once the machine is put out of service it can be easily disposed of. To correctly dispose of the slicer, ask any company assigned to such a service carefully observing the materials used for the various components (see chap. 4 par. 4.1).

CHAP. 6 - ROUTINE CLEANING

6.1 - GENERAL

- the machine must be cleaned at least once a day or if necessary, more frequently.
- all dough mixer parts that come into direct or indirect contact with the processed foodstuff must be scrupulously cleaned.
- Do not use hydro cleaners, high pressure water jets but neutral detergents (pH 7) to clean the dough mixer **Any other product is forbidden.** Do not use tools, brushes and other than can superficially damage the machine.

Before carrying out any cleaning operation:

- Disconnect the plug to fully isolate the machine from the rest of the plant.

6.2 - CLEANING THE MACHINE

The tank, the shaft and the spiral must be cleaned at the end of each working cycle and must be carried out using hot water and a sponge. Carefully dry each element at the end of the cleaning operation.
Use a sponge wet slightly with a small amount of detergent and non harmful sanitizer to clean the outside of the machine.
Do not use abrasive detergents, detergent creams, solvents or diluents; residuals of these products can dangerously contaminate the foodstuff during successive processing.
Do not use abrasives or metallic chaffs to prevent damaging the surfaces by scratching.

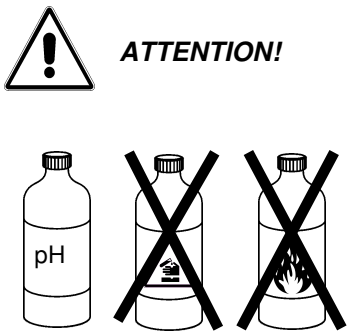


Fig. n°38

CHAP. 7 - MAINTENANCE

7.1 - GENERAL

Before carrying out any maintenance operation it is necessary that:

- the plug be disconnected from the network in order to isolate completely the machine from the rest of the plant.

7.2 - TIGHTENING THE TOP CHAIN

The chain must be tightened if, when carrying out excessive checks it is loose or if spiral rotation is not constant. In this case call the “AFTER SALES CENTRE” for retightening.

7.3 - GREASING THE CHAINS

It is recommended that both drive chains be greased periodically using suitable grease to

INTRODUCTION

- *This manual has been drawn up in order to provide the **customer** with all information on the machine and relevant standards, as well as use and maintenance instructions that allow the appliance to be used at its best, keeping efficiency integral over time.*
- *This manual must be conserved and kept integral until disposal of the machine.*
- *This manual is to be provided to persons using the machine and for its periodic maintenance.*

INDEX

1. Start the machine by pressing “ON”.

At the end of the cycle, the machine will stop automatically.

PROGRAMME 2
1. Press the button to set the rotation time of the spiral in fast mode (Ref. 8); enter the desired time by pressing “+”/”–” (Refs. 10a and 10b).
2. Start the machine by pressing “ON”.

At the end of the cycle, the machine will stop automatically.

PROGRAMME 3 (COMBINED)
1. Press the button to set the rotation time of the whisk in slow mode; enter the desired time by pressing “+”/”–” (Refs. 9a and 9b).
2. Press the button to set the rotation time of the whisk in fast mode; enter the desired time by pressing “+”/”–” (Refs. 10a and 10b).
3. Start the machine by pressing “ON”.

Once the first processing cycle terminates, the machine will automatically start the second cycle without switching off. At the end of both cycles, the machine will stop automatically.

5.3 - PRODUCTIVITY AND DURATION OF THE PRODUCTION CYCLE

For each model that maximum production capacity for each cycle is indicated as in *Tab. 1*.
The duration of the work cycle, in relation to the machine model, can vary from about 14 to 20 minutes.
Once the first processing cycle terminates, the machine will automatically start the second cycle without switching off. At the end of both cycles, the machine will stop automatically.
Do not exceed the quantity of dough that the machine can produce in each operational cycle indicated also in *Tab. 1* (depending on the model).
Adding water and other ingredients to the mass already partially mixed inside the tank must be carried out gradually to the indicative proportion of about 2 Kg of flour for each litre of liquid.
Pour first the water then the flour into the tank.

- at the end of the cycle, the dough will detach from the tank walls, therefore stop the machine;
- if need be, to slightly modify the characteristics of the dough without stopping the machine, pour in the ingredients using the opening on the tank protection (*Fig. 36)*
- Before lifting the protection and removing the dough to be placed on the work bench, pull the plug out of the socket.

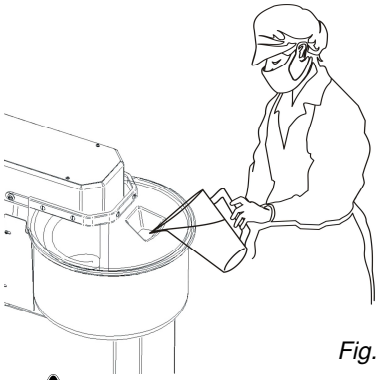


Fig. n°36

ATTENTION!

5.2 - USING THE CONTROLS

5.2.1 - Manual programme

1. Press the "ON" button to start the machine.
2. Press the relevant button (Ref. 5) to start the slow movement of the spiral, or the fast movement button (Ref. 4) for the desired time.
3. Press the button (Ref. 6) to invert the bowl's direction of rotation.
4. Press the "OFF" button to stop the machine.

WARNING!
The inversion of the bowl rotation occurs with a pre-defined time of 5 minutes, which can be activated at any time.

5.2.2 - Automatic programme

There are 3 types of automatic programmes:

PROGRAMME 1
Press the button to set the rotation time of the spiral in slow mode (Ref. 7); enter the desired time by pressing "+"/"–" (Refs. 9a and 9b).

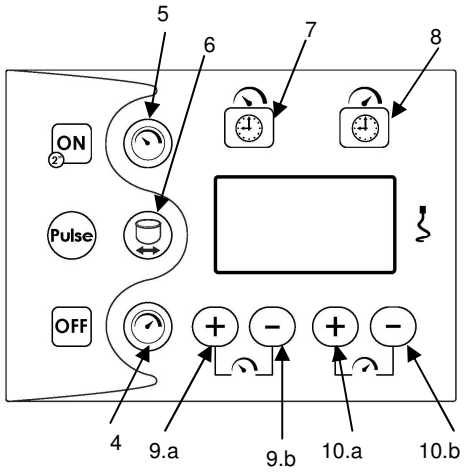


Fig. n°37

CHAP. 1 - RECEIVING THE MACHINE

1.1 - PACKAGING

The packaging within which the dough mixer is sent is made up of (*Fig. n°1*): a cardboard box, a wooden pallet and protective nylon. They are to be disposed of separately and in compliance with the existing laws in force in the Country of installation.

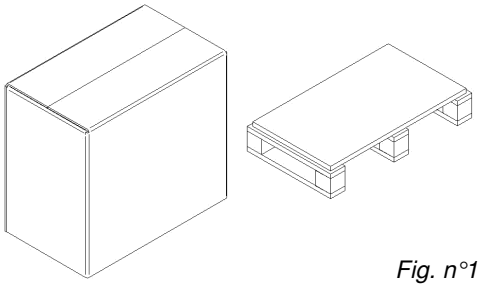


Fig. n°1

	Dimensions AxBxC (mm)	Gross Weight (Kg)
HRC-BG 40 2V	630x970x1070	150
HRC-BG 50 2V	630x970x1070	170

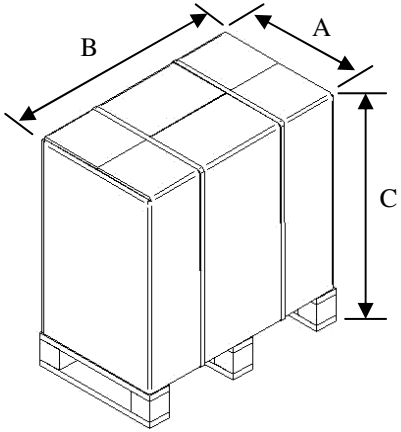


Fig. n°2

ATTENTION!

Do not superimpose (*Fig. n°3*)**.**

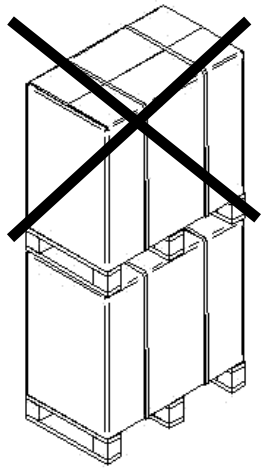


Fig. n°3

Do not expose the package to humidity and rain (*Fig. n°4*).

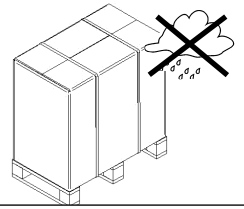


Fig. n°4

Heavy package. Manually lift with the aid of minimum three people (*Fig. n°5*).

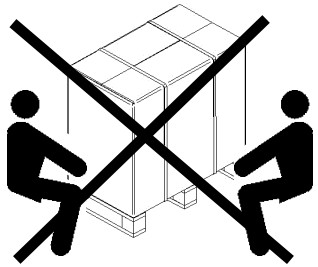


Fig. n°5

Move the package only with electrical or manual trolleys equipped with lifting brackets (*Fig. n°6*).

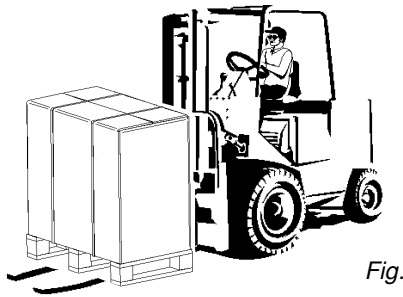


Fig. n°6

Do not move the pack hung from ropes or similar systems because the barycentre is not in the middle
(*Fig. n°7*).

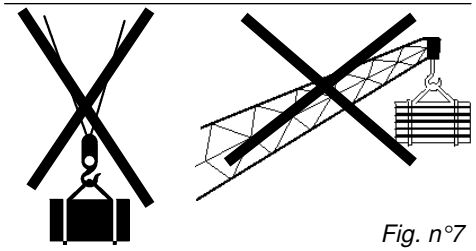


Fig. n°7

1.2 - PACKAGING CHECK ON RECEIPT OF THE PACKAGE

On receiving the package if this shows no signs of external damage, open it and check that all the material is inside. If however on receiving the package there are signs of maltreatment, (*Fig. n°8*), collisions or falls, it is necessary to inform the courier of the damage and and within 3 days from the shipping date indicated on the documents, draw up a precise report

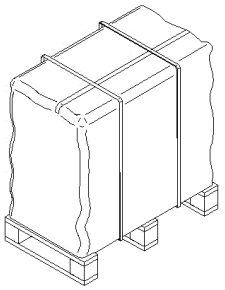


Fig. n°8

CHAP. 5 - USING THE MACHINE

5.1 - STARTING UP THE MACHINE

For 1st use strictly follow the following instructions:

- check that installation has been carried out correctly as indicated in **chapter 2**;
- lift the tank's lid (*Fig. 33*) and pour inside the tank all of the water and other liquids necessary for the dough;
- add about 50% of the flour and the other solid ingredients (*Fig. 34*);
- close the lid by lowering it up to slightly touching the tank;
- check before any other operation that the main switch is ON;
- before starting up the appliance, verify whether the power grid has voltage by checking that the display is lit (Fig. 35);
- press the "ON" button to start the machine that will start the work cycle;
- after 2-3 minutes stop the machine by pressing the "OFF" button;
- lift the lid and insert the remaining flour;
- close the lid and start the machine that will blend all ingredients, transforming it into a homogeneous dough;
- a thermal overload protection circuit breaker stops the machine in case of a motor jamming. After removing its cause, you can reset the protection and restart the machine in few minutes.

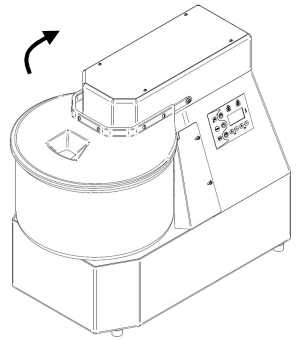


Fig. n° 33

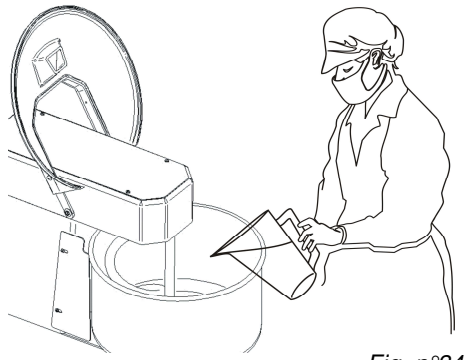


Fig. n°34

Display

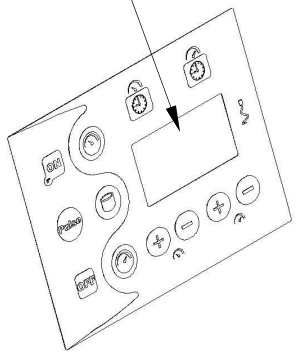


Fig. n°35

4.5 - OVERALL SIZE, WEIGHT, CHARACTERISTICS ...

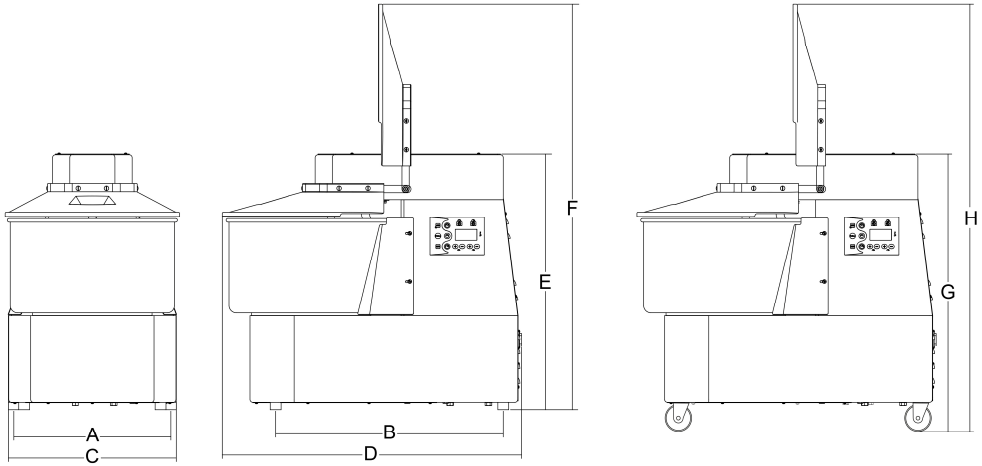


Fig. n°32

***TAB. n°1* - MISURE D'INGOMBRO E CARATTERISTICHE TECNICHE**

MODEL	***U.m.***	**HRC-BG 40 2V**	**HRC-BG 50 2V**
Tank dimensions	*mm*	ø452 x 260	ø500 x 270
A x B	*mm*	377 x 630	413 x 654
C x D	*mm*	434 x 823	470 x 875
E / F	*mm*	705 x 1115	723 x 1180
G / H	*mm*	785 / 1195	809 / 1266
Tank capacity	*lt*	41	52
Dough capacity	*Kg*	35	44
Tank motor **Spiral motor**	*W*	750 1.500/2.200	750 1.500/2.200
Tank totations	*r.p.m*	10	10
Spiral rotations slow mode **Spiral rotations fast mode**	*r.p.m*	82 165	82 165
Net weight	*Kg*	135	155
Power Source	*3ph*	230 V. / 60 Hz	
Noise degree	*dB*	≤ 60	

ATTENTION:
The electrical characteristics for which the machine is prepared are indicated on the plate

of the damages caused to the machine. **Do not turn the package upside down!!** When handling make sure that it is held firmly in the four fundamental points (keeping it parallel to the pavement).

CHAP. 2 - INSTALLATION

ATTENTION!

All operations must be carried out by specialised staff (*Fig. n°9*).

Fig. n°9

2.1 - UNPACKING

- Remove the strips from the packaging (*Fig. n°10*) and lift (*h*) the cardboard box.
- The machine is fixed with two plates to the pallet.

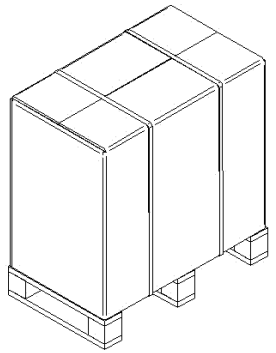
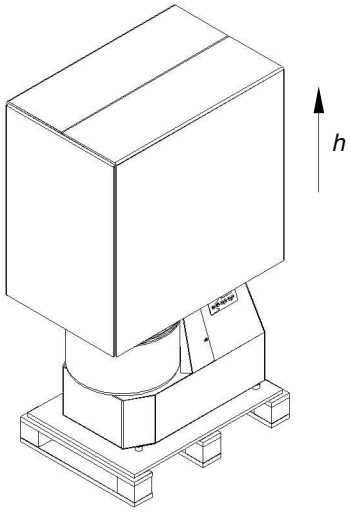


Fig. n°10



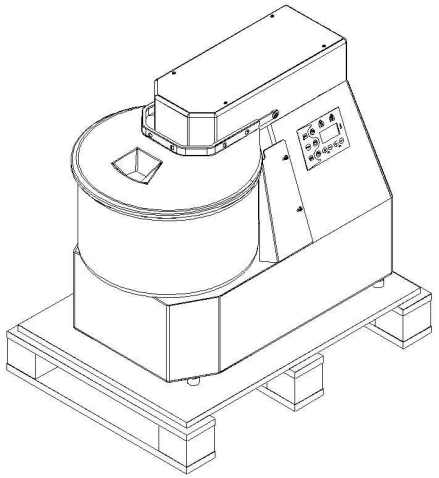


Fig. n°11

2.2 - POSITIONING

Position the pallet, with the dough mixer, on a flat surface and unscrew (*a*) the screws that fix the machine to the pallet (*Fig. n°12*).
At this point, with care, turn the machine over onto one side and unscrew the screws to remove the anchoring plates (b). Fixed the screws removed onto the bottom cover.
Position the dough mixer in the predestined place.
The surface on which the dough mixer is to be positioned must take into consideration the dimensions indicated in *Tab. 1* (based on the model) therefore the support surfaces must be wide enough to contain it (*Fig. n°13*) and must be well levelled and dry away from water and heat sources with suitable ventilation and lighting in relation to the space necessary for its use and safe keeping.
(The machine must also be positioned in a non saline room with a maximum humidity of 75% and a temperature included between +5°C and +35°C; however in rooms that can not cause malfunctioning of the machine.

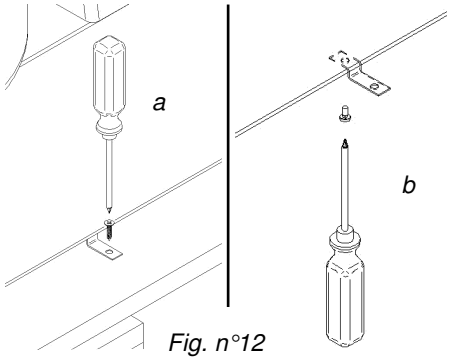


Fig. n°12

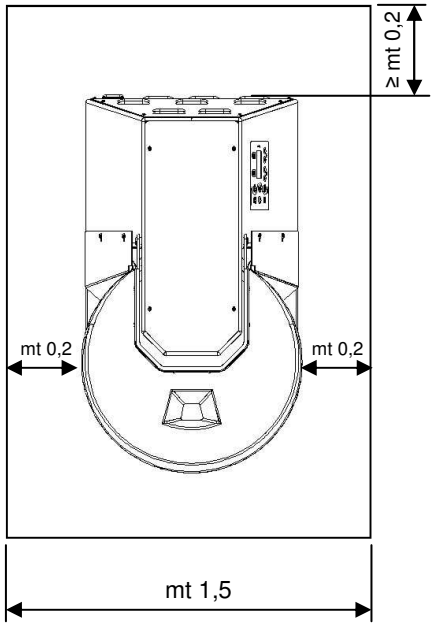


Fig. n°13

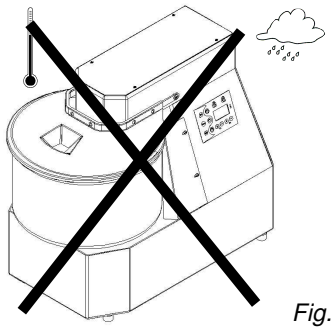


Fig. n°14

- A micro switch on the protection, located on the tank, that stops the machine if it is lifted and does not allow switch on unless the protection is closed (*Fig. n°30*).

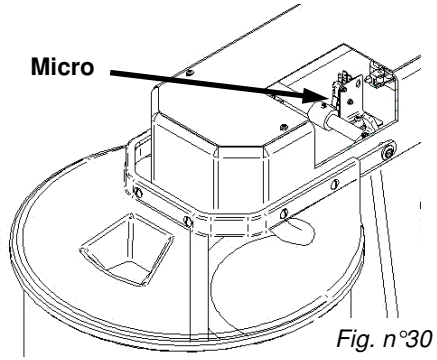


Fig. n°30

- Relay in the control circuit that requires restarting the machine in case of accidental lack of power supply (*Fig. n°31*).

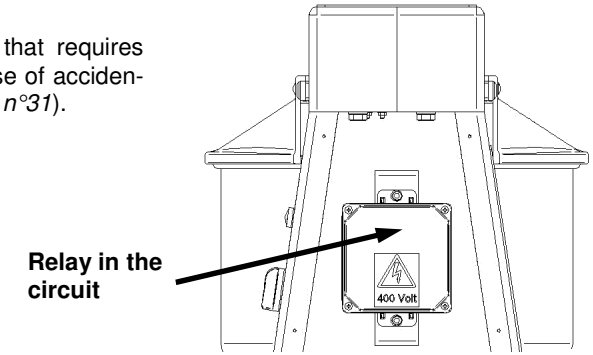


Fig. n°31

Even though the **CE** professional dough mixers are equipped with regulation measures for electrical and mechanical protections (both during functioning and during cleaning and maintenance), there are however **RESIDUAL RISKS** that cannot be totally eliminated and are recalled in this manual under the form of ***ATTENTION.*** These relate to danger of contusions or other caused by the tank or other machine components.

4.3 - DESCRIPTION OF THE MACHINE

The **CE** professional dough mixers have been projected and realised by our company with the precise purpose of mixing food products (flour, yeast etc.) and guarantee:
- maximum safety during use, cleaning and maintenance;
- Maximum hygiene, obtained thanks to the meticulous selection of materials that come into contact with food stuff;
- robustness and stability of all components;

4.4 - MACHINE NOISE LEVEL

The measurement of the noise level indicates that the value is 60 dB.

4.2 - SAFETY SYSTEMS INSTALLED ON THE MACHINE

4.2.1 - Mechanical safety systems

Regarding the mechanical safety systems, the dough mixer described in this manual responds to:
- the **UL 763** and **CSA 22.2** Machine Directives.

The safety systems are:
- Lid for rotating tank (*Fig. n°28 ref. n°1*);
- Tank protection (*Fig. n°28 ref. n°2*).

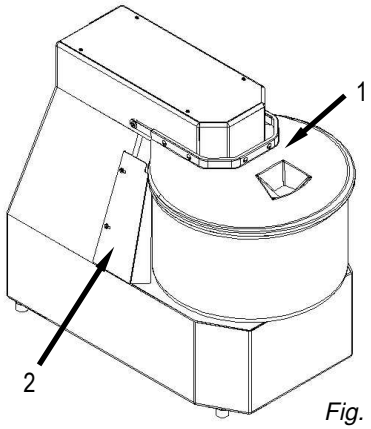


Fig. n°28

4.2.2 - Electrical safety systems

Regarding the electrical safety systems, the dough mixer described in this manual responds to:
- the **UL 763** norm;
- the **CSA 22.2** norm.

The dough mixer is envisioned with:
- thermal protection circuit breaker with manual reset, on back of machine, which stops the machine when current overload or motor jamming occur (*Fig. n°29*).

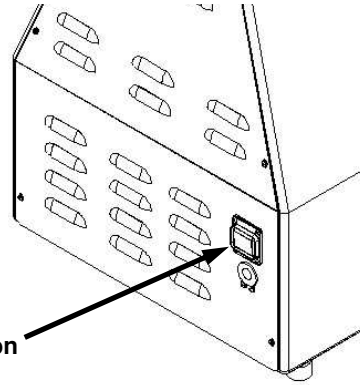


Fig. n°29

2.3 - ELECTRIC CONNECTION

Check that the data reported on the technical plate-serial number (*Fig. n°15*), on the dispatch note and in the order carried out correspond; If this is not the case, immediately contact the manufacturer for an explanation.
Make sure at this point that the plant is up to standards and that the cable and the earth plant function perfectly.

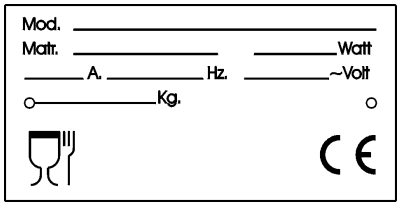


Fig. n°15

2.3.1 - Dough mixer with three phase motor 230 V.

The dough mixer is equipped with a UL listing power supply cord and a plug.
Connect the dough mixer with a 230V. 3Ph - 60 Hertz electric circuit.
Moreover check that features on the rating plate - serial number (FIG. n°15) correspond to the features shown in the consignment and delivery note.

2.3.2 - Tank rotation direction

Check the direction of rotation of the spiral by pressing and holding for two seconds the “ON” button, immediately followed by the “OFF” button. When viewed from the transmission shaft, the spiral must turn clockwise, in other words, it must push the dough downwards (Fig. 16).
If the initial rotation direction is anti-clockwise, invert two of the three phase wires (black, grey or brown) in the plug (Fig. 17).

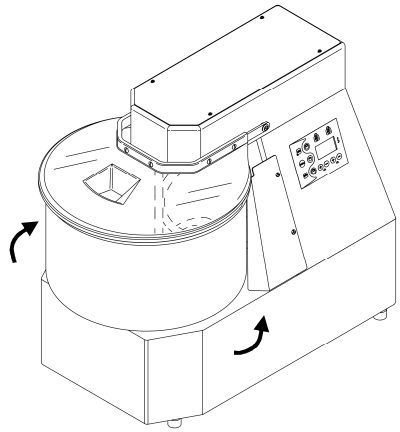


Fig. n°16

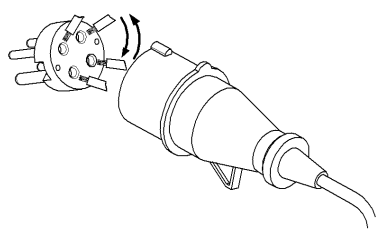


Fig. n°17

2.4 - WIRING DIAGRAM THREE PHASE 230V.

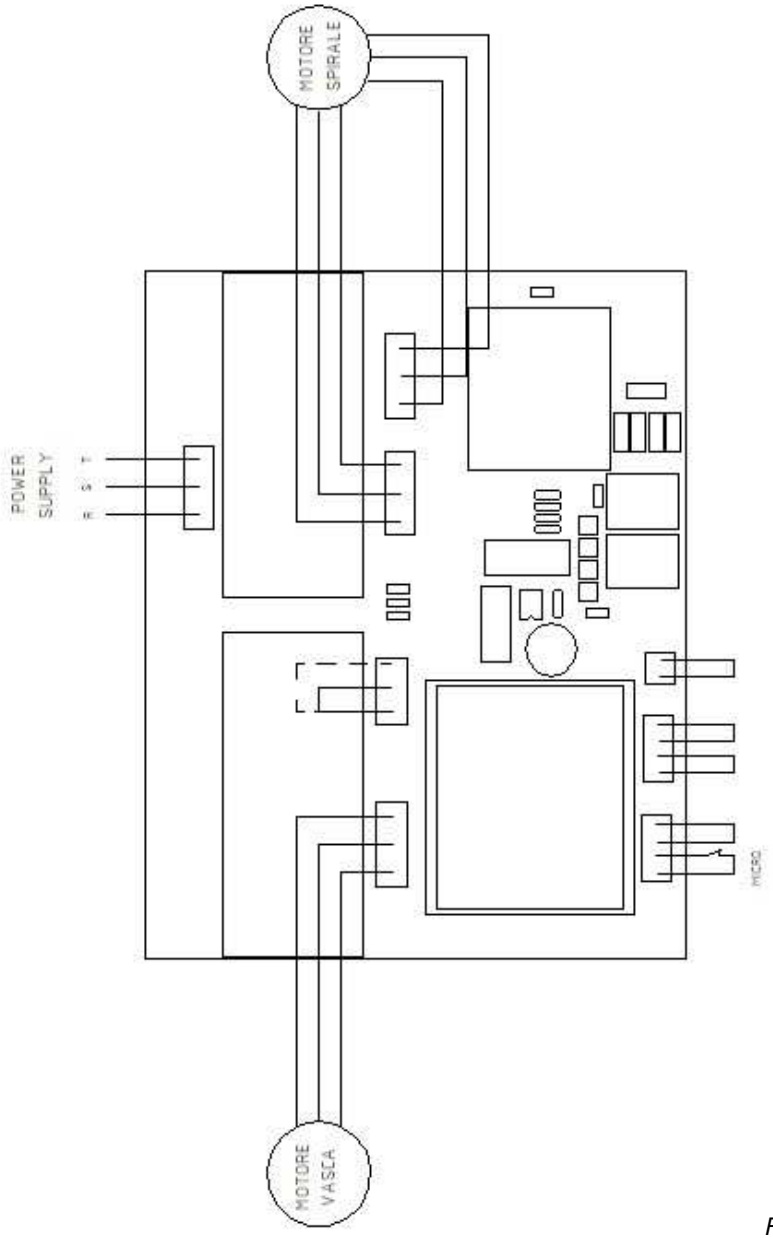


Fig. n°18

CHAP. 4 - LEARNING ABOUT THE DOUGH MIXER

4.1 - CONSTRUCTIVE CHARACTERISTICS

The dough mixer is mainly made up of a large thick C40 steel structure protected with scratch resistant powder coating. This guarantees contact with foodstuff (hygiene).
The tank with reinforced edge, the forged spiral tool and the shaft are made from AISI 304 stainless steel. The protection placed on the tank, conforming to standards, is made of PETG with a hole for adding products during processing .
The transmission is a high efficiency motor with oil bath gear box and the moving parts are mounted on watertight ball bearings. Wheels and timer are optional.

4.1.1 - Machine components

LEGEND:

1	-	*Frame*	*7*	-	*Tank lid*
2	-	*Spiral*	*8*	-	*Tank protection*
3	-	*Controls panel*	*9*	-	*Foot*
4	-	*Top sump*	*10*	-	*Terminal board*
5	-	*Shaft*	*11*	-	*Rear sump*
6	-	*Tank*	*12*	-	*Thermal overload protection circuit breaker*

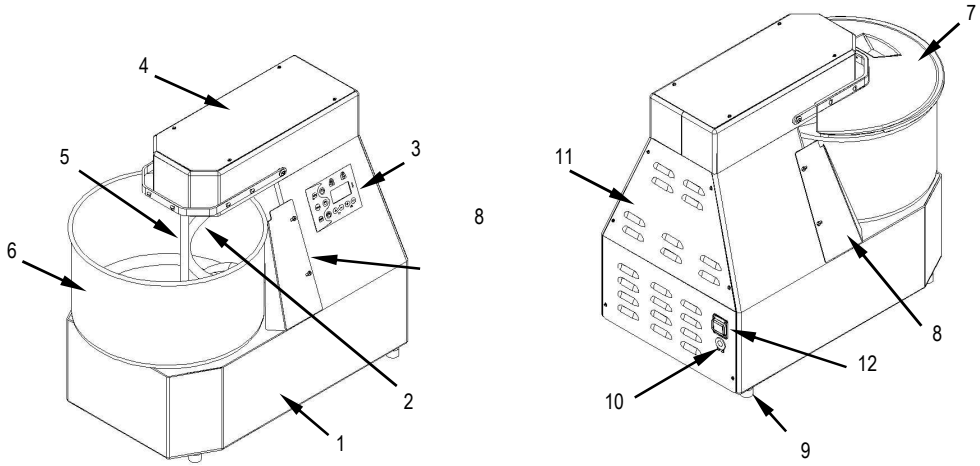


Fig. n°27

- During maintenance or cleaning remain concentrated on the operations in progress.
- Do not use corrosive or flammable substances to clean the dough mixer (*Fig. n°24*).
- To clean, carefully follow the instructions in the “Routine cleaning” chapter.
- Do not wash the dough mixer with jets of water, with rough or abrasive means that can ruin the surfaces. Do not immerge it in water or other liquids.
- Do not expose the dough mixer to damaging agents: sun, rain, splashes, humidity, ice (*Fig. n°25*).

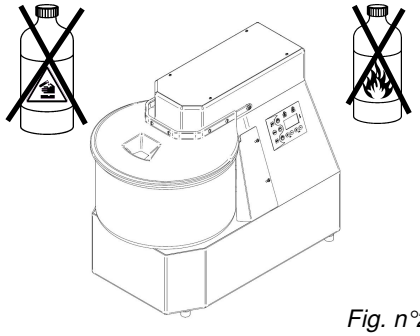


Fig. n°24

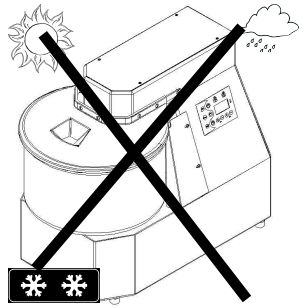


Fig. n°25

- Do not pull the dough mixer or the power cable (*Fig. n°26*), to disconnect the plug from the socket.
- Regularly check the state of the power cable; a worn cable or however not integral is a serious electrical .
- If the machine is not used for a long period of time, contact the “After Sales Centre” for a test before use.
- If the machine should assume or show signs of malfunctioning, it is recommended that it is not used and do not intervene directly for repairing but contact “After sales centre”, visible on the back of this manual.

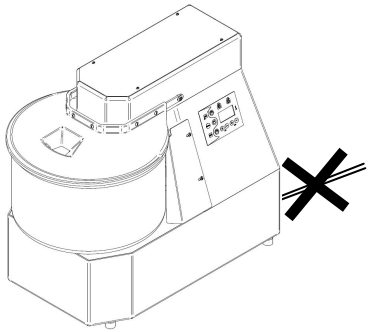


Fig. n°26

- Do not leave the dough mixer insert if not necessary. Pull out the plug when the machine is not being used.
- Even if the machine has safety systems installed on the dangerous points, do not place hands, arms or any other part of the body near to the tank and the moving parts inside it.

2.5 - CONTROLS

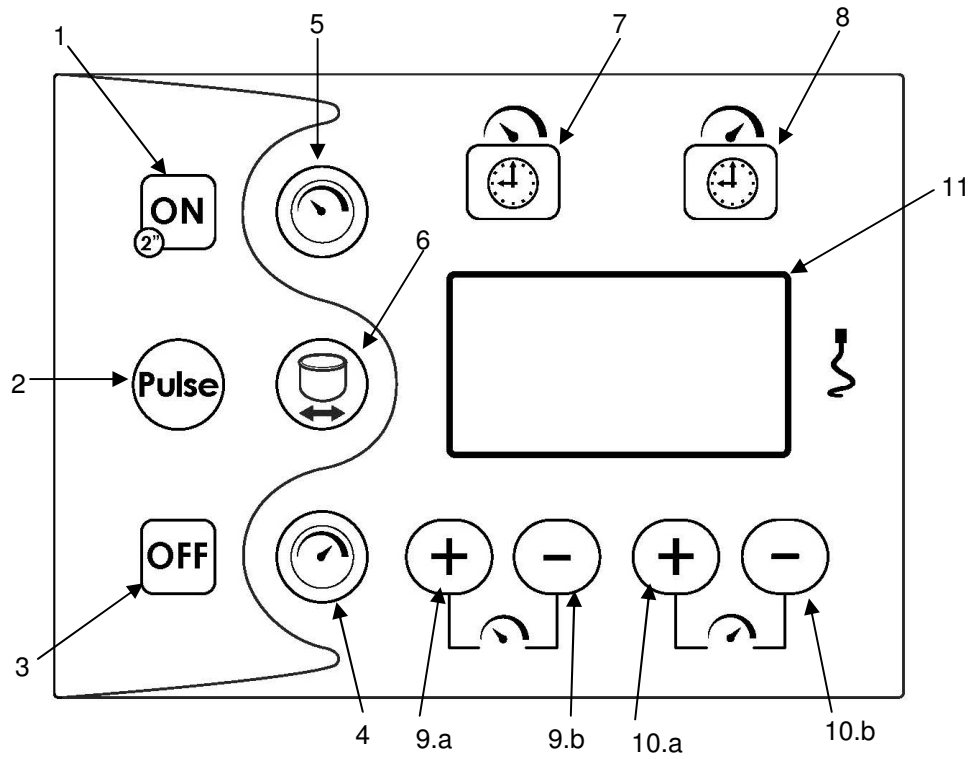


Fig. n°19

1. *“ON” button*
2. *“PULSE” button (bowl and spiral movement)*
3. *“OFF” button*
4. *Spiral rotation setting – fast mode*
5. *Spiral rotation setting – slow mode*
6. *Bowl rotation inversion*
7. *Time setting for spiral rotation – slow mode*
8. *Time setting for spiral rotation – fast mode*
9. *Buttons for setting the rotation time of the spiral in slow mode using the “+” and “–” (Refs. 9.a and 9.b)*
10. *Buttons for setting the rotation time of the spiral in fast mode using the “+” and “–” (Refs. 10.a and 10.b)*
11. *Display*

2.6 - PRELIMINARY CHECKS

Before testing make sure that the protection located on the tank is lowered up to slightly touching the bowl, after which test functioning as follows:

- activate the “ON” button and the “OFF” button (*Fig. n°20)*;
- check that when lifting the protection the machine stops functioning;
- with the machine on, remove the plug and reinsert it to check if the machine does not automatically restart.
- on this two-speed model, set the slow or fast mode by pressing the controls shown in Fig. 21 and then press “ON” again to verify the correct operation; the machine can remain on whenever the speed is changed; lastly, press “OFF” to stop the machine.
- check that the “Pulse” button works properly by pressing it with brief pulses.

After these operations have been completed, it is possible to begin the functional verification as described above.

ATTENTION!

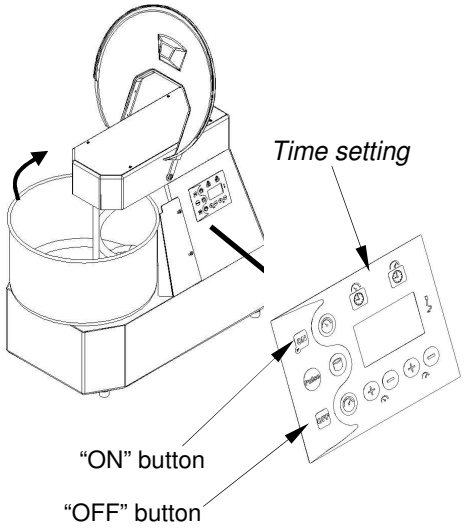


Fig. n°20

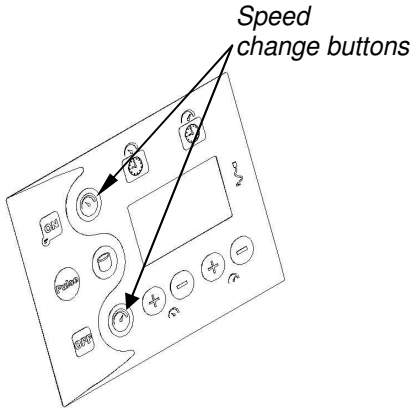


Fig. n°21

CHAP. 3 - INFORMATION REGARDING THE MACHINE

3.1 - GENERAL PRECAUTIONS

The general precautions, even if taken for granted, are fundamental for installation, use maintenance and any inconveniences with respective solutions.

- The dough mixer has been projected for mixing and blending flours for food use. Every other use is to be considered improper and therefore dangerous.
- The Manufacturer cannot be held responsible in the following cases:

⇒ **if the machine is tampered with by non authorised staff;**

⇒ **if components are replaced with non original ones;**

⇒ **if the instruction in this manual are not carefully followed;**

⇒ **if the machine surfaces are treated with non suitable products.**

- Conserve this manual with care for future information or reference (*Fig. n°22*).
- The dough mixer must be used only by trained staff with perfect knowledge of the safety standards contained in this manual.
- If staff turnover is necessary, provide training beforehand.
- The dough mixer must not be used by children or incompetent persons and however by non trained persons (*Fig. n° 23*).
- Disconnect the machine’s socket from the electric network before carrying out any cleaning or maintenance operations.
- Carefully valuate the residual risks when intervening for routine dough mixer maintenance or cleaning (therefore the tank protection is lifted).

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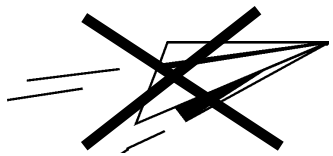

Fig. n°22

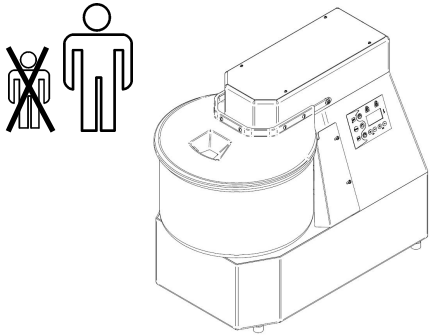

Fig. n°23

ATTENTION!