

APPLICARE

TARGA

CARATTERISTICHE

INSTRUCTION HANDBOOK

LABOTRONIC RTL

*We wish to thank you for the preference granted to us by purchasing one of **CARPIGIANI** machines.*

*To the best guarantee, since 1993 **CARPIGIANI** has submitted its own Quality System to the certification according to the international Standard ISO 9001, nowadays its production has got UNI-EN-ISO 9001:2008 Certified Quality System.*

Moreover, Carpigiani machines comply with following European Directives:

- “Machinery” Directive 2006/42/CE,
- “Low Voltage” Directive 2006/95/EC,
- “EMC” Directive 2004/108/EC,
- “PED” Directive 97/23/EC,
- Regulation 2004/1935/EC relating to “Materials and articles in contact with foodstuffs”

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FOREWORD

INSTRUCTION HANDBOOK

Editing this handbook, it was taken into due account European Community directions on safety standards as well as on free circulation of industrial products within E.C.

PURPOSE

This handbook was conceived taking machine users' needs into due account. Topics relevant to a correct use of the machine have been analyzed in order to keep unchanged in the long run quality features characterizing **CARPIGIANI** machines all over the world. A significant part of this handbook refers to the conditions necessary to the machine use and to the necessary procedure during cleanout as well as routine and special maintenance. Nevertheless, this handbook cannot meet all demands in details. In case of doubts or missing information, please apply to:

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HANDBOOK STRUCTURE

This handbook is divided in sections, chapters and subchapters in order to be consulted more easily.

Section

A section is the part of the handbook identifying a specific topic related to a machine part.

Chapter

A chapter is that part of a section describing an assembly or concept relevant to a machine part.

Subchapter

It is that part of a chapter detailing the specific component of a machine part.

It is necessary that each person involved in the machine operation reads and clearly understands those parts of the handbook of his/her own concern, and particularly:

- The Operator must read the chapters concerning the machine start-up and the operation of machine components.
- A skilled technician involved in the installation, maintenance, repair, etc., of the machine must read all parts of this handbook.

ADDITIONAL DOCUMENTATION

Along with an instruction manual, each machine is supplied also with additional documentation:

- **Part list:** a list of spare parts which is delivered together with the machine for its maintenance.
- **Wiring diagram:** a diagram of wiring connections is placed in the machine.

**Before using the machine read carefully the instruction handbook.
Pay attention to the safety instructions.**



CONVENTIONAL SYMBOLS



CAUTION: ELECTRIC SHOCK DANGER

The staff involved is warned that the non-observance of safety rules in carrying out the operation described may cause an electric shock.



CAUTION: GENERAL HAZARD

The staff involved is warned that the operation described may cause injury if not performed following safety rules.



NOTE

It points out significant information for the staff involved.



WARNINGS

The staff involved is warned that the non-observance of warning may cause loss of data and damage to the machine.



PROTECTIONS

This symbol on the side means that the operator must use personal protection against an implicit risk of accident.

QUALIFICATION OF THE STAFF



MACHINE OPERATOR

He/she is an unskilled person, who has no specific expertise and can only carry out easy chores, such as the machine operation by means of controls available on the push-button panel, and filling and drawing of products used during operations.



MAINTENANCE ENGINEER

He/she is a skilled engineer for the operation of the machine under normal conditions; he/she is able to carry out interventions on mechanical parts and all adjustments, as well as maintenance and repairs. He/she is qualified for interventions on electrical and refrigeration components.



CARPIGIANI ENGINEER

He/she is a skilled engineer the manufacturer assigned to field interventions for complex jobs under particular conditions or in accordance with agreements made with the machine's owner.

SAFETY

When using industrial equipment and plants, one must be aware of the fact that drive mechanisms (rotary motion), high voltage components, as well as parts subject to high temperatures may cause serious damage to persons and things.

Who is in charge of plant safety must be on the look-out that:

- An incorrect use or handling shall be avoided;
- Safety devices must neither be removed nor tampered with;
- The machine shall be regularly serviced;
- Only original spare parts are to be used especially as far as those components with safety functions are concerned (ex.: protection microswitches, thermostats);
- suitable personal protective equipment is worn.

To achieve the above, the following is necessary:

- At the working place an instruction manual relevant to the machine should be available;
- Such documentation must be carefully read and requirements must consequently be met;
- Only adequately skilled personnel should be assigned to electrical equipment;
- Be on the look out that no technician will ever carry out interventions outside his own knowledge and responsibility sphere.

QUALIFICATION OF THE STAFF

Staff attached to the machine can be distinguished according to training and responsibility as follows:

OPERATOR

- A person who has not necessarily a high technical knowledge, just trained for ordinary operation of the machine, such as: startup, stop, filling, basic maintenance (cleanout, simple blocking, instrumentation checkings, etc.).

SKILLED ENGINEER

- A person engaged on more complicated operations of installation, maintenance, repairs, etc.

IMPORTANT!

One must be on the look-out that the staff does not carry out any operation outside its own sphere of knowledge and responsibility.

NOTE:

According to the standard at present in force, a SKILLED ENGINEER is who, thanks to:

- training, experience and education,
 - knowledge of rules, prescriptions and interventions on accident prevention,
 - knowledge of machine operating conditions,
- is able to realize and avoid any danger and has also been allowed by the person in charge of plant safety to carry out all kinds of interventions.*

WARNING

When installing the machine, insert a differential magnetothermal protection switch on all poles of the line, adequately sized to the absorption power shown on machine data plate and with contact opening of 3 mm at least.

- Never put your hand into the machine, alike during production and cleaning operations. Before carrying out any maintenance operation, make sure that the machine is in "STOP" position and main switch has been cut out.
- It is forbidden to wash the machine by means of a bolt of water under pressure.
- It is forbidden to remove panels in order to reach the machine inside before having disconnected the machine.
- **CARPIGIANI** is not responsible for any accident that might happen during operation, cleaning and/or servicing of its units, if this warning has not been fully complied with.



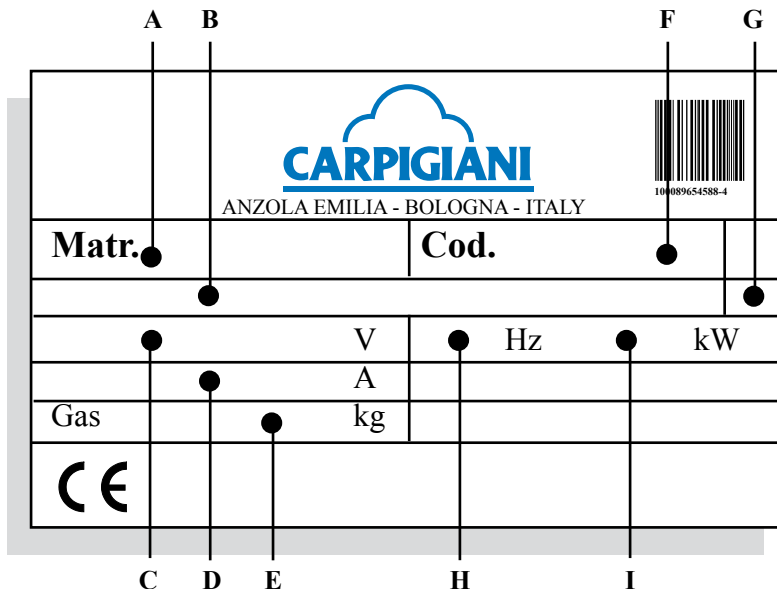
1. GENERAL INFORMATION

1.1 GENERAL INFORMATION

1.1.1 Manufacturer's identification data

The machine has a data plate carrying manufacturer data, machine type and serial number, as signed when it is manufactured.

Copy of machine data plate to be found on first page of this handbook.



Legend:

- A=Serial number
- B= Machine type
- C= Voltage
- D= Main-switch
- E= Gas type and weight
- F= Machine code
- G= Condensation
- H= Frequency
- I= Power input

1.1.2 Information about service

All operations of routine maintenance are here described in section "Maintenance"; any additional operation requiring technical intervention on the machine must be cleared with the manufacturer, who will also examine the possibility of a factory technician field intervention.

1.1.3 Information to the user

- The manufacturer of the machine is at user's disposal for any explanation and information about the machine operation.
- In case of need, please call the local distributor, or the manufacturer, if no distributor is available.
- Manufacturer's service department is available for any information about operation, and requests of spare parts and service.



1.2 INFORMATION ABOUT THE MACHINE

1.2.1 General data

LABOTRONIC RTL are batch freezers for the production of ice cream. They have a horizontal barrel which facilitates the extraction of ice cream.

These machines are electronically controlled to ensure a professional use and best quality of ice cream. It is possible to personalize ice cream production programs in order to get any kind of ice cream and other specialties; only with the LABOTRONIC RTL can you really produce an extraordinary variety of ice cream, exclusively tasty cremolata fruit

CARPIGANI recommends to always use high quality mix for ice cream production in order to satisfy your customers, even the hardest-to-please ones. Any saving made to the prejudice of quality will surely turn into a loss much bigger than the saving itself.

Bearing in mind the above statements, please take heed of the following suggestions:

- Make your mixes yourselves from high quality natural ingredients or buy them from reliable companies;
- Follow closely instructions given by your mix supplier for the preparation of the mixes;
- Do not alter your mix supplier's recipes, by adding, for instance, water or sugar;
- Taste ice cream before serving it and start selling it only if entirely satisfactory;
- Make sure your staff always keeps the machine clean.

Have your machine serviced always by companies authorized by **CARPIGANI**.

1.2.2 Technical features

MODEL	ICE-CREAM								Cremolata	Beater motor speed n	Power supply			Rated output	Con-denser	Dimensions cm			Net weight kg		
	Quantity per batch				Hourly output						Quantity per cycle kg	Volt	Hz			Ph	kW	Base		Height (H)	
	Mix batch kg		Ice cream l		Mix batch kg		Ice cream l											Width (L)			Depth (P)
	Min	Max	Min	Max	Min	Max	Min	Max													
Labotronic 10 30 RTL	1,5	5	2	7	10	30	12	42	4	2	400	50	3	3,8	Water	50	65	140	230		
Labotronic 15 45 RTL	2,5	7,5	3,5	10,5	15	45	21	63	6,5	2	400	50	3	5,2	Water	50	65	140	270		
Labotronic 20 60 RTL	3	10,5	4	15	20	60	28	90	9	2	400	50	3	7,2	Water	50	65	140	320		
Labotronic 30 100 RTL	5	16,5	7	23	30	100	42	138	12	2	400	50	3	10,8	Water	60	85	140	415		

Performances featured by a room temperature of 25°C and a cooling water temperature of 20°C.

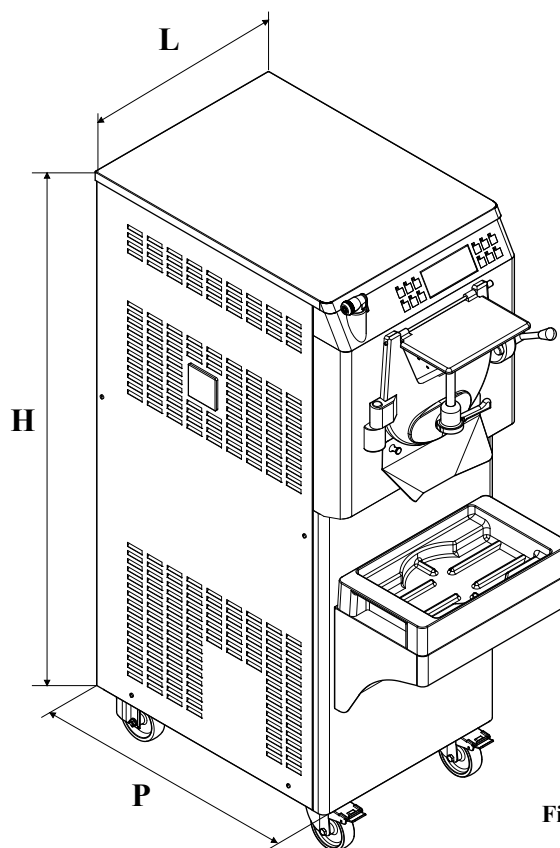


Fig. 1

1.2.3 Location of machine groups

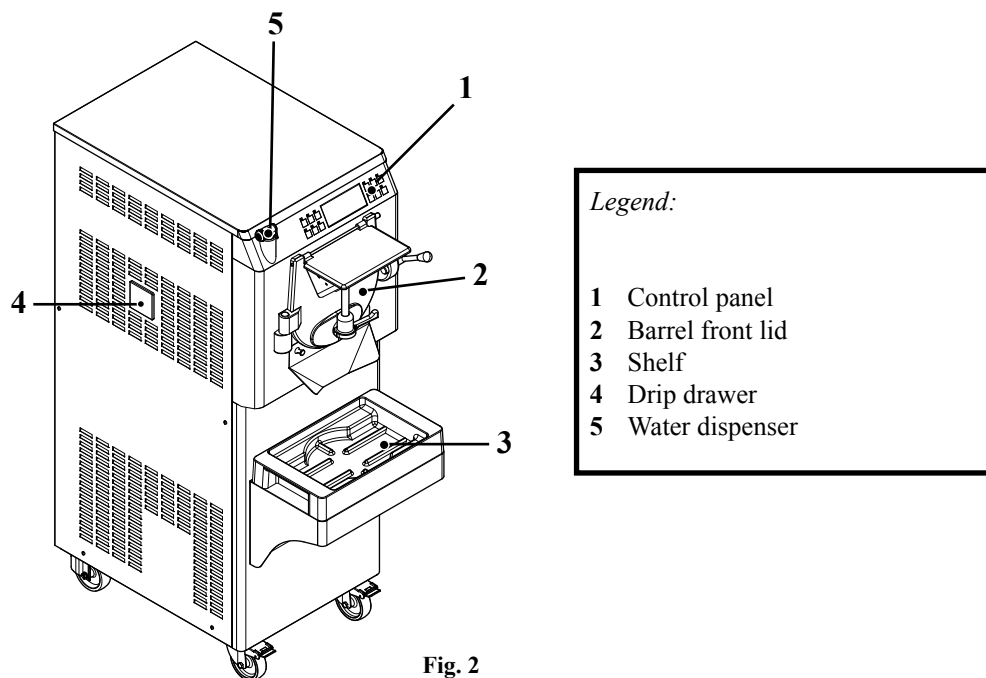


Fig. 2

1.3 INTENDED USE

The LABOTRONIC RTL must only be used for the production of ice cream, cremolata fruit and slush ("G" option) with the respect of what indicated in 1.2.1 "General information", within the limits indicated here under.

Voltage:	±10%
Min air temperature:	10°C
Max air temperature:	43°C
Min water temperature:	10°C
Max water temperature:	30°C
Min. water pressure:	0,1 MPa (1 bar)
Max water pressure:	0,8 MPa (8 bar)
Max relative humidity:	85%

This machine has been designed for its use in rooms not subject to explosion-proof laws; its use is thus bound to complying rooms and normal atmosphere.

1.4 NOISE

The steady acoustic pressure level weighed A in a working place alike by watercooled and by aircooled machines is less than 70 dB(A).

1.5 STORING A MACHINE

The machine must be stored in a dry and dump-free place.

Before storing the machine, wrap it in a cloth in order to protect it against dust and else.

1.6 DISPOSAL OF PACKING STUFFS

When opening the packing crate, separate packing stuffs per type and get rid of them according to laws in force in machine installation country.

1.7 WEEE (Waste Electrical and Electronic Equipment)

In conformity with the European Directives 2006/66/EC and 2002/96/EC, also known as WEEE, the presence of the symbol on the side of the product or packaging means that the product must not be disposed of with normal urban waste. Instead, it is the user's responsibility to dispose of this product by returning it to a collection point designated for the recycling of electrical and electronic equipment waste. Separate collection of this waste helps to optimize the recovery and recycling of any reclaimable materials and also reduces the impact on human health and the environment. For more information concerning the correct disposal of this product, please contact your local authority or the retailer where this product was purchased.



2. INSTALLATION

2.1 ROOM NECESSARY TO THE MACHINE USE

The machine must be installed in such a way that air can freely circulate all around. Rooms for the approach to the machine must be left free in order to enable the operator to act without constraint and also to immediately leave working area, if need be. The minimum approach room to working area should be at least 150 cm in consideration of space taken by opened doors.

ATTENTION

MACHINES WITH AIRCOOLED CONDENSER must be installed no closer than 50 cm to any wall in order to allow free air circulation around the condenser.

NOTE

An insufficient air circulation affects operation and output capacity of the machine.

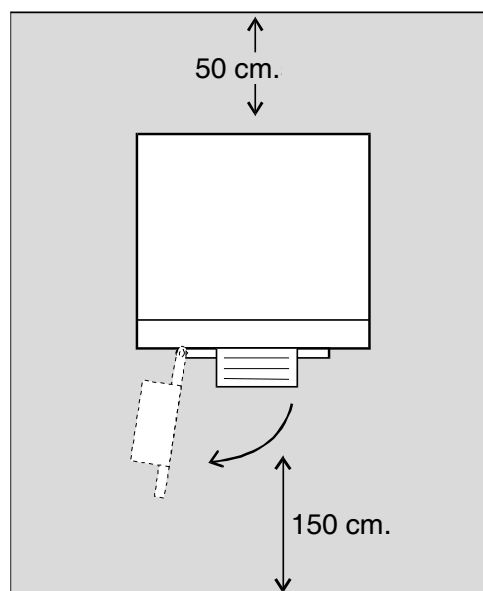


Fig. 3

2.2 WATER SUPPLY CONNECTION

The machine must be connected to running water which pressure must not be higher than 0,8 MPa (8 bars).

By aircooled machines, water connection for drinking water (for machine wash) is placed under the machine.

By watercooled machines water connections (for machine wash and gas cooling) are placed on upper panel.

2.3 MACHINE WITH AIRCOOLED CONDENSER

Machines with aircooled condenser must be installed no closer than 50 cm to any wall in order to allow free air circulation around the condenser.

NOTE

An insufficient air circulation affects operation and output capacity of the machine.



2.4 MACHINES WITH WATERCOOLED CONDENSER



To make the machine run, a watercooled machine must be connected to running water supply, or to a cooling tower.

Water must have a pressure of 0.1 MPa and 0.8 MPa (1-8 bar) at least, and a delivery at least equal to the estimated hourly consumption.

Connect inlet pipe marked by plate "Water Inlet" (Pos. A Fig. 4) to water supply installing a shut-off valve, and outlet pipe marked by plate "Water Outlet" to a drain pipe, installing a shut-off valve.

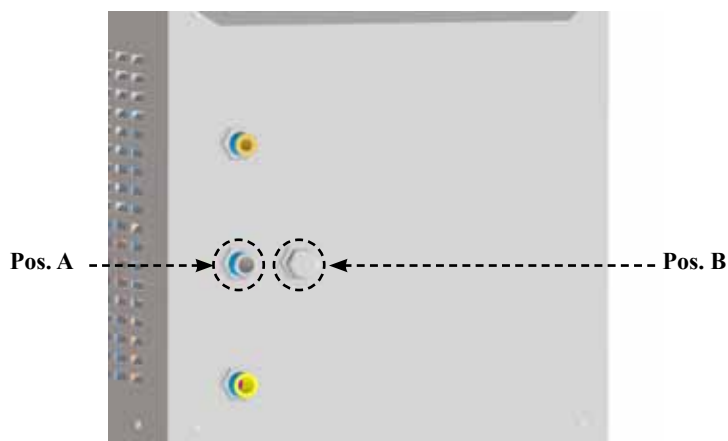


Fig. 4

If the gas is cooled by water coming from a recovery system (e.g., cooling tower), connect the inlet pipe to the connector on the right (Pos. B Fig. 4).

Make sure that the inlet not being used is closed using the special cap, see Fig. 4 Pos. B.

2.4.1 Water valve adjustment



IMPORTANT

If water valve needs be reset, this operation will have to be carried out by skilled personnel, only.

Valve adjustment must be carried out in such a way that no water flows when machine is off and lukewarm water flows when machine is on.

NOTE

Water consumption increases if temperature of entering water is above 20°C.

ATTENTION

Do not leave the machine in a room with temperature below 0°C without first draining water from the condenser.

2.5 ELECTRIC CONNECTION

Before connecting the machine to the mains, check that machine voltage indicated in data plate corresponds with the mains.

Insert a differential magnetothermal protection switch adequately sized to absorption capacity required and with contact opening of 3 mm at least.

The machines are delivered with a 5 wire cable: blue wire must be connected to the neutral lead.

IMPORTANT

Yellow/green ground wire must be connected to an adequate ground plate.



2.5.1 Replacing the power cable

Should the machine main cable be damaged, it must be replaced immediately through one with similar features. Replacement shall be carried out by skilled technicians, only.

IMPORTANT
Direction of rotation
Beater rotation is anticlockwise.

NOTE

By threephased machines, it is necessary to check that axial pulley A has clockwise rotation: to do that, watch through slits of rear panel (see picture).

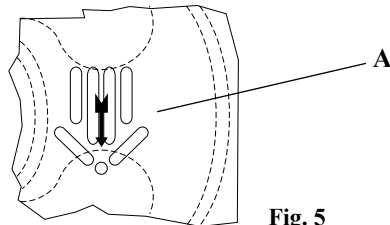


Fig. 5

Reversal of rotation

Should direction of rotation be wrong, reverse it by exchanging two of the three phases which start at the differential magnetothermal protection switch.

2.6 LOCATION

The machine is provided with castors for an easy positioning; a mechanical block system, once engaged, prevents machine from moving and keeps it standstill.

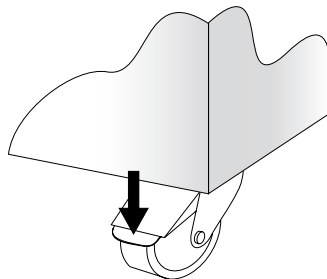


Fig. 6

2.7 REFILLING

Motor installed in the machine is of the type with lubrication for life; no action of checking/replacing or topping up is necessary.

Gas filling necessary to the freezing system is carried out at **CARPIGIANI** works during machine postproduction testing.

If a gas addition happens to be made, this must be carried out by skilled technicians, only, who can also find out trouble origin.

2.8 MACHINE TESTING

A postproduction test of the machine is carried out at **CARPIGIANI** premises; Operation and output functionality of the machine are thoroughly tested.

Machine test at end user's must be carried out by skilled technicians or by one of **CARPIGIANI** engineers.

After the machine positioning and correct connections, also carry out all operations necessary to functional check and test of the machine.



3. DIRECTIONS FOR USE

3.1 MACHINE SAFETY WARNINGS

When using industrial equipment and plants, one must be aware of the fact that drive mechanisms (rotary motion), high voltage components, as well as parts subject to high temperatures may cause serious damages to persons and things.

Who is in charge of plant safety must be on the look-out that:

- An incorrect use or handling is avoided
- Safety devices must neither be removed nor tampered
- Maintenance interventions are performed on a regular basis
- Only original spare parts are to be used especially as far as those components with safety functions are concerned (ex.: protection microswitches, thermostats)
- Suitable personal protective equipment is worn.

To achieve the above, the following is necessary:

- At working place an instruction manual relevant to the machine should be available.
- Such documentation must be carefully read and regulations must consequently be followed.
- Only adequately skilled personnel will have to be assigned to electrical equipment.

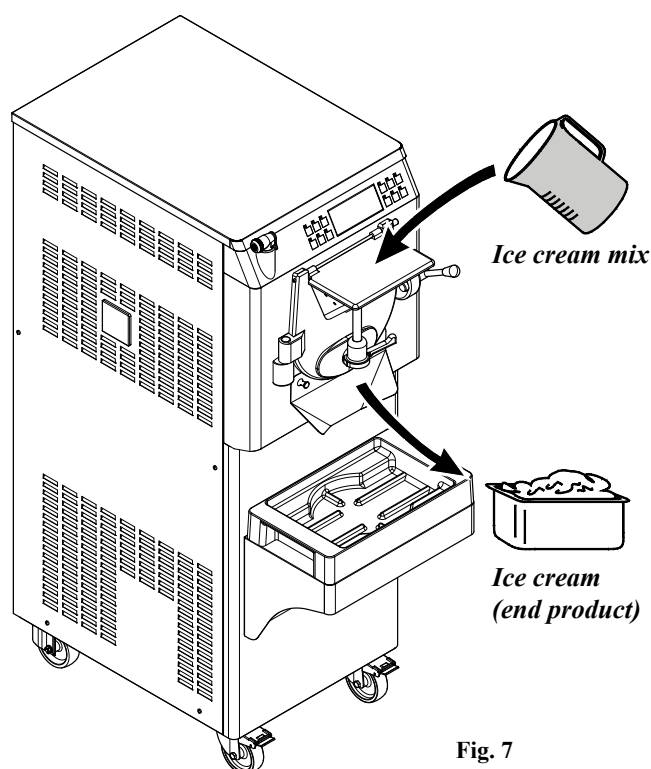
3.2 MACHINE CONFIGURATION

The machine consists of motor drive for beater assembly drive, a cooling system with water - or aircooled condenser.

Ice cream is made by pouring mix into the barrel and starting the automatic production cycle which ends when right consistency of ice cream as set by **CARPIGIANI** is reached. To this purpose, minum and maximum quantities of mix per batch must be followed, as shown in table Sec. 1.2.2. When cycle is over, ice cream is ready for being taken out from ice cream door and poured directly in ice cream cups and containers.

WARNING

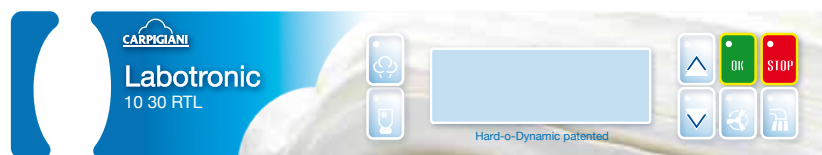
**To make ice cream extraction easier, only use the plastic spatula provided.
Do not use metal spatulas since these could damage the machine.**



3.3 CONTROLS

3.3.1 Button Pad

The machine is equipped with a button pad on the front facing the operator; each button has a symbol to explain the function assigned to it.



3.3.2 Button functions



DISPLAY

The machine has an alphanumeric LCD display to show a series of messages when the machine is switched on as well as during use. In STOP mode, it shows the time in the top left, the date in the top right and the machine model in the centre. 3' minutes after the last button has been pressed and with the machine in STOP, the lighting on the display will switch off; to switch it on again, enable a function or press OK.



STOP KEY

In this function, the machine is idle. From this position, it is possible to access the other functions. Stop has priority over all other functions.



WATER DISPENSE KEY

Whenever this is pressed, it starts to dispense water through the nozzle on the front.

To stop dispensing water, press the same key again or press STOP or wait for 3'. To set a dispensing time of less than 3', edit the step U14 from the user menu or follow this automatic procedure:

- Start the water dispensing function
- After the required amount of time, hold down the Water Dispense button (until you hear the "beep").
- Dispensing stops and the time from enabling is then stored to memory.
- When the shower is used again, the dispensing time will be the one stored to memory.

To increase the time again, it needs to be re-edited in step U14 of the user menu.



OK KEY

When pressed while viewing the menu, it starts the selected process.



INCREASE KEY

This button increases the values that can be changed in Programming mode and in the functions where it is possible to change Batch Freezing settings.



DECREASE KEY

This button decreases the values that can be changed in Programming mode and in the functions where it is possible to change Batch Freezing settings. It is also used to reset alarm messages.



CLEAN/POUR

CLEAN FUNCTION



When the  key is pressed from Stop, the following menu is displayed:

<p>* CLEAN CLEAN+DEFROST DEFROST</p>
--

and the Clean, Increase and Decrease LEDs switch on.

Use the **INCREASE** and **DECREASE** keys to select the type of cleaning required (selected using the asterisk alongside the cycle).

Press the **OK** key to start the required cleaning program.

CLEANING PROGRAMS:

- **CLEAN:** for a traditional machine wash using the shower attachment (which can be connected to the hot water in the workshop) to fill the cylinder with water and then pressing the **OK** button to start the beating function and proceed with washing. The beating function runs for 1'.
- **CLEAN + DEFROST:** as well as the beating function, heating is also enabled for 1'.
- **DEFROST:** Heating without beating is enabled for 5'.

During the cleaning stage, the first line of the display shows the selected cleaning program, the second line shows any warning messages in case of a boiling hot cylinder (such as when using the DEFROST program), while the fourth line shows the speed of the beater and the running time:


<p>CLEAN</p> <p>Speed 2 00:59</p>

Use the **INCREASE** and **DECREASE** keys to change the beater speed while cleaning.


POURING FUNCTION

Press the Clean key during a Ice Cream or Cremolata cycle to pour the product. The pouring speed can be changed using the Increase and Decrease keys and it is possible to enable chilled pouring.

Cooled extraction from Speed Ice Cream and Hard Ice Cream

Once extraction has been enabled from the above cycles, if the Ice Creams key  is pressed, this starts the product chilling mode during extraction, which will end after 20": the LED of the Ice Creams key will switch on for the 20" that chilling is enabled.

Chilled Extraction from Excellent Ice Cream, Simply Ice Cream Cycles

Once extraction has been enabled from the above cycles, if the Ice Creams key  is pressed, this starts automatic chilling (only if required according to the consistency reading), for the product being extracted when the batch freezing cylinder is empty or when the product is sufficiently cool. The LED on the Ice Creams key switches on for the time that chilling is enabled.

NOTE

The cooled extraction is the same as the Speed Ice Cream cycle.

ICE CREAMS KEY

When the Ice Creams key is pressed, this opens a menu with the following available cycles:

- Excellent Ice Cream
- Speed Ice Cream
- Hard Ice Cream
- Simply Ice Cream (Submenu)
 - o Cream Ice Cream
 - o Fruit Ice Cream
 - o Fruit Sorbet





CREMOLATA KEY

Press the Cremolata key to open a menu containing the following available cycles:
 - Fruit Cremolata

To select a cycle, use the **INCREASE** and **DECREASE** keys to scroll through the different recipes, moving the asterisk to alongside the required recipe and pressing **OK** to confirm.

3.4 CYCLE SELECTION AND DESCRIPTION

IMPORTANT

If the last cycle performed is in a submenu (e.g., Cream Ice Cream), when the Ice Creams key is pressed, the submenu previously selected is the one viewed. It is possible to select the cycle using the arrow keys or to return to the main menu by selecting "BACK" and pressing OK to confirm.



3.4.1 Excellent Ice Cream



Press the Ice Cream keys and scroll through the menu with the Increase and Decrease keys to move the asterisk to the program to be carried out:



When OK is pressed to confirm, the cycle starts and the display will read:



- with the name of the programme in progress on the first line
- the fourth line shows the current consistency value on the right, the set consistency to be reached on the left and the consistency increase graph in the centre.

When processes are started, the Increase and Decrease keys light up to permit the operator to vary Set consistency up to 120. The proposed Set is the setting that was set during the last cycle. The Excellent whipping cycle obtains an excellent product in relation to the type and quantity of mix introduced and automatically modifies the cold to ensure an optimum thermal exchange to obtain EXCELLENT ice cream.

This cycle is particularly recommended for minimum loads and water-based products. When the set consistency is reached, the machine will interrupt chilling but without emitting any acoustic signal since for optimum ice cream drying, the intermittent signal will only sound when the required consistency is reached. At this point it is possible to extract the product by pressing the Cleaning/Extraction key. We recommend carrying out this cycle using the beater with mobile slide blocks.

3.4.2 Speed Ice Cream

Press the Ice Creams key and scroll through the menu with the Increase and Decrease keys to move the asterisk to the program to be carried out:



when OK is pressed to confirm, the cycle starts and the display will read:



- with the name of the programme in progress on the first line
- on the fourth line, the current consistency value on the right and the set consistency to be reached on the left, and in the middle, the consistency increase bar chart.

When processes are started, the Increase and Decrease keys light up to permit the operator to vary Set consistency up to 120. The proposed Set is the setting that was set during the last cycle. The Speed whipping cycle is faster than the Excellent cycle and is particularly indicated for dealing with maximum or medium loads (no min. loads).

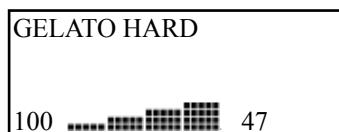
When the set consistency is reached, the machine stops the chilling function and an intermittent acoustic signal informs the operator to extract the ice cream, using the Cleaning/Extraction key. We recommend carrying out this cycle using the beater with mobile slide blocks.

3.4.3 Hard Ice Cream

Press the Ice Creams key and scroll through the menu with the Increase and Decrease keys to move the asterisk to the program to be carried out



When OK is pressed to confirm, the cycle starts and the display will read:



- with the name of the programme in progress on the first line
- The fourth line will show the current consistency on the right and the set consistency to be reached on the left, with the consistency increase bar chart in the centre.

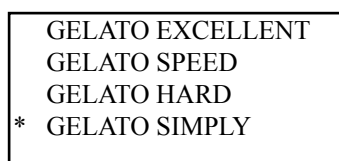
When processes are started, the Increase and Decrease keys light up to permit the operator to vary Set consistency up to 120. The proposed Set is the setting that was set during the last cycle. The Hard whipping cycle obtains a very compact and dry product; ideal for those who use the scoop to serve the Ice Cream.

The Hard Ice Cream cycle can only be used with medium or maximum loads.

When the set consistency is reached, the machine stops the chilling function and an intermittent acoustic signal informs the operator to extract the ice cream, using the Cleaning/Extraction key. We recommend carrying out this cycle using the beater with mobile slide blocks.

3.4.4 Simply Ice Cream

Press the Ice Creams key and scroll through the menu with the Increase and Decrease keys to move the asterisk to the program to be carried out:



Press OK to confirm and open the submenu:

```
* CREAM ICE CREAM
  FRUIT ICE CREAM
  FRUIT SORBET
  ---- BACK ----
```

Use the Increase and Decrease keys to scroll through the submenu, moving the asterisk alongside the required cycle and then pressing OK to confirm.

If we are carrying out the "Cream Ice Cream" cycle, the display will read:

```
CREAM ICE CREAM

100 ..... 47
```

- with the name of the programme in progress on the first line
- the fourth line will show the current consistency on the right and the set consistency to be reached on the left, with the consistency increase bar chart in the centre.

For simply group programme cycles, the consistency value can only be changed by varying the user programming steps (U09, U10, U11 – see User Programming).

The Simply group allows the ice cream maker to set cycles according to his or her experience and products, so as to create dedicated recipes that, even when prepared by less qualified staff, can guarantee gelato of excellent quality.

3.4.5 Fruit Cremolata



Press the Cremolata key:

```
* FRUIT CREMOLATA
```

Press OK to start.

While Fruit Cremolata is being made, the display will read:

```
FRUIT CREMOLATA

Set timer: 10      09:59
```

The display reads:

- The name of the programme in progress on the first line
- The fourth line will show the set total batch freezing time on the left and on the right, the count-down timer for batch freezing time for the Cremolata.

Use the Increase and Decrease keys to change the batch freezing time for the Cremolata.

The compressor is enabled for the whole time that Cremolata is being made, less 1 minute.

The batch freezing time can be programmed from 1' to 20' using the Increase or Decrease keys

When the set time is up, the buzzer will sound for an undetermined amount of time to indicate that the cremolata is ready for extraction, while the display will read as follows:

```
FRUIT CREMOLATA
  Extract
  Cremolata end
```

For this cycle, use the beater with mobile scrapers with the same scrapers as used to prepare Ice Creams.

3.5 ICE CREAM PRODUCTION (BATCH FREEZER)

After having attended to the wash, sanitizing and complete rinse immediately before use, as indicated in section 5 of hygiene, take out the mix from the pasteurizer, pour the desired amount with the loading hopper through the panel into the cylinder keeping within the minimum and maximum amounts indicated in the paragraph table 1.2.2.

Before pouring the mix, make sure that the lid and ice cream hatch are perfectly closed.

At this point, start the required cycle, as described in paragraph 3.4.

NOTE

If the ice cream is not taken out immediately after batch freezing, maybe due the operator is momentarily busy, the ice cream is kept in agitation and the HARD-O-DYNAMIC is kept under constant control.

If the ice cream loses in consistency, the HARD-O-DYNAMIC restarts the compressor and automatically resumes batch freezing that restores the ice cream to optimal conditions.

IMPORTANT

When using a boiling mix at +85°C, before pouring it into the cylinder, it is necessary to press the "GELATERIA" button, select the required cycle, press OK and wait for the beater to start.

3.5.1 Ice Cream Consistency

CARPIGIANI equips the machine with optimal ice cream consistency settings.

The HARD-O-DYNAMIC assures a constantly perfect ice cream relative to the mix being processed, but each operator can set even personal processing cycles.

A higher consistency can be, in fact, necessary for particularly creamier ice creams, or low skim ice creams, like some fruit sorbets.

3.5.2 Changing gelato consistency (Gelato Excellent Speed and Hard only)

After selecting the required batch freezing cycle, it is possible to change the final consistency of the ice cream using the INCREASE and DECREASE keys. The value on the display will be changed as a result, from a minimum of 50 to a maximum of 120.

The changed value will be stored to memory for the next batch freezing operation unless there is a power outage, in which case, the consistency value will return to 100.

3.5.3 Ice cream removal

At the end of the production cycle, after the acoustic signal, remove the ice cream from the bath freezing cylinder, and then proceeding to:

- Place the tray on the shelf, under the ice cream chute.
- Rotate the ice cream release lever towards the left (see fig.1).
- Lift the lever with the panel.
- Push the button **EXTRACTION**.
- Select speed 3 by pressing the INCREASE key.
- At the end of this phase, press **STOP**.

WARNING

To facilitate the removal of the ice cream use only the spatula and plastic material supplied. Do not use metal spatulas inasmuch as they could damage the machine.

SECURITY NOTICE

To avoid unnecessary wear of the scraper sliding block and the cylinder, the machine returns to STOP after 1 minute of continuous functioning in extraction mode.





3.5.4 Use of the ice cream release lever

Stancher

Stop the ice cream flow aperture turning the lever completely to the right until the flow ceases.

Opening procedure

Rotate the lever (see fig.1) by 90° towards the left.

Lift the lever and the panel.

Block the upper panel by rotating the lever (see fig.1) all the way towards the right.

Closing procedure

Repeat the aforementioned operations described for opening in an inverse manner.

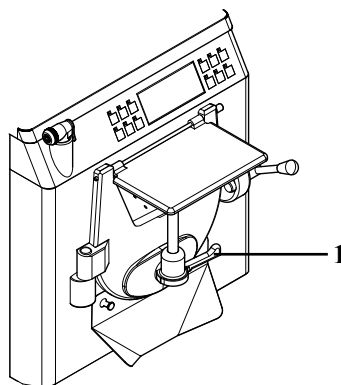


Fig. 8

3.5.5 Auto-Defrost

If a Gelato cycle is interrupted (e.g., the Stop button is accidentally pressed or there is a power blackout), a few seconds after entering STOP mode, the machine will automatically (if necessary) enable the defrost function for the cylinder to enable the beater to start up again.

The display will read:

15:21:39	07-01-10
AUTO-DEFROST	04:46
Wait ...	

It is not possible to enable any cycle during this function.


The function will end when the timer has finished, if the Stop button is pressed or in the event of an alarm.

The function can be restarted manually by selected the DEFROST program from the CLEAN cycle.

3.6 FRUIT CREMOLATA PRODUCTION

Pour the fruit mix, with the aid of the loading hopper, into the batch freezer cylinder.



Starting from the STOP position, press the **CREMOLATA** button  and select the Cremolata function using the Increase or Decrease keys, then press OK or wait 5" to start the production cycle, which alternates working periods with pauses.

When the set time is expired, an intermittent acoustic signal will sound to indicate that the Cremolata is ready.

3.6.1 Production time variation for the fruit Cremolata

The user can vary the production time relative to the final product desired, from 2 to 20 minutes.

To vary the production time of the fruit cremolata one must act upon the Increase and Decrease buttons, with the machine in **CREMOLATA PRODUCTION** mode. To obtain a dryer cremolata increase the overall time by pushing the Increase button, vice versa the Decrease button will shorten it.

The new set time is visualized on the display.



NOTE

In the case of a power failure to the machine, time settings stay automatically on the last input stored.

3.6.2 Cremolata extraction

Once the production cycle has finished, which is signalled by an acoustic warning and a notice on the display, press the STOP key.

At this point, it is possible to extract the cremolata by opening the front lid and using the spatula provided.

WARNING

To facilitate the cremolata extraction only use the plastic spatula included. Do not use metal spatulas for they could damage the machine.

NOTE

The best FRUIT CREMOLATAS are obtained with equal or greater mix quantities to those indicated on the table on page 10.

3.7 USER PROGRAMMING

By pressing simultaneously the STOP and DECREASE buttons, the display will read “Manager Menu” and subsequently;

Hour Step U01 15

Modify the clock settings with the INCREASE and DECREASE buttons if necessary.

Press STOP, this way each value of the following table will appear sequentially – all adjustable with the INCREASE and DECREASE buttons.

Step	Display	Notes	M. U.	MIN	MAX	Default
U01	Hour		hours	0	23	
U02	Minutes		min	0	59	
U03	Day Week		gg	Sun	Sat	
U04	Day of the Month		gg	1	31	
U05	Month		mm	1	12	
U06	Year		yyyy	2000	2099	
U07	Language	Ita, Eng, Fra, Deu, Esp	n°	Ita	Eng	Ita
U08	HOT- Simply Cream		N	000	120	100
U09	Hot- Simply Fruit		N	000	120	90
U10	Hot- Simply Sorbet		N	000	120	80
U11	Set TEC GRANITA	not used				
U14	Shower Time		Sec	015	300	180
U15	BackLight Time		Min	000	030	003

Steps U08, U09 and U10 concern the Set HOT for the cycles Simply Cream, Simply Fruit, Simply Sorbet.

U14 is the water dispensing time.

U15 is the number of minutes after which the backlighting of the display switches off when the



machine is in Stop. This is switched on again when a function is enabled, during Programming or when the OK key is pressed.

To quit the user programming mode, wait approx. 30" without pressing any keys or to quit immediately, press **CLEANING/EXTRACTION**.

The changed values will automatically be stored to memory.

4. SECURITY DEVICES

4.1 ALARMS

Labotronic RTL machines are equipped with a series of safety devices to safeguard the machine and those who use it. Each time the protection systems intervene, there is a corresponding alarm message on the fourth line of the display. For example:

15:21:39	07-01-10
LABOTRONIC	
Compressor relay	

In case of an alarm, the display will flash. When the alarm is reset, the message will remain on the display, but not flashing.

To delete the message after resetting the alarm, press the Decrease key. If the alarm will not reset, this means it is still active.

The following is a list of the ALARMS:

Display	Description
Slow Beat Relay	Slow Beater thermal overload relay intervention When this alarm intervenes it sets the machine to Stop.
Fast Beat Relay	Fast Beater thermal overload relay intervention When this alarm intervenes it sets the machine to Stop.
Compress Relay	Compressor thermal overload relay intervention When this alarm intervenes it sets the machine to Stop.
T_IN Probe Alarm	"TIN" temperature probe interrupted or short circuited This alarm is displayed during Ice Cream cycles that use the EVF Exc solenoid and sets the machine to STOP. While the alarm is active, it is not possible to use Ice Cream group cycles involving the EVF Exc solenoid. Check the TIN temperature probe and replace, if necessary.
T_OUT Probe Alarm	"TOUT" temperature probe interrupted or short circuited This alarm is displayed during Ice Cream cycles that use the EVF Exc solenoid and sets the machine to STOP. While the alarm is active, it is not possible to use Ice Cream group cycles involving the EVF Exc solenoid. Check the TOUT temperature probe and replace, if necessary.
Front Lid Open	When this alarm intervenes, it sets the machine to STOP; it is reset automatically when the front lid is closed.
Pressure switch	Safety pressure switch intervention When this alarm intervenes it stops the compressor. If the pressure switch intervenes for 3 consecutive times or if it remains open for 2 minutes, the machine enters Stop mode. The display will read "Pressure switch". Check the water inlet and outlet pipes to ensure water can flow freely when the compressor is running. For air-cooled machines, make sure that the condenser fan is not running while the compressor is switched on or that the air-cooled condenser is not clogged. Clean the condenser with a jet of compressed air, if necessary.
Service	It is advisable to service the machine to maintain its efficiency and optimum performance. Contact an authorized assistance service.
Prd Timeout	Timeout Prod (Difficulty in cooling) Intervenes when the machine does not cool. If the compressor remains ON continuously for more than 20' and HOT does not reach the Discriminating (fixed) value during the whipping process, the machine is placed in Stop by the "Timeout Prd" alarm on the display. The alarm can be reset by pressing the DECREASE key. One of the possible causes of this type of problem could be the lack of gas in the system.
Checksum Fail	Contact the authorised assistance centre.



BLACKOUT

In case of a temporary power outage:

- in Stop, Cleaning, during Speed Ice Cream, Excellent Ice Cream, Granita and Cremolata cycles, when the power returns, the machine switches on again in Stop mode.

If the power blackout occurred during a Gelato cycle, when the machine returns to STOP, it will automatically enable (if necessary), the "Auto -Defrost" function (Sect. 3.5.5).

4.2 SECURITY SYSTEMS OF THE MACHINE

The following illustration shows the position layout of the control elements.

They are visible only from the left and right side of the machine, after removing the side steel plates.

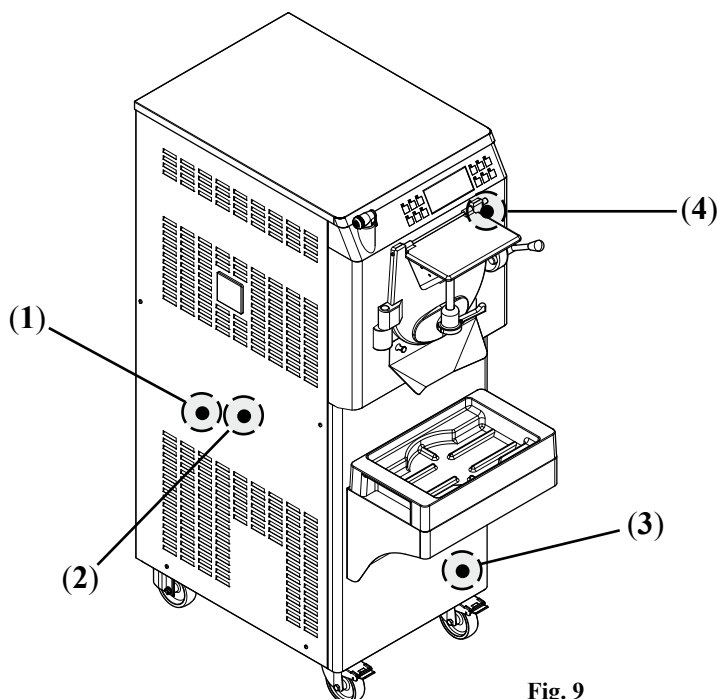



Fig. 9

 These allude to the inside of the machine.



WARNING
IT IS ABSOLUTELY FORBIDDEN TO TAMPER OR ELIMINATE
THE SECURITY DEVICES PROVIDED FOR THE SECURITY
OF THE OPERATOR.



WARNING
CARPIGIANI does not assume any responsibility for any damage to third persons
or the machine itself, if the foreseen security devices have been tampered with.

5. CLEANING, DISASSEMBLY AND REASSEMBLY OF PARTS IN CONTACT WITH THE PRODUCT

5.1 GENERAL DESCRIPTION

Cleaning and sanitisation are operations that must be carried out habitually and with maximum care at the end of each production run to guarantee the production quality and respect the necessary hygienic norms.

Giving dirt the time to dry out can greatly increase the risk of rings, marks and damage to surfaces. Removing dirt is much easier if it is done immediately after use because there is the risk that some elements containing acid and saline substances can corrode the surfaces. A prolonged soaking is recommended.



5.2 WASHING CONDITIONS

- **Avoid using solvents, alcohol or detergents that could damage the component parts, the machine or pollute the functional production parts.**
- When manually washing never utilise powder or abrasive products, abrasive sponges or pointed tools. There is a risk of dulling the surfaces, removing or deteriorating the protective film that is present on the surface and scoring the surface.
- Never use metal scouring pads or synthetic abrasives that could cause oxidization or make the surfaces vulnerable to attack.
- Avoid using detergents that contain chlorine and its composites. The use of these detergents such as bleach, ammonia, hydrochloric acid and decalcifiers can attack the composition of the steel, marking and oxidising it irreparably and causing damage to the parts made from thermoset materials.
- Do not use dishwashers and their detergent products.



5.3 SUGGESTIONS

- Use a non-aggressive detergent solution to wash the parts.
- Manually wash the parts in water (max 60°C) using a non-aggressive detergent and the cleaning brushes supplied as standard.
- Use drinking water (bacteriologically pure) to rinse the parts.
- To sanitise leave the disassembled parts in sanitised tepid water for 10-15 minutes (use the sanitising product following the instructions of the manufacturer) and rinse them before reassembling.
- When the washing procedure has been completed and before the reassembly of each component dry thoroughly with a clean and soft cloth that is suitable for coming into contact with foodstuffs, to avoid leaving any humidity rich in mineral salts and chlorine that could attack the metal surfaces and leave opaque traces.



Carpigiani recommends the use of a cleaning/sanitising solution to wash the machine.

The use of a cleaning/sanitising solution optimises the washing and sanitising procedures in that it eliminates two phases of the procedure (a rinse and a washing phase). In substance the use of a cleaning/sanitising solution saves time by facilitating and simplifying washing/ sanitising procedures.

WARNING

Every time the machine is washed and its parts that come into contact with the ice cream mix are disassembled it is essential to carry out a visual control of all the parts manufactured in thermoset materials and metal such as sliding shoes, pump gears, beaters, etc. All parts must be integral and not worn, without cracks or splits, or opaque if originally polished/transparent.

Carpigiani declines all responsibility for any damage caused by imperfections and/or undetected breakages and not promptly solved by the substitution of original spare parts and is available for consultation and for any specific requests made by the customer.



5.4 HOW TO USE CLEANING/SANITISING SOLUTION

Prepare a solution of water and sanitising detergent following the instructions shown on the label of the product being utilised.

Washing/sanitisation by immersion of components

- Manually remove the bulk residues utilising the supplied brushes.
- Remove finer residues with a jet of water.
- Immerse the parts to be cleaned into the solution.
- Let the solution react for the time indicated on the label of the product being utilised.
- Rinse the parts with care, using plenty of clean drinking water.

5.5 CLEANING THE EXTERIOR OF THE MACHINE

Remove the dust and protective material that was applied before shipment. Use water only with a mild soap-based detergent and apply using a soft cloth.



5.6 PRELIMINARY CLEANING

1. With the machine in Stop mode, pour water into the whipping cylinder with the door of the beater unit closed. Utilise the flexible water dispenser positioned on the front of the machine by pressing the "WATER DISPENSER" key.
2. Press the "CLEANING" key and activate the "WASHING" programme and allow the beater to rotate in the least time possible. The machine functions for approximately one minute after which it goes into "STOP" mode to avoid wear of the sliding shoes and the cylinder.
3. Open the product discharge door and let all the water contained inside the cylinder drain out.
4. Disassemble the components of the machine (door and beater).
5. After removing the components, prepare a container of detergent/sanitising solution following the instructions shown on the label of the product being utilised.
6. Utilising the small supplied brush immerse the parts in the detergent/sanitising solution; clean the walls of the cylinder and the seat of the beater.
7. Rinse utilising abundant clean water.
8. Remove the drip tray drawer (Ref. 3) and then wash and clean it.
9. Remove the tub tray (Ref. 4) and then wash and clean it.
10. Clean the exterior of the machine using a humid and sanitised cloth.



5.7 BEATER DISASSEMBLY

Remove the beater by carefully pulling it out.

Be careful not to damage the sliding shoes and the cylinder walls with the agitator shaft.



WARNING

Carry out this operation with utmost care, since beater may be damaged in case it falls to the ground.

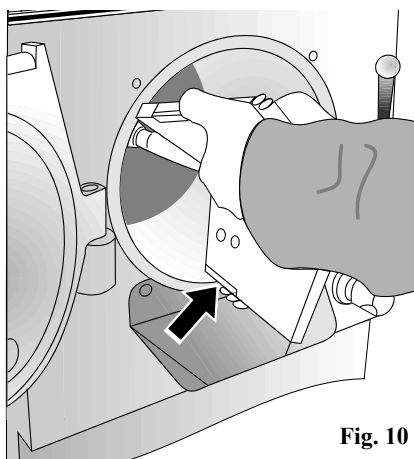


Fig. 10

- Fully disassemble the sliding shoes.
- Withdraw the stuffing box from its seat on the beater shaft.
- Wash all parts previously disassembled with detergent/sanitising solution, then rinse.
- Reassemble all parts previously disassembled, remembering to grease the stuffing box with a film of edible fat.

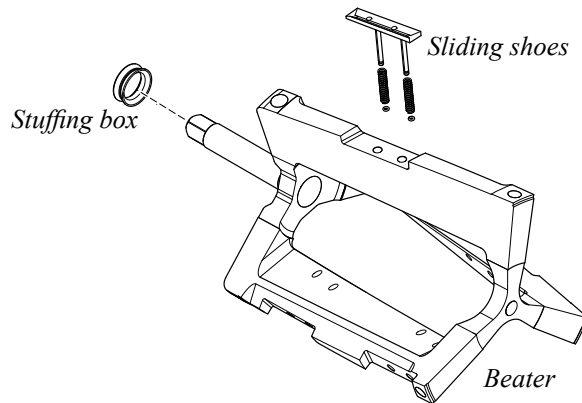
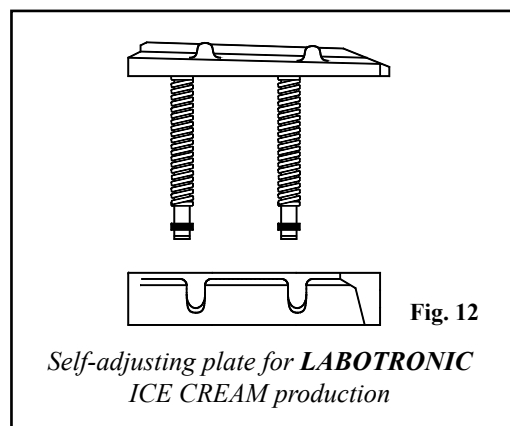


Fig. 11

When reassembling the beater, catch it with both hands and push the sliding shoes in order to insert it easily. Push to the beater to the bottom and at the same time let it turn in order to fully insert the beater shaft into its seat.

5.7.1 Sliding shoes disassembly

The sliding shoes mounted on the beater are "self-adjusting". An accurate cleaning ensures the efficiency of the system.



5.7.2 Stuffing box

When disassembling the beater also check the integrity of the stuffing box. Depending on the amount of time the machine has been operating, substitute it with a another one when necessary from the accessory kit inside the machine packing.

- Remove the beater assembly
- Remove the stuffing box from its seat
- Lubricate the spare stuffing box
- Assemble the new stuffing box
- Clean and lubricate the old stuffing box to allow it to recover its elasticity.

IMPORTANT

The substitution of the seal with an original spare part is necessary every time that traces of ice cream can be seen in the drip tray alongside the machine when it is removed.

To carry on operating the machine after ice cream has been found causes bigger leakage from the stuffing box, thereby causing malfunctioning of the machine which consequently affects production.

CAUTION

When the machine is not in use, leave the beater lid open so that the stuffing box does not deform. When reassembling the beater, grip it with both hands and push the sliding shoes in to insert it easily. Place the beater inside the cylinder and at the same time turn it to fully insert the beater shaft onto its seat.



5.8 FRONT LID DISASSEMBLY



- Lift lid locking lever and turn it towards the right.
- Open the lid by rotating it on its hinge.
- Remove the lid by lifting it.
- To carry out the cleaning operations, remove all mobile parts including the gasket seal and the cylinder.
- Wash all parts previously disassembled with detergent/sanitising solution, then rinse.
- Reassemble all parts previously disassembled remembering to grease the O-ring and the support Ref. 362 with a film of edible fat.

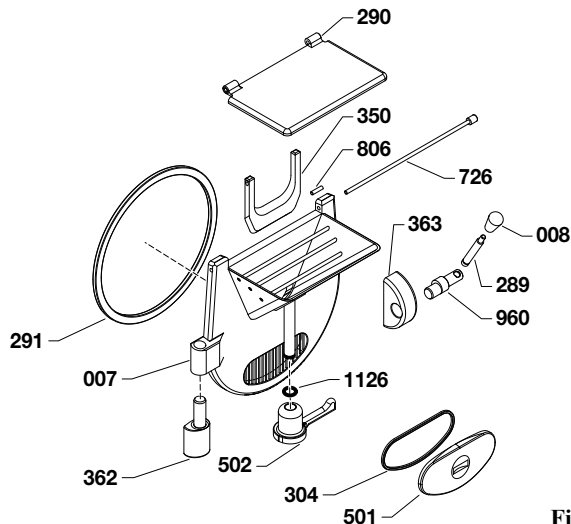


Fig. 13

5.8.1 Ice cream door disassembly



- Lift the lid by turning the lever (Ref. 1) 90° to the left.
- Lift the lever and the door and lock the lid in the upward position by turning the lever to the right until it stops.
- Remove the O-ring from the lid sliding rod and remove it so as to release the lever.
- Remove the O-ring of the lid.
- Wash all parts previously disassembled with detergent/sanitising solution and then rinse.
- Reassemble all parts previously disassembled, remembering to grease the O-ring with a film of edible fat.

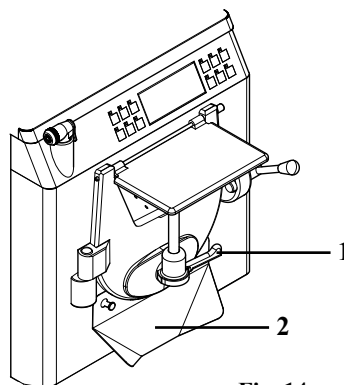


Fig. 14

5.8.2 Hopper cover disassembly



To clean the mix filling area withdraw the cover fixing rod (pos. 6) and remove it. The cover is provided with a small panel to prevent the ice cream from returning to the hopper which must be disassembled for cleaning. Wash all parts previously disassembled with detergent/sanitising solution, then rinse.

5.8.3 Ice cream slide disassembly



- Release the slide from its fixing knobs by rotating it.
- Wash all parts previously disassembled with detergent/sanitising solution, then rinse.

5.9 SANITISATION

- Operation required before each production process.
- With the machine switched off and the beater lid closed, pour the detergent/sanitising solution into the whipping cylinder.
- Press the "CLEAN" button and start the "CLEAN" programme. Let the machine run for 10/15 seconds.

WARNING

Prolonged operation on the "CLEAN" setting with the cylinder empty or containing water/sanitising solution will cause the beater sliding shoes to wear quickly.

- Let the detergent/sanitising solution react in the cylinder for the time indicated on the label of the product being utilised.
- Fully drain the detergent/sanitising solution from the whipping cylinder.
- Rinse utilising abundant clean water.

ATTENTION

Do not touch the sanitized parts with the hands, cloths or anything else.

WARNING

Before starting again with the ice cream production, rinse thoroughly with water so as to remove any residues of the sanitizing solution.

5.10 HYGIENE

The fats contained in ice cream are ideal terrain for the proliferation of mildew and bacteria. To eliminate them, the parts that come into contact with the mix and the ice cream must be thoroughly washed and cleaned.

The stainless steel, thermoset and rubber materials used for the construction of these parts and their particular design make cleaning easy, but cannot prevent the growth of mildew and bacteria if not properly cleaned.



6. MAINTENANCE

CAUTION

Never put your hands into the machine when the machine is operating or whilst cleaning. Before maintenance, make sure the machine has been placed in "STOP" mode and disconnected from the electrical power supply.



6.1 MAINTENANCE TYPOLOGY

ATTENTION

Any maintenance operation requiring the opening of machine panels must be carried out with the machine placed to Stop mode and disconnected from the electrical power supply!

The cleaning and lubricating of moving parts is strictly forbidden!

Repairs to electrical and refrigeration systems must be carried out by skilled technicians!

“Repairs to the whole or parts of the electrical, mechanical, air supply and cooling systems must be carried out by specialist technicians approved by the manufacturer and if necessary in accordance with agreed routine and special maintenance schedules as provided for by the customer with reference to specific intervention methods and according to the intended use of the machine”.



Operations necessary for the correct running of the machine are such that most maintenance is completed during the production cycle.

Maintenance operations, such as the cleaning of parts that come into contact with the product, assembly of the stuffing box, disassembly of the beater assembly must be carried out at the end of the working day, so as to speed up the required serving operations.

Here below is a list of routine maintenance operations:

- **Cleaning and substitution of the stuffing box**
Cleaning must be carried out at the end of the working day. Substitution of the stuffing box must be made if product drips inside drip drawer.
- **Cleaning the beater assembly**
To be carried out at the end of the working day.
- **Cleaning the sliding shoes**
To be carried out at the end of the working day.
- **Cleaning the panels**
To be carried out daily with neutral soap and ensuring that the cleaning solution never reaches beater assembly inside.
- **Cleaning and sanitisation**
To be carried out at the end of each working day in accordance with procedures described in section 5 of this manual.

WARNING

NEVER USE ABRASIVE SPONGES TO CLEAN THE MACHINE AND ITS PARTS BECAUSE THE SURFACES MIGHT BECOME SCRATCHED.



6.2 WATER-COOLED MACHINES

For machines with a water-cooled condenser, the water must be drained from the condenser at the end of the selling season to avoid troubles if the machine is stored in rooms where the temperature falls below 0°C. After closing the water inlet tube, withdraw the drain tube from its seat and let the water flow out from the circuit.



6.3 AIR-COOLED MACHINES

For machines with an air-cooled condenser, periodically clean the condenser to remove dust, paper and whatever may prevent air from circulating. Use a brush with long bristles or a jet of compressed air for cleaning.



ATTENTION

**Wear personal protection in order to avoid accidents when using compressed air.
Wear protective glasses!**

N.B.: Never use sharp metal objects to carry out this operation. The correct functioning of a refrigeration system mainly depends on cleaning the condenser.



6.4 ORDERING SPARE PARTS

When parts are worn out or broken, order spare parts from your local distributor.

6.5 ACCESSORIES KIT

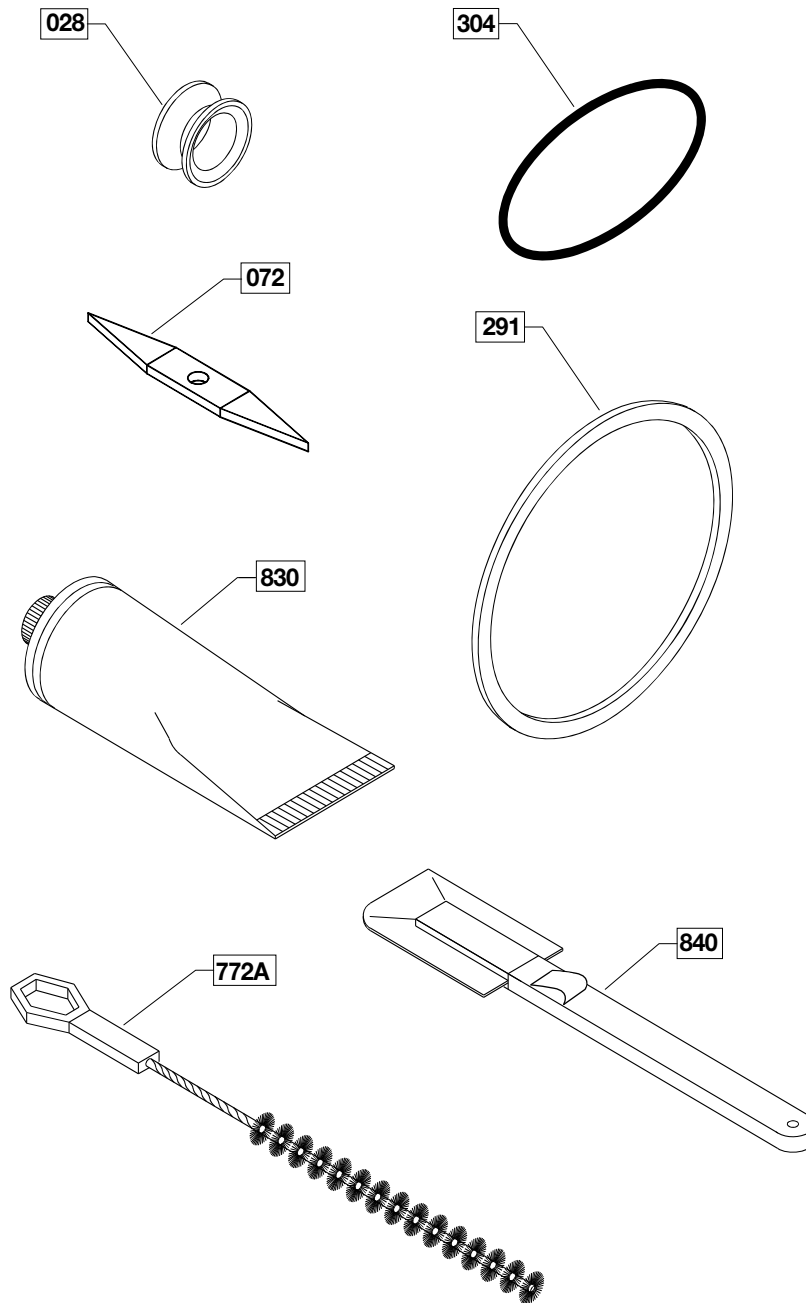


Fig. 15

LABOTRONIC RTL ACCESSORY KIT

Description	Position number
Beater stuffing box	28
O-ring extractor	72
Hose adapter	291
Gaskets for hose adapter	304
Brush	772A
Tube of food-grade lubricant	830
Ice cream spatula	840

7. TROUBLESHOOT GUIDE

IRREGULARITY	CAUSE	PROCEDURE
Machine does not start	Main switch is off	Switch it on
	Machine unplugged	Check and plug in
	Machine is not set at PRODUCTION	Check push button for PRODUCTION is lit
	Front lid is not closed well	Check front lid closure
Compressor starts and then stops after a few seconds without ice cream being thick	Watercooled machine: water does not circulate	Open water tap Check that hose is neither squashed nor doubled up.
	Aircooled machine:	Check that rear of machine is air does not circulate at least 50 cm from wall Clean condenser from obstructions
After 20 minutes processing mix has not frozen and the machine returns to Stop	No gas	Check leakage and weld
	Pressure switch has broken down	Check connection and replace, if need be
Machine runs but no ice cream comes from ice cream door	No sugar in the mix	Wait for the gelato in the cylinder to defrost or start the DEFROST program and then change or replace the mix.
Machine works but ice cream is too soft	Too much sugar in the mix	Modify or replace the mix
Mix in drip drawer	Stuffing box missing or ruined	Install if missing Replace if ruined
Gelato comes out between the plastic disc and steel support.	Gasket missing or not properly installed	Check and fix or replace
Bacteria tests show too high bacteria charge	Too high bacteria charge in the mix.	Improve preparation procedure by sanitizing all containers, spoons, etc., and have mix analyzed before pouring it into the machine
	Machine not clean enough.	Empty and thoroughly wash the machine. Carry out sanitization as per chapter 5 of manual.
The machine is displaying the service message	The number of operating hours means that the machine now requires a service	The machine can be used normally. To restore optimum performance, contact your authorized assistance service.

