INSTRUCTION HANDBOOK

READY

APPLICARE

TARGA

CARATTERISTICHE

CARPIGIANI

Code IC193-033800_00

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 Certified Quality System.*

Moreover, Carpigiani machines comply with following European Directives:

- "Machinery" Directive 2006/42/EC,
- "Low Voltage" Directive 2014/35/EU,
- "EMC" Directive 2014/30/EU,
- "PED" Directive 2014/68/EU,
- Regulation 2004/1935/EC relating to "Materials and articles in contact with foodstuffs"
- Regulation 2023/2006/EC relating to "Good manufacturing practice for materials and articles intended to come into contact with food"

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The purchaser has the wright to reprint it for his own office use.
CARPIGIANI policy pursues a steady research and development, thus it reserves the right to make changes and revisions whenever deemed necessary and without being bound to previous statements to the purchaser.

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FOREWORD

INSTRUCTION MANUAL

The European Community directions on safety standards as well as on free circulation of industrial products within the E.C. were taken into due account when editing this manual.

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 manual refers to the conditions necessary for the machine use and to the necessary procedures during cleaning as well as routine and special maintenance.
Nevertheless, this manual cannot cover any possible need in detail. In case of doubts or missing information, please contact:

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STRUCTURE OF THE MANUAL

This manual is divided in sections, chapters and sub chapters for an easy reference.

Section
A section is the part of the manual 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.
Sub chapter
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 understands those parts of the manual of his/her own concern, and particularly:

- the Operator must read the chapters concerning machine start-up and operation of machine components.
- A qualified engineer involved in the installation, maintenance, repair, etc. of the machine must read all parts of this manual.

ADDITIONAL DOCUMENTATION

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

- **Wiring diagram**: a diagram of wiring connections placed in the machine.
- **Installation sheet:** To be filled-in by the installer. A copy is to be given to the customer, to the dealer and to the manufacturer to activate the machine warranty

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



CONVENTIONAL SYMBOLS



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



CAUTION FLAMMABLE GAS HAZARD (ISO 817 - A2L)
Reports residual fire hazard from use of low- flammability refrigerant (A2L).



CAUTION: DANGER FROM HIGH TEMPERATURES
This warns the staff involved that failure to abide by safety rules in carrying out the operation described involves the risk of burns and scalds.



CAUTION CRUSHING HAZARD
This warns the staff involved that failure to abide by safety rules in carrying out the operation described involves the risk of suffering crushed fingers or hands.



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 personnel involved.



WARNINGS
This warns the personnel involved that the non-observance of warning may cause loss of data and damage to the machine.



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



EQUIPOTENTIAL CONNECTION
For connecting all appliances with this type of connection.
Warning: do not connect to ground.



READ THE INSTRUCTION MANUAL
It signals to the personnel involved that it is necessary to carefully read the instruction manual before using the machine.

QUALIFICATION OF THE PERSONNEL SYMBOLS

The personnel allowed to operate the machine can be differentiated by the level of preparation and responsibility in:



MACHINE OPERATOR
Unqualified personnel, without any specific technical abilities, capable of carrying out simple jobs, such as: operating the machine using the commands available on the keypad, the loading and unloading of products used during production, the loading of any consumable materials, basic maintenance operations, (cleaning, simple blockages, inspections of the instrumentation, etc.).



SKILLED ENGINEER
He/she is a skilled engineer, capable of operating 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 moving parts (rotary motion), high voltage components, as well as parts subject to high temperatures may cause serious damage to persons and things.
The persons in charge of safety must ensure that:

- any incorrect use or handling is avoided;
- the safety devices are neither removed nor tampered with;
- the machine is regularly serviced;
- only original spare parts are used, especially in the case of safety-related components (e.g.: protection microswitches, thermostats).
- suitable personal protective equipment is worn;
- high care is taken during hot product cycling.
- open flames are not used near the machine.

To achieve the above, the following is necessary:

- at the work station 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 and machineries; this appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety;
- Make sure that no technician will ever carry out interventions outside his own knowledge and responsibility sphere;
- Children should be supervised to ensure that they do not play with the machine

IMPORTANT!
Make sure that the personnel do not perform operations out of their range of knowledge and responsibility (refer to “Qualification of the personnel symbols”).



NOTE:
According to the standard in force, a QUALIFIED ENGINEER is a person who, thanks to:
- training, experience and education,
- knowledge of rules, prescriptions and interventions on accident prevention,
- knowledge of machine operating conditions,
It 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.

WARNINGS





The machine must be installed in compliance with current installation regulations.
When installing the machine, insert a differential magnetothermal protection switch on all poles of the line, (see par.2.4).

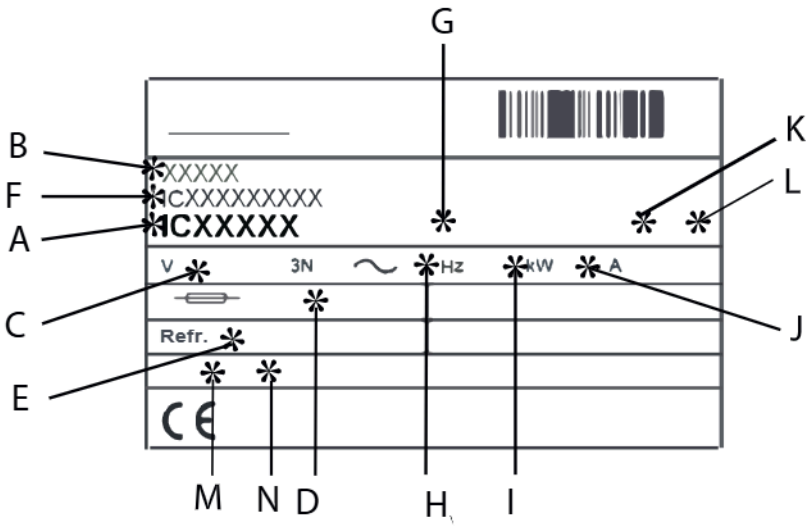
- Never perform operations on the machine using your hands, during both production and cleaning. Before carrying out any maintenance operation, make sure that the machine is in “STOP” position and that the main switch has been cut out.
- It is forbidden to wash the machine by means of a jet of pressurized water.
- It is forbidden to remove panels in order to reach the machine internal parts before disconnecting the machine from the power supply.
- The place of installation must not be exposed to water sprays, high moisture, heat or steam sources and open flame sources.
- Do not store explosive substances or spray cans inside the machine, nor aerosol cans containing flammable propellant.
- Ensure that ventilation openings of the machine remain unobstructed.
- Do not damage the refrigerant circuit
- Do not use any mechanical device or other means near the refrigerant circuit to prevent it from getting damaged
- **CARPIGIANI** is not responsible for any accident that might happen during operation, cleaning and/or servicing of its machines 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, assigned 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= Supply voltage
D= Fuse rating
E= Gas type and weight
F= Machine code
G=Condensation type
A=Air
W=Water
H=Frequency
I= Power
J= Rated current
K= IP code
L= Climate class
M= Greenhouse effect gas quantity
N= PS max pressure admitted (if A2L gas is present)

IMPORTANT:
When the refrigeration circuit requires the use of low GWP refrigerant, classified as low flammability A2L(ISO817), the machine features the symbol next to the identification plate, which identifies residual al risk of fire/explosion in case of refrigerant accumulation in the equipment due to refrigeration system leakes.



NOTE:

Pay special attention to the indications in the manual highlighted with the symbol .



1.1.2 Information for the installation technician

To comply with hazardous material transportation regulations, the machine may be shipped without the refrigerant required for its proper operation. In this case, the refrigeration circuit will be filled with Nitrogen (UN1066 - pressure below 200 kPa at 20°C), and it will be necessary to empty the system and refill it with the type and quantity of gas specified on the data plate.



1.1.3 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.



1.1.4 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 information

Ready models produce ice cream by mixing, heating and freezing it inside a single cylinder.

CARPIGIANI 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 recipies, 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 **CARPIGIANI**.

1.2.2 Technical features

MODEL	Production output		Mix q.ty per batch		electric spec.*			Rated Power	Condenser**	Dimensions cm			Net weight
	kg	litres	Min. kg	Max. kg	Volt	Hz	Ph	kW		Width	Depth	Height	kg
Ready 20 30	20/30	28/40	3	5	400	50	3	4	Water	52	65	140	250
Ready 30 45	30/45	42/60	3,5	7,5	400	50	3	5,2	Water	52	65	140	290
Ready 40 60	40/60	56/84	5	10.5	400	50	3	6	Water	52	65	140	340

The quantity per cycle and hourly production change according to the mixes used.
The values "Max" refer to the Italian classic easy-to-work ice-cream.
* Other voltages and cycles available with an extra cost.
** The air-cooled condenser is available with an extra charge.
The following characteristics are purely indicative, Carpigiani reserves the right to make all the changes whenever necessary and without being bound to previous statements to the purchaser.



1.2.3 Location of machine groups



Caption:

1. Control panel
2. Cylinder front lid
3. Shelf for drip tray
4. Drip drawer

1.3 INTENDED USE

The **Ready** must only be used for the production of ice cream, with the respect of what indicated in 1.2.1 "General information", within the limits indicated here under.

Voltage:	±6%
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:	0,5 MPa (5 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, on batteries and accumulators and waste batteries and accumulators, 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

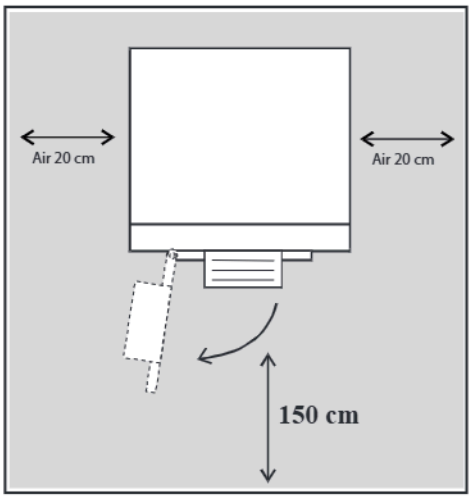
The machine must be installed in such a way that air can freely circulate all around.
Rooms for the approach to the machine must be left free in order to enable the operator to act without constraint and also to immediately leave working area, if need be.
The minimum approach room to working area should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

ATTENTION
Machines with air-cooled condenser must have 20 cm. of free space along the sides in order to allow free air circulation around the condenser.

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

WARNING
Ensure that all ventilation openings of the machine remain unobstructed. Do not install the machine near heat sources

WARNING
Clean under and near the machine frequently in order to prevent paper and other foreign bodies from obstructing regular air flow.



2.2 WATER SUPPLY CONNECTION

The machine must be connected to running water which pressure must not be higher than 0,5 MPa (5 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 air-cooled condenser must have 20 cm. of free space along the sides 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



The machine must be connected to the water supply respecting the applicable national requirements; moreover the water mains pressure must not exceed 0.5 MPa (5 bar). The connection pipes are provided by the installer and must comply with IEC61770. Used pipes cannot be reused.
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 0.5 MPa (1-5 bar) at least, and a delivery at least equal to the estimated hourly consumption.
Connect inlet pipe marked by plate "Water Inlet" 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.

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



The power supply system must comply with the national regulations in force in the place of installation and provided with an efficient ground connection.
The manufacturer is not responsible for any malfunction or for injury to persons and/or damage to property resulting from connection to a non-compliant electrical system.
The appliance must be installed according to the current regulations for electrical installation, by competent and qualified technical personnel meeting the technical and professional requirements provided for by the legislation in force in the country of installation.
Before connecting the machine to the mains, check that the mains characteristics meet those of the machine specified in the identification plate applied to the machine itself.
Check that the power supply network is provided with a disconnection device, in compliance with the installation rules, ensuring complete disconnection from the mains for each pole (differential circuit breaker), in the conditions of overvoltage category III. The opening distance of contacts must be at least 3 mm.
The trip level of the residual current device must be ≤ 30 mA, and in any case comply with local regulations.
To ensure proper interruption in the event of a ground fault, the residual current device must be at least of type A, F, or B (ref. IEC 60775), depending on the fault current that the machine may generate.



WARNINGS
The disconnection device must provide protective functionality by disconnecting power when required. If the device is not suitable, a fault condition may result in untimely or failed/delayed tripping, which could lead to serious hazards for the operator.

For machines equipped with a single-phase inverter connected between phase and neutral, use a device sensitive to high-frequency fault currents, at least type F, capable of detecting and interrupting multi-frequency residual currents.
For machines equipped with a three-phase inverter, use a type B device, which is also sensitive to DC faults.



NOTE
If the machine is equipped with a power cable, in case of three-phase machines with neutral, the blue wire of the power cable must be connected to the system neutral

WARNING
If the machine is fitted with a power cable, the yellow/green wire MUST be connected to an appropriate grounding of the electric system

2.5.1 Equipotential connection

Connection to external equipotential terminal is indicated by symbol .
It is present on the side or on the back of the machine, not to be connected to the protection ground.
The conductor to be used has a cross-section at least equivalent to the one of the connected conductor with greatest cross-section.

2.5.2 Replacing the power cable

If the machine power cable is damaged, replace it immediately with a cable with the same features. Replacement must be carried out by qualified personnel only.

IMPORTANT
Check the correct direction of rotation of the beater.

Reversal of rotation (only for three-phase machines)
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 fitted with wheels to ease its positioning. The wheels feature mechanical lock mechanisms which, once engaged, prevent the machine from moving and shifting to a different position. The machine must be positioned at right angles on a horizontal bearing surface (max. tilt: 2°).

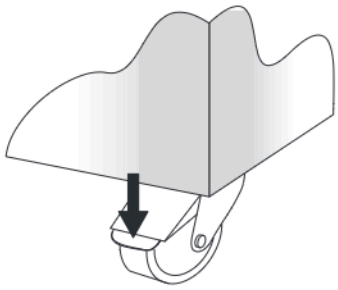


Fig. 4

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 CONFIGURATION

The machine has a motor to drive the beater, and a cooling system with water or air-cooled condenser and a heating system.
Feed mix (ready-made liquid mix, mix to be re-hydrated and mix to be brought to 90°C) into the cylinder and start the automatic production cycle, until ice cream reaches the ideal consistency set by CARPIGIANI; use the minimum and maximum mix quantity per cooling cycle specified in the chart under paragraph 1.2.2. When the cycle ends, the ice cream is ready to be extracted through the spigot door and dispensed directly into a tub.

WARNING

In any case, do not touch the door during the heating stage or the stages immediately after, since it can reach very high temperatures.

WARNING

To make product dispensing easier, only use the plastic spatula supplied. Never use metal spatulas as these could damage the machine.



3.2 CONTROLS

This machine is provided with an electronic control keyboard; every key relates to a machine function. For a correct use of the keys, press on the symbol or in the middle of the key; every key has a LED (light emitting diode) which lights up when relevant function is inserted.

3.2.1 Electronic control keyboard





STOP
In this function, the machine is not working and the relevant red LED is on. The display shows STOP. After 3 minutes, the display backlighting turns off and the display turns on when pressing any key.



CLEANING
If Cleaning button is pressed, the display shows:

*CLEAN HOT CLEAN

Use the Increase and Decrease keys to select the desired function and press OK to activate it.
The available functions are:

- Clean
- Clean+hot
- Drying
- Water Filling
- Delayed Cleaning

Clean
In this function, only the slow beater is enabled for 1 minute, then the machine automatically sets back to STOP in order to avoid the excessive wear of cylinder and beater; the display shows the decreasing timer on the top line and the speed on the bottom line.

TIMER 01:00 SPEED 01

Press the Increase key to enable the quick beater. The timer continues its count:

TIMER 01:00 SPEED 02

It is possible to reset slow beating by pressing the Decrease key.

Hot cleaning
Beater with speed 1 (that can be changed from 1 to 2) and heating are enabled for 1'.

Drying
Heating is activated for 1'.

Water Filling

The display shows:

Set L 00.00 OK ?



Set the amount of water to supply (in number of liters) using the Increase and Decrease buttons.

Set L 01.00 OK ?

Press OK to activate water dispensing.

Set L 01.00 Water L 00.00

When counter reaches the set quantity, the machine goes back to Stop

Delayed Cleaning
With this function, cylinder walls are cooled to allow an easy cleaning even if the machine is not immediately cleaned after product extraction.

The display will read:

00:00:35 DEL:CLEANING

in the first line the time elapsed since cycle start, and in the second line the name of the program.



INCREASE
This increases the values that can be edited for those functions where this is permitted, e.g. the consistency set in the freezing cycle.
Moreover, it allows changing the Beating speed in the Cleaning and Extraction functions.



DECREASE
This decreases the values that can be edited for those functions where this is permitted, e.g. the consistency set in the freezing cycle.
It is also used to reset alarm messages.
Moreover, it allows changing the Beating speed in the Cleaning and Extraction functions.



OK
If pressed when viewing the menus, this starts up the selected cycle.
It is used during cycles to confirm that ingredients have been introduced or to confirm the continuing of a process after the Stop button has been pressed. Skip to the next phase by holding it down for a prolonged period during a pause (timer) or in the heating phase.



WATER DELIVERY
It can be accessed from any function.
The relevant LED turns on, water delivery is activated for a fixed time of 3' or until Stop or the Water Delivery Key are pressed.

Water Delivery Time Storage
If the Water Delivery Button is pressed for approx. 3" (until you hear a "beep") during water delivery, this latter is stopped and the time elapsed since its activation is stored.
When the sprayer is used again, the delivery time will be the stored one.
To increase time, use user step U14.



GELATO PRODUCTION

By pressing the Gelato Production key the display shows:

```
* GELATO
  SHERBET
```

Use the Increase and Decrease keys to move the asterisk selecting the required cycle.
The available cycles are:

- Gelato
- Sherbet
- Slush Fruit
- Gelato Crystal
- Fruit Crystal
- Icecream (optional)

Press OK to activate the selected cycle.



GELATO WF PRODUCTION

By pressing the Water Filling Gelato Production key the display shows:

```
* GELATO WF
  SHERBET WF
```

Use the Increase and Decrease keys to move the asterisk selecting the required cycle.
The available cycles are:

- Gelato WF
- Sherbet WF
- Milk Gelato
- Gelato HOT WF
- Sherbet HOT WF
- Milk Gelato HOT

Press OK to activate the selected cycle.



GELATO HOT PRODUCTION

By pressing the Gelato HOT Production key the display shows:

```
* GELATO HOT
  GELATO HOTAGE
```

Use the Increase and Decrease buttons to move the asterisk selecting the required cycle.
The available cycle are:

- Gelato HOT
- Gelato HOT AGE
- Gelato HOT COLD
- ICECREAM HOT
- ICECTRAM HOTAGE
- ICECREAM HOTCOLD



Press OK to activate the selected cycle.

In these cycles, when the temperature in the cylinder reaches 40°C, a "WARNING HOT" message is displayed alternated with the set temperature.

```
SET  085  °C
MIX  042  °C
```

```
WARNING HOT
MIX  042  °C
```



EXTRACTION
The function can be accessed at the end of all Gelato and Sherbet cycles (including HOT, WF and Crystal cycles).
In this function the relevant LED turns on, only the slow beating motor is enabled and the display shows a time countdown.

TIMER 03:00 Speed 1

Press STOP or wait 3' (fixed) to stop beating.
From Extraction mode it is possible to access the Cooling extraction function by pressing the Gelato Production key. In this case, the Production LED turns on for 20" fixed; at the end of such time the machine sets back to simple extraction unless the 3 total minutes of extraction have already passed; in this case the machine sets to STOP.

Press the Increase key to activate quick beating. To enable slow beating again press the Decrease key.

3.3 GELATO PRODUCTION



After cleaning, sanitizing and completely rinsing the machine right before the use, according to the instructions in sec. 5 Cleaning, make sure spigot door and ice cream outlet spigot door are properly closed and proceed as follows:

3.3.1 "Gelato" production

Take the mix, pour the required quantity into the cylinder, through the hopper of spigot door respecting the minimum and maximum quantities indicated in the table under paragraph 1.2.2.
By pressing the Gelato Production key the display shows:

* GELATO SHERBET

Use the Increase and Decrease keys to move the asterisk selecting the required cycle.
The available cycles are:
- Gelato
- Sherbet
- Slush Fruit

Press OK to activate the selected cycle.

Gelato and Sherbet Cycle
The product is cooled in the cylinder till its consistency value is reached. According to the selected cycle, Gelato or Sherbet, the proper Consistency Set is automatically set.

In case of Gelato cycle the display shows:

SET 100 GELATO 005

While in case of Sherbet Cycle:

SET 060 SHERBET 005

SET = the consistency to reach (it can be changed using the Increase/Decrease keys)
GELATO and SHERBET = the current consistency

By pressing the Production  button, the display shows the timers:

060 20:00 020 GELATO 033

The display shows the HoT Timer on the first left line, the Timeout Prd in the middle and the hopper temperature on the right side. The second line shows the current consistency.

To go back to the initial page, press the Production button  again.

Once the desired consistency is reached, an intermittent acoustic signal activates, to indicate that ice cream is ready.

For the Gelato cycle, the display shows:

SET 100 GELATO 100

Slush Fruit Cycle
The product is cooled in the cylinder till its consistency value is reached. The display shows:

SET 10:00 SLUSH 09:56

SET are the total freezing minutes. This time can be changed, during freezing, using the Increase and Decrease keys in steps of 1 minute from a minimum of 2 to a maximum of 20 minutes.
SLUSH is the decreasing time.
The last minute of freezing will only be beating.
At the end of freezing an intermittent beep will be emitted.

Gelato Crystal and Fruit Crystal Cycle
The product is brought to the right consistency for 5 times.
The consistency Set is by default 60 for Gelato Crystal and 50 for Fruit Crystal:

SET 060 CRYSTAL 046	SET 050 CRYS.FR.046

The set can be changed using the Increase/Decrease buttons (minimum settable value = 40).
Every time consistency is reached, the compressor is deactivated for 20" before bringing the product back to the right consistency.
The beater is always active with freezing speed.

Once the product has reached the consistency for 5 times, the Increase/Decrease buttons LEDs turn off and it is no longer possible to change the Set HoT.

The display eventually shows "Extract" (until next function change) and an intermittent acoustic signal is activated.

EXTRACT! CRYSTAL 062

Alternated with:

SET 060 CRYSTAL 062

WARNING
For product extraction, fit spacer to spigot door, as specified in paragraph 3.3.4

Press the OK button 

to extract.
This allows you to switch from freezing to extraction speed (and vice versa).
When the button used to activate extraction speed is pressed, the acoustic signal stops and after 1 minute:

- if the function was not changed or if the extraction speed has not been disabled yet, the machine automatically switches to the freezing speed, the acoustic signal is activated again and the display starts flashing.
- if the speed had already been switched to the freezing speed manually, but the machine is still in Production mode, the acoustic signal is activated again.

Whenever the operator activates extraction speed by pressing the OK button, the one-minute timer starts again.
The OK button LED remains on when extraction speed is activated.

Icecream (optional)

WARNING
The IceCream cycle is a high-speed freezing cycle that has to be carried out with 3E Beater.

The product is cooled inside cylinder until consistency is reached (HoT), at high speed.
The display shows:

SET 100 ICECREAM 005

SET = indicates the consistency to be reached (Set HoT).
The Set can be modified by pressing the Increase/Decrease button and the changes are memorized
GELATO = indicates the current (HoT) consistency

Once the desired consistency is reached, an intermittent sound is activated to indicate that ice cream is ready.
The display shows:

SET 100 ICECREAM 100

EXTRACT! ICECREAM 100

Press the Cleaning button to extract the product.

3.3.2 "Gelato WF" production

By pressing the Dry Water Gelato Production key, the display shows:

* GELATO WF SHERBET WF

Use the Increase and Decrease keys to move the asterisk selecting the required cycle.
The available cycles are:

- Gelato WF
- Sherbet WF
- Milk Gelato
- Gelato HOT WF
- Sherbet HOT WF
- Milk Gelato HOT

Press OK to activate the selected cycle.

Extract (all Gelato cycles)
When an acoustic warning is activated to signal that the ice cream is ready, the display shows the message "EXTRACT!" on the first line alternated with the Set HOT.

Gelato WF Cycle
The display will read:

Set lt/qt 00.00 OK ?

Use the Increase and Decrease keys to set the amount of water to deliver in number of liters.

Set lt/qt 01.00 OK ?

Press OK to activate water dispensing. When the counter reaches half the set quantity, dispensing stops and the display shows:

Solids?

Press OK to enable the beater and insert the solids (mix powder or paste).
Once the solids have been inserted, the display shows:

End Solids?

Press OK to activate water delivery for the remaining half.
At the end of delivery, the machine sets to Beating, the Beating time can be changed pressing the Increase/Decrease keys from 1 to 4':

Agitazione TIMER 02:59

The set time is stored.
At the end of beating (or by pressing OK), the machine will start the freezing cycle.

SET 100 GELATO 043

Sherbet WF Cycle
The cycle is very similar to the Gelato WF cycle but using the Sherbet cycle freezing parameters.

Milk Gelato Cycle
The cycle is very similar to the Gelato WF Cycle but displaying the following message:

1/2 Milk ?

both at cycle start and after inserting the solids.

Gelato HOT WF Cycle
The "HOT" cycles are used for hot processing.



WARNING
In any case, do not touch the door during the heating stage or the stages immediately after, since it can reach very high temperatures.

The cycle is similar to Gelato WF cycle but at the beginning of the cycle the temperature is set:

SET 050 °C OK ?

it can be changed using the Increase and Decrease keys, press OK to confirm. Then the display shows the number of liters that can still be changed using the Increase and Decrease keys:

Set lt/qt 00.40 OK ?

Press OK to activate water dispensing.
When the counter reaches half the set quantity, dispensing stops and the display shows.

Solids?

Press OK to enable beating and insert the solids (powders).
Once the solids have been inserted, the display shows:

End Solids?

Press OK to activate water delivery for the remaining half.
A 3' (+ heating) beating function is activated. The display shows:

Agitazione TIMER 03:00

At the end of beating (or by pressing OK), the machine sets to Heating:

SET 050 °C MIX 010 °C

Once set is reached, the machine sets to Cooling until 4°C

SET 004 °C MIX 051 °C

Once 4°C are reached, the machine starts the freezing cycle.

SET 100 GELATO 043

Sherbet HOT WF Cycle
The cycle is very similar to the Gelato HOT Cycle with the Fruit parameters and hot processing.

WARNING
In any case, do not touch the door during the heating stage or the stages immediately after, since it can reach very high temperatures.



Milk Gelato HOT Cycle
The cycle is very similar to the Milk Gelato Cycle with the hot processing.

WARNING
In any case, do not touch the door during the heating stage or the stages immediately after, since it can reach very high temperatures.



3.3.3 "Gelato HOT" production

Pour the required quantity of mix into the cylinder, through the hopper of spigot door respecting the minimum and maximum quantities indicated in the table under paragraph 1.2.2.
By pressing the Gelato HOT Production key the display shows:

```
* GELATO HOT
  GELATO HOTAGE
```

Use the Increase and Decrease buttons to move the asterisk selecting the required cycle.
The available cycle are:

- Gelato HOT
- Gelato HOT AGE
- Gelato HOT COLD
- ICECREAM HOT
- ICECREAM HOTAG
- ICECREAM HOTCOLD

Press OK to activate the selected cycle.

Gelato HOT Cycle
Pasteurization cycle that automatically ends with a Gelato cycle.



WARNING
In any case, do not touch the spigot door during the heating stage or the stages immediately after, since it can reach very high temperatures.

In Heating mode, it is possible to set the pasteurization temperature (SET) with Increase/ Decrease keys. If modified, the SET is saved.
The display shows in the first line the temperature set to reach and in the second line the mix current temperature:

```
SET  085 °C
MIX  020 °C
```

When the heating set has been reached, if necessary, the pasteurization pause will be performed. The pause duration is automatically calculated according to the heating set (for example 84°C pause for 1', 65°C pause for 30 minutes).
The display shows in the first line the conservation set and the decreasing timer of pause duration. For example, with set at 65°:

```
SET 065°C  29:59
MIX  065 °C
```

At the end of the pause, or directly at the end of heating, cooling is activated if the set is equal to or greater than 85°. The display shows:

```
SET  004 ° C
MIX  085 °C
```

Note: By pressing and holding button OK pressed for a few seconds during heating or pause, the machine directly shifts to cooling phase.

Upon reaching 4° C the machine will automatically switch to Gelato cycle showing the consistency Set to be reached in the first line and current consistency in the second line:

```
  SET  100
GELATO  042
```



WARNING
User takes full responsibility for the manual control of pasteurization, complying with prevailing local regulations on mix handling in case mixes are not pasteurized

Gelato HOTAGE Cycle
Pasteurization cycle that automatically ends with an aging cycle.

WARNING
In any case, do not touch the spigot door during the heating stage or the stages immediately after, since it can reach very high temperatures.



In Heating mode, it is possible to set the pasteurization temperature (SET) with Increase/ Decrease keys. If modified, the SET is saved.

The display shows in the first line the temperature set to reach and in the second line the mix current temperature:

```
SET  085 °C
MIX  020 °C
```

When the heating set has been reached, if necessary, the pasteurization pause will be performed. The pause duration is automatically calculated according to the heating set (for example 84°C pause for 1', 65°C pause for 30 minutes).
The display shows in the first line the conservation set and the decreasing timer of pause duration. For example, with set at 65°:

```
SET 065°C  29:59
MIX  065 °C
```

At the end of the pause, or directly at the end of heating, cooling is activated if the set is equal to or greater than 85°. The display shows:

```
SET  004 ° C
MIX  085 °C
```

Note: By pressing and holding button OK pressed for a few seconds during heating or pause, the machine directly shifts to cooling phase.

Once the temperature has reached 4 °C, the display shows:

```
Gelato ?
MIX  004 °C
```

The product is kept at 4°C until user presses OK
The machine switches to Gelato cycle showing the consistency Set to be reached in the first line and the current consistency in the second line:

```
SET  100
GELATO  042
```

WARNING
User takes full responsibility for the manual control of pasteurization, complying with prevailing local regulations on mix handling in case mixes are not pasteurized



Gelato HOT COLD cycle
Cycle consisting of a heating phase immediately followed by a cooling phase, which automatically ends with an aging cycle.

WARNING
In any case, do not touch the spigot door during the heating stage or the stages immediately after, since it can reach very high temperatures.



In Heating mode, it is possible to modify the temperature (SET) with the Increase/Decrease buttons, independent of the HOT and HOT AGE cycles.
If modified, the SET is saved.

The display shows in the first line the temperature set to reach and in the second line the mix current temperature:

SET 085 °C
MIX 020 °C

When the heating set is reached, the machine immediately switches to the cooling phase. In this cycle the pause is never carried out, independent of the heating temperature Set. The display shows:

SET 004 ° C
MIX 085 °C

Note: By pressing and holding button OK pressed for a few seconds during heating, the machine directly shifts to cooling phase.

Once the temperature has reached 4 °C, the display shows:

Gelato ?
MIX 004 °C

The product is kept at 4°C until user presses OK
The machine switches to Gelato cycle showing the consistency Set to be reached in the first line and the current consistency in the second line:

SET 100
GELATO 042



WARNING
User takes full responsibility for the manual control of pasteurization, complying with prevailing local regulations on mix handling in case mixes are not pasteurized

ICECREAM HOT cycle
Pasteurization cycle that automatically ends with an Icecream cycle.
In Heating mode, it is possible to set the pasteurization temperature (SET) with Increase/ Decrease keys. If modified, the SET is saved (used also in the ICECREAM HOT AGE cycle).

The display shows in the first line the temperature set to reach and in the second line the mix current temperature:

SET 085 °C
MIX 020 °C

When the heating set has been reached, if necessary, the pasteurization pause will be performed. The pause duration is automatically calculated according to the heating set (for example 84°C pause for 1', 65°C pause for 30 minutes).
The display shows in the first line the conservation set and the decreasing timer of pause duration. For example, with set at 65°:

SET 065°C 29:59
MIX 065 °C

At the end of the pause, or directly at the end of heating, cooling is activated if the set is equal to or greater than 85°. The display shows:

SET 004 °C
MIX 085 °C

***Note**: By pressing and holding button OK* OK *pressed for a few seconds during heating or pause, the machine directly shifts to cooling phase.*

Once the temperature has reached 4°C (Set saved), the machine will automatically switch to Icecream cycle showing the consistency Set to be reached in the first line and current consistency in the second line:

```
SET  100
ICECREAM  042
```

ICECREAM HOT AGE cycle

Pasteurization cycle that automatically ends with an aging cycle.
In Heating mode, it is possible to set the pasteurization temperature (SET) with Increase/ Decrease keys. If modified, the SET is saved (used also in the ICECREAM HOT cycle).

The display shows in the first line the temperature set to reach and in the second line the mix current temperature:

```
SET  085 °C
MIX  020 °C
```

When the heating set has been reached, if necessary, the pasteurization pause will be performed. The pause duration is automatically calculated according to the heating set (for example 84°C pause for 1', 65°C pause for 30 minutes).

The display shows in the first line the conservation set and the decreasing timer of pause duration. For example, with set at 65°:

```
SET 065°C  29:59
MIX  065 °C
```

At the end of the pause, or directly at the end of heating, cooling is activated if the set is equal to or greater than 85°. The display shows:

```
SET  004 °C
MIX  085 °C
```

***Note**: By pressing and holding button OK* OK *pressed for a few seconds during heating or pause, the machine directly shifts to cooling phase.*

Once the temperature has reached 4°C (Set saved) the display shows:

```
IceCream?
MIX  004 °C
```

The product is kept at 4°C until user presses OK OK
The machine switches to Icecream cycle showing the consistency Set to be reached in the first line and the current consistency in the second line:

```
SET  100
ICECREAM 042
```

ICECREAM HOT COLD cycle

Cycle consisting of a heating phase immediately followed by a cooling phase, which automatically ends with an aging cycle.
In Heating mode, it is possible to modify the temperature (SET) with the Increase/Decrease buttons, independently of the HOT and HOT AGE cycles.
If modified, the SET is saved.

The display shows in the first line the temperature set to reach and in the second line the mix current temperature:

```
SET  085 °C
MIX  020 °C
```

When the heating set is reached, the machine immediately switches to the cooling phase. In this cycle the pause is never carried out, independent of the heating temperature Set. The display shows:

```
SET  004 °C
MIX  085 °C
```



***Note**: By pressing and holding button OK* 

pressed for a few seconds during heating, the machine directly shifts to cooling phase.

Once 4°C are reached (Set saved in step T30 "IceCreamCool.") the display shows:

```
IceCream?
MIX  004 °C
```

The product is kept at 4°C until user presses OK 

The machine switches to Icecream cycle showing the consistency Set to be reached in the first line and the current consistency in the second line:

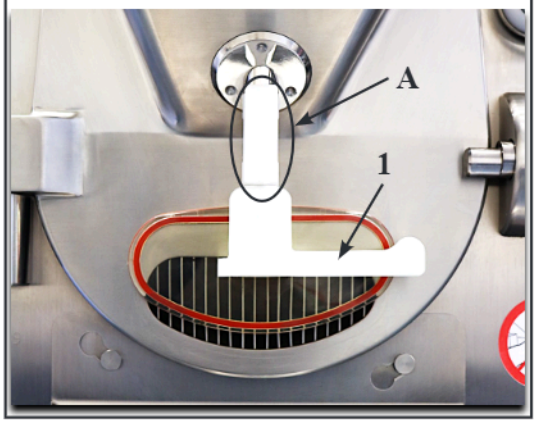
```
  SET  100
ICECREAM 042
```

3.3.4 Ice cream dispensing

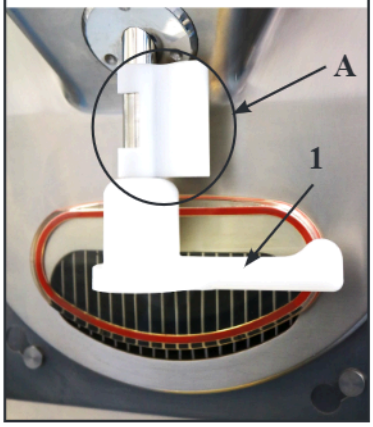
At the end of the freezing cycle, the ice cream can be extracted from the cylinder as follows:

- Set tub on the support, under the ice cream outfeed chute.
- Only for Crystal cycles, fit spacer (ref.A) on the spigot door, as shown in the figure. Spacer can be fitted and removed at any time, during all processing steps.

Front position: greater opening



Side position: smaller opening



- Turn locking lever to the left (ref. 1).
- Raise lever and spigot.
- Lock spigot door up by taking lever fully home to the right
- If EXTRACTION is selected, speed can be edited using the Increase and Decrease keys, while **FOR CRYSTAL CYCLES ONLY**, if EXTRACTION is not pressed, (extraction) speed can be increased by pressing OK when the display shows Extract!

SAFETY REMARK

The machine sets to STOP after 3 minute of continuous operation in extraction mode in order to avoid early wear of scrapers and cylinder

3.3.5 Using the ice cream dispensing lever

Locking

Lock ice cream outfeed by taking lever (ref. 1) fully down and rotating it fully to the right.

Opening

Turn lever (ref. 1) to the left by 90°.
Raise lever and spigot.
Lock spigot up by taking lever (ref. 1) fully home to the right.

Closing

Repeat the opening procedure in the reverse sequence to close.

3.3.6 Spigot door closing cam (ref. 2)

To open:
Push the knob towards the front and pull it to the right.

To close:
Close the spigot door, push the knob to the left and lower it.



3.3.7 Using the shower and the shower support

Open the hopper cover, rotate the shower support (ref. 3) and lay it on the spigot door hopper as shown in the figure. Remove the shower (ref. 4) from its seat and insert it in the suitable seat of the shower support.



3.4 USER PROGRAMMING

To access user programming with the machine in STOP mode, press the STOP and DECREASE keys at the same time; hold them until the display shows "Manager Menu" and the Software version. Then the display shows the first step of programming and the relevant value.
The values can be changed using the INCREASE and DECREASE keys.

Step	Display	Notes	U.M.	MIN	MAX	Typical
U01	Hour		hr	0	23	
U02	Minutes		min	0	59	
U03	Day of the week		dd	Sun	Sat	
U04	Day of the month		dd	1	31	
U05	Month		mm	1	12	
U06	Year		yyyy	2000	2099	
U07	Language	Ita, Eng, Fra, Deu, Esp, Jpn		Ita	Jpn	Ita
U08	Fahrenheit		Y/N	No	Yes	No
U09	Quart		Y/N	No	Yes	No
U14	Water Time		Sec	015	300	180
U15	Timer BackLight		Min	000	030	003

U01-U06: Date and time setting.

***NOTE**: Check date and time at regular intervals to prevent significant deviations over time.*

U07: Language setting

U08: Settings °C (No) / °F (Yes)

U09: Settings Liters (No) / Quart (Yes). 1 Quart = 946 ml. The liter display is L whereas the Quart display is qt.

U14: Setting of water delivery time from the shower.

U15: Setting of the minutes after which display backlighting turns off with machine set to Stop. It can be turned back on by activating any function, in Programming or pressing OK. If this step is set to 0, display backlighting is always on.

To exit user programming, wait for about 30 seconds without pressing any button or press CLEANING/EXTRACTION to force quit.

4. SAFETY DEVICES

4.1 SPIGOT DOOR MICROSWITCH



On the closing spigot door of the cylinder, in which the beater unit is located, there is a microswitch which immediately controls machine stop if the spigot door is opened.



WARNING
It is absolutely forbidden to tamper with or eliminate any devices in place to ensure operator's safety.



WARNING
CARPIGIANI can not be held liable for any loss or damage or injury to persons and/or the machine, in case any safety-related devices are tampered with.

4.2 ALARMS



The machine signals possible alarms by displaying them on line two and flashing the message on the display.
If an alarm was triggered and then reset, the alarm remains visible on the display in a steady way (not flashing).
To delete the message after restoring the alarm, press the Decrease button. If the alarm will not reset, this means it is still active.

Alarms are listed in the table below:

Alarm PR	Pressure switch This alarm stops the compressor. If pressure switch trips 3 times in a row or if it stays open for 2 consecutive minutes, the machine sets to Stop. The display reads "Alarm PR".
Alarm RTC	Compressor Thermal Relay When the Compressor thermal relay triggers, all outputs are disabled and the machine sets to Stop. The display reads "Alarm RTC" until the alarm is active.
Alarm RTL	Slow Beater Thermal Relay When the Slow Beater thermal relay triggers, all outputs are disabled and the machine sets to Stop. The display reads "Alarm RTL" until the alarm is active.
Alarm RTV	Quick Beater Thermal Relay When the Quick Beater thermal relay triggers, all outputs are disabled and the machine sets to Stop. The display reads "Alarm RTV" until the alarm is active.
Alarm TEC	"TEC" temperature probe switched off or short-circuited. Alarm enabled in the heating and refrigerated storage cycles. This alarm triggers machine Stop. As long as alarm is active, none of the above-listed cycles can be started. Check TEC temperature probe and replace it if necessary.
Alarm TES	TES Safety thermostat When the TES Safety Thermostat trips, the machine enters STOP mode and the display reads “TES Alarm”.
Power Off	Power Off The power off is recorded only in the events.

Spigot Open	Magnetic Safety Switch (IMS) or Spigot Door Open The machine sets to Stop from any function. In Programming, the open spigot door is not signaled. When the spigot door is closed again "Spigot Door Open" is no longer displayed.
Power On	Power back on After a blackout the display shows "Power back on". If the machine needs an autodefrost, the alarm appears only for a few seconds and then shows the Autodefrost display.
Timeout Product.	Timeout Production (Cooling fault) It is triggered when the machine cooling is faulty. If compressor remains on continuously for over 15', during freezing, and HOT does not reach the threshold of the relevant cycle, the machine sets to Stop with displayed "Timeout Prod." alarm. It can be reset by pressing the Decrease key. One of the possible causes for this type of problem could be no gas in the system.

4.2.1 Blackout

In case of blackout, the machine will behave differently based on the function it was carrying out upon power off.

Once power is restored, from Stop, Cleaning, Extraction and Water Filling functions, the machine restarts in Stop mode without displaying any indication.

Once power is restored, from Production (Gelato or Slush) functions, the machine restarts in Stop mode and displays “Power On”.

For the HOT cycles:

From the Heating and/or Pause cycle, the machine sets back to Heating, displaying “Power On”.

From the Cooling cycle, the machine sets back to Cooling if the Time/Temp parameters are included in the ones relevant to the Power Off table, displaying “Power On”.

From the Cooling cycle, the machine repeats Heating if the Time/Temp parameters are NOT included in the ones relevant to Power Off table, displaying “Power On”.

Blackout table

TEC Temperature	**Time**
>50°C	30 minutes
49°C ÷ 15°C	10 minutes
14°C ÷ 10°C	20 minutes
9°C ÷ 6°C	2 hours



WARNING

If the blackout occurs during the heating stage and lasts for over 90 minutes, user takes the responsibility for checking if the product in the machine is still suitable for consumption.

5. CLEANOUT DISASSEMBLING AND REASSEMBLING 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.
- To sanitize the disassembled parts leave them in the sanitizing solution for the time indicated by the solution manufacturer (use the sanitizing product following the manufacturer's instructions, the type and sanitizing agent concentration must comply with 40 CFR § 180904) and rinse them before refitting.
- Use drinking water (bacteriologically pure) to rinse the parts.
- When the washing procedure has been completed and before reassembly, dry each component 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 OUTSIDE CLEANOUT

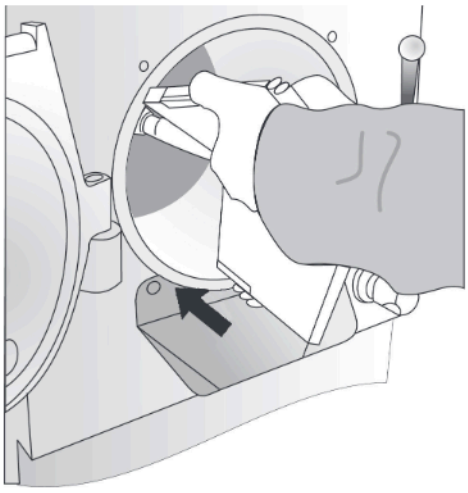
Clean the machine from dust and material its has been strewed with before shipment. Use water only and add a mild detergent, such as soap and a smooth cloth.

5.6 PRELIMINARY CLEANOUT

With machine off and beater front lid closed, let water in the barrel.
Select the function **CLEANOUT** and let the beater run the least in order avoid a useless wear of sliding shoes and cylinder.
Drain all water from the cylinder, open its lid so as to remove the beater.

5.7 BEATER DISASSEMBLY

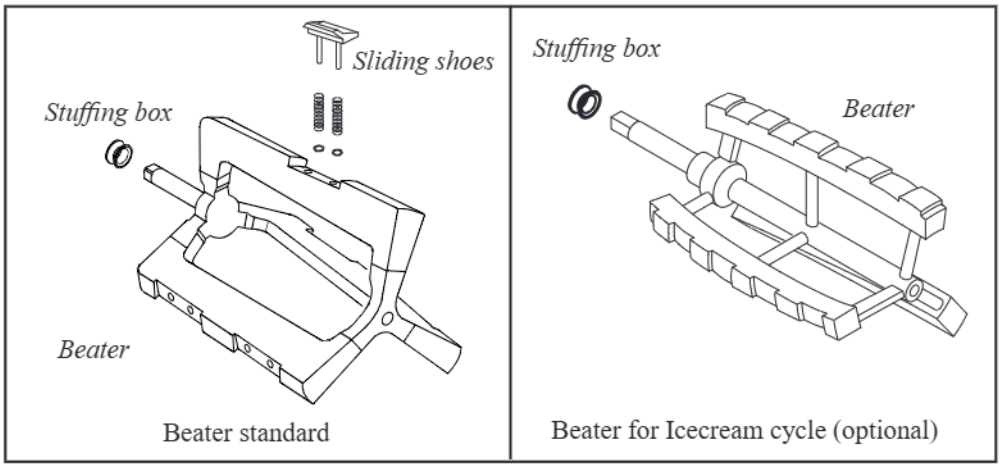
Remove the agitator by pulling gently outwards.
Be careful not to damage the scraping palettes and dent the cylinder walls with the agitator shaft.



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

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.

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



Beater standard

Beater for Icecream cycle (optional)

5.7.1 Sliding shoes disassembly

Sliding shoes mounted on beater are "self-adjusting". An accurate cleaning secures full working order of the system.

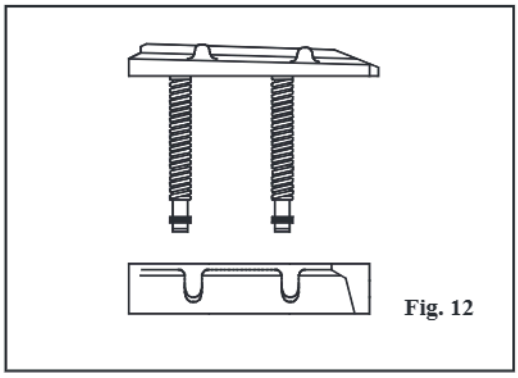


Fig. 12

5.7.2 Stuffing box

On disassembling beater also check wholeness of stuffing box; depending on machine operation length, it is necessary to replace it through the spare one to be found in the accessory kit inside machine packing.

- Remove beater assembly
- Remove stuffing box from its seat
- Lubricate spare stuffing box
- Mount the new stuffing box
- Clean and lubricate the old stuffing box and put it away for recovery of its elasticity.

IMPORTANT

Stuffing box must be replaced with an original spare part each time ice cream drops are found on withdrawing drip drawer placed at the machine side.
Keeping on operating the machine after finding ice cream drops brings about a bigger leakage from stuffing box, thence a malfunctioning of the machine which consequently affects production.

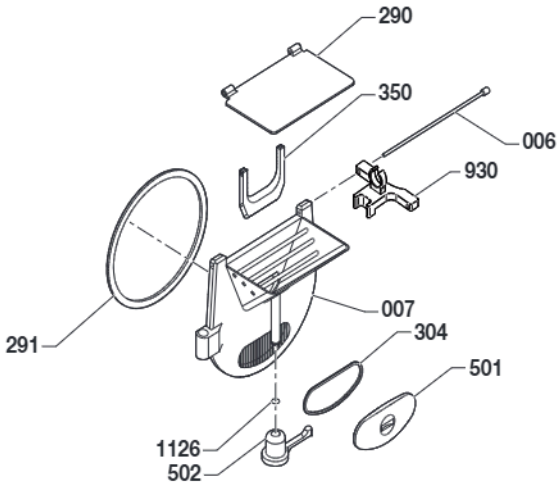
CAUTION

When you do not use the machine, leave beater lid open in order to avoid stuffing box buckling.

5.8 SPIGOT DOOR REMOVAL

- Lift the lever (pos. 289) locking the spigot door and move it to the right.
- Open spigot door pivoting on the hinge (pos. 362).
- Lift spigot door to remove.
- Remove all mobile parts, including the cylinder seal.
- Wash all removed parts using water and cleaning/sanitizing solution and rinse.
- Reinstall all removed parts taking care to smear with some food-grade lubricant all O-rings and spigot door support shaft pos. 362.





5.8.1 Ice cream outfeed spigot removal

- Lift the spigot door (pos. 501) rotating the lever (pos. 502) by 90° on the left.
- Lift lever and spigot door and lock spigot door up by turning lever fully home to the right.
- Now remove the bottom O-ring (pos. 1126) from spigot door pivot and remove it, in this way lever is released as well.
- Remove the O-ring (pos. 304) the spigot.
- Wash all removed parts using water and cleaning/sanitizing solution and rinse.
- Reinstall all removed parts taking care to smear all O-rings with some food-grade lubricant.

5.8.2 Hopper cover removal

To clean mix feeding area, with machine stopped, slide out cover retaining shaft (pos. 006) and remove it.

Cover features a small baffle preventing ice cream from going up the hopper, which must be removed and cleaned.

Wash all removed parts using water and cleaning/sanitizing solution and rinse.

WARNING

During assembly of the hopper cover, mount carefully the cover retaining shaft (pos. 6), if mounted in the absence of the dispenser water support (pos. 930), its length may damage the panel front of the machine



5.8.3 Product chute removal

In order to make easier the removal of any ice-cream residue, remove the ice-cream chute using both hands and turn it anti-clockwise so as to release it from its seat.
Wash the disassembled pieces with water and cleaning/sanitizing solution and then rinse



5.9 SANITIZATION

- 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

Ice cream fat contents are ideal fields for proliferation of mildew and bacteria.
To eliminate them, parts in contact with mix and ice cream must be thoroughly washed and cleaned. Stainless steel materials as well as plastic and rubber ones 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, either during the operation or during cleaning. Before servicing, make sure the machine has been set in "STOP" position and the main switch has been cut out.



6.1 SERVICING TYPOLOGY

ATTENTION

Any servicing operation requiring the opening of machine panels must be carried out with machine set to stop and disconnected from main switch!
Cleaning and lubricating moving parts is forbidden!
"Repairs to the wiring, mechanical, air supply or cooling systems, or to parts of same must be carried out by qualified personnel with permission to do so and if necessary, according to the routine and extraordinary maintenance schedules as envisaged by the customer with reference to specific intervention methods, according to the use for which the machine is destined".



WARNING

Do not use any mechanical device or other means near the refrigerant circuit to prevent it from getting demaged.



Operations necessary to proper machine running are such that most of servicing is completed during production cycle. Servicing operations, such as cleaning of parts in contact with the product, replacing of stuffing box, disassembling of beater assembly are to be carried out at the end of a working day, so as to speed up serving operations required.
Here below you can find a list of routine servicing operations:

- **Cleanout and replacement of stuffing box**
  Cleaning should be carried out at the end of a working day, whilst replacement only after checking of stuffing box and in the event product drips inside drip drawer.
- **Cleanout of beater**
  At the end of a working day
- **Cleaning the metal sheets and drip tray**
  To be carried out daily with neutral soap , seeing to it that cleaning solution never reaches beater assembly at its inside.
- **Cleanout and sanitization**
  At the end of each working day, according to procedures described in section 5 of this manual.
- **Sprayer maintenance**
  If there is a water leak from the sprayer, we advice you to replace the seals (ref. 1, 2, and 3) in case they are broken, see the drawing. In order to replace the seals (ref. 1 and 2) it is enough to undo the front white plug. On the other hand, to replace the seal (ref. 3) it is necessary to undo the front white plug and remove the handle pin (ref. 4).

WARNING

Never use abrasive sponges to clean machine and its parts, as it might scratch their surfaces.



WARNING

Make sure that nothing is obstructing the ventilation openings of the machine.





6.2 WATERCOOLING



By machines with watercooled condenser, water must be drained from condenser at the end of selling season in order to avoid troubles in the event that the machine is stored in rooms where temperature may fall under 0°C. After closing water inlet pipe, withdraw drain pipe from its seat and let water flow out from circuit.

6.3 AIRCOOLING



Clean condenser, periodically, so as to remove dust, paper and what can prevent air from circulating. For cleanout, use a brush with long bristles or a bolt of compressed air.



ATTENTION

When using compressed air, put on personal protections in order to avoid accidents; put on protective glasses!



NOTE:

never use sharp metal objects to carry out this operation. Good working of a freezing plant mostly depends on cleaning of condenser.

6.4 ORDERING SPARE PARTS

When one or more parts are worn out or broken, place the order through your local distributor.



WARNING

Before using spare parts and/or supplied parts intended to come into contact with the product on the machine, it is absolutely necessary to clean and sanitize them as indicated in sec. 5 of this manual



For proper cleaning, use the accessories supplied with the machine and replace them periodically, based on the frequency of use, and in any case whenever they are worn and/or deteriorated. Replacement with original parts is recommended.

7 TROUBLESHOOT GUIDE



IRREGULARITY	CAUSE	PROCEDURE TO FOLLOW
Machine does not start	Machine unplugged. Front lid is not closed well.	Check and plug in. Check front lid closure.
Compressor starts and then stops after a few seconds without ice cream being thick	Watercooled machine: water does not circulate. Aircooled machine: air does not circulate	Open water tap. Check that hose is neither squashed nor doubled up. Check that rear of machine is at least 50 cm from wall. Clean condenser from obstructions
After 15 minutes of freezing cycle, the mix does not freeze, the machine switches to STOP mode.	No gas in the machine	Air the room and contact a qualified technician Disconnect power Contact the qualified technician
Mix in drip drawer	Stuffing box missing or ruined.	Install if missing. Replace if ruined.
Ice cream comes out from behind front lid	Gasket missing or not properly installed.	Check and fix or replace.

