



## **INSTRUCTION MANUAL**

### **UF 920 SP US**

**AFFIX  
PLATE WITH  
SPECIFICATIONS**

*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.*

**Carpigiani**

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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:

- **Wiring diagram:** a diagram of wiring connections is placed in the machine.
- **Installation sheet:** To be completed by the installer. Return a copy to the customer, the dealer and the manufacturer in order 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: 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: MOVING PARTS

This warns the personnel involved about the presence of moving parts and the hazards of injuries if the safety norms are not complied with.



### 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.

## 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, 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.

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;
- the machine must only be installed in places where its use and maintenance are reserved for qualified personnel
- 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 appliance.

### 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 circuit breaker, fuse or disconnect protection switch on all poles of the line, adequately sized to the absorption power shown on machine identification plate and with a contact opening of 3 mm at least.

- 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.
- Do not store explosive substances or spray cans inside the machine, nor aerosol cans containing flammable propellant.
- **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 identification data

The machine has an identification plate carrying manufacturer data, machine type and serial number assigned when it is manufactured.

The machine data plate is located on the rear panel and electrical box cover inside the machine.

Model No.						
Serial No.				Fac.ID.		
Volts		Phase		Hz		
Max Breaker Fuse Size						
Minimum Circuit Ampacity						
Total Load						
		DESIGN PRE		OPERATING PRE		
HIGH SIDE, PSIG						
LOW SIDE, PSIG						
REFRIGERANT AMOUNT (OZ)						
REFRIGERANT						
	QTY	VOLT	HP	FLA/RLA	LRA	
COMPRESSOR						
BEATER (HIGH)						
BEATER (LOW)						
FAN MOTOR						

### 1.1.2 Information on maintenance service

All ordinary maintenance operations are described in section "Maintenance" of this manual; any additional operation requiring technical intervention on the machine must be agreed upon with the manufacturer, who will also examine the possibility of sending one of its own engineers for the intervention.

### 1.1.3 Information for users

- The machine manufacturer can be contacted for any explanation and information about the machine operation or any modifications aimed at improving the machine's efficiency.
- In case of need, please call the local distributor, or the manufacturer if no distributor is available.
- The 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

Machines installed on the floor intended for indoor use only and for commercial purposes such as ice cream and pastry workshops.

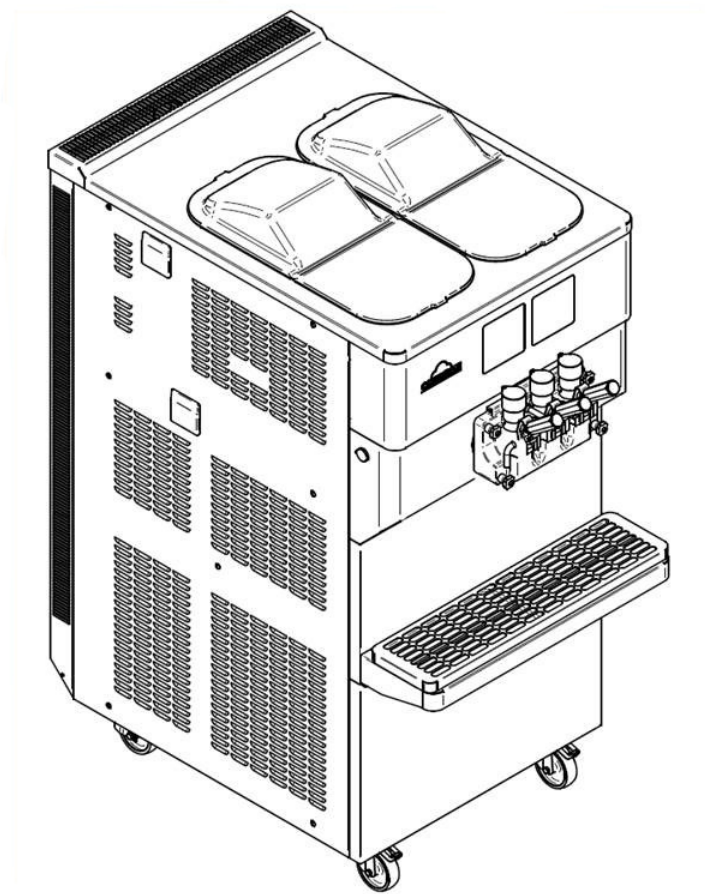
Machine produces soft ice cream in two flavors + mixed.

**CARPIGIANI** recommends to always use high quality mix for ice cream production in order to please even the most demanding customers. Any saving made to the detriment of quality will surely turn into a much bigger loss than the saving itself.

Bearing in mind the above statements, please take into consideration 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 supplier’s recipes, by adding, for instance, more water or sugar than recommended.
- Taste ice cream before serving it and start selling only if entirely satisfactory.
- Make sure your staff always keeps the machine clean.
- Have your machine serviced always by companies authorised by **CARPIGANI**.

1.2.2 Machine layout



1.2.3 Technical features

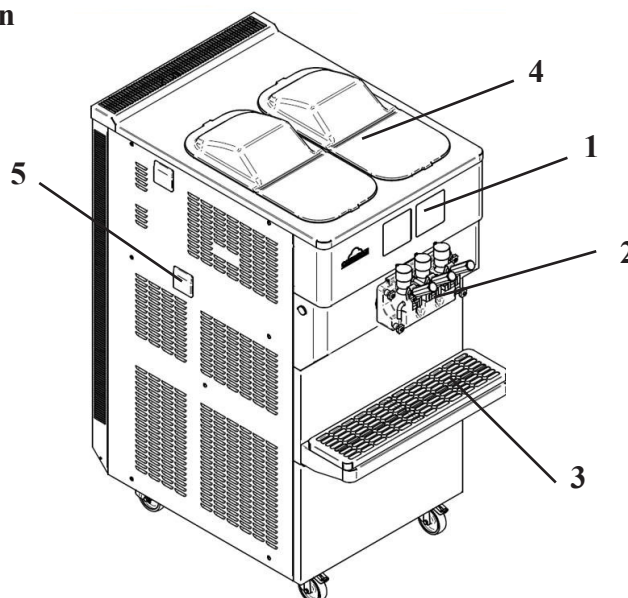
MODEL	Hopper capacity Qts	Flavors	Electrical supply **			Dimensions in			Net Wight lbs
			Volt	Ph.	Cycles	Width	Depth	Height	
UF 920 SP US P	21+21	2 + mixed	208-230	3	60	28.1	47.2	61.3	1080
UF 920 SP US G	21+21	2 + mixed	208-230	3	60	28.1	47.2	61.3	1047
UF 920 SP US P	21+21	2 + mixed	208-230	1	60	28.1	47.2	61.3	1080
UF 920 SP US G	21+21	2 + mixed	208-230	1	60	28.1	47.2	61.3	1047

\*\* Other power supplies are available.  
All specifications mentioned must be considered approximate; Carpigiani reserves the right to modify, without notice, all parts deemed necessary.  
This unit may be manufactured in other electrical characteristics and may have additional regulatory agency approvals, please consult the local Carpigiani Distributor. Check name plate for exact electrical data. \* Room temperature 68°F (20°C).

### 1.2.4 Machine unit location

Key:

1. Control panels
2. Freezing cylinder front lid
3. Shelf
4. Mix hopper covers
5. Drip drawer



### 1.3 INTENDED USE

The machine must be used solely for the purpose described in chapter 1.2.1, “General information” within the functional limits described below.

- Voltage: .....±10%
- Air min. temperature °C: .....10°C / 50°F
- Air max. temperature °C:.....43°C / 109.F
- Water min. temperature .....10°C / 50°F
- Water max. temperature.....30°C / 86°F
- Water min. pressure .....0,1 MPa (1 bar) - 14 PSI
- Water max. pressure.....0,5 MPa (5 bar) - 72 PSI
- Max air relative humidity: .....85%

The machine must not be used for any purpose other than the one it has been originally designed for.



### 1.4 NOISE

The equivalent continuous A-weighted sound pressure level in a workplace for water-cooled as well as air-cooled machines is less than 70 dB(A).

### 1.5 MACHINE STORAGE

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

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



### 1.6 DISPOSAL OF PACKAGE MATERIALS

When opening the crate, divide packaging materials by type and dispose 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 optimise 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 FOR MACHINE USE

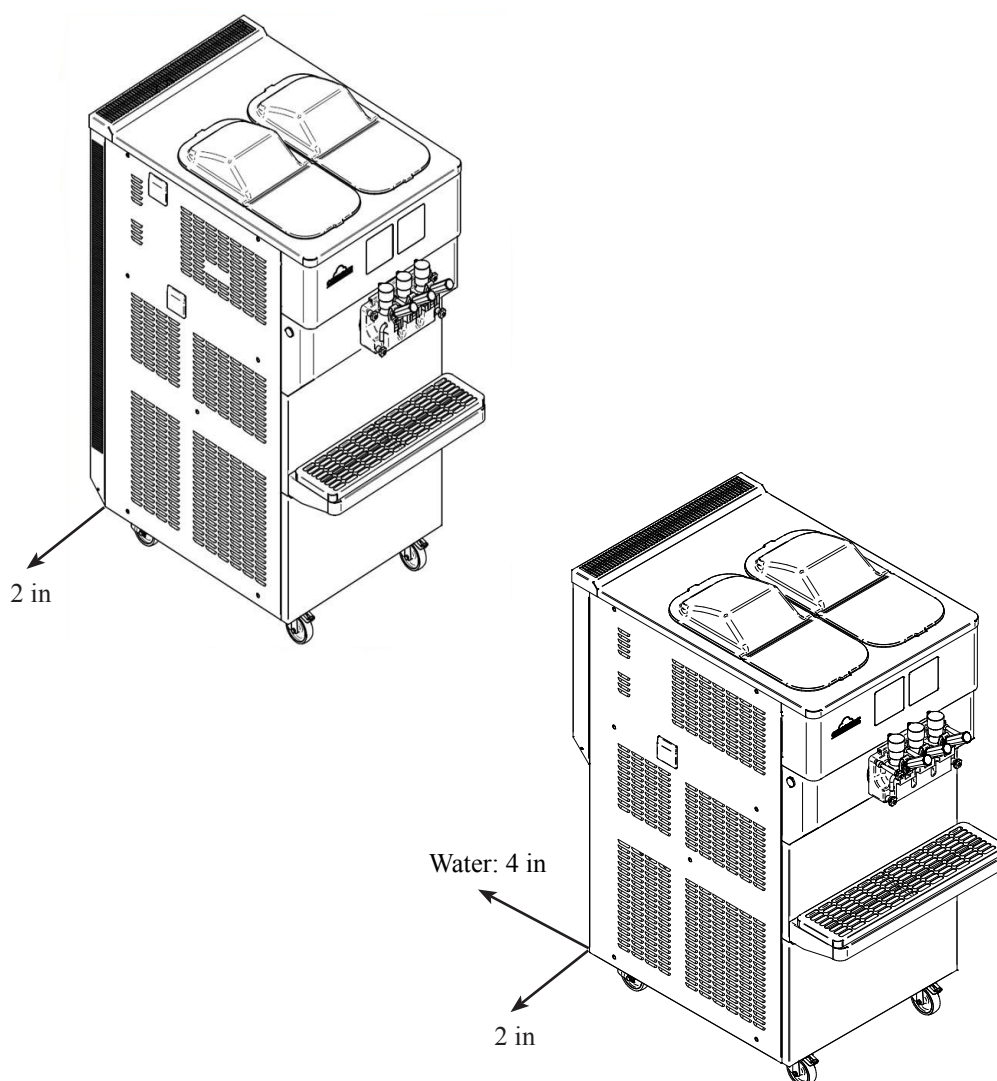
The machine must be positioned on a smooth, level floor (max. tilt: 2°).  
The machine must be installed in such a way that air can freely circulate all around.  
Enough room must be left free around the machine, in order to enable the operator to act without constraint and also to immediately leave working area, if necessary. There must be a lateral space of nearly 26 in to remove the drip drawers.

#### WARNING

**MACHINES WITH AIR-COOLED CONDENSER must be installed with at least 2 inches of clearance on both sides of the machine**

#### NOTE

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



### 2.2 MACHINES WITH AIR-COOLED CONDENSER

Machines with air-cooled condenser must have adequate spacing on both sides of the machine. You should have a minimum of 2 inches of clearance on both sides of the machine. This will ensure an adequate airflow is maintained.

#### NOTE

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





## 2.3 MACHINES WITH WATER-COOLED 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 - 72 psi). The connection pipes are provided by the installer and must comply with IEC61770. Used pipes cannot be reused. Machines fitted with a water-cooled condenser need to be connected to running water supply or to a cooling tower. Water must have a pressure ranging between 0.1 MPa and 0.5 MPa (1-5 bar 14-72 PSI), and a flow rate 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.

### ATTENTION

**The equipment is to be installed with adequate backflow protection to comply with applicable federal, state, and local codes.**

### 2.3.1 Water valve adjustment

#### WARNING

If water valve needs to 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 68°F (20°C).*

#### WARNING:

**Do not leave the machine in a room with temperature below 32°F (0°C) without draining water from the condenser.**

## 2.4 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.

Check that the trip level of the differential circuit breaker is  $\leq 30\text{mA}$ .

If the machine is supplied with power cable than, for three phase machine with neutral, the blue conductor of the power supply cable must be connected to the system neutral.

#### WARNING

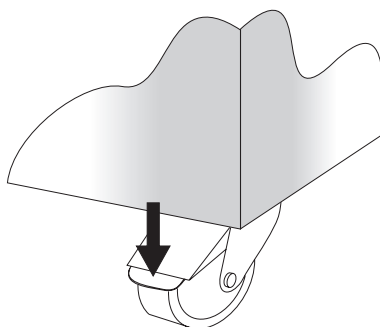
**If the machine is fitted with an electric supply cable including a yellow/green cable, it MUST be connected to an appropriate grounding of the electric system.**

### 2.4.1 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.

## 2.5 POSITIONING THE MACHINE

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 on a smooth, level floor.



## 2.6 TOP-UPS

The motor on the machine features life lubrication; therefore, it is not necessary to replace or top up its lubricant. The amount of gas necessary to the freezing system is filled by **CARPIGIANI** during post-production testing of the machine. A new machine should not require any top-ups or replacement. If gas top-up or replacement is necessary, the operation must be carried out exclusively by qualified technical personnel able to establish the cause leading to such need.



## 2.7 MACHINE TESTING

The machine is tested after production at **CARPIGIANI**'s premises; the requested operational and production functions are inspected and verified. Machine test at the end user's premises must be carried out by authorized technical personnel or by a **CARPIGIANI** engineer. Once the machine has been positioned and connected to its supply lines, it is possible to carry out the operations required for machine functional check and operating test.





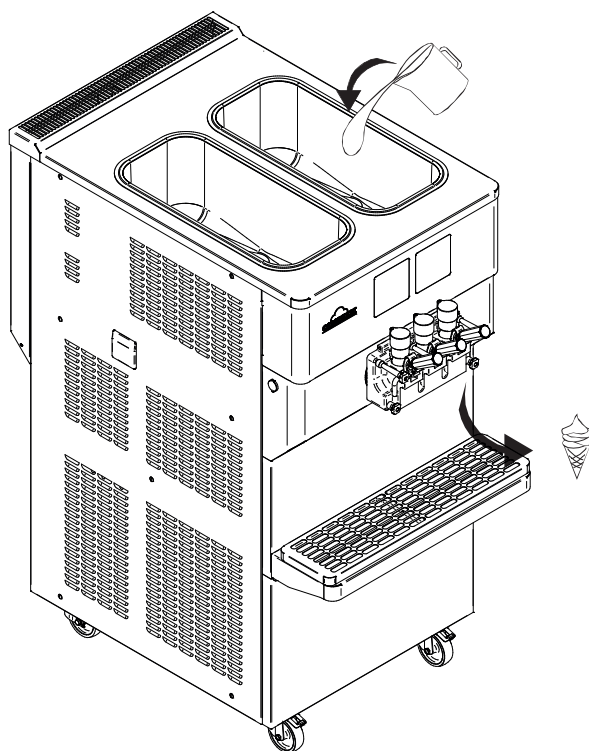


### 3. INSTRUCTIONS FOR USE

#### 3.1 MACHINE CONFIGURATION

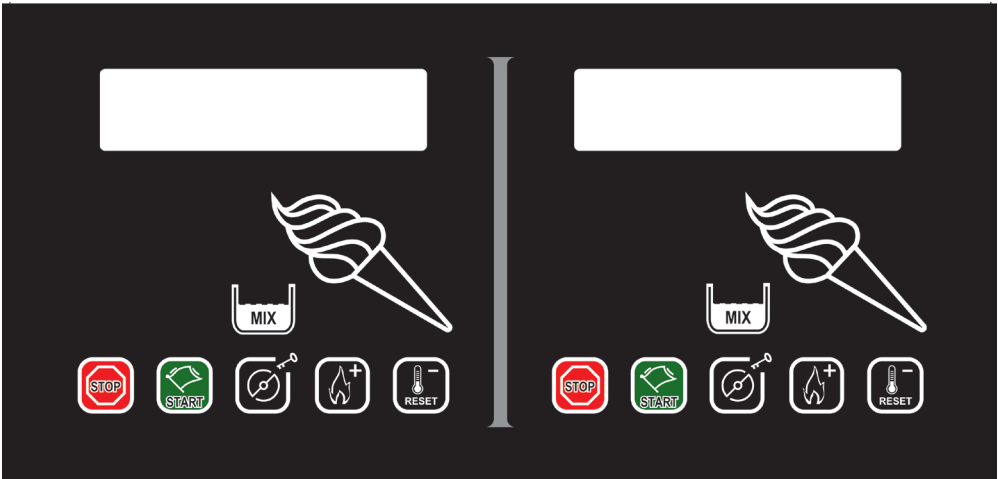
The machine consists of a motor to drive the beater, and a water or air cooling system with condenser.

**Soft ice cream is prepared by filling the hopper with cold mix (39°F) and starting the automatic production cycle, until the ideal ice cream consistency set by CARPIGANI is reached.** Thanks to the pump, the mix enters the freezing cylinder already mixed with air; ice cream is produced only when it needs to be served. The spigot handle allows a single portion of soft ice cream to be distributed. At the same time, the same amount of mix moves from the top hopper into the freezing cylinder.



3.2 ELECTRONIC CONTROL KEYBOARD AND BUTTON FUNCTIONS

Details of the panel are shown in the picture below.



The machine has 2 freezing cylinders. We consider side 1 as left side and side 2 as right side.

Display

On turning the machine on and during its operation, a series of messages are displayed on the screen.

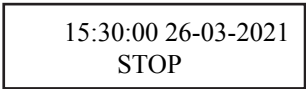
Led indicators

A led indicator lights up when the function corresponding to the symbol onto it is activated.



STOP key

In this function, your machine is off and relevant (backlit) led is on. From Stop position you can enter any machine function. To change function, IT IS always NECESSARY to first go back to STOP. On the display:



If you leave the machine in Stop when mix is above the level sensor, the message “Why in STOP ???” will be displayed after 30” so as to alert the user to set the machine to Production or Storage mode.



PRODUCTION (START) key

To run the machine in Production function, it is important to have the minimum mix level sensor in the hopper covered with mix.

If step 1000 Product Selection, (see programming table), is set to Dairy, press Start (Production) key to display:



The display is showing the kind of ice cream selected:

Dairy (Crema) = On side 1 (left) Dairy soft ice cream is produced.

Dairy (Crema) = On side 2 (right) Dairy soft ice cream is produced.

The machine will start running after few seconds



When the Production cycle starts the display shows:

Do Not Serve!  
W-0015 T=39°F

The first row indicates if the ice cream is ready to be served (Sundae Ready!) or not (DO NOT SERVE!).

The second row indicates the number of days until next brush cleaning and the temperature in the hopper.

When the SET HoT is reached, the display shows:

Sundae Ready!  
39°F

During ice cream extraction, if the consistency drops below the programmed value, the display shows:

Do Not Serve!  
W-0015 T=39°F

Do Not Serve! the ice cream is not ready for extraction.

By pressing Production you pass to the various “windows” or screens hereafter described:

Hopper ↓ 57°F  
Cylinder ↓ 55°F

The first line (top) of this window shows the Hopper temperature:

↓ = on, when cooling the hopper 57°F=temperature in the hopper (TEV)

The second line shows the temperature of the two Cylinders:

↓ = on, when cooling cylinder 1 55°F=temperature in cylinder (TEC)

SET =100 HoT = 085  
MIR= 0 mA =7500

The display indicates on the first row:

SET=100: SET HoT HoT=85: actual reading of the ice cream consistency.

On the second row:

MIR=0 not activated

mA=7500: current drawn by the motor, units mA

TEV 50°F TGV -7°F  
TEC 55°F TE -7°F

The display indicates the temperatures (without showing the units °C or °F).

TEV = Hopper temperature sensor

TEC = Cylinder temperature sensor

TGV = Hopper evaporator temperature sensor

TE1 = Cylinder evaporator temperature sensor

TOC 134°F TIMC 71°F  
TAMB 73°F TOMC 71°F

The display indicates the temperatures (without showing the units °C or °F).

TOC = Condenser output temperature sensor

TIMC = Compressor input temperature sensor

TAMB = Ambient temperature sensor

TOMC = Compressor output temperature sensor



Cone Today  
1

This window shows the Cones of the day (starting 0:00 to 23.59):

1 = number of cones dispensed in the day (sum between the side cones and half the central cones)

Total Cones  
26

This window shows the no. of total Cones:

26 = number of total cones dispensed (sum between the side cones and half the central cones)

Press Production again to return to the initial display.



### FRUIT key

If step 1000 Product Selection (see programming table) is set to Fruit, by pressing Start (Production) key the display shows:

Fruit

Fruit

The machine will start running Fruit cycle after few seconds

Fruit cooling cycle is similar to the standard production, but the target of the HoT becomes SET HoT Fruit (see the program table).



### YOGURT key

If step 1000 Product Selection (see programming table) is set to Yogurt, by pressing Start (Production) key the display shows:

Yogurt

Yogurt

Leaving the word 'YOGURT' on the display, the Yogurt cycle will be activated.

The cycle is similar to standard Production but the product is cooled down to the HoT programmed at HoT Yogurt step (see programming table).



### NO MIX

When there is no mix (medium level) the first line of the display shows "Add Mix"

flashing and the hopper level LED on the keyboard flashes

When the mix falls below the medium level, an intermittent sound will also be activated (except in STOP).

Add Mix

When there is no mix (low level) the first line of the display shows Mix Esaurita - Mix

Out steady-on and the hopper low level LED on the keyboard comes on

The second line indicates the number of cones that can be drawn (Cones) before the machine goes automatically into Storage mode.

Mix Out  
Cones: 5

### Note:

With the messages Add Mix and Mix Out on the display, the subsequent Production screens cannot be accessed.

When there are no more cones, the display shows e.g.: :

No More Cones





### DRY FILLING (DF) button (optional)

Dry Filling (DF) can be carried out:

- from Production with mix below low or medium level
- from Stop by switching to Production with mix below low level

#### Production with mix below medium level and low level covered

The display shows:

Add Mix

An intermittent acoustic signal is activated.

Press and hold the DF button for a few seconds.

The increase and decrease keys will turn on, the Production LED will start flashing and the display will show:

Liters 00.00

The quantity can be modified by pressing the Increase and Decrease keys in steps of 0.05 liters, within 5" after the DF key is pressed.

If no key is pressed for 10", quantity selection phase will be quit and the display goes back to the previous screen.

Press the DF button within 10 seconds to start delivering water in the hopper; the display will show the decreasing value:

Dry Filling  
Liters 01.55

First mixing phase:

Fast beating in the hopper is enabled for a set time. The display will show the decreasing timer on the second line:

Dry Filling  
Wait 2:59

A second mixing phase is performed in specific machines:

At the end, Production is enabled again.

Fast beating in the hopper will remain active for a set time.

The display will go back to standard Production display.

At the end, the fast beating in the hopper is deactivated and the DF is considered as completed. The machine goes back to standard Production.

#### Production with mix below low level

The display shows:

Mix Out  
Last Cones: 10

An intermittent acoustic signal is activated.

Press and hold the DF button for a few seconds.

The display shows:

Dry Filling  
Needed

Press the DF button again and the increase and decrease keys will turn on,



the Production LED will start flashing and the display will show:

Liters 00.00

The quantity can be modified by pressing the Increase and Decrease keys in steps of 0.05 liters, within 5" after the DF key is pressed.

If no key is pressed for 10", quantity selection phase will be quit and the display goes back to the previous screen.

The Dry Filling steps are the same described above, but with the following differences:

- Production is never enabled and at the end of the DF procedure the machine will automatically switch to Stop
- The quantity can be modified in steps of 0.10 liters.
- During the second mixing phase (phase 4) Production is not enabled and the display will show:

Dry Filling  
Mix 7:59

At the end of total timer, beating will be disabled and the machine will switch to Stop. During this phase if the medium level is not covered an intermittent acoustic signal is activated.

### Dry Filling Pause

Starting from Dry Filling phase 3 it is possible to block all outlets by pressing the Stop key. In this way a Pause phase will be activated.

Now an intermittent acoustic signal is activated and the display reads:

STOP (STOP)  
CONTINUA?(START)

By pressing Stop the machine will Stop and the DF procedure will be canceled.

Upon next DF, liters and timer will resume from previous settings.

By pressing Start (Production) the machine will resume exactly from where it stopped (liters counting and timer will start again from where they stopped).



### WATER DELIVERY button (for DF versions only - optional)

By pressing the Water Delivery key for 3" from Stop, the display shows:

15:33:56 14-06-2023  
Water Timer 60

Water delivery in the hopper is activated for the whole set time (60").

**STORAGE key**

By pressing the Storage key, the product is conveyed into the hoppers and into the cylinders at a temperature of 39°F.

Once the Storage mode is accessed, the display becomes:

Hopper	↓	59°F
Cylind.	↓	54°F

The first line (top) of this window shows the temperature in the Hopper (TEV) and the second line the temperature of the Cylinder (TEC).

↓: The arrow indicates what is actually cooled.

Press Storage to switch to the different screens described below:

TEV 150°F	TGV 158°F
TEC 152°F	TE 154°F

In this window the display shows the different probe temperatures.

TOC 137°F	TIMC 71°F
TAMB 71°F	TOMC 71°F

This window shows the probe temperatures:

TOC = Condenser Output Temperature Probe  
 TIMC = Compressor Inlet Temperature Probe  
 TAMB = Ambient Temperature Probe  
 TOMC = Condenser Output Temperature Probe

Press Storage to go back to the initial page.

**CLEANING key**

Press "Cleaning" button once, it will activates for 30" and the following is displayed:

HoT=058	TEC 57°F
Beater +Pump ON	

Both beater and pumps are activated for 30 seconds or until STOP is pressed.

Press Cleaning a second time and the following is displayed:

HoT=058	TEC 57°F
Pump ON	

Only pumps remain active, whereas the beater is disabled.

Press Cleaning a third time and the following is displayed

HoT=058	TEC 57°F
Beater ON	

The beater is activated and the pumps are disabled.

Press Cleaning a fourth time and the following is displayed:

HoT=058	TEC 57°F
Beater +Heating	

The beater remains active and the cylinder heating is enabled until reaching the set temperature.


Pressing Cleaning returns to the initial display (Cleaning).

This machine has an automatic system commanding the wash of parts in contact with food products. This system, called "WASH", inhibits the production at the end of the set days. The maximum duration of which does not exceed 42 days.

**KEYBOARD LOCK Function**

In order to clean the keyboard with a clean cloth, it is recommended to lock the keys on the board as follows:



Press the key  for 3 seconds, the check lamp will blink to indicate that the keyboard is now locked. You can clean it, now, with no risks. To unlock, press again for 3 seconds and the check lamp will switch off.

**PASTEURIZATION key**

This process cannot be started if the mix in the hopper is below the medium level.

Factory default setting is every day at 2.00.


The machine is normally in Production mode; when the Pasteurization time is reached, the machine automatically passes from Production or Storage to Pasteurization to carry out the cycle.

If the number of days to next washing has expired, Automatic Pasteurization is disabled and will indicate wash today.

Notes:

In case of Triple Spigot Door, if one side of the machine cannot activate pasteurization, the other side will set to storage.

To activate Manual Pasteurization on a Triple Spigot Door machine, make sure that medium level gages of both hoppers are covered, set side 2 to

Storage or Production mode and then press  (side 1), and hold it for 5 sec. Pasteurization will be activated on both sides.

On the other hand, in case of Double-Spigot machine, the left and right sides are separated and Pasteurization can be activated from both sides independently.

After Pasteurization has been running for five seconds the procedure must run completely.

If Pasteurization is not completed successfully, the machine will NOT be able to enter Production mode until a Pasteurization cycle has been completed.

The product, both in the hopper and in the cylinder, is heated to 66° C (150°F) (programmable value), it remains at this temperature for 30 minutes, and then it is cooled until reaching the storage temperature (programmable value).

When the procedure is finished the display shows “- Pasto End -” along with the day and time of completion, thus confirming that Pasteurization has been carried out successfully.

Access to Production is inhibited until Pasteurization is completed (until display shows Pasto End).

**NOTE:**

*Once it has started, the pasteurization cycle cannot be stopped. The complete cycle takes about 2 hours. During the heat treatment and Pause, the mix inside the machine is very hot, so neither try to take it out, nor to disassemble the machine.*

**WARNING**

**Do not serve ice cream, nor disassemble the machine during the heat treatment because the product is very hot and under pressure.**

**WARNING**

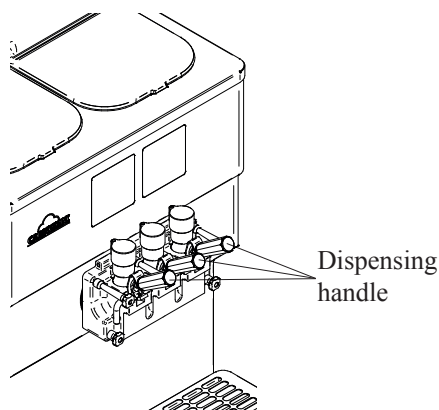
**The user will be held fully liable for manual pasteurization, in accordance with the local standards in force regarding non pasteurized mix treatment, moreover it is operator responsibility to define a washing frequency of machine in accordance with local laws, to ensure the quality and security of production**





### 3.3 SPIGOT HANDLE

In order to dispense the product, place a cup or a cone under the spout and slowly pull down the dispensing handle. As soon as the product comes out, twist the cup or the cone to form a cone-shaped serving. When the portion has reached the desired size, close the dispensing handle and quickly pull the cone or the cup down in order to sharpen the tip.

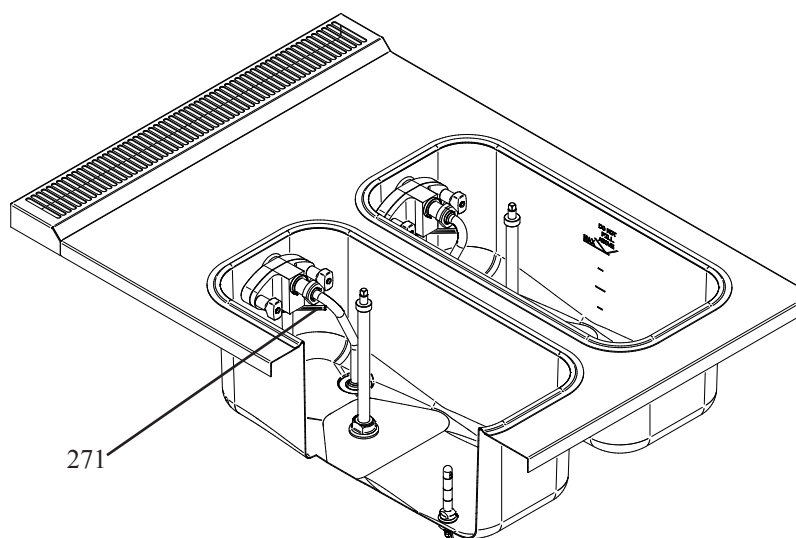


### 3.4 PUMP FEED MACHINE - “R” PUMP

“R” pump allows, by changing position of regulator pos. 271, to vary proportions between air and mix conveyed to the freezing cylinder; so, within certain limits, it allows overrun adjustment depending on the mix used.

“R” pump regulator should be set to the middle position (normally).

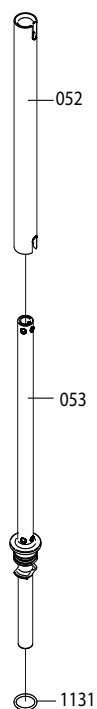
If, after dispensing a significant number of cones, ice cream is too heavy and wet, you may move R pump regulator a notch at a time towards the right. If ice cream comes out of spigot mixed with air bubbles or popping, then turn R pump regulator a notch at a time towards the left.



### 3.5 GRAVITY-FED MACHINE - feeding needle

How to obtain and how to keep top quality performance in time.

1. Maintain a high mix level inside the hopper (more than half of the hopper). During production and storage, mix temperature inside the hopper is 39°F.
2. A fluid mix without particles must be used. A thick mix with big particles could close the hole of the feeding needle thus blocking mix from entering the cylinder.
3. Keep the feeding needle slider (pos. 52) in a position as to allow for a smooth mix flow from the hopper. By rotating the slider slot to the hole with smaller diameter, the quantity of mix to the cylinder will decrease, and vice versa.
4. Set the feeding needle in such a way that inlet hole is turned towards the middle of the hopper.
5. Never exceed production limits declared by Carpigiani in par 1.2.3, and dispense cones and cups in the most regular way. If limits in production capacity as specified by Carpigiani are exceeded the machine could stop. If this occurs, reset the machine as follows.
  - stop the machine (STOP position)
  - remove the feeding needle to enable the mix to quickly drop into the cylinder
  - set machine in the "cleaning" position (beater + heating) for a few minutes
  - make sure that the product coming out from the spigot body is liquid
  - reposition the feeding needle making sure the slider is sufficiently open
  - restart the machine setting it in "PRODUCTION" mode. Do not start dispensing product until the production cycle is completed (ready or serve).



### 3.6 PRELIMINARY OPERATIONS, WASHING AND SANITIZING

Before starting the machine for the first time, it is necessary to thoroughly clean its parts and sanitize all parts coming into contact with the mix. See section 5.



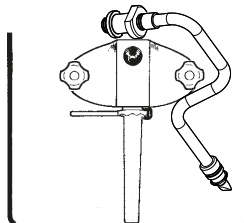
## 3.7 MACHINE START-UP

After installing the machine according to the instructions given in the chapter **INSTALLATION**, and after carefully cleaning and sanitizing the machine, proceed as follows:



### 3.7.1 Pump-fed machines

Remove the hopper cover and place it on a sanitized cloth. Remove the pressure pipe from the bottom of the hopper and place it on the pump body.

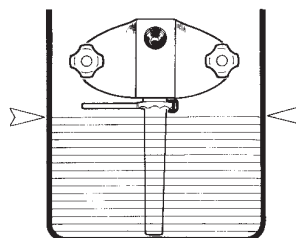


#### Prime Hopper:

- Take one bag of mix from the refrigerator.  
**Note: Mix to be poured at a temperature of 39-41°F.**
- With the dispensing lever open, pour mix into the hopper allowing it to drain into the cylinder.
- When a small amount of full strength mix (not mix and sanitizing solution) is flowing from the spigot door, close the spigot door lever.

#### Connecting the pressure pipe:

- Keep pouring the mix until the cylinder has been filled (bubbles shall be visible in the hopper while filling); with clean and sanitized hands, take the pressure pipe and insert it in the bottom of the hopper.
- Turn pressure pipe clockwise towards pump, and connect it to pump; turn connecting pipe to lock it in place. Mix inside hopper shall never reach the pump (see the picture);
- Place hopper cover back.
- Select production function.



#### WARNING

**Once the mix is poured in the hopper, the suitable lid must be used so as to keep it at the correct temperature and to minimize the risk of contamination**



### 3.7.2 Gravity-fed machines

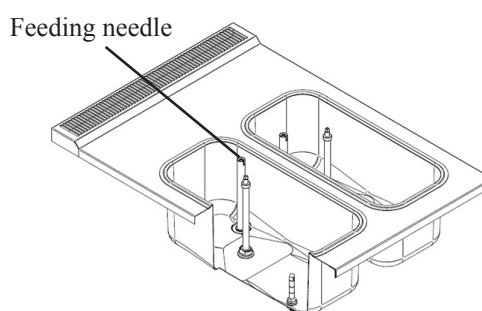
Remove the hopper cover and place it on a sanitized cloth. Remove the feeding needle from the hopper bottom and place it on a sanitized cloth.

#### Prime Hopper:

- Take one bag of mix from the refrigerator.  
**Note: Mix to be poured at a temperature of 39-41°F.**
- Lower the dispensing lever and start pouring mix in the hopper to allow it to drain also into the cylinder.
- When a small amount of full strength mix (not sanitizer) is flowing from the spigot door, move the lever to its original position and close the spigot door lever.

#### Connect the feeding needle:

- Keep pouring the mix until the cylinder has been filled (bubbles shall be visible in the hopper while filling); with clean and sanitized hands, remove the feeding needle from the sanitized cloth and insert it in the hopper bottom. The level of mix in the hopper must never exceed the height of the feeding needle (see figure);
- Place hopper cover back
- Select production function





### 3.8 OPEN PROCEDURE

Once the heat-treatment cycle has been completed, if no malfunction has occurred, the message “Pasto end” appears on the display. This indicates that the heat-treatment process has been correctly completed without interruptions.  
Press “STOP” button.

#### WARNING

**If the heat-treatment cycle was not correctly completed, an alarm code will be displayed on the screen. THE MIX HAS NOT BEEN correctly PASTEURIZED.**

**Call for service if necessary. After the alarm problem has been corrected, set the machine to PRODUCTION by pushing SELECTION button to restart heat cycle.**

#### 3.8.1 Sanitize the door area

- Prepare a water and cleaning/sanitizing solution following the instructions shown on the label of the product being utilized. Use the sanitizing product following the instructions of the manufacturer, the type and concentration of sanitizing agent shall comply with 40 CFR §180.940 (for example Kay-5 sanitizer).
- Soak a brush in the sanitizing solution and brush ice cream outfeed hole and the whole area around the spigot door several times.
- Spray the sanitizing solution on the ice cream outfeed hole and the whole area around the spigot door.
- Wash, rinse and sanitize drip tray, drip drawer and hopper cover.
- Wipe the exterior of the machine and the hopper area with a clean sanitized towel.

#### 3.8.2 Start the machine

Press the PRODUCTION button. The led light is on. Within a few minutes the product is ready to be served

### 3.9 CLOSE PROCEDURE

#### 3.9.1 Sanitize the door area

- Prepare a water and cleaning/sanitizing solution following the instructions shown on the label of the product being utilized. Use the sanitizing product following the instructions of the manufacturer, the type and concentration of sanitizing agent shall comply with 40 CFR §180.940 (for example Kay-5 sanitizer).
- For machines with unscrewable nozzles, using the suitable supplied tool, unscrew the spigot door nozzles unit, remove them from the spigot door and pull the O-Rings out.
- Soak a brush in the sanitizing solution and brush ice cream outfeed hole and the whole area around the spigot door several times.
- If present, reassemble the nozzles on the door.
- Spray the sanitizing solution on the ice cream outfeed hole and the whole area around the spigot door.
- Wash, rinse and sanitize drip tray, drip drawer and hopper cover.
- Wipe the exterior of the machine and the hopper area with a clean sanitized towel.

#### 3.9.2 Prepare the machine for the overnight heat treatment cycle

- Verify the mix level; refill mix as required. The level LED on the control panel must be OFF. DO NOT FILL ABOVE THE THE FEEDING NEEDLE HEIGHT.
- Make sure that the machine remains in “PRODUCTION” or “STORAGE” mode LED is ON.



### 3.10 USER PROGRAMMING

To access the User Programming with the machine in Stop mode, press Stop and Reset and keep them pressed until the display shows "User Menu".

Then, the display shows some sub-menus that can be selected with the Increase/Decrease buttons:

- Date
- Hour
- Alarms
- Events
- Information
- Language
- Autsetup
- Pasteurization list
- Auto Production
- Auto Storage
- Auto Pasto
- Auto Hot/Cold
- User Parameters

To access a sub-menu, press Production (Start).

If a sub-menu contains editable values, the Increase and Decrease button LEDs will turn on and the value can be modified by pressing such buttons.

To select different values, press Production (Start) in the sub-menu.

The exit is automatic without pressing any button after 60" or by pressing the Stop button which also has the function of returning to the previous menu. The Stop key also returns to the previous menu (back function) when navigating in sub-menus.





#### User Programming Map

1. Date: Date setting.
2. Hour: Hour setting.
3. Alarms: Display of active alarms.
4. Events: Display of events.
5. Information: Display of machine information.
6. Language: Language setting.
7. Autsetup: Factory default setting;
8. Pasteurization list;
9. Auto Production: Setting of automatic production time.
10. Auto Storage: Setting of automatic storage time.
11. Auto Pasto: Setting of automatic pasteurization time.
12. Auto Hot/Cold: Setting of automatic Hot/Cold time.
13. User Parameters: User parameters setting.

When the user menus are accessed again, the last selected sub-menu will be displayed again.







<b>Date</b>	
By pressing Production (Start) the display will show an arrow on the month	Date →06 Mar 2020
That can be changed using the Increase and Decrease buttons. Press Production (Start) to go to the next value.	  
While changing values, you can always press Stop to return to the previous menu.	

<b>Hour</b>	
The time modification procedure is like that for the date.	Hour →15:25:00

*Note: check date and time at regular intervals to prevent significant deviations over time.*

<b>Alarms</b>	
<p>List of triggered Alarms</p> <p>It is possible to scroll through the alarms by pressing the Increase and Decrease buttons.</p> <p>The first line shows the alarm number and the total number of alarms occurred at the same time.</p> <p>Stop goes back to the user menu and deletes the reset alarms.</p> <p>If there are no alarms, the display shows "No Alarms Active"</p>	Spigot Door Open Alarm 1 of 2

<b>Events</b>	
Upon access, the event number (last recorded) is displayed.	Log. id 51
Then the page switches to the related event	20-01-2021 18:37:43 Spigot open
Press the Increase and Decrease keys to scroll through all numbered events (Log) and release them to open the related event.	 

<b>Information (Pasto Activated)</b>	
The display will show the control unit sw version and	UF920 3Ph 50Hz P CB1 V 03.04.15
Press Increase to display the sw version of the Keyboard Adapter (ADP) interface board.	CARPIGIANI ADP2 V 03.02.03
Press Increase to display the time to the next Pasto (Time Next Pasto)	Time Next Pasto 00:00:00
Press Increase to display the time to the next washing (Time Next Wash)	Time Next Wash 13d 23:48:05
By pressing Increase, only if step 8990=1, the Webgate signal power read at that time (0 to 31)	Webgate Sig. Pwr. 00/31

<b>Information (H/C Activated and Pasto Deactivated)</b>	
The display will show the control unit sw version.	UF920 3Ph 50Hz P CB1 V 03.04.15
Press Increase to display the sw version of the Keyboard Adapter (ADP2) interface board.	CARPIGIANI ADP2 V 03.02.03
Press Increase to display the time to the next H/C (Time Next H/C)	Time Next H/C 16:05:00
Press Increase to display the time to the next washing (Time Next Wash)	Time Next Wash 13d 23:48:05
By pressing Increase, only if step 8990=1, the Webgate signal power read at that time (0 to 31)	Webgate Sig. Pwr. 00/31

**WARNING:**

**The Hot/Cold cycle does not replace Pasteurization. For Dairy products (milk-based) it is always necessary to carry out a daily Pasteurization cycle.**

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

**If pasteurization is disabled to enable Hot/Cold cycle and vice versa, a complete washing cycle must always be performed as described in paragraph 5.**

<b>Language</b>	
Language selection (English / Italiano) with Increase/Decrease buttons.	Language English

<b>Autosetup</b>	
The operation sets all user programming values to the default values. Press Start to confirm, press Stop to cancel the operation.	Reset User Param? START:YES STOP:NO

<b>Pasteurization list</b>	
List of successfully completed Pasteurizations. If there are none stored, the display shows "No Pasto Saved"	No Pasto Saved
Otherwise, pressing Production (Start) displays: Date Pasto Start Time (S:Start) and End Time (E:End) of the last Pasteurization. The others can be selected with Increase and Decrease.	20-01-2021 S 19:05 E 21:30
Then press Production (Start) to display the duration of the Heating with the Heating start TEV. Use the Increase and Decrease keys to switch to the different Pasto phases.	Heating 00:35:23 39°F
Pause Pause duration and pause start TEV	Heating Pause 00:30:12 150°F
Cooling Cooling Duration and cooling start TEV	Cooling 00:45:56 150°F
Pasto End Total Pasto time and cooling end TEV.	Pasto End 01:51:31 39°F

<b>Auto Production</b>	
Automatic Production mode setting. Navigation/editing is as already described: Increase and Decrease and Production (Start). By setting YES, the function is activated. Pressing Increase enters the time.	Automode Production No
The value indicated by the arrow can be changed with the Increase/Decrease keys.	Auto Production Time 08: →00

<b>Auto Storage</b>	
Automatic Storage mode setting. Navigation/editing is as already described: Increase and Decrease and Production (Start). By setting YES, the function is activated. Pressing Increase enters the time.	Automode Storage No
The value indicated by the arrow can be changed with the Increase/Decrease keys.	Auto Storage Time →00: 00



<b>Auto Pasto</b>	
Automatic Pasteurization mode setting. Navigation/editing is as already described: Increase and Decrease and Production (Start). By setting YES, the function is activated. Pressing Increase enters the time.	Automode Pasto No
The value indicated by the arrow can be changed with the Increase/Decrease keys.	Auto Pasto Time →02: 00

<b>Auto Hot/Cold</b>	
Automatic Hot/Cold mode setting. Navigation/editing is as already described: Increase and Decrease and Production (Start). By setting YES, the function is activated. Pressing Increase accesses the time and selection of interval in days of when to run the cycle. Note: If the Pasteurization is active, it takes precedence over the Hot/Cold cycle, so if the latter is also active it will be ignored.	Automode Hot/Cold No
Automatic Hot/Cold time setting The value indicated by the arrow can be changed with the Increase/Decrease keys.	Auto Hot/Cold Time →02: 00
Setting of the required Hot/Cold cycle frequency in days (1 to 3) The value indicated by the arrow can be changed with the Increase/Decrease keys.	Start Hot/Cold Days →1

**WARNING:**

**The Hot/Cold cycle does not replace Pasteurization. For Dairy products (milk-based) it is always necessary to carry out a daily Pasteurization cycle.**

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

**If pasteurization is disabled to enable Hot/Cold cycle and vice versa, a complete washing cycle must always be performed as described in paragraph 5.**

Parameters						
User Programming						
Step	Eng	Ita	U.M.	Min	Max	Default
1000	Product Selection	Selezione Prodotto		Dairy	Yogurt	Dairy
1010	Set HoT	Set HoT		10	120	100
1030	Set HoT Fruit	Set HoT Frutta		10	120	65
1050	Set HoT Yogurt	Set HoT Yogurt		10	120	70
1180	H/C Cylinder	H/C Cilindro	*C	50	75	65
1520	H/C Hopper	H/C Vasca	*C	50	75	65
3106	Timeout H/C Pause	Timeout Pausa H/C	min	0	60	30
3124	Mode MV	Modalita MV		Silent	Max Prod.	Max Prod.
9002	Time Format	Formato Ora		24h	AM/PM	24h
9003	Date Format	Formato Data		GMA	MDY	MDY
9020	Temperature Format	Formato Temperatura	°C/°F	°C	°F	°C
9032	Level Beep Enable	Abilita Beep Liv.	Y/N	yes	no	yes



Step	Description
1000	Product Selection Product selection among Dairy, Fruit or Yogurt
1010	Set HoT It represents the ice cream consistency value to be reached referred to the product set in Dairy. Increasing this number will increase product consistency and decrease temperature.
1030	Set HoT Fruit It represents the ice cream consistency value to be reached referred to the product set in Fruit. Increasing this number will increase product consistency.
1050	Set HoT Yogurt It represents the ice cream consistency value to be reached referred to the product set in Yogurt. Increasing this number will increase product consistency.
1180	H/C Cylinder Cylinder temperature set in Hot/Cold
1520	H/C Vasca (H/C Hopper) Hopper temperature set in Hot/Cold
3106	Timeout H/C Pause Pause time set in Hot/Cold
3124	Modalita MV (MV Mode) It can be set to: - Silent - Max Prod.
9002	Time Format Can be set in 24h or AM/PM
9003	Date Format Can be set in DMY or YMD or MDY
9020	Temperature Format Can be set in °C/°F
9032	Level Beep Enable If set to YES, the machine will beep intermittently when the mix is below medium level, except in Stop mode, when it will stay OFF even if the function is enabled.



## 4. SAFETY DEVICES

### 4.1 ALARMS

The machine is provided with a self-CHECK device to indicate possible troubles.  
The display shows the type of Alarm occurred. An acoustic signal will also warn the operator.  
Press STORAGE/RESET in order to delete the alarm from display.

Use the table below for troubleshooting.

The machine can be used in Production mode also when a no-critical alarm has taken place; while if the alarm is a critical one, the machine will not allow you to enter production and it is necessary to press STOP and not to use the machine until repaired. Alarms are listed in the table below:



ALARM	DESCRIPTION
<b>Add Mix</b>	The display indicates Add Mix when the mix in the hopper is below the MEDIUM level. An intermittent beep is also activated. Corrective actions: add mix
<b>EVRV Alarm-No Pasto</b>	Pasteurization inhibited. the machine function remains activated, but it will not be possible to carry out pasteurization Corrective actions: Contact technical assistance
<b>Al. Ice Cylinder</b>	During Production, when ice is detected inside the cylinder the machine sets to Sundae Ready. Corrective actions: - poor cylinder supply. Check pump efficiency. - Check for excessive scraper wear. - Contact technical assistance
<b>Al.Heat.Exchange</b>	During Pasteurization, if the machine detects heat exchange problems, it stops heating and displays the relevant alarm. The machine will anyway remain in Heating mode. Corrective actions: - Check the driving belt or verify that the agitator is properly positioned. - Contact technical assistance
<b>Alarm Probe TAMB OC</b> <b>Alarm Probe TAMB SC</b>	TAMB probe faulty. The alarm is not critical and the machine allows all functions, but it is necessary to replace the probe as soon as possible The machine allows any function. Corrective actions: - Contact technical assistance (replace probe)
<b>Alarm Probe TE OC</b> <b>Alarm Probe TE SC</b>	Evaporator probe faulty. The alarm is not critical and the machine allows all functions. Corrective actions: - Contact technical assistance (replace probe)
<b>Alarm Probe TEC OC</b> <b>Alarm Probe TEC SC</b>	Cylinder probe faulty The machine allows Production and Cleaning functions (not Heated Cleaning). Corrective actions: - Contact technical assistance (replace probe)
<b>Alarm Probe TEV OC</b> <b>Alarm Probe TEV SC</b>	Hopper probe faulty The machine allows Cleaning and Heated Cleaning functions. Corrective actions: - Contact technical assistance (replace probe)
<b>Alarm Probe TGV OC</b> <b>Alarm Probe TGV SC</b>	Hopper evaporator probe faulty If Pasteurization is activated, it can be completed but does not allow a new Pasteurization. The other functions are allowed. Corrective actions: - Contact technical assistance (replace probe)
<b>Alarm Probe TIMC OC</b> <b>Alarm Probe TIMC SC</b>	TIMC probe faulty The machine allows any function. Corrective actions: - Contact technical assistance (replace probe)

<b>Alarm Probe TOC OC</b> <b>Alarm Probe TOC SC</b>	TOC probe faulty The machine allows any function. Corrective actions: - Contact technical assistance (replace probe)
<b>Alarm Probe TOMC OC</b> <b>Alarm Probe TOMC SC</b>	TOMC probe faulty The machine allows any function. Corrective actions: - Contact technical assistance (replace probe)
<b>TESC Alarm</b>	Cylinder safety thermostat tripped. The machine switches to Stop. Corrective actions: - Check that the cylinder is loaded and that TEC probe reading is correct - Contact technical assistance
<b>TESV Alarm</b>	Hopper safety thermostat tripped. The machine switches to Stop. Corrective actions: - Check the correct TEV probe reading - Contact technical assistance
<b>Autosetup Tech</b>	An Autosetup Tech was performed.
<b>Autosetup User</b>	An Autosetup User was performed. The message is saved only in the event log.
<b>Can-Bus Not Connect</b>	Can-Bus communication has been interrupted. Corrective actions: - Contact technical assistance
<b>Upload Parameters</b>	Event generated after loading parameters (programming table) from USB.
<b>Close Piston</b>	Corrective actions: close the relevant open lever
<b>No More Cones</b>	In Production mode, when there is no mix and the machine is in reserve (low level on), it is possible to dispense only the set number of cones. Once the set cones have been used up, the display will show the message "no more cones" and the machine automatically sets to Storage mode. Corrective actions: Fill hopper with mix
<b>Storage Failed</b>	The alarm is displayed in one of the following 2 conditions: - Power On with temperature > 41°F and time/temperature table check failed, with machine previously in Production, Storage, Stop (machine loaded) or Cleaning (machine loaded) or - Machine loaded that remains in Stop or Cleaning mode for a period of time that exceeds the ranges allowed by the time/temperature table. Access is allowed to the Storage and Pasteurization functions. The Production key is enabled, but forces Pasteurization.  The mix has been at an elevated temperature for too long. The machine only allows access to storage and pasteurization functions Corrective actions: solved by washing or pasteurizing.
<b>Inv. Beater Fault</b>	Err. Inv. Agit. Corrective actions: Contact technical assistance
<b>Inv. Compr. Fault</b>	Err. Inv. Compr. Corrective actions: Contact technical assistance
<b>Inv.Beat.Com.Error</b>	Err.Com.Inv.Agit. Corrective actions: Contact technical assistance
<b>Err. Com.Inv. Compr. (Inv.Compr.Com.Err.)</b>	The display indicates <b>Inv.Compr.Com.Err.</b> with a communication alarm from the Inverter.  Corrective actions: Check the MC inverter - control unit communication cable and any alarms on the inverter display.
<b>Error Can-Bus</b>	Errore Can-Bus Corrective actions: Contact technical assistance
<b>Pasto End</b>	Pasteurization end. Only informative message recorded in the event log. Press Reset to clear.
<b>Hot/Cold End</b>	Hot/Cold End. Only informative message recorded in the event log. Press Reset to clear.
<b>Beater Low HoT</b>	HoT Basso Agit. Corrective actions: Contact technical assistance

<b>Hot/Cold Stopped</b>	The user pressed stop during the Hot/Cold cycle. Corrective actions: restart the cycle
<b>Hot/Cold Failed</b>	The Hot/Cold cycle is interrupted due to an alarm that sets the machine into Stop or Storage mode. Corrective actions: check the cause from the events
<b>Input Pressostato (Press. Switch Input)</b>	Pressure switch tripped. (see pressure switch alarm) The <b>Press. Switch Input</b> alarm is stored in the events any time it is triggered, before the machine switches to Stop mode. Therefore, it can only be seen on downloaded events and on displayed events, but not during normal machine operation.  Corrective actions: check the flow of the cooling water or of the cooling fan in air-cooled machines.
<b>Can-Bus Disturbed</b>	Interference Can-Bus Corrective actions: Contact technical assistance. Press Reset to clear.
<b>Wash Today</b>	On the day the machine is to be washed the display shows "Wash Today". Once Production is stopped, this function can no longer be reactivated. Corrective actions: wash the machine
<b>TE Limit</b>	During Pasteurization, when a temperature threshold is exceeded, TE Limit is displayed The machine remains in the same function. Corrective actions: Contact technical assistance
<b>TGV Limit</b>	During Pasteurization, when a temperature threshold is exceeded, TGV Limit is displayed The alarm may be due to a hopper rotor failure The machine remains in the same function. Corrective actions: check hopper agitator operation. Contact technical assistance
<b>Missed Pasteur</b>	The alarm is displayed in one of the following 2 conditions: - Pasteurization is not carried out at the programmed time (machine with uncovered levels or machine in Stop) Or - The machine was off at automatic pasteurization time Corrective actions: Production block, solved by washing or pasteurizing.
<b>Missed Hot/Cold</b>	The Hot/Cold cycle is not carried out at the programmed time (machine with uncovered levels or machine in Stop) Or The machine was off at the automatic Hot/Cold time. Corrective actions: Block on Production, can be solved by washing or pasteurizing or running a Hot/cold cycle.
<b>Power Off</b>	Power Off. The event is logged in the event log from any function.
<b>Max Beater Absorb.</b>	In any function with MA active, the absorption is read by the control unit. When this absorption exceeds a certain maximum allowed threshold, the cylinder sets to Stop mode with the alarm Max Assorb. Agit. (Max Beater Absorb.). The alarm is generated due to beater excessive stress/load and the machine sets to STOP mode. The alarm resets on its own. Corrective actions: Check that the beater is not stuck. Contact technical assistance
<b>Corrupted Memory</b>	A memory writing error has been detected. Corrective actions: Contact technical assistance.
<b>Mix Out</b>	The display shows Mix Out when the mix is below the minimum (low) level. Corrective actions: Fill hopper with mix
<b>Do Not Serve!</b>	Under certain conditions the machine displays the message "Do not Serve!" when the product is not suitable for dispensing. In particular, the message may be displayed in the following cases: - Production (when the product has not reached the right consistency) - Pasteurization (the product is liquid and in some phases it is boiling hot)  Corrective actions: wait for the achievement of the correct consistency or the end of Pasteurization and subsequent achievement of correct consistency in Production mode. If the alarm persists contact technical assistance

<b>Pasteur Failed</b>	Pasteurization is interrupted due to an alarm that sets the machine into Stop or Storage mode. Corrective actions: Production block, solved by washing or pasteurizing. Access is allowed to the Storage and Pasteurization functions.
<b>Pasteur Stopped</b>	Pasteurization is interrupted voluntarily by the operator by pressing the Stop key. Corrective actions: Production block, solved by washing or pasteurizing. Access is allowed to the Storage and Pasteurization functions.
<b>Why In Stop?</b>	If the machine is left in Stop mode with mix above the minimum level, after 30 seconds the display shows the flashing message "Why In Stop?" and there is an intermittent warning sound. This warns the user to set the machine either to Production, Pasteurization, or Storage mode. Corrective actions: Set to Production or Storage
<b>Spigot Open</b>	Spigot is open. If opened, it resets the "Wash Today" message. Corrective actions: Replace dispensing head. If the alarm persists contact technical assistance
<b>Spigot Close</b>	Spigot Close is saved whenever the spigot door is closed. Signaling only in events.
<b>Pressure Switch</b>	Pressure switch tripped. The machine switches to Stop. Corrective actions: Check the flow of the cooling water or of the air-cooled machine cooling fan. If the alarm persists contact technical assistance, check for blockages.
<b>Past. Cooling &gt;120'</b>	Pasteurization cooling exceeded 120'. The alarm remains on the display until the user resets it. Corrective actions: Production block, solved by washing or pasteurizing. contact technical assistance.
<b>Reset MMV - optional -</b>	The hopper rotor motor switched to protection mode Corrective actions: check that the hopper rotor can rotate with no obstacles and that it is activated in the Production / Storage or Pasteurization functions. If the alarm persists contact technical assistance
<b>Past. Heat &gt;90'</b>	Pasteurization heating exceeded 90'. The alarm remains on the display until the user resets it. Corrective actions: check correct operation of the hopper rotor Production block, solved by washing or pasteurizing. contact technical assistance.
<b>Power On</b>	Power on after a blackout.
<b>High Cyl. Temp.</b>	In Production, Storage or Pasteurization mode, if cylinder temperature reaches 85°C (60°C in case of non-Self pasteurizing machine), the machine sets to Stop with alarm "High Cyl. Temp." Corrective actions: contact technical assistance
<b>High Hop. Temp.</b>	In Production, Storage or Pasteurization mode, if hopper temperature reaches 85°C (60°C in case of non-Self pasteurizing machine), the machine sets to Stop with alarm "High Hop. Temp." Corrective actions: contact technical assistance.
<b>Overload Compressor</b>	Compressor Motor Overload. The machine switches to Stop. Corrective actions: contact technical assistance
<b>Storage Timeout</b>	In storage, if during cooling the temperature does not reach the storage setpoint within 8 hours, the Storage Timeout alarm is triggered, stopping the machine with alarm displayed. Corrective actions: contact technical assistance
<b>Timeout Soft Node</b>	Timeout Nodo Soft Corrective actions: contact technical assistance.
<b>Timeout PRD</b>	The ice cream does not achieve programmed consistency. If the Timeout PRD alarm occurs 5 times, the machine switches to Storage mode. Corrective actions: Check the quantity of mix in the cylinder and the pump/feed tube correct operation. If the alarm persists contact technical assistance

<b>Last Pasteur &gt;25h</b>	<p>25 hours have passed since the start time of the last successful pasteurization.</p> <p>For Self Pasteurizing machine without Automatic Pasteurization function Access is allowed to any function.</p> <p>For Self Pasteurizing machine with Automatic Pasteurization function Access allowed to the Storage and Pasteurization functions. The Production key is enabled, but forces Pasteurization. The machine does NOT automatically switch from Storage to Pasteurization.</p> <p>Corrective actions: Production block, solved by washing or pasteurizing.</p>
<b>Webgate Err. Comm.</b>	<p>No communication between CB1 and MWG.</p> <p>If no communication occurs after 3 consecutive minutes, the machine displays the alarm Webgate Err. Comm.</p> <p>Corrective actions: contact technical assistance</p>
<b>Webgate Modbus Err.</b>	<p>Incorrect communication between CB1 and MWG.</p> <p>Incorrect wiring of the modbus wires (e.g. signals inverted) generates this alarm.</p> <p>Corrective actions: contact technical assistance</p>





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

### 5.1 GENERAL INFORMATION

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

Giving mix the time to dry out can greatly increase the risk of rings, marks and damage to surfaces. Removing mix 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 not recommended.



### 5.2 WASHING CONDITIONS

- **Avoid using solvents, alcohol or detergents that could damage the component parts, the machine or contaminate the functional production parts.**
- When manually washing never utilize 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 oxidation 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 oxidizing it irreparably and causing damage to the parts made from plastic materials.
- Do not use dishwashers and their detergent products.



### 5.3 TIPS

- Use a non-aggressive detergent solution to wash the parts.
- Manually wash the parts in water (max 140°F) using a non-aggressive detergent and the cleaning brushes supplied as standard.
- Use drinking water (bacteriologically pure) to rinse the parts.
- To sanitize leave the disassembled parts in sanitized tepid water for 10-15 minutes (use the sanitizing product following the instructions of the manufacturer; the type and concentration of sanitizing agent shall comply with 40 CFR §180.940 for example Kay-5 sanitizer) 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/sanitizing solution to wash the machine.**

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

#### **WARNING**

**Every time the machine is washed and the parts that come into contact with the ice cream mix are disassembled, it is essential to carry out a visual inspection of all the parts made in thermosetting, plastic, elastomer-based and silicon-based 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 replacement with original spare parts. The manufacturer is available for consultation and for any specific requests made by the customer.**





## 5.4 HOW TO USE CLEANING/SANITIZING SOLUTION

Prepare a solution of water and sanitizing detergent following the instructions shown on the label of the product being utilised. Use the sanitizing product following the instructions of the manufacturer, the type and concentration of sanitizing agent shall comply with 40 CFR §180.940 (for example Kay-5 sanitizer).

Washing/sanitizing by soaking

- Remove larger residues by hand
- Remove finer residues with water jets
- Soak the assembled parts to clean in the solution
- Use the supplied cleaning brushes to forcefully brush all components and the relevant holes.
- Allow the solution to work for the time indicated on the label of the product used
- Rinse the parts with care, using plenty of drinkable water

## 5.5 DAILY CLEANING

Refer to the opening procedures (par. 3.9) and closing procedures (par. 3.10).



### WARNING

**“Storage” mode is not used as a substitute for proper cleaning and sanitizing procedures at the frequencies required by Federal, state, and local regulatory agencies**

## 5.6 PROGRAMMED CLEANING TIME

This machine has an automatic system commanding the wash of parts in contact with food products. This system, called “WASH”, inhibits the production at the end of the set days. The maximum duration of which does not exceed 42 days.

In Production mode, the display indicates the number of days to machine next cleaning.



### WARNING

**Cleaning and sanitization must be carried out at the programmed date indicated on the display, as a habit and with utmost care, in order to guarantee quality of production and the compliance with health rules.**



### WARNING

**For not automatic machine (“not SP” or “SP” with starting hour of automatic pasteurizing settled on “OFF”), it is operator responsibility to define a washing frequency of machine in accordance with local laws, to ensure the quality and security of production.**

## 5.7 DRAINING AND CLEANING



1. Place an empty pail under the spout.
2. Press the STOP button.
3. Pull the spigot handles and completely drain the ice cream to empty the cylinders.
4. Select CLEANING function .
5. When the product coming out becomes liquid, push STOP button and leave the handles down.
6. Remove hopper cover. Remove the hopper beater leaving it inside the hopper.
7. Disconnect pressure pipe from pump by turning it by 45° and sliding it out from its seat inside hopper. Wait for the product to be completely drained from hopper. In case of gravity machines see paragraph 5.10.
8. Wait for the liquid mix to fully come out and bring the dispensing levers in closing position. Fill the hoppers with 10 liters of clean water. Clean the hopper walls and the level sensor with the supplied brushes. Clean the pump and the pressure pipe with a smaller brush.
9. Place an empty pail under spout. Open the spigot handles and let the water drain out.
10. Rinse with warm water until the solution runs clear.
11. Select CLEANING function and let the machine run for 10 seconds.
12. Press the STOP button, place a pail beneath the spigot, lower the spigot handles and drain all the water from the machine.

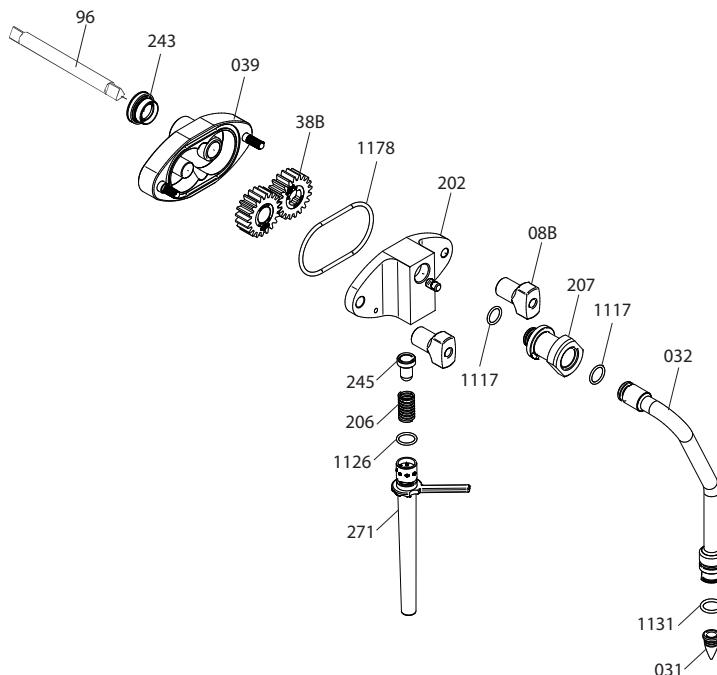
## 5.8 REMOVING THE MIX BEATER AND PUMP

1. Remove the pumps by turning them 45° clockwise and pulling them towards you.
2. Extract the hopper beaters from the hoppers.



## 5.9 PUMP-FED MACHINES - DISASSEMBLING PUMP AND COMPRESSION PIPE

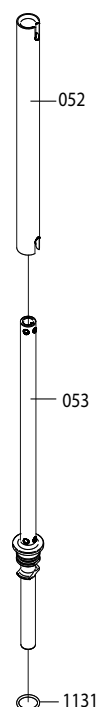
1. Take the connection pipes (pos. 207) out from the pumps and compression pipes pos. 32). Turn RH and LH compression pipes 45° anticlockwise and lift them while taking them out from their seats inside the hoppers. Remove O-rings (1117 and 1131).
2. Remove air regulators (pos. 271) by turning them anticlockwise and pulling downwards.
3. Remove spring (pos. 206) and valve (pos. 245). With the extractor provided, remove O-ring (pos. 1126).
4. Unscrew the two knobs (pos. 8B) in order to separate cover (pos. 202) and pump body (pos. 39).
5. Tapping the pump (pos. 039) body against the palm of your hand, remove the pump gears (pos. 38 B). Remove the o-ring from the pump body (pos. 039).



## 5.10 Gravity-fed machines - DISASSEMBLING FEEDING NEEDLE

To disassemble the feeding needle

- remove its slider (pos. 52)
- take the feeding needle out of the hopper
- remove OR from the needle (pos. 1131)





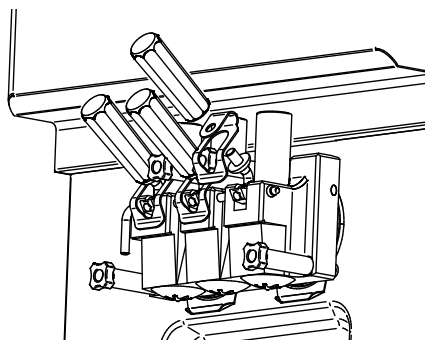
## 5.11 DISASSEMBLING FRONT LID

### CAUTION

Before disassembling the front lid, make sure that tanks and cylinders are completely drained.

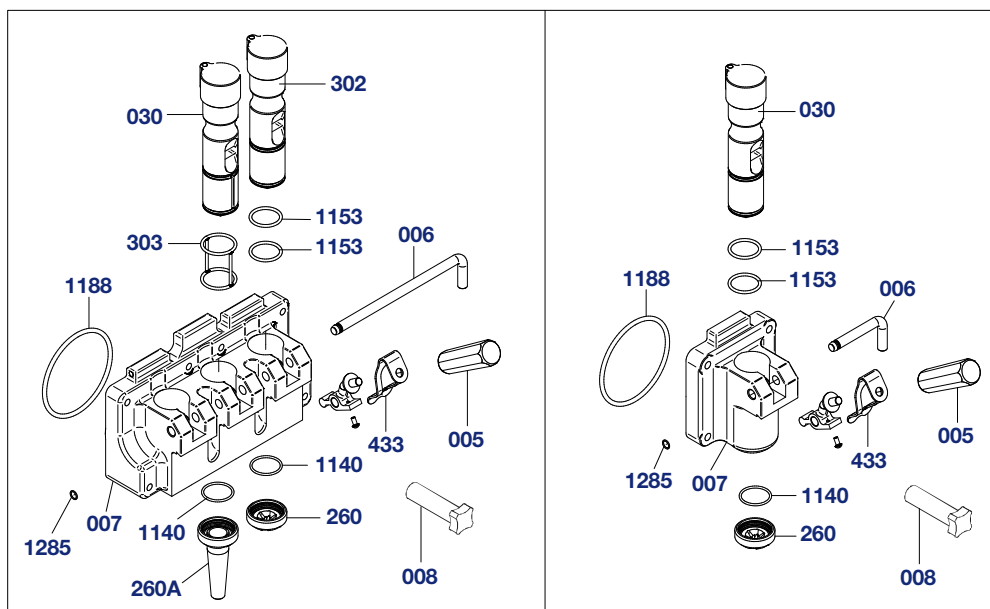
#### 5.11.1 Removal of self-closing spring (for preset machines)

For machines equipped with Self-Closing spring, remove the spring (see picture). Unscrew plastic handle from metal cam.



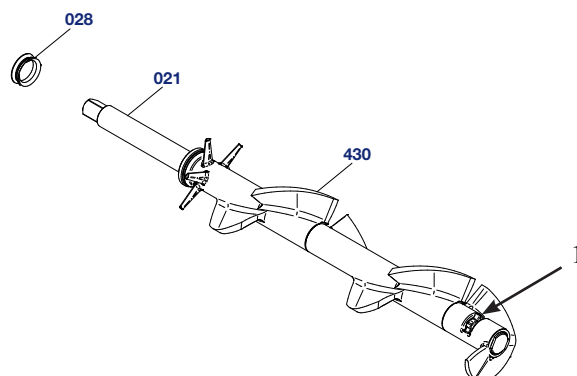
#### 5.11.2 Disassembling front lid

1. Remove the two retaining knobs (pos. 8) and pull the door assembly towards you sliding it off the front panel studs.
2. Pull the dispensing handle (pos. 5) so the pistons (pos. 30 and 302) raise in their housing.
3. Remove the pivot pin o-ring (pos. 1285) and the pivot pin (pos. 6) out releasing the dispensing handle (pos. 5)
4. Using the dispensing handle pull the piston (pos. 30 and 302) out completely.
5. Using the o-ring extractor, remove the o-rings (pos. 1153, 303 and 1188).
6. Unscrew the nozzles (260) and, using the OR extractor, remove the O-rings (1140).



## 5.12 DISASSEMBLING BEATER

1. Remove beater (pos. 21) from cylinder and support the end use two hands.
2. Remove seal (pos. 28) from beater shaft, check for wear or damage.
3. Remove the beater blades (pos. 430): move the lever (ref. 1) to release the blades (pos. 430) and remove them from the beater shaft.



## 5.13 WASHING AND SANITIZING COMPONENTS

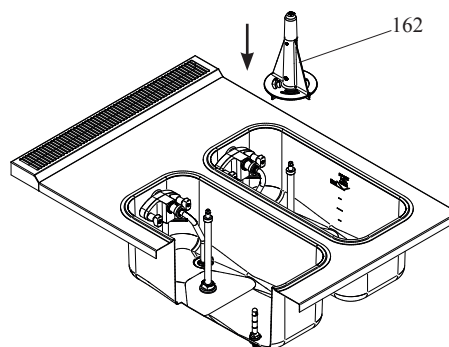
1. Remove larger residues by hand.
2. Remove finer residues with a jet of water
3. Prepare a solution of water and cleaning/sanitizing product following the instructions indicated on the label of the product used, soak the parts to clean in the cleaning/sanitizing solution.
4. Use the supplied cleaning brushes to forcefully brush all components and the relevant holes.
5. Allow the cleaning/sanitizing solution to work for the time indicated on the label of the product used.
6. Rinse the parts with care, using plenty of clean drinking water.
7. Place the components on a clean tray to air-dry.
8. Make sure the machine is in STOP mode.
9. Soak a brush in the cleaning/sanitizing solution and clean the housing holes of pumps and pressure pipes.
10. Spray the cleaning/sanitizing solution on the whole internal surface of the cylinders and on the hopper walls.
11. Soak a brush in the cleaning/sanitizing solution and clean cylinders and hoppers.

**Repeat the operations 9, 10 and 11 several times.**



## 5.14 REASSEMBLING THE HOPPER BEATER

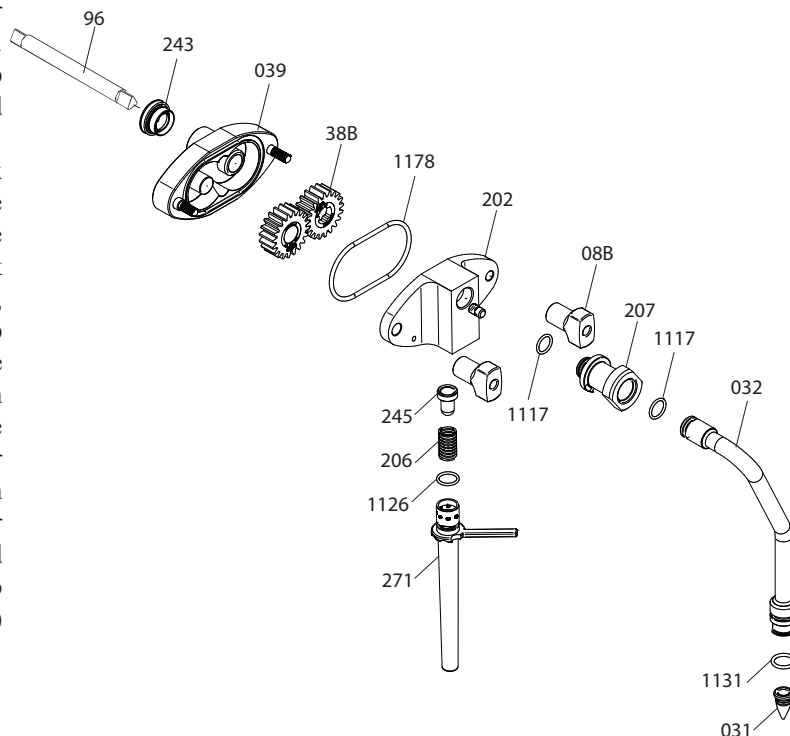
Place the beaters (pos. 162) back in their seat.





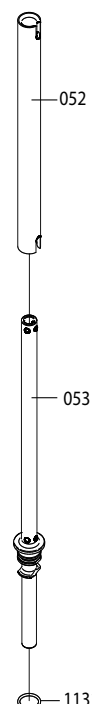
## 5.15 PUMP-FED MACHINES - REASSEMBLING THE PUMP AND COMPRESSION PIPES

1. Lubricate and place the O-ring (pos. 1117) back on the connection pipes.
2. Lubricate and place the O-rings (pos. 1117 and 1131) back on the compression pipes (pos. 32).
3. Insert the connection pipes (pos. 207) in the compression pipes (pos. 32) and leave them in the sanitizing solution.
4. Lubricate and install the O-ring (pos. 1178) on the pump body.
5. Lubricate the gears (pos. 38 and 38A) and insert them into the pump body. **Do not lubricate the teeth of the pump gears, flat surface only.**
6. Lubricate and place the O-ring (pos. 1126) on the inlet pipe (pos. 271).
7. Insert the valve (pos. 245) and spring (pos. 206) in their pump cover housing (pos. 202).
8. Insert the air regulator (pos. 271) in the pump cover: push and turn it clockwise.
9. Install the mix pump in the hopper with the locking hook on the right, turning the pump counterclockwise until it locks in place. Assemble the pump cover (pos. 202) with the air regulator as shown and turn the two knobs (pos. 8) tightly.



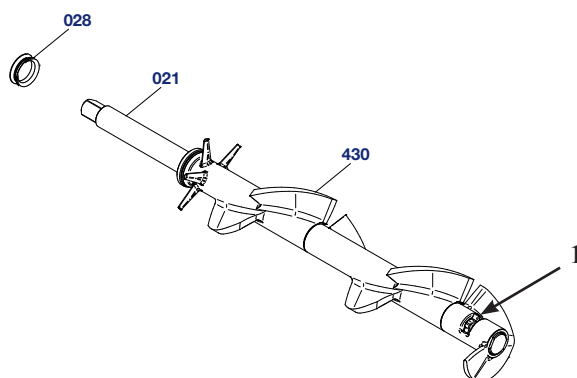
## 5.16 Gravity-fed machines - REASSEMBLING FEEDING NEEDLE

1. Lubricate the O-ring (pos. 1131)
2. Reassemble the feeding needle
3. Insert the feeding needle on the hopper bottom without installing it.



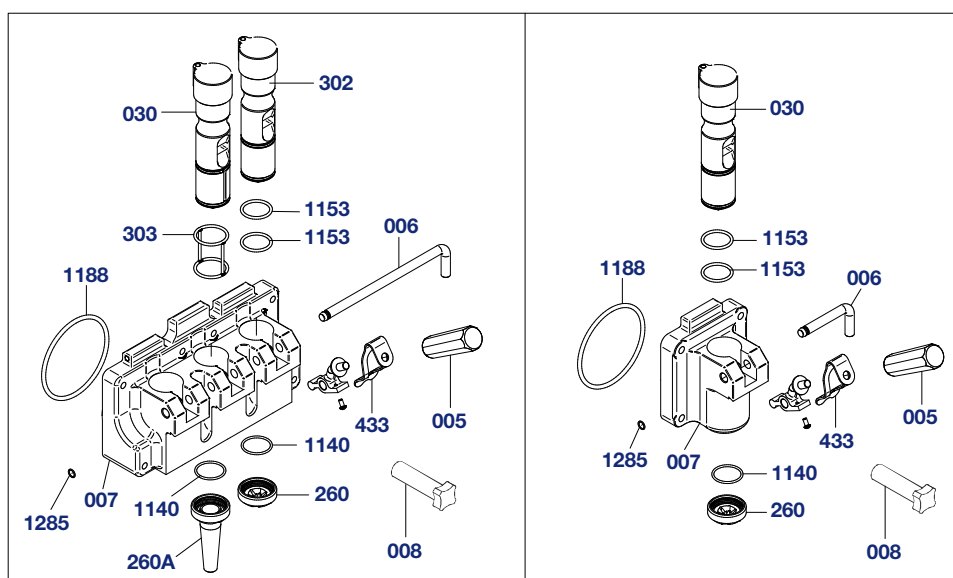
## 5.17 REASSEMBLING THE BEATER

1. Fit the beater blades (#430) on beater. When reassembling the last blade (the front one - pos. 430) make sure that the lever (ref. 1) is repositioned in its seat on the shaft
2. Lubricate beater seal (#28) sides, and slide it on beater shaft.
3. Fit beater inside cylinder. Push it and turn it clockwise until it locks inside rear hub. Otherwise the dispensing spigot door could be assembled incorrectly and mix could come out or causing serious damage.



## 5.18 REASSEMBLING FRONT LID

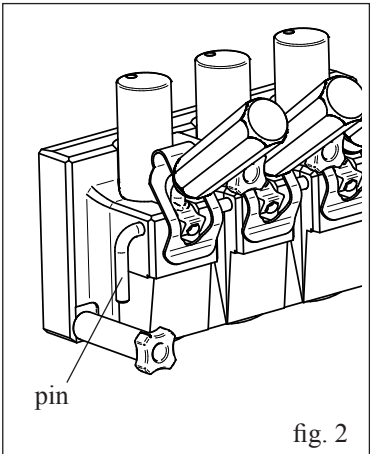
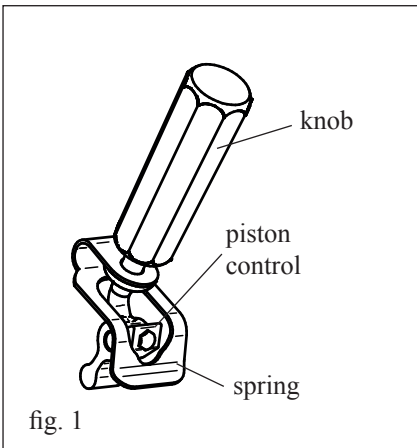
1. Lubricate and slide the piston o-rings (pos. 1153 and 303) into their seats on each piston.
2. Insert the pistons (pos. 30 and 302), pointed end down, in the dispensing head (pos. 7) making sure that the piston square notch lines up with the rectangular opening on the spigot front.
3. Position the dispensing handle (pos. 5) on the lid (pos. 7) and insert the pivot pin (pos. 6) in its housing through the handle lever hole. Lubricate and insert the pivot pin o-ring (pos. 1285). Lubricate and slide the large front lid o-ring (pos. 1188) into its seat.
4. Insert the O-rings (1140) into the nozzles (260) and screw on the door.
5. Insert the front lid assembly onto the front panel studs and fasten it with the knobs (pos. 8) hand tight.





5.18.1 Refitting of self-closing spring (for preset machines)

To refit the self-closing spring, insert the spring between the knob and the piston control, screw the knob without tightening it (see fig. 1), insert it all in the spigot door and insert the pin. At this point screw the knobs in tightly on the piston control.



5.19 SANITIZING THE WHOLE MACHINE

The machine must be sanitized before use. Proceed as follows:

1. Fill the hoppers with detergent/sanitizing solution, prepared according to the instructions on the used product label, up to the maximum level and allow the solution to flow into the cylinders. Leave it stay for the time specified by the manufacturer.
2. Using the brushes supplied, clean the mix level sensors, the hopper walls, the surface of the pumps and the hopper beaters.
3. Select CLEANING function and let the machine run for about 10 seconds. Press the STOP button. Cylinders and pumps are now filled with sanitizing solution.
4. Pour some detergent/sanitizing solution in a pail.
5. Dip a brush in the pail of detergent/sanitizing solution and brush clean the lid. Repeat the operation twice.
6. Wipe the exterior of machine with a clean sanitizing towel. Repeat the operation twice.
7. Place an empty pail under the front lid and pull the spigot handles.
8. Allow all of the detergent/sanitizing solution to drain. If the sanitizing solution does not flow out completely, keep the spigot handles down and select CLEANING function, let the machine run for 5 seconds so that the last solution residues flow out, then push STOP.
9. Rinse with plenty of drinking water.

**WARNING**

**Do not keep the machine running in "CLEANING" mode for a long time and with cylinders full of sanitizing solution or empty cylinders since the beater would wear out.**

**WARNING**

**Do not touch sanitized parts with hands, napkins, or else.**

**WARNING**

**Before starting again with ice cream production, rinse thoroughly with just water, in order to remove any residue of sanitizing solution.**

5.20 PRIMING THE MIX PUMP

See paragraph 3.7 Machine start-up





## 6. MAINTENANCE

### 6.1 SERVICE TYPE

#### WARNING

Any servicing operation requiring the opening of machine panels must be carried out with machine set to stop and disconnected from main switch!

**Do not clean and lubricate moving parts!**

“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 intended use of the machine”.



The below preventative procedures are necessary for proper machine operation during the production cycle.

Herebelow you can find a list of routine servicing operations:

- **Cleaning and replacement of seal**

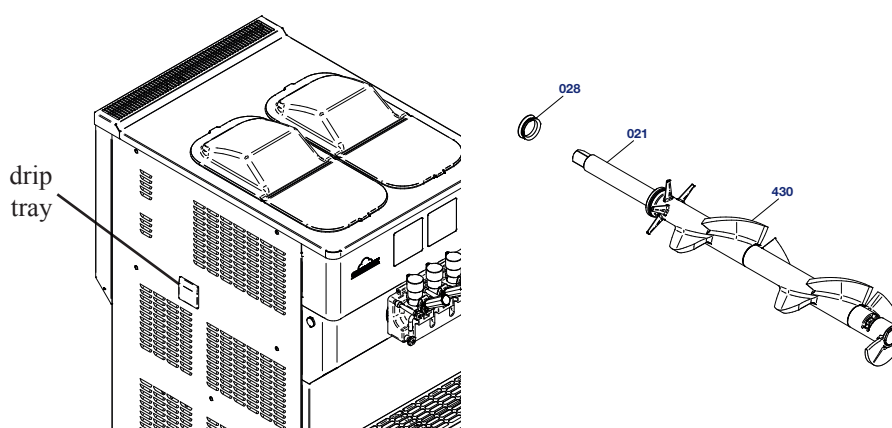
Should you ever find that some product drips from drip tray, it means that seals (pos. 28) have lost their ability to seal; when disassembling the beater, it is consequently necessary to check them and, according to the machine working period, to replace them with the seals included in the machine accessory kit.

- If the seals show no defects, they can be used again after washing them, when at room temperature they have regained their original shape.
- Replace seals as follows:
- Draw the beater assembly out.
- Remove seal from its seat
- Lubricate the new seal and install it
- Discard old seal



#### WARNING

**If you continue to work after noting traces of product in the drip tray, you further accentuate the leakage of the seal; this can lead to a malfunction of the machine serious enough to halt production.**



#### WARNING

**Like all moving parts, the complete beater is also subject to wear and tear. For this reason, we recommend checking the amount of wear of parts in direct contact with one another (beater/cylinder walls) on a regular basis during scheduled cleaning operations and in any case, every six months of machine operation.**





- **Cleaning of beater assembly, cleaning of pump, cleaning and sanitization of all the machine**  
According to procedures described in section 5 of this manual.
- **Cleaning of panels**  
To be carried out daily with neutral soap, seeing to it that cleansing solution never reaches the inside of beater assembly.

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#### WARNING

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

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## 6.2 WATER COOLING

In machines with water-cooled condenser, water must be drained from the condenser at the end of the selling season in order to avoid problems in the event that the machine is stored in rooms where temperature may fall under 32°F.

Contact technical assistance.

## 6.3 AIR COOLING

Clean the condenser periodically, in order to remove dust and impurities that may hinder air circulation. Contact technical assistance.

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#### WARNING!

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

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**NEVER USE SHARP METAL OBJECTS TO CARRY OUT THIS OPERATION. THE CORRECT OPERATION OF A REFRIGERATION SYSTEM MOSTLY DEPENDS ON HOW CLEAN THE CONDENSER IS.**

## 6.4 ORDERING SPARE PARTS

Should one or more parts wear out or break, place your order to a **CARPIGIANI** Technician and always mention the machine type and its serial number stamped on data plate you find on the machine rear.

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#### 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**

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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. TROUBLESHOOTING GUIDE

FAULT	CAUSE	PROCEDURE TO FOLLOW
<b>Compressor starts and stops after a few seconds</b>	1. Water Cooled Machine: water supply interrupted or hose pinched 2. Air Cooled Machine: Condenser fans not operating 3. Not enough clearance around machine	1. Check water supply lines and flow rate. 2. Call technician 3. Reposition machine with more side clearance
<b>Mix leaking out of piston</b>	1. Piston O-ring damaged or missing.	1. Drain cylinders and stop machine. Remove the affected piston and change orings. Lubricate, reinstall piston. Refill cylinders
<b>Mix leaking into side drip tray</b>	1. Rear beater seal damaged or missing.	1. Drain cylinders and stop machine, remove the dispensing head and beaters. Replace the damaged or missing seals. Replace beater and dispensing head. Refill cylinders and restart.
<b>Piston(s) hard to operate</b>	1. No or low lubrication	1. Stop machine, release cylinder pressure. Remove piston(s) wash and relubricate with food-grade grease.
<b>Ice cream too soft</b>	1. Check temperature and overrun.	1. Raise HOT number slightly if too warm. If temp OK, overrun is too low. Check feed tube is installed and set correctly.
<b>Ice cream too hard/cold</b>	1. Check temperature and overrun	1. Check feed tube setting or set to larger hole size stop machine, press clean button 4 times (beater & heating) run for 5 minutes and then restart the machine in production
<b>Scraping sound from freezing cylinder(s)</b>	Overfreezing in the cylinder	1. Allow 10 minutes for overload to cool. Remove feed tube from mix tank. Press clean button 4 times (beater & heating) and run for 6-8 minutes, press stop. Replace feed tube on larger hole size and restart machine in production mode.
<b>Liquid dispenses before frozen ice cream</b>	Idle time liquid build up	1. Before dispensing, press clean button to start motor and compressor. Wait 5 seconds before dispensing and this will minimize liquid dispense with ice cream