

APPLICARE
TARGA
CARATTERISTICHE

INSTRUCTIONS HANDBOOK
191 BAR USA

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 9001-94 .

Moreover, Carpigiani machines comply with following European Directives:

- **98/37/CE** **“Machinery” Directive;**
- **73/23/CEE** **“Low Voltage” Directive;**
- **89/336/CEE** **“Emc” Directive;**
- **97/23/CE** **“Ped” Directive;**
- **2004/1935/CE** **Relating to “Materials and articles in contact with foodstuffs”**

CARPIGIANI

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The purchaser has the right to reprint it for his own office use.

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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:

CARPIGIANI

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

ADDITIONAL DOCUMENTATION

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

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

ATTENTION

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



CONVENTIONAL SYMBOLS



CAUTION: ELECTRIC SHOCK DANGER

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



CAUTION: GENERAL HAZARD

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



NOTE

It points out significant information for the staff involved.



WARNINGS

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



PROTECTIONS

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

QUALIFICATION OF THE STAFF



MACHINE OPERATOR

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



MAINTENANCE ENGINEER

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



CARPIGIANI ENGINEER

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

SAFETY

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

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

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

To achieve the above, the following is necessary:

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



QUALIFICATION OF THE STAFF

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

OPERATOR

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

SKILLED ENGINEER

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

IMPORTANT!

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

NOTE:

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

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

WARNING

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

- Never put your hand into the machine, alike during production and cleaning operations.

Before carrying out any maintenance operation, make sure that the machine is in “STOP” position and main switch has been cut out.

- It is forbidden to wash the machine by means of a bolt of water under pressure.
- It is forbidden to remove panels in order to reach the machine inside before having disconnected the machine.
- **CARPIGIANI** is not responsible for any accident that might happen during operation, cleaning and/or servicing of its units, if this warning has not been fully complied with.



1 GENERAL INFORMATION

1.1 GENERAL INFORMATION

1.1.1 Manufacturer's identification data

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

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

EQUIPMENT DATA PLATE				
Model No. _____				
SERIAL NO. _____		DATE _____		
UNITS _____	PHASE _____	HZ _____		
MAX. BREAKER/FUSE SIZE _____ AMP				
MINIMUM CIRCUIT CAPACITY _____				
	DESIGN PRES.	OPERATING PRES.		
HIGH SIDE PSIG				
LOW SIDE PSIG				
REFRIGERANT _____ AMOUNT _____ OZ				
	BEATER	COMPRESSOR	FAN	
QTY				
HP				
FLA				
LRA				

1.1.2 Information about service

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

1.1.3 Information to the user

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



1.2 INFORMATION ABOUT THE MACHINE

1.2.1 General data

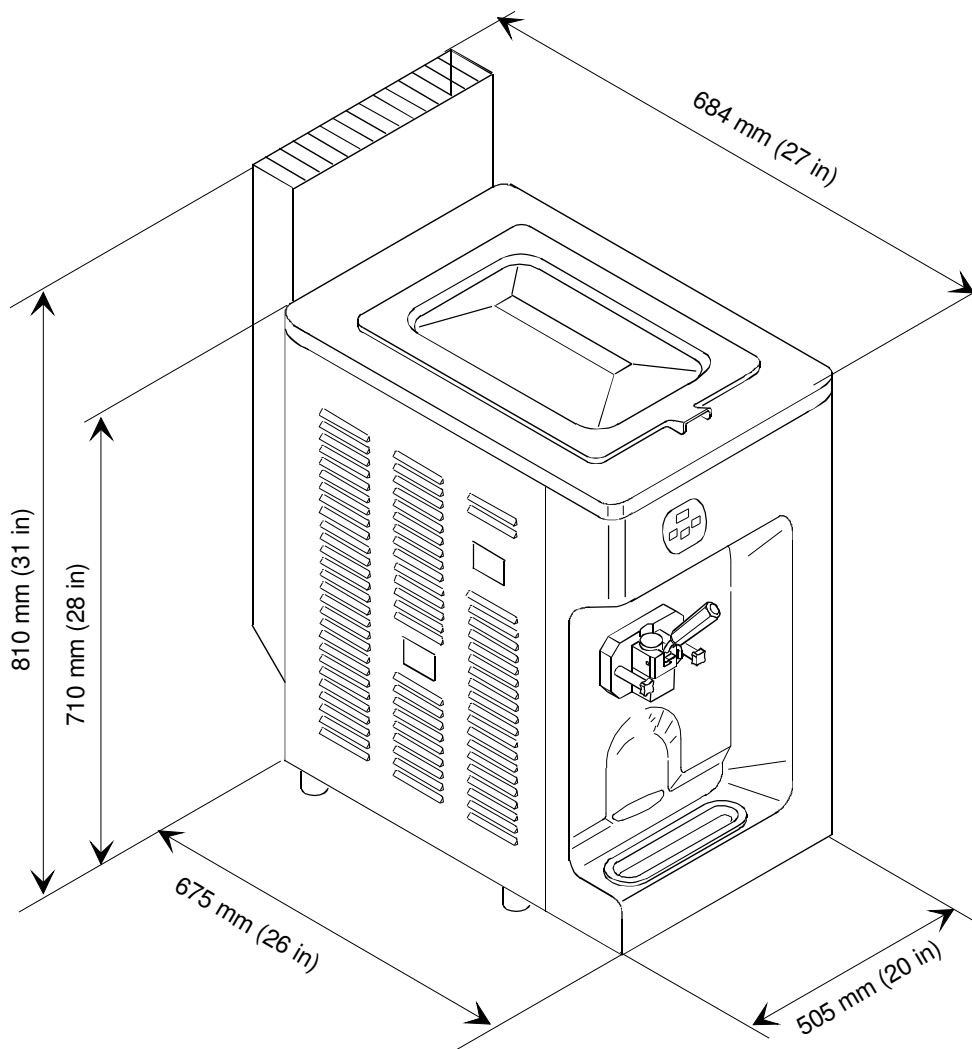
Counter-top machine to immediately produce and distribute soft express ice cream in one flavor available with pump or gravity feeder.

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

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

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

1.2.2 Machine layout



1.2.3 Technical features

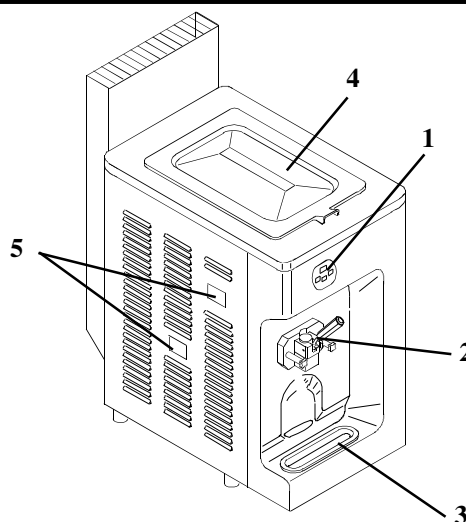
MODEL	Hourly production *		Tank capacity	Flavours	Power supply			Power input	Condenser	Net Weight
	lb	2,7 oz portions	Gal.		Volt	hZ	Phases	Hp		lb
191 BAR	42	250	4,7	1	208-230	60	1	2,4	air/water	230

* Hour output may vary depending on mix used
 Performances featured by a room temperature of 77°F and a water temperature of 68°F.

1.2.4 Machine sets location

caption:

- 1 control panel
- 2 Freezing cylinder front lid
- 3 Drip tray shelf
- 4 Mix tank cover
- 5 Drip troughs



1.3 INTENDED USE

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

Voltage	±10%
Min air temperature °F	50°F
Max air temperature °F	109°F
Min water temperature	50°F
Max water temperature	86°F
Min. water pressure	0,1 MPa (1 bar)
Max water pressure	0,8 MPa (8 bar)
Max relative humidity	85%

The machine has been designed for its use in places which are not subject to explosion-proof standards; its use is thus bound to conforming places and normal atmosphere

1.4 NOISE

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

1.5 STORING A MACHINE

The machine must be stored in a dry and dust-free place.
Before storing the machine, wrap it in a cloth in order to protect it against dust and else.

1.6 DISPOSAL OF PACKING STUFFS

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

1.7 WEEE (Waste Electrical and Electronic Equipment)

In accordance with European Directive 2002/96/EC on WEEE (Waste Electrical and Electronic Equipment), the presence of the above symbol on the product or on its packaging indicates that this item must not be disposed of in the normal unsorted municipal waste stream. Instead, it is the user's responsibility to dispose of this product by returning it to a collection point designated for the recycling of electrical and electronic equipment waste. Separate collection of this waste helps to optimize the recovery and recycling of any reclaimable materials and also reduces the impact on human health and the environment.

For more information concerning the correct disposal of this product, please contact your local authority or the retailer where this product was purchased.



2. INSTALLATION

2.1 ROOM NECESSARY TO THE MACHINE USE

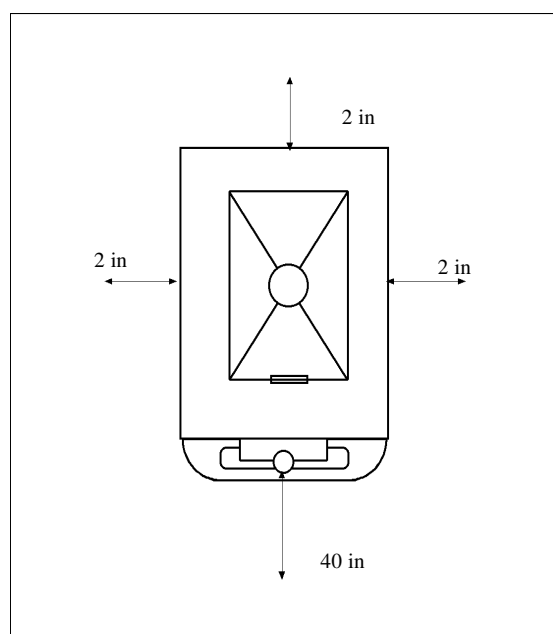
The machine must be installed in such a way that air can freely circulate allaround. Rooms for the approach to the machine must be left free in order to enable the operator to act without constraint and also to immediately leave working area, if need be. The minimum approach room to working area should be at least 40 in.

ATTENTION

Machines with aircooled condenser must be installed no closer than 2 in to any wall in order to allow free air circulation around the condenser.

NOTE

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



2.2 MACHINE WITH AIRCOOLED CONDENSER

Machines with aircooled condenser must be installed no closer than 2 in to any wall in order to allow free air circulation around the condenser.

NOTE

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

2.3 MACHINES WITH WATERCOOLED CONDENSER

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

Water must have a pressure of 1 Bar at least and a delivery at least equal to the estimated hourly consumption.

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





2.3.1 Water valve adjustment

WARNING

If water valve must be retarded, 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.

ATTENTION:

Do not leave the machine in a room with temperature below 32°F without first draining water from the condenser.

2.4 ELECTRIC CONNECTION

Before connecting the machine to the mains, check that machine voltage indicated in data plate corresponds with the mains (see sec. 1.1.1 point C).

Insert a differential magnetothermal protection switch adequately sized to absorption capacity required (see sec. 1.1.1 point D) and with contact opening of 3 mm at least.

WARNING

Yellow/green ground wire must be connected to a good ground outlet.

Rotation direction by three-phased machines

The beater rotates anticlockwise. By gravity-feed machines, it is necessary to remove the plate and check the direction of rotation.

Reversing rotation direction

To reverse the direction rotation, when wrong, it is necessary to interchange two of the three leads coming from the circuit breaker.

2.4.1 Replacement of power supply cord

If the machine main cable is damaged, it must be replaced through a cable with similar features. Replacement will have to be carried out by skilled technicians only.

2.5 LOCATION

Level the machine on the counter surface to ensure smooth operation and prevent mix from leaking.

2.6 REFILLING

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

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

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

2.7 MACHINE TESTING

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

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

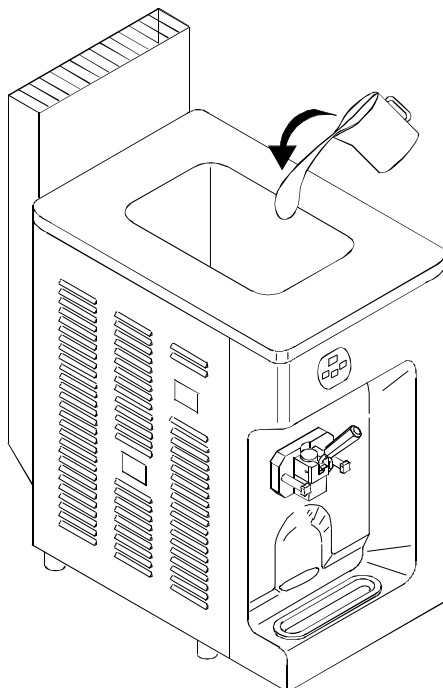
After the machine positioning and correct connections, also carry out all operations necessary to functional check and test of the machine.

3. DIRECTION FOR USE

3.1 MACHINE CONFIGURATION

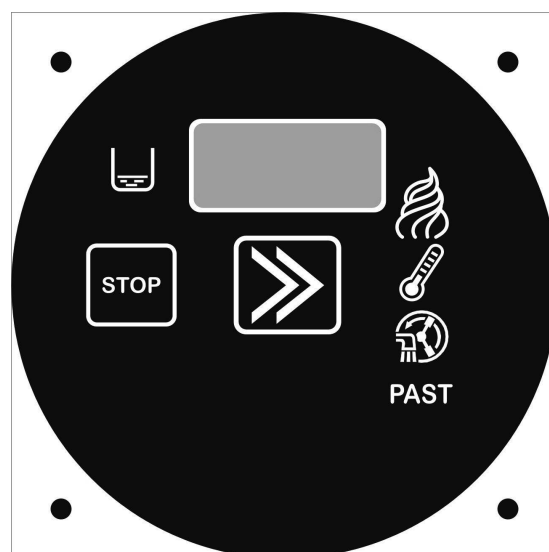
The machine is made up of a motor-drive to power the beater unit, and a cooling system with water or air condenser.

Soft ice cream is prepared by filling the tank 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 or feeding needle, the mix enters the beating cylinder already mixed with air; ice cream is produced only when it needs to be served. The distributor valve on the machine front allows a single portion of soft ice cream to be distributed. At the same time, the same amount of mix moves from the upper cooled tub into the beating cylinder.



3.2 ELECTRONIC CONTROL KEYBOARD AND BUTTON FUNCTIONS

Details of the panel are shown in the picture below.



Lighted function indicators

The indicator lights up to show that the function corresponding to the symbol next to the indicator itself is inserted.

Monitor

This display indicates the product consistency or product temperature in tank when the machine is turned on and during its operation, while in DISTRIBUTION.



STOP button

STOP function selected and light indicator on: the machine is ready to receive all the functions and the display shows the tank temperature. If, from any function, we press STOP, the display will show OFF 2 seconds and it will then return to the previous indication of tank temperature.

From Production and Storage it is necessary to press Stop 2 seconds, in order to have the machine in STOP and so avoid “ touch” problems with the touch-sensitive panel.



Function selection button

By pushing this button you may select any of the following functions: Prd, Sto, CLE. The last selection made will be activated 2 seconds later.



STORAGE function (Sto)

When selecting this function, led lights up and the machine stores the mix both in hopper and cylinder at a pre-set temperature of 39°F. The display indicates mix temperature in the hopper.



CLEANING function (CLE)

When selecting this function, led lights up, the beater and the mix pump run, while the refrigeration unit is off. This function is timed and ends automatically when the set time (usually 30 seconds) is reached. The display indicates product temperature in the cylinder.



Not available function.



PRODUCTION function (Prd)

When selecting this function the led lights up and the mix into the cylinder is freezeed until its set consistency (pre-set HOT setting) is reached. During this cycle, the display indicates a number corresponding to the product consistency in the cylinder till reaching of the preset value, then the same display will show mix temperature in the hopper.

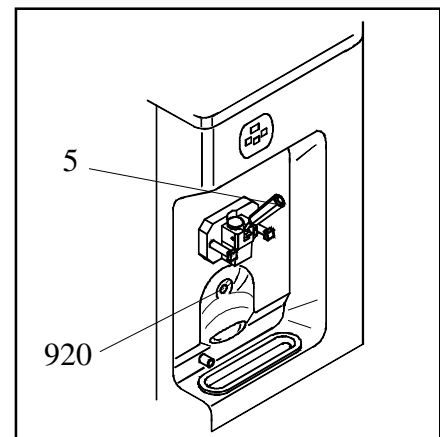


Tank level indicator

By lighting up, this led indicates that the mix level in the hopper has reached the minimum allowed and refilling with fresh product is necessary. When the indicator is on in PRODUCTION you can draw max. 10 cones out.

3.3 SPIGOT HANDLE

In order to dispense the product, place a cup or a cone under the spout and slowly pull down the disepnsing handle (pos. 5). As son 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.

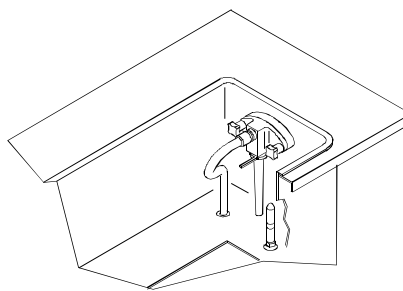


WARNING
It is important to keep the sensor (pos. 920) clean

3.4 PUMP - FED MACHINES - "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 regulation depending on mix used.

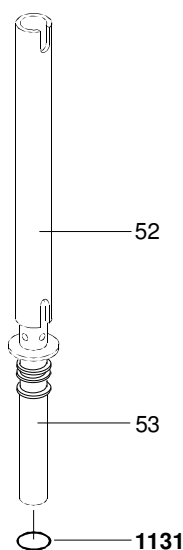
"R" pump regulator should be set to the middle position. If, after dispensing a significant number of cones, ice cream is too heavy and wet, you may move the R pump regulator a notch at a time towards the right. If ice cream comes out of spigot mixed with air bubbles, then turn R pump regulator a notch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



3.5 GRAVITY - FEED MACHINE - FEEDING NEEDLE

How to obtain and how to keep quality performances.

1. Maintain a big mix level inside the hopper (above the half of the hopper itself). Mix temperature inside the hopper is 39°F both during production and storage
2. During the day the mix must periodically be stirred by use of a plastic spatula to avoid separation, particularly when product has not been dispensed over a long period and the machine has been in "storage" mode for a long time.
3. A fluid mix without particles has to be used. A thick mix with big particles could close the slot of the feeding needle thus blocking mix from entering the cylinder.
4. 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 whole with smaller diameter, the quantity of mix to the tank will decrease, and vice versa.
5. Set the feeding needle in such a way that inlet hole is turned towards the middle of the tank.
6. Never exceed production limits in kilograms declared by Carpigiani, 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. In this case appear on the display the alarm signal "ICE". If this occurs to reset the machine please operate as follow.
 - stop the machine (pressing the push button to the STOP position)
 - remove the feeding needle to enable a quick drop of the mix into the cylinder
 - set machine in the "cleaning" position for a few minutes
 - make sure that the product coming out for the spigot body when dispensing is liquid
 - position the feeding needle again making sure the slider is sufficiently open
 - start the machine putting it in the "production" mode. Do not start dispensing product from the machine until the production cycle has been completed.



3.6 PRELIMINARY OPERATIONS, WASHING AND SANITIZATION



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

WARNING

Machine provided with an automatic system for compulsory washing of the parts in contact with food product.

Cleaning and sanitizing shall be executed as a habit (for example every 3 days) with care in order to guarantee quality of ice cream in full respect of necessary hygienic rules.

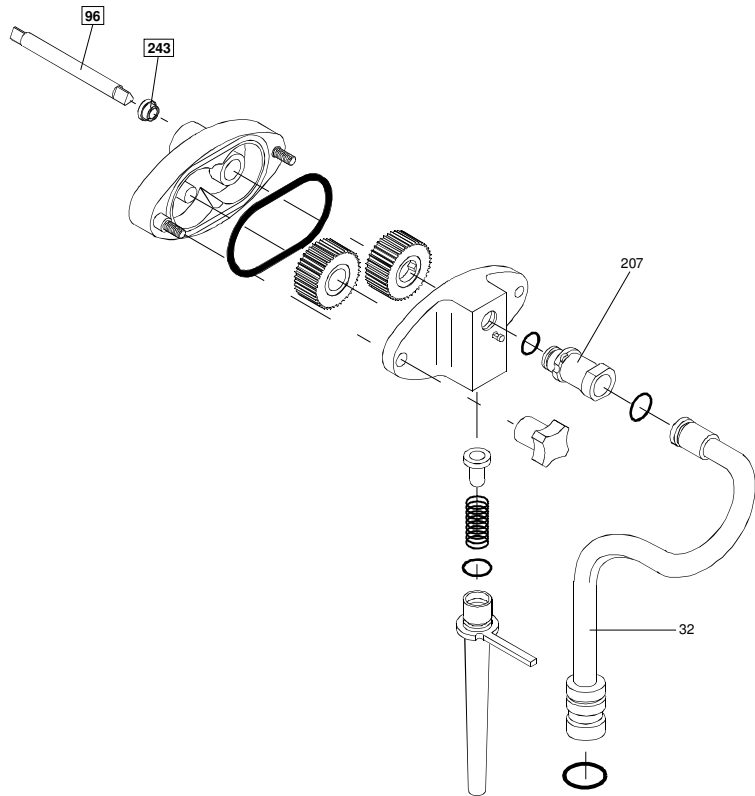
3.6.1 Cleaning

Lift tank cover and from its inside take out bag containing accessories, instruction booklet and warranty sheet.

Remove the tank cover and the drip troughs.

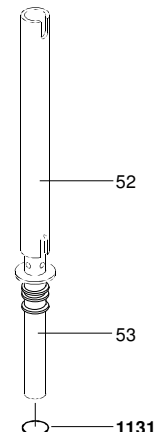
By pump-fed machines:

- Disconnect the connection pipe (pos. 207) by turning it to match with the hole and free it from the pin found on the pump cover.
- Pull the connection pipe backwards and remove the feeding pipe (pos. 32) by turning it 90° then pulling upwards.
- Removing the pump by turning it clockwise of 45° then pull backwards.
- Disassemble the pump (see section 5 of this manual).



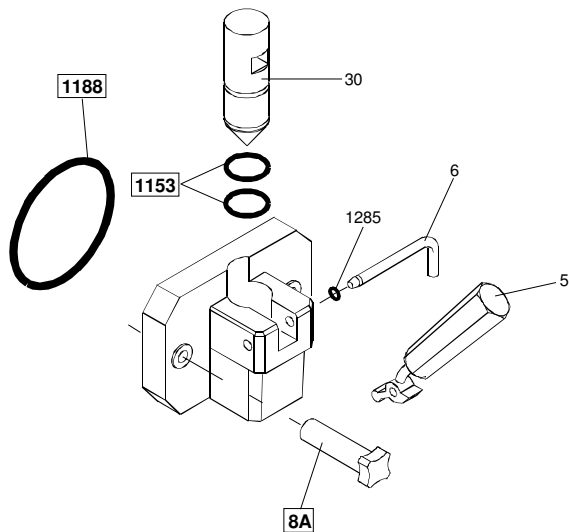
By gravity-fed machines:

- Extract the feeding needle slider (pos. 52), withdraw the slider from the tank bottom and remove the OR (pos. 1131).



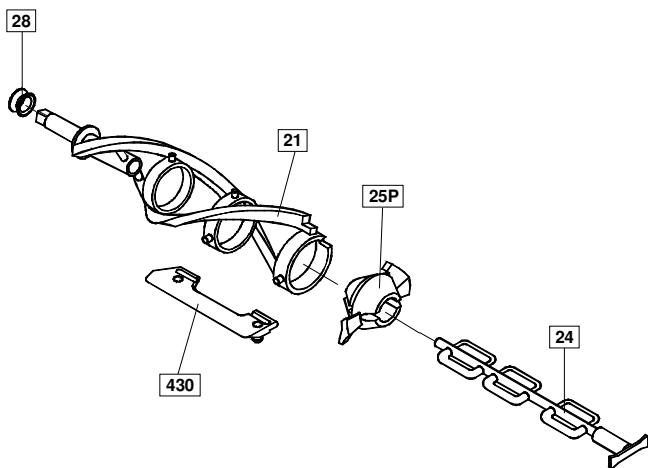
Removing the door

Remove the two retaining knobs (pos. 8A) and pull the door assembly towards you sliding it off the two front panel studs. Pull the dispensing handle (pos. 5) so the piston (pos. 30) raises in its housing. Remove the pivot pin O-ring (pos. 1285) and pull the pivot pin (pos. 6) out releasing the dispensing handle (pos. 5). Using the dispensing handle lever pull the piston (pos. 30) out completely. Using the o-ring extractor, remove the two piston o-rings (pos. 1153), and the large dispensing door o-ring (pos. 1188).



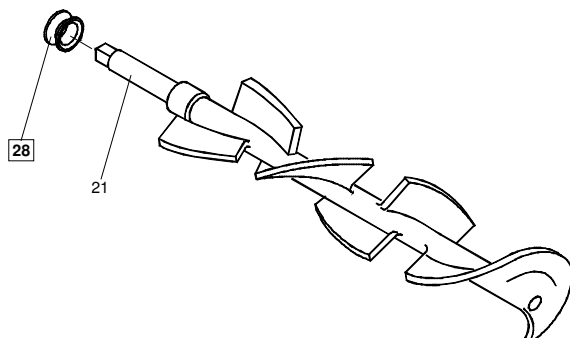
By pump-fed machine: Removing the beater

Pull the beater out of the cylinder. Slide the beater seal (pos. 28) out of the beater shaft. Pull out and remove the end pusher (pos. 25P) and the idler (pos. 24). Remove the 3 beater blades (pos. 430).



By gravity-fed machine: Removing the beater

Pull the beater out of the cylinder. Slide the beater seal (pos. 28) out of the beater shaft.



- 1- Fill a clean sink with detergent and hot water (122-140°F).
- 2- Wash the disassembled parts with the solution and scrub them thoroughly with the brushes provided with the machine. As you proceed, rinse with hot water. Make sure all lubricant and mix film is removed from parts.
- 3- Fill another sink with sanitizer prepared in 70-90°F water (ex. 1 packet in 2,5 gal. of water).
- 4- Place the parts in the sanitizing solution. Leave them there for a minimum of 1 minute (**using the sanitizing solution, the sanitizer manufacturers' directions are to be followed**).
- 5- Place the components on a clean tray to air-dry.
- 6- Return to the machine with a small amount of sanitizer.
- 7- Dip a brush into the sanitizer and thoroughly brush the freezing cylinder
- 8- Dip the brush (pos. 772D) into the sanitizer solution and thoroughly brush the drip pipe.
- 9- Dip a brush into the sanitizer and thoroughly brush clean the mix inlet hole and the pump drive hub opening in the rear mix hopper.
- 10- Spray the back of cylinder and the hopper walls with sanitizer.

Repeat step 7, 8, 9 and 10 several times

Reassemble and place the compression tube (see section 5 of this manual) into the tank and connect to the pump only when cleaning operations are complete.

Reassemble the pump (see section 5 of this manual), making sure to use food-grade lubricant on all o-ring and insert it in the hopper

Reassemble the beater (see section 5 of this manual), insert it completely into the freezing cylinder by grasping it with both hands.



WARNING

Insert the beater minding not to hit it against the cylinder wall, since you might scratch it and so jeopardize the correct machine operation.

Reassemble the front lid (see section 5 of this manual) and install it back.

Reassemble and install the feeding needle (by gravity-feed machines)

Place the cover and the drip troughs back.

3.6.2 Sanitizing



CAUTION

For the use of sanitizers, instructions on labels are to be followed.

The machine must be sanitized before mix is poured in. Proceed as follows:

- 1- Fill the hopper to the maximum level with sanitizer prepared in 70-90°F water (ex. 1 packet in 2,5 gal. of water) and allow to drain into the cylinder.
- 2- Using the brush, clean the mix level probes, the entire surface of the mix hopper, the surface of the mix pump and the outside of the hopper agitator.
- 3- Select CLENOUT function and let the beater run for about 10 seconds. Press the STOP button. The cylinder and the pump are now filled with the sanitizing solution.
- 4- Return to the machine with a small amount of sanitizer solution in a pail.
- 5- Dip the door spout brush in the pail of sanitizer and brush clean the dispensing spout. Repeat the operation 2 times.
- 6- Wiper the exterior of machine with clean sanitized towel. Repeat the operation 2 times.
- 7- Wait for at least 5 minutes before proceeding with the next instructions.
- 8- Place an empty pail under the draw spout and pull the handle
- 9- Allow all of the sanitizer to drain. If the sanitizing solution does not flow out completely, keep the spigot open and select CLENOUT function, keep the beater running for 5 seconds so that the last solution residues flow out then push STOP.

CAUTION

Do not keep the beater running for more than the time strictly needed to complete washing and sanitization. Without the lubrication of mix butterfat the beater wear out quickly

3.6.3 Hygiene

Mildew and bacteria grow rapidly in the ice cream fat contents. To eliminate them, it is necessary to thoroughly wash and clean all parts in contact with mix and ice cream, as described above.

Stainless steel and plastic materials, as well as rubber used in the construction and also their particular shapes make cleanout easy, but cannot prevent proliferation of mildew and bacteria if not properly cleaned.



3.7 STARTING THE MACHINE

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

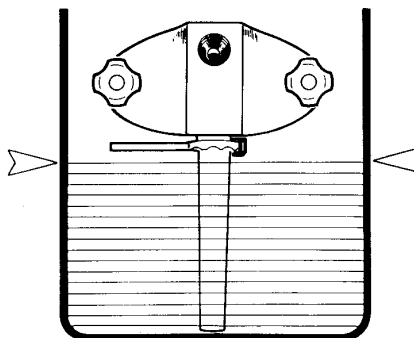


3.7.1 Starting machines with pump

Remove the compression pipe from bottom of the tank and place it in the sanitizing solution.

Prime Hopper:

- Retrieve 1 bag of mix from the walk-in refrigerator.
NB.: Mix to be poured at a temperature of 39-41°F.
- With the draw handle open, pour one bag of mix into the hopper allowing it to drain into the freezing cylinder. Mix level in the tank must never reach the pump (see picture) and more mix must be added when level goes below about 2 cm from tank bottom.
- When only full strength mix (not mix and sanitizer) is flowing from the draw spout, close the draw handle.



Connect the mix pressure pipe:

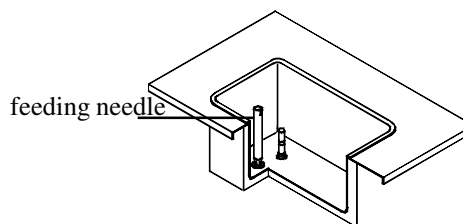
- When the mix stops bubbling from the bottom of the hopper, take the mix pressure pipe from the sanitizing solution and insert it in its position in the bottom of the hopper. Make sure your hands are clean and sanitized.
- Turn the pressure pipe clockwise towards the pump and connect the tube to the pump.
- Select production function to start the Automatic freezing operation.
- Replace the hopper cover.

3.7.2 Starting gravity-fed machines

Remove the feeding needle from tank bottom and place it in the sanitizer solution.

Prime Hopper:

- Retrieve 1 bag of mix from the walk-in refrigerator.
NB.: Mix to be poured at a temperature of 39-41°F.
- With the draw handle open, pour one bag of mix into the hopper allowing it to drain into the freezing cylinder. Mix level in the tank must never exceed feeding needle height (see picture) and more mix must be added when level goes below about 2 cm from tank bottom.
- When only full strength mix (not mix and sanitizer) is flowing from the draw spout, close the draw handle.



Connect the feeding needle:

- When the mix stops bubbling from the bottom of the hopper, take the mix feeding needle from the sanitizing solution and insert it in its position in the bottom of the hopper. Make sure your hands are clean and sanitized.
- Select production function to start the Automatic freezing operation.
- Replace the hopper cover.



3.8 PRODUCTION

Dispense icecream without exceeding the machine production rate as shown in the table on page 13. If you do not exceed it, and provide to refill the machine with fresh mix, you can be sure you will never have to stop selling, even during peak hours.

While your store is closed, set the machine to STORAGE by pushing SELECTION push-button .

You will save significantly on energy consumption, as the compressor runs only for the time strictly necessary in order to keep product at its correct temperature.

When you reopen the store, set the machine to DISTRIBUTION and within a few minutes youghourt icecream will be back at the correct consistency for sale.

It is essential that you carry out CLEANING and SANITIZATION of the machine, daily or every few days, depending on bacteriological quality of your mix as well as on health regulations in force in your country.

If the machine has been stopped a long time due to a power failure, it is necessary that you check product temperature before starting the sale again; if the temperature is over +43°F, the machine must be emptied, cleaned and sanitized, and filled up with new fresh mix at +39°F.

3.9 OPEN PROCEDURE



3.9.1 Start the machine

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

3.10 CLOSE PROCEDURE

3.10.1 Sanitize the door area

- Dip the door spout brush in a small amount of sanitizer solution and brush clean several times the dispensing spout from the outside.
- Wash, rinse and sanitize the drip tray, the drip trough and the hopper cover.
- Wipe exterior of machine and the door area with clean sanitized towel.



3.11 ON THE DISPLAY



The CPU carries out a test on the keypad and display, and all leds light for a functional test; a “t” is thence displayed and soon followed by a number (for example 01) which indicates the software version installed in the machine.

If the machine does not function, your technician will always have to specify this number (software version), as well as the machine serial number to be found on data plate, so as to take the best advantage of the After Sale Service.

Last, the writing “con” will be displayed and followed by the number of cones in 2 displays, at first tens of thousands/thousands and then hundreds/tens/units (for example, 32.514).

During the routine operation the tank temperature (TEV) is displayed and during ice cream production the product consistency is instead indicated on the display.

In cleaning mode, the cylinder temperature indicated by the sensor TEC is displayed.

3.12 PROGRAMMING FOR USER

In programming for the user, it is allowed to change the values pertinent to the ice cream consistency.

In order to enter in Programming User instructions given below are to be followed:

- 1) Press the push-buttons Stop and Selection (from machine in Stop) at the same time and release them when "000" is displayed. If no push-button is pressed within 5", the machine sets at Stop.
- 2) Press Selection and modify the value by incrementing it up to "012".
Confirm with the push-button Stop.
- 3) Wait until Hot and its value (the latter can be changed between 40 and 120 with Selection) will alternate on the display. Increasing this number will also increase ice cream hardness, as well as and beater motor input.
- 4) To leave this mode, just wait for 30" or conceal the photocell (MIR).



4. SAFETY DEVICES

4.1 ALARMS

The machine is provided with a self- "CHECK" indicating possible troubles with your machine. The "CHECK" led (**the spot down on the right side of the display**) blinks when an alarm is active, and it stays on as a reminder of an alarm occurred and reset.

When an alarm is displayed, check which one through the table below.

The machine can be used in the distribution mode also when an alarm has occurred, provided that it is non critical one; otherwise the machine will not allow to enter in the distribution function; if this is the case, press STOP and do not use the machine till its repair. Press Selection in order to delete the writing with reset alarm.

In the table below you can find list of available alarms:

ALARM	DESCRIPTION
A01 (PTMA)	Thermal protection tripped
A02 (RTC/PTMC)	Compressor thermal relay or Compressor thermal protection tripped
A03 (TESV)	Tank Safety thermostat tripped
A04 (TESC)	Cylinder safety thermostat tripped
A05 (TEV)	Tank sensor faulty (interrupted or under short circuit). You can only enter in Cleaning function. The machine set at Stop.

Above 5 critical alarms cause machine to set at STOP, while led blinks if the alarm is still active and is fixed on if reset.

ALARM	DESCRIPTION
A06 (TEC)	Cylinder sensor faulty (interrupted or under short circuit). If tripping comes from Pasteurization or Storage, the machine will set at Stop. If it comes instead from Cleaning or Production, the machine will remain in that function: relevant led blinks and A06 will be displayed.
A07 (TGV)	Tank evaporator sensor faulty (interrupted or under short circuit). The alarm will cause check led blinking but will not stop the machine (this remains in the same function).
A09 (IMS)	Safety magnet switch. Front lid open.
A11 (PRESS)	High pressure switch tripped. After 3 times or when it trips 2' consecutively, the machine sets at Stop.
A12 (TE1)	Cylinder evaporator sensor faulty (interrupted or under short circuit). The alarm will cause check led blinking but will not stop the machine (this remains in the same function).
A15 (BLACK OUT)	Blackout. The machine returns to the function where it was, excepted for Cleaning, where it returns to Stop or Pasto Cooling according to the Blackout Table.
A20 (BELT)	DELTA TGVTEV In Heating of Pasteurization, if TGV temperature becomes \geq TEV as to the value programmed in step DELTA TGVTEV, A20 is displayed and the machine sets back at STOP.
A22 (TIME OUT)	In Production: the beater motor is controlled and if staying ON more than 15' without reaching HOT, the machine sets at "Hot reached" status, with alarm A22. If, instead, the consistency value is below HOB (HOT Block) 15', the machine sets at Stop.
A24 (MIX OUT)	When the minimum level is on (level LED on) and in Production we dispense a number of portions same as or higher than the value set in step t23 (Last Cones), A24 is displayed and the machine sets at Storage mode. Top up in order to reset the alarm.
Stb	In production, it may be displayed STB, meaning Stand By or ice cream not yet ready for distribution.

ALARM	DESCRIPTION
PHS	Phase controller. Machine is left in Stop. It is necessary to invert 2 phases in order to enable its functioning again. On turning the machine on, the alarm resets.
LOW	"LOW" blinks mix is out and reserve led is on. The alarm is active in all functions but Cleaning.

4.1.1 Black-out

In case of a blackout, if the machine was:

- in Stop or Cleaning, on power return it sets at STOP.
- Production, or Storage: on power return, the machine sets back at the function where it was before blackout and alarm A15 will be displayed.

5. DISASSEMBLING, WASHING, SANITIZING AND REASSEMBLING THE PARTS IN CONTACT WITH THE PRODUCT

Use a mild detergent to wash the parts.

Wash (by hands) the parts in water (at max 140°F), using a mild detergent and the accessory brushes. Use neither dish-washing machines, no detergents intended for them.

For rinse, use (bacteria free) drinking water. For sanitizing, leave the parts in sanitize lukewarm water 10 to 15 minutes (**using the sanitizing solution, the sanitizer manufacturers' directions are to be followed**) and rinse before reassembling them.



5.1 PROGRAMMED CLEANING

The machine has been provided with an automatic system for compulsory washing of the parts in contact with food product, for example every 3 days.

Such a system, called "WASH" inhibits the distribution function at the end of the 3rd day and the message "WAS" will be displayed.

Every time you dispense ice cream or the beater motor starts, the number of days to next programmed washing will be displayed.



WARNING

Cleaning and sanitizing shall be executed as a habit (for example every 3 days) with care in order to guarantee quality of ice cream in full respect of necessary hygienic rules.



5.1.1 Cleaning

Remove the tank cover and the drip troughs.

5.2 EMPTYING THE ICE CREAM PLANT

1 - Place an empty pail under the spout.

2 - Press the  button.

3 - Pull the dispensing lever and drain the ice cream.

4 - Select CLENOUT function .

5 - When the product coming out becomes liquid, push STOP button and leave the spout open.

6 - Remove the hopper cover and the drip draws.

7 - For the pump fed machine: in the hopper, disconnect pressure pipe from the mix pump, turn it sideways, remove it pulling it up from its seat and let the product flow completely out. Grasp the pump and turn it in a clockwise direction of 45° then pull it out towards you.


8 - For the gravity fed machine: remove the feeding needle.

9 - Close the spout handle, pour 2,6 gal. of cool and clean water into the mix hopper. Use the white hopper brush to scrub the mix hopper and mix level sensor. Use the small brush to clean the mix inlet hole and the drive hub of the mix pump.

10 - Place an empty pail under spout. Open the spigot piston and let the water drain out.

11 - Rinse with warm water until the solution runs clear.

12 - Select CLENOUT function .

13 - Turn the machine off by pushing the  button and let the water flow out.

14 - Fill the hopper with 2,6 gal. of warm detergent solution.

15 - Clean the hopper walls and the level sensor using the supplied brushes.

16 - Pull the dispensing handle and let the liquid flow out completely.

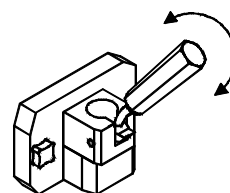
17 - Rinse with clear water, pull the spigot handle and let the water flow out.

18 - Fill the hopper with Sanitizer prepared in 70-90°F water (ex. 1 packet in 2,5 gal. of water). Use the white hopper brush to scrub the mix hopper and mix level sensor. Use the small brush to clean the mix inlet hole and the drive hub of the mix pump.

19 - Select CLENOUT function  and let the beater run for 10 seconds.

20 - Push the STOP button. Let the Sanitizer solution stand for a minimum of 1 minute.

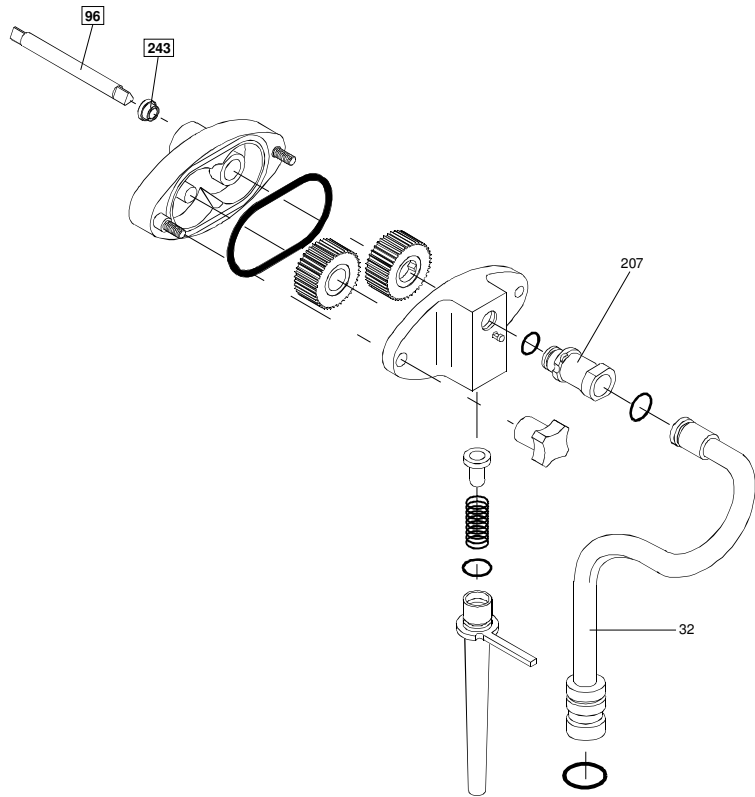
21 - Pull the dispensing handle and let the water flow completely out.





5.3 PUMP FED MACHINES - DISASSEMBLING MIX PUMP

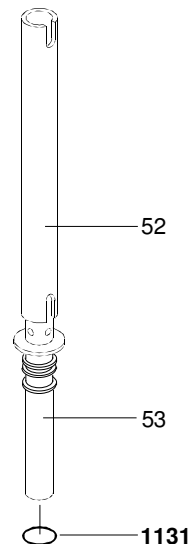
- 1- Keeping the feeding tube (pos. 271) upward turn it counterclockwise and pull it out.
- 2- Pull the spring (pos. 206) and the back flow valve (pos. 245) out. Using the o-ring extractor, remove the o-ring (1126).
- 3- Unscrew the 2 knobs (pos. 8) and separate the cover (pos. 202) from the pump body (pos. 39).
4. Tapping the pump body against the palm of your hand, remove the pump gears (pos. 38 and 38A). Using the o-ring extractor, remove the large o-ring (pos. 1178).
- 5- Pull the connection tube (pos. 207) from the pressure pipe. Remove the o-rings (pos. 1117, 1126 and 1131).



5.4 GRAVITY FED MACHINES - DISASSEMBLING FEEDING NEEDLE

To disassemble the feeding needle

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

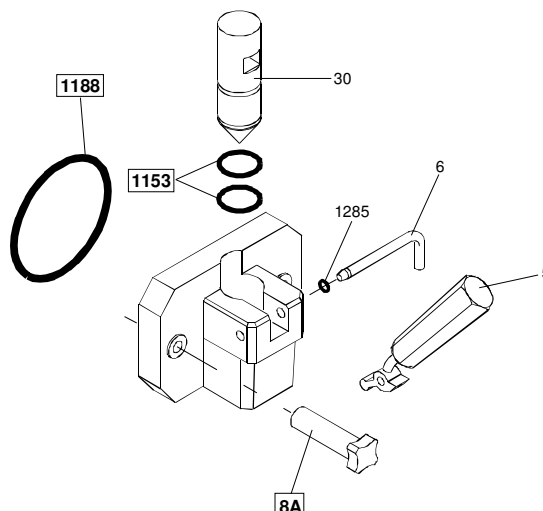


5.5 DISASSEMBLING OF THE DISPENSING DOOR

CAUTION

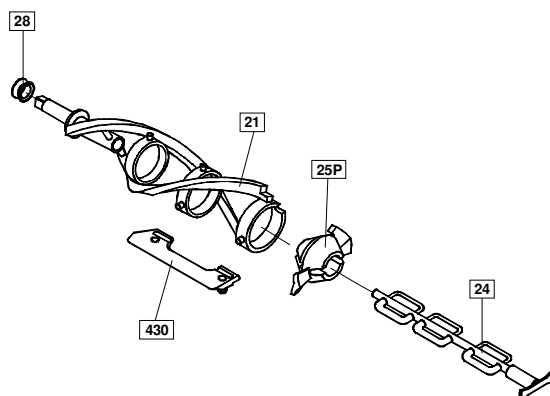
Before disassembling the dispensing head, make sure that the hopper and the cylinder are completely drained.

- 1- Remove the two retaining knobs (pos. 8A) and pull the door assembly towards you sliding it off the two front panel studs.
- 2- Pull the dispensing handle (pos. 5) so the piston (pos. 30) raises in its 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 lever pull the piston (pos. 30) out completely.
- 5- Using the o-ring extractor, remove the two piston o-rings (pos. 1153), and the large dispensing door o-ring (pos. 1188).



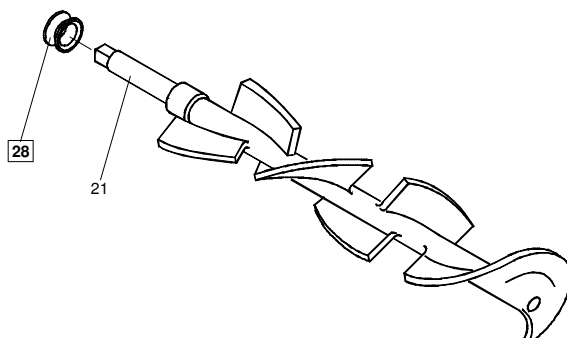
5.6 PUMP FED MACHINES - DISASSEMBLING BEATER

- 1- Pull the beater out of the cylinder.
- 2- Slide the beater seal (pos. 28) out of the beater shaft.
- 3- Pull out and remove the end pusher (pos. 25P) and the idler (pos. 24).
- 4- Remove the 3 beater blades (pos. 430).



5.7 GRAVITY FED MACHINE - DISASSEMBLING BEATER

- 1- Pull the beater out of the cylinder.
- 2- Slide the beater seal (pos. 28) out of the beater shaft.
- 3- Pull the idler (pos. 24) slightly to the front of the beater until the groove in the shaft of the idler lines up with the slot on the beater frame. Pull the idler out.





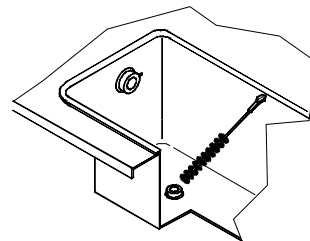
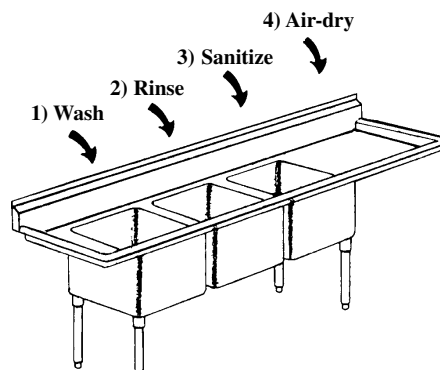
5.8 WASHING AND SANITIZING OF COMPONENT PARTS

CAUTION

For the use of sanitizers, instructions on labels are to be followed.

- 1- Fill a clean sink with detergent and hot water (122-140°F).
- 2- Wash the disassembled parts with the solution and scrub them thoroughly with the brushes provided with the machine. As you proceed, rinse with hot water. Make sure all lubricant and mix film is removed from parts.
- 3- Fill another sink with sanitizer prepared in 70-90°F water (ex. 1 packet in 2,5 gal. of water).
- 4- Place the parts in the sanitizing solution. Leave them there for a minimum of 1 minute.
- 5- Place the components on a clean tray to air-dry.
- 6- Return to the machine with a small amount of sanitizer.
- 7- Dip a brush into the sanitizer and thoroughly brush the freezing cylinder
- 8- Dip a brush into the sanitizer and thoroughly brush clean the mix inlet hole and the pump drive hub opening in the rear mix hopper.
- 9- Spray the back of cylinder and the hopper walls with sanitizer.

Repeat step 7, 8 and 9 several times

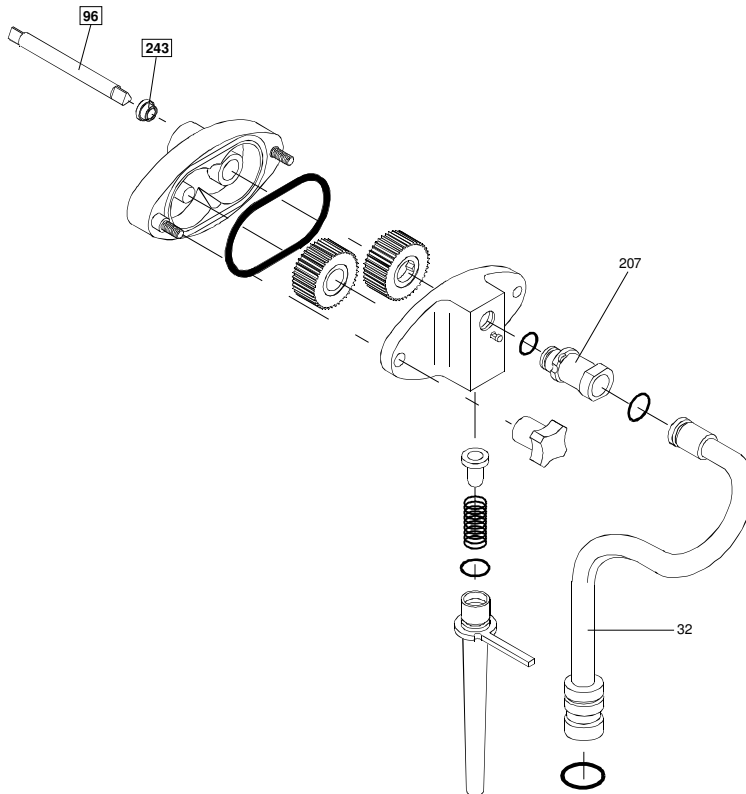


5.9 PUMP FED MACHINES - REASSEMBLING MIX PUMP



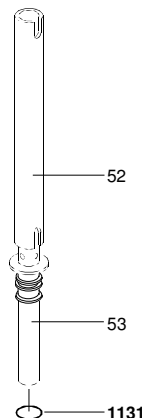
- 1- Lubricate and replace the o-ring (pos. 1117) on the connection tube (pos. 207).
- 2- Lubricate and replace the o-rings (pos. 1126 and 1131) on the pressure pipe (pos. 32).
- 3- Insert the connection tube assembly in the pressure pipe (pos. 32)
- 4- Place the pressure pipe in a sanitizing solution.
- 5- Lubricate and replace the pump body o-ring (pos. 1178).
- 6- Lubricate the sides as well as the center of the pump gears (pos. 38 and 38A) with a thin film of lubricante insert them into the pump body (pos. 39). **Do not lubricate the teeth of the pump gears.**
- 7- Lubricate and replace the o-ring (pos. 1412) on the feeding tube (pos. 271).
- 8- Hold the pump cover (pos. 202) upside down and insert the back flow valve (pos. 245) and spring (pos. 206) in their pump cover housing.

- 9- Insert the feeding tube (pos. 271) in the pump cover: push and turn it clockwise.
- 10- Assemble the pump cover (pos. 202) with the feeding tube downwards onto the pump body and turn the two knobs (pos. 8) tightly; install the mix pump in the hopper with the blocking pin hook on the right, turning the pump counter clockwise until it locks onto the hopper blocking pin.



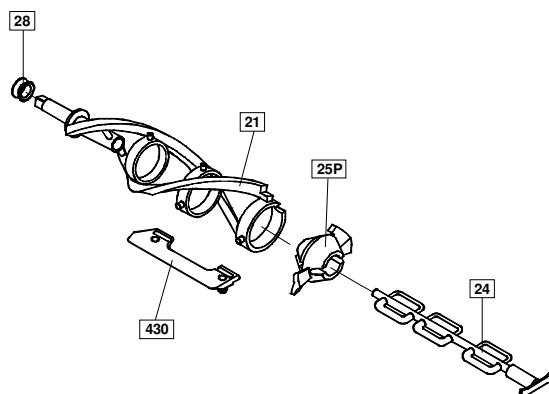
5.10 GRAVITY FED MACHINES - REASSEMBLING FEEDING NEEDLE

- 1- Lubricate the o-ring (pos. 1131)
- 2- Reassemble the feeding needle
- 3- Place the feeding needle in the sanitizing solution.



5.11 PUMP FED MACHINES - REASSEMBLING BEATER

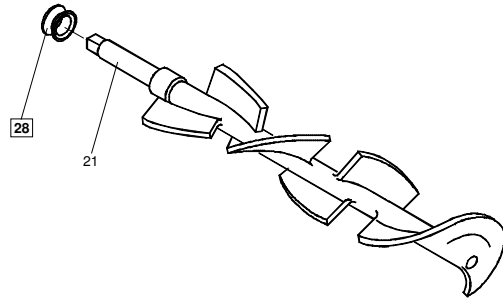
- 1- Insert the 3 beater blades (#430) onto the beater frame. Carpigiani suggests to replace the blades each 6 months (please see the tune-up kit card).
- 2- Insert the end pusher (#25P) onto the beater frame.
- 3- Insert the end of the idler shaft (#24) in the rear housing of the beater, through the end pusher. Push the idler into position.
- 4- Lubricate the sides of the beater seal (#28) and slide it onto the beater shaft.
- 5- Insert the beater assembly into the cylinder. Push it while turning it clockwise until it engages in its rear hub, otherwise the dispensing head cannot be fastened properly, mix can flow out and serious damage may occur.



5.12 GRAVITY FED MACHINES - REASSEMBLING BEATER



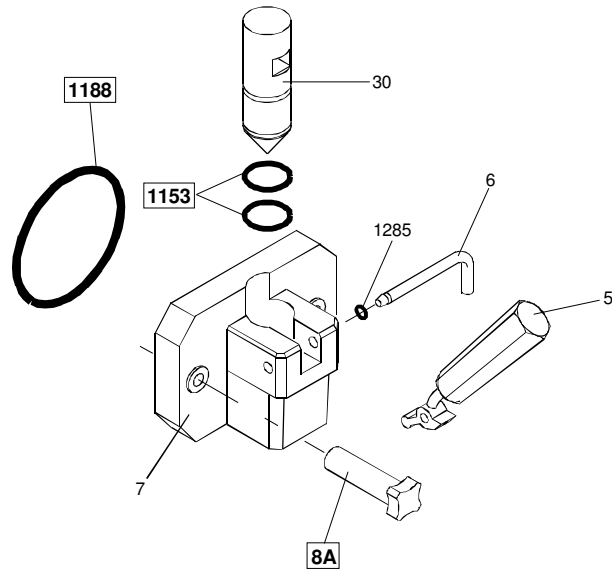
- 1- Lubricate the sides of the beater seal (pos. 28) and slide it onto the beater shaft.
- 2- Insert the beater assembly into the cylinder. Push it while turning it clockwise until it engages in its rear hub, otherwise the dispensing head cannot be fastened properly, mix can flow out and serious damage may occur.



5.13 REASSEMBLING OF THE DISPENSING DOOR



- 1- Lubricate and slide the 2 piston o-ring (pos. 1153) into their seats.
- 2- Insert the piston (pos. 30), 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 door (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 into its seat the large dispensing door o-ring (pos. 1188).
- 4- Insert the dispensing door assembly onto the two front panel studs and fasten it with the two knobs (pos. 8A) hand tight.



5.14 SANITIZING THE WHOLE MACHINE

The machine must be sanitized before mix is poured in. Proceed as follows:

- 1- Fill the hopper to the maximum level with sanitizer prepared in 70-90°F water (ex. 1 packet in 2,5 gal. of water) and allow to drain into the cylinder.
- 2- Using the brush, clean the mix level probes, the entire surface of the mix hopper, the surface of the mix pump.
- 3- Select CLENOUT function and let the beater run for about 10 seconds. Press the STOP button. The cylinder and the pump are now filled with the sanitizing solution.
- 4- Return to the machine with a small amount of sanitizer solution in a pail.
- 5- Dip the door spout brush in the pail of sanitizer and brush clean the dispensing spout. Repeat the operation 2 times.
- 6- Wiper the exterior of machine with clean sanitized towel. Repeat the operation 2 times.
- 7- Wait for at least 5 minutes before proceeding with the next instructions.
- 8- Place an empty pail under the draw spout and pull the handle
- 9- Allow all of the sanitizer to drain. If the sanitizing solution does not flow out completely, keep the spigot open and select CLENOUT function, keep the beater running for 5 seconds so that the last solution residues flow out then push STOP.



CAUTION

Do not keep the beater running for more than the time strictly needed to complete washing and sanitization. Without the lubrication of mix butterfat the beater wear out quickly



Place the cover and the drip troughs back.

5.15 MIX PRIMING

Prime Hopper:

- Retrieve 1 bag of mix from the walk-in refrigerator.
- With the draw handle open, pour one bag of mix into the hopper allowing it to drain into the freezing cylinder.
- When only full strength mix (not mix and sanitizer) is flowing from the draw spout, close the draw handle.

By pump fed machines - Connect the mix pressure pipe:

- When the mix stops bubbling from the bottom of the hopper, take the mix pressure pipe from the sanitizing solution and insert it in its position in the bottom of the hopper. Make sure your hands are clean and sanitized.
- Turn the pressure pipe clockwise towards the pump and connect the tube to the pump.
- Select production function to start the Automatic freezing operation.
- Replace the hopper cover.

By gravity fed machines - Connect feeding needle:

- When the mix stops bubbling from the bottom of the hopper, take the mix feeding needle from the sanitizing solution and insert it in its position in the bottom of the hopper and adjust the slider to the smallest diameter hole. Make sure your hands are clean and sanitized.
- Select production function to start the Automatic freezing operation.
- Replace the hopper cover.



6. MAINTENANCE

6.1 SERVICING TYPOLOGY

ATTENTION

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

Cleaning and lubricating moving parts is forbidden!

Repairs of electrical and freezing plants must be carried out by skilled engineers!



Operations necessary to proper machine running are such that most of servicing is completed during production cycle.

Servicing operations, such as cleaning of parts in contact with the product, replacing of stuffing box, disassembling of beater assembly are to be carried out at the end of a working day, so as to speed up serving operations required.

Herebelow you can find a list of routine servicing operations:

- Cleanout and replacement of stuffing box

If the product drips from the right drip pipe onto the machine front side, it means that the stuffing box (pos. 28) has no tightness.

When dismantling the beater, check the status of the stuffing box; based on how long the machine has been used, replace it if necessary, alternating it with the second stuffing box, provided with the accessories packet included in the packing.

If the stuffing box has no defects, it can still be used after washing it, i.e., when at room temperature, it has again its original shape.

To replace the stuffing box, proceed as follows.

Remove the beater unit

Remove the stuffing box from its slot

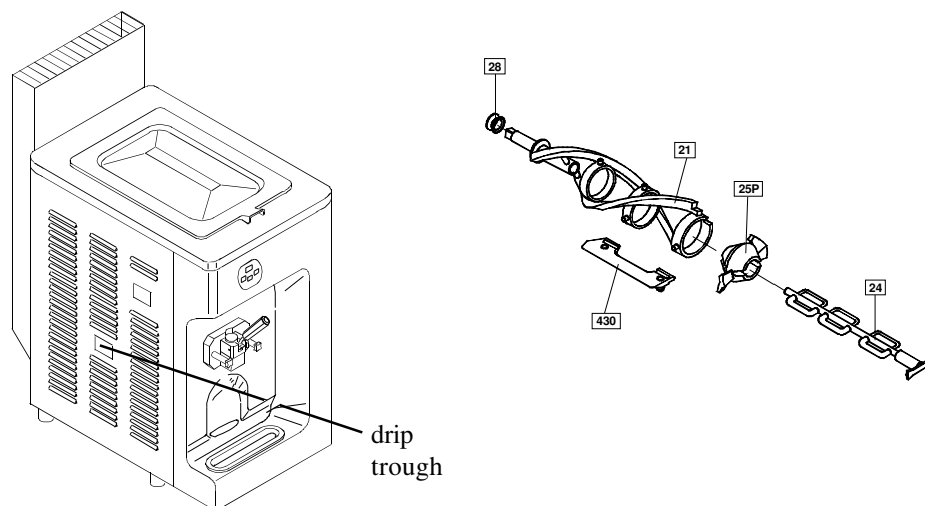
Lubricate the replacement stuffing box

Mount the new stuffing box

Clean and lubricate the replaced stuffing box and store it to allow it to regain flexibility.

WARNING

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



- Cleanout of panels

To be carried out daily with neutral soap, seeing to it that cleansing solution never reaches beater assembly at its inside.

- Cleanout of beater, pump or gravity feed, dispensing door and machine's sanitization

To be carried out according to procedures described in section 5 of this manual.

WARNING

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



6.2 WATERCOOLING

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

After closing water inlet pipe, withdraw drain pipe from its seat and let water flow out from circuit.

6.3 AIRCOOLING

Clean condenser, periodically, so as to remove dust, paper and what can prevent air from circulating.

For cleanout, use a brush with long bristles or a bolt of compressed air.

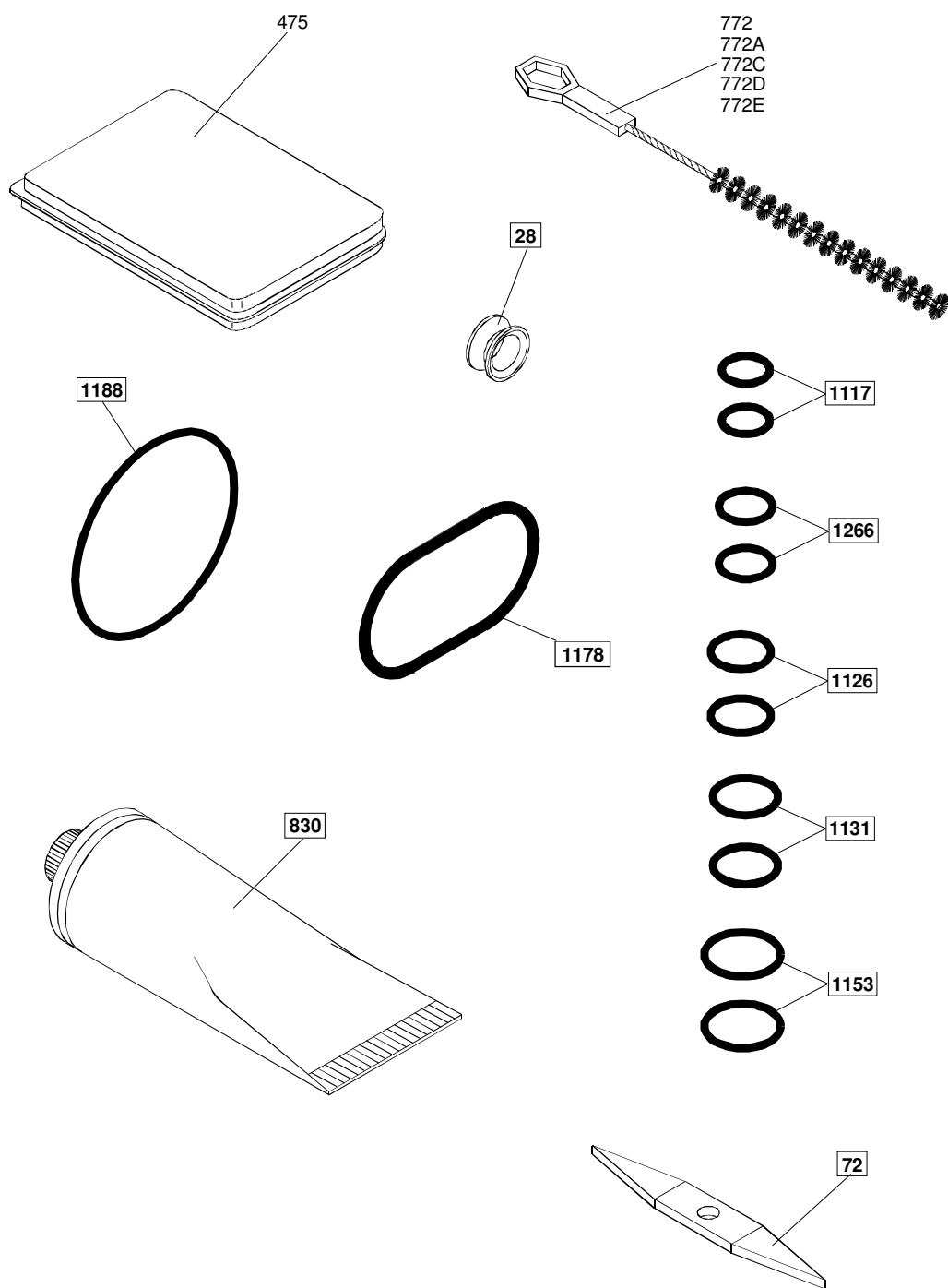


ATTENTION!

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

NEVER USE SHARP METAL OBJECTS TO CARRY OUT THIS OPERATION. GOOD WORKING OF A FREEZING PLANT MOSTLY DEPENDS ON CLEANING OF CONDENSER.

6.4 TABLE OF SPARE PARTS EQUIPMENT



Pos.	Description
28	Beater stuffing box
72	O ring extractor
475	Accessories
772	Brush D. 8x250
772A	Brush D. 15x350
772C	Brush D. 40x400
772D	Brush D. 30x640
772E	Brush D. 85x145x390

Pos.	Description
830	food-grade lubricant tube
1117	Gasket OR
1126	Gasket OR
1131	Gasket OR
1153	Gasket OR
1178	Gasket OR
1188	Gasket OR
1266	Gasket OR

7 TROUBLESHOOT GUIDE

IRREGULARITY	CAUSE	PROCEDURE TO FOLLOW
Machine does not start.	<ol style="list-style-type: none"> 1. Burnt fuses. 2. Machine not properly plugged. 3. Alarm messages on display 	<ol style="list-style-type: none"> 1. Check and replace. 2. Check and plug in. correctly. 3. See section 6..
Compressor starts and then stops after a few seconds.	<ol style="list-style-type: none"> 1. If machine is watercooled: water is not circulating. 2. If machine is aircooled: air is not circulating. 	<ol style="list-style-type: none"> 1. Open water inlet cock and check that pipe is not squashed nor bent. 2. Check that machine rear side is at least 50 cm from wall. 2. Clean condenser if obstructed by dust, or else.
Machine works but no ice cream comes out of spigot.	<ol style="list-style-type: none"> 1. Not enough sugar in mix. 2. Washing water has been left in spigot and has frozen. 	<ol style="list-style-type: none"> 1. Allow ice cream in barrel to thaw and then modify or replace the mix. 2. Allow to thaw, take out a glass of ice cream before
Machine works but ice cream is too soft	<ol style="list-style-type: none"> 1. Too much sugar in mix. 2. Machine has run too long without dispensing ice cream. 3. Ice cream is dispensed too fast. 	<ol style="list-style-type: none"> 1. Modify or replace mix. 2. Take out ice cream until fresh mix reaches the barrel. 3. Remember not to exceed production rate as per table, and adjust ice cream dispensing speed, if need be.
Mix or ice cream come out above or below piston though it is closed.	<ol style="list-style-type: none"> 1. Piston without OR or OR is worn-out. 	<ol style="list-style-type: none"> 1. Insert or replace it with a new one if worn-out.
Mix coming out of drip drawer	<ol style="list-style-type: none"> 1. Stuffing box missing or worn-out. 	<ol style="list-style-type: none"> 1. Install it if missing. If worn-out, replace it with a new one.
Piston hard to operate.	<ol style="list-style-type: none"> 1. Dry sugar on piston. 	<ol style="list-style-type: none"> 1. Wash thoroughly and grease piston and OR with edible fat.
Ice cream comes out from front lid .	<ol style="list-style-type: none"> 1. OR missing or not properly fit. 2. Front lid knobs not tightened evenly. 	<ol style="list-style-type: none"> 1. Check and put remedy. 2. Stop machine. loosen and tighten them again.
Bacteria tests show too high level.	<ol style="list-style-type: none"> 1. Too many bacteria in the mix. 2. Machine not clean enough, nor sanitized. 3. Mix left into the machine over 72 hours without performing cleaning and sanitizing operations. 	<ol style="list-style-type: none"> 1. Improve procedure of mix preparation by sanitizing all containers. Have mix analyzed before pouring it into the tank. Storage temperature is too high: adjust storage thermostat. 2. Empty and clean the machine with care. It is then important to sanitize the machine as indicated in section SANITIZATION. 3. Empty the machine: clean and sanitize it; then fill with fresh and pasteurized mix kept at 39°F.