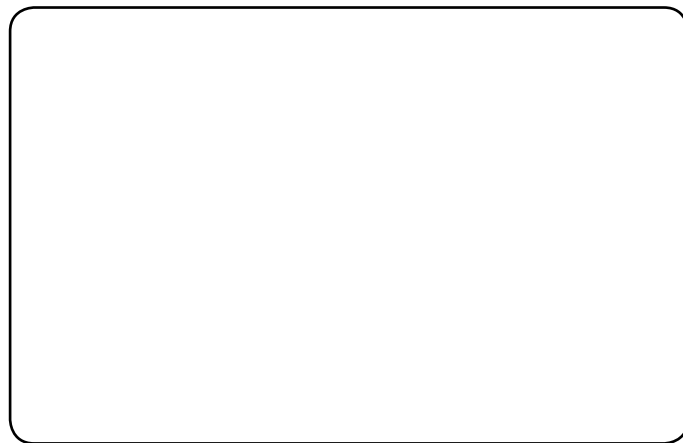




INSTRUCTIONS HANDBOOK

LB 200 G

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, nowadays its production has got UNI-EN-ISO 9001-2000 Certified Quality System.

Moreover, Carpigiani machines comply with following European Directives:

- “Machinery” Directive 98/37/EC,
- “Low Voltage” Directive 73/23/EEC,
- “EMC” Directive 89/336/EEC,
- “PED” Directive 97/23/EC,
- Regulation 2004/1935/EC relating to “Materials and articles in contact with foodstuffs”

CARPIGIANI

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Tel. 051-6505111 - Fax 051-732178

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

CARPIGIANI policy pursues a steady research and development, thus it reserves the right to make changes and revisions whenever deemed necessary and without being bound to previous statements to the purchaser.

Issue: 1	Date: 08/04	Changes:
written: AM	Checked: JC	Approved: RV

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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 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.

**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.

MODEL NO. _____			
SERIAL NO. _____		DATE _____	
VOLTAGE _____		PHASE _____ HZ _____	
MAX. BREAKER/FUSE SIZE _____ AMP			
MINIMUM CIRCUIT CAPACITY _____			
HIGH SIDE PSIG _____		REF. TANK PRES. _____	
LOW SIDE PSIG _____		OPERATING PRES. _____	
REFRIGERANT _____ AND WT. _____ OZ			
BEATER		COMPRESSOR	
QTY		FAN	
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

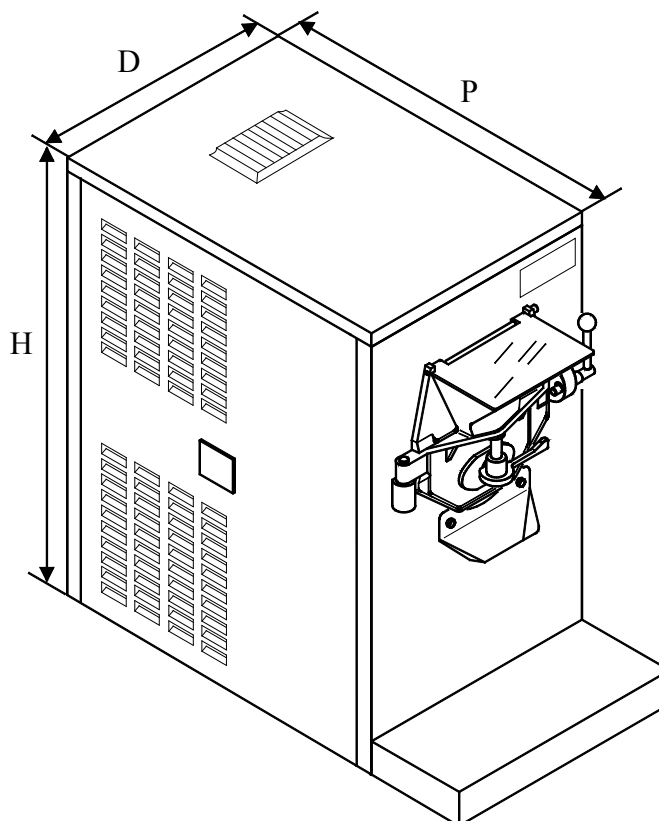
LB 200 G are counter batch freezers.

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

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

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

1.2.2 Machine layout



1.2.3 Technical features

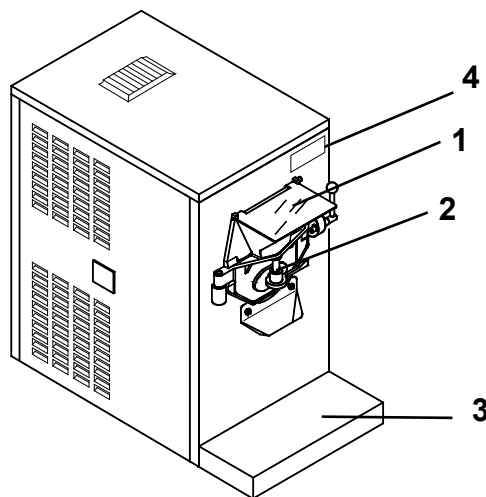
Model	Hourly output*	Cylinder Capacity	Electric power			Rated Power	Dimensions inc.			Net weight
	Min	Max	Volt	Hz	Phases	Hp	Width (W)	Depth (D)	Height (H)	lbs
LB 200 G	8/10 gal	5 qts	208/230	60	1	2,8	38.5	28.7	31.7	396

* Hourly output and mix quantity per batch may vary depending on temperature and type of mix used, as well as on desired overrun.
Performances featured by a room temperature of 25°C

1.2.4 Machine groups location

Caption:

- 1 Front lid
- 2 Ice cream door
- 3 Shelf for the tank
- 4 Control Panel



1.3 INTENDED USE

This machine must only be used to produce ice cream, conforming with contents of paragraph 1.2.1 "General Information", within the functional limits hereunder reported:

Voltage:	±10%
Air min. temperature	10°C
Air max. temperature	43°C
Water min. temperature	10°C
Water max. temperature	30°C
Water min. pressure	0.1 MPa (1 bar)
Water max. pressure	0.8 MPa (8 bar)
Max air relative humidity	85%

No other use than the one complying with the original manufacturing purpose is foreseen

1.4 NOISE

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

1.5 STORING A MACHINE

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

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

1.6 DISPOSAL OF PACKING STUFFS

When opening the packing crate, 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

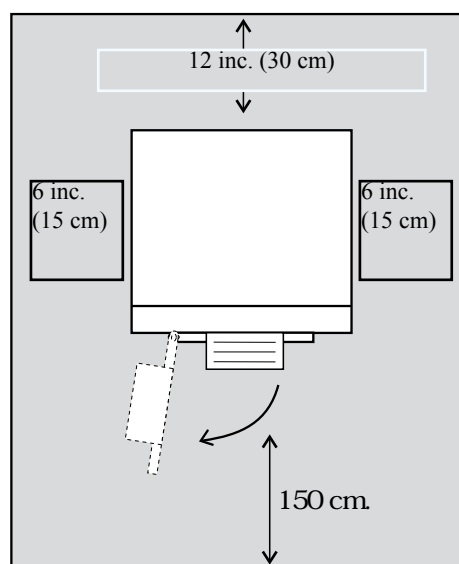
The machine must be installed in such a way that air can freely circulate all around. Rooms for the approach to the machine must be left free in order to enable the operator to act without constraint and also to immediately leave working area, if need be. The minimum approach room to working area should be at least 60 inc. (150 cm) in consideration of space taken by opened doors.

ATTENTION

MACHINES WITH AIRCOOLED CONDENSER must be installed NO CLOSER THAN 12 INC. (30 cm) to any wall in order to allow free air circulation around the condenser.

NOTE

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



2.2 WATER SUPPLY CONNECTION

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

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

2.3 MACHINE WITH AIRCOOLED CONDENSER

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

NOTE

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



2.4 MACHINES WITH WATERCOOLED CONDENSER

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

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

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

2.4.1 WATER VALVE ADJUSTMENT

IMPORTANT

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

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

NOTE

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

ATTENTION:

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

2.5 ELECTRIC CONNECTION

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

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

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

IMPORTANT

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

2.5.1 Replacing the power cable

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

IMPORTANT

Direction of rotation

Looking at the machine front, direction beater rotation is anticlockwise.

Reversal of rotation direction

If the beater rotation is not correct, reverse it by interchanging two of the three leads coming from the circuit breaker.



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. INSTRUCTIONS FOR USE

3.1 MACHINE SAFETY WARNINGS

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

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

- An uncorrect use or handling is avoided.
- Safety devices are neither removed nor tampered.
- Service is regularly carried out
- Only are original spare parts to be used especially as far as those components with safety functions are concerned (ex.: protection microswitches, thermal relays).

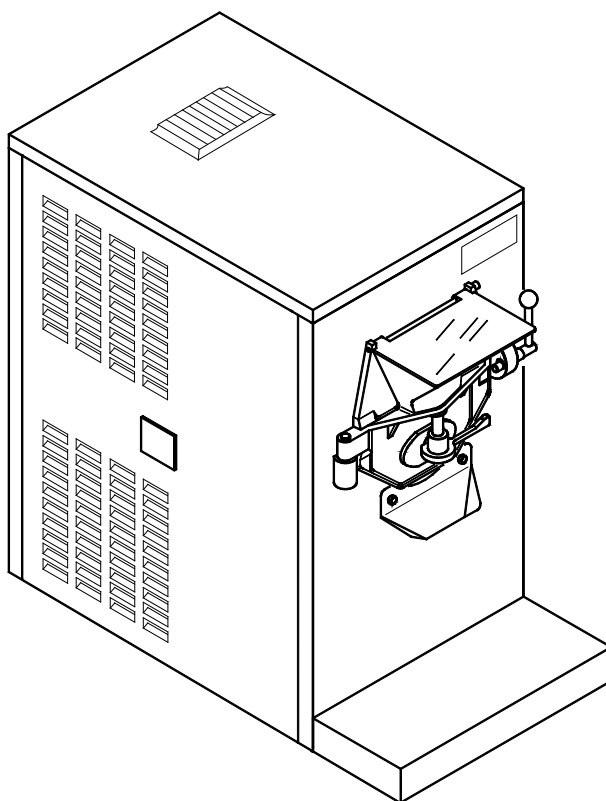
To achieve the above, the following is necessary:

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

3.2 MACHINE CONFIGURATION

The machine consists of a transmission of movement for beater assembly, a heating and cooling system with aircooled or watercooled condenser.

Ice-cream is prepared by letting the mix into the hopper and starting the automatic production program, up to reach the best ice cream consistency as set by CARPIGIANI in the observance of minium and maximum ice cream mix quantities reported in the table paragraph 1.2.2. When the cycle ends, ice cream is ready to be taken out from ice cream outlet lid.





3.3 ELECTRONIC CONTROL KEYBOARD AND KEY FUNCTION

The machine has an electronic control keyboard. For a correct use of the keys, press the same on the symbol or in the middle. When a led lights up, it means that relevant function has been selected. Monitor and keyboard controls are hereafter described and illustrated.



Function insertion light indicators

When a light indicator lights up, it means that the function relevant to the symbol next to the light indicator has been inserted.



Function STOP

In this function the machine is off and relevant red light is on.



PROGRAMMING key

This key is active in Programming mode, only. By pressing it during the production cycle, the display shows the HOT consistency set.



SELECTION KEY

By pressing this key many times, you can select hereafter described functions:

- Cleaning (CLE)
- Production (Prd)

Latest selection will be activated after 2 seconds (led is " on).

This key is also used to reset alarms that remain on the display.



Function CLEANING

By selecting this function, relevant light led lights up. Only does the beater run, whereas the cooling unit is off. This is a timed function and ends automatically when set time is over (usually 3 minutes).



Function PRODUCTION

If the sign Prd is left on the display 2 seconds, the letter "-H-" will appear.

By pressing the Selection Key again, the letter "-L-" will be displayed.

Latest selection will be activated after 2 seconds (led is " on).

A production cycle (-H- or -L-) will start depending on your selection.

Production -H-

On cycle start, the beater motor will run at production low speed and will be followed by the compressor 2 minutes later.

The product is cooled till the consistency set relevant to -H- cycle is reached. Consistency is displayed in real time, whereas, HOT Set can be read 5" long after pressing the PROGRAMMING Key.

An intermittent sound of the buzzer will warn that the production cycle has been completed. The display blinks. The beater keeps on running and the compressor stops 20" and restarts to keep ice cream at its proper consistency.

Production -L-

On cycle start, the beater motor will run at production high speed and will be followed by the compressor 2 minutes later.

The product is cooled till the consistency set relevant to -H- cycle is reached. Consistency is displayed in real time, whereas, HOT Set can be read 5" long after pressing the PROGRAMMING Key.

An intermittent sound of the buzzer will warn that the production cycle has been completed. The display blinks. The beater keeps on running and the compressor stops 20" and restarts to keep ice cream at its proper consistency.



Function DISTRIBUTION

The function Distribution is enabled in Production, only and it allows the product Cooled Distribution. From Production mode, press the Selection Key. The sign "Out" will be displayed 2" long; soon after, current value of HOT consistency will be displayed, too. Further, the Distribution Led will light up.

In this function the beater runs at its highest speed and the compressor starts if required by the product consistency. This will avoid the compressor operates when the cylinder is empty or when the product is already too cold. From this function the machine will automatically pass to Stop after 3' or after pressing the Stop Key.

3.4 PRELIMINARY OPERATIONS, WASHING AND SANITIZING

Before the machine start-up, it is necessary to thoroughly wash its components and sanitize food area parts.

IMPORTANT

Cleaning and sanitizing must perfectly be carried out as a habit, at the end of each production day, in order to grant the production quality in the observance of the necessary hygienic standards.



CAUTION

Neither user solvents, nor alcohols and detergents that may damage the machine components or cause functional parts pollution



To wash this machine, Carpigiani recommends to use **XSAN** sanitizier. Using **XSAN** will optimize wash and sanitation because it eliminates 2 steps of the procedure (i.e., a rinse and a washing step); in practice, **XSAN** is a time saver and makes washing/sanitation easier.

3.4.1 How to use XSAN

Prepare a solution with water (at a temperature between 45 and 60°C) and **XSAN** concentrated at a percent between 1 and 3 % depending on water hardness.

Dipping Wash/santitation

- Remove coarse residual food by hand
- Remove the smallest residues with bolt water
- Dip all parts to be cleaned into **XSAN** solution
- Let the solution act some 10/15 minutes.
- Rinse the parts thoroughly with a plenty of drinking water.





3.4.2 Outside Cleaning

Remove dust and protective film which the machine was coated with before shipment. Use just water with addition of **XSAN**, if need be, and a soft cloth.

3.4.3 Preliminary Cleaning

Machine is off and front lid is closed: pour **XSAN** solution into the cylinder.

Select the function **CLEANING** and let the beter run as less as you can, in order to avoid a useless wear of slinding shoes and cylinder.

Drain the cylinder by opening the drain door.

3.4.4 Disassembling the machine

Disassemble, clean with **XSAN** solution and reassemble the machine parts as described in section 5 of this handbook.

3.4.5 Hygiene

Ice-cream fat contents are ideal fields of mildew and bacteria proliferation. To eliminate them, it is necessary to wash and clean parts in contact with mix and ice cream with utmost care, as described above.

Stainless steel and plastic materials, as well as rubber employed in the construction of the machine parts and their special design make cleaning easy, but cannot prevent mildew and bacteria if the machine is not properly cleaned.

3.5 ICE CREAM PRODUCTION

After washing, sanitizing and fully rinsing the machine right before its use, as described in section 5 Cleaning, pour the desired mix quantity into the cylinder, in the observance of minimum and maximum batches indicated in table of paragraph 1.2.2.

Before pouring the mix, make sure that ice cream outlet door is perfectly closed.

Select the function **PRODUCTION**.

The operator will be warned by an acoustic signal when the production cycle has come to completion.

3.5.1 Ice-cream distribution

When the production program is over, ice-cream can shall be taken out as follows:

- Place the tank on the mix, under the ice-cream outlet chute.
- Turn the unlock outlet door (ref. 1) letwards
- Lift the handle with the lid.
- Lock the lid up towards the right till its stop
- Select the function **DISTRIBUTION**

WARNING

To avoid a useless wear of sliding shoes and cylinder, the machine will pass to Stop position after 3' continuous operation.

3.6 SETTINGS AND CHECKS

3.6.1 Setting the product consistency

Inboth programs -L- and -H-, the consistency to be reached can be changed as follows:

- 1) Machine in Production: press the Key "P".
- 2) Hot consistency Set will be displayed and can only be increased with SELECTION key between 20 and 120; so set new Hot value, now.
- 3) Press no key for 5 seconds in order to store the new value; new HOT value will now be on the display.

4. SAFETY DEVICES

4.1 ALARMS

This machine has a self - “ CHECK “ device indicating any possible operation troubles. The “CHECK” led (a decimal point down on display right side) blinks when an alarm is active and it remains on to remind us that an alarm has tripped and reset. When an alarm is displayed, check the one it deals with, through the table below.

If it is a critical alarm, the machine will not allow to enter in Production.

Press Selection in order to delete the alarm message on the display after the alarm has reset.

The table here below shows the available alarms:



ALARM	DESCRIPTION
dor (IMS)	Safety Magnet Switch (Door open). Machine sets at Stop with sign “dor”. On closing the door, the alarm will automatically reset from display and machine is in Stop.
Pr (PRESS)	High pressure switch has tripped. This alarm causes the compressor stop and the display shows the message “Pr”. If the Pressure switch trips 3 times or 2 running minutes, the machine will pass to Stop. Check inlet and outlet water pipes which shall be such that water can freely circulate when the compressor runs. By air-cooled units, check whether the condenser fan runs when the compressor is on, or check whether the condenser is obstructed: if this is the case, clean it with a compressed air jet.
PtA (PTMA)	Beater Motor Thermal Protector Machine passes to Stop with “ Pt”.
OL (Al. Inverter)	Alarm Inverter. Machine passes to Stop with “ OL”. To reset the Inverter, clear the machine 1' and then turn it on again.

4.2 BLACKOUT

If, in case of power failure, the machine was in:

- STOP or Cleaning or distribution, on power return it will pass to STOP.

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

IMPORTANT

Cleaning and sanitizing must perfectly be carried out as a habit, at the end of each production day, in order to grant the production quality in the observance of the necessary hygienic standards.



CAUTION

Neither user solvents, nor alcohols and detergents that may damage the machine components or cause functional parts pollution



To wash this machine, Carpigiani recommends to use **XSAN** sanitizer. Using **XSAN** will optimize wash and sanitation because it eliminates 2 steps of the procedure (i.e., a rinse and a washing step); in practice, **XSAN** is a time saver and makes washing/sanitation easier.

5.1 HOW TO USE XSAN

Prepare a solution with water (at a temperature between 45 and 60°C) and **XSAN** concentrated at a percent between 1 and 3 % depending on water hardness.

Dipping Wash/santitation

- Remove coarse residual food by hand
- Remove the smallest residues with bolt water
- Dip all parts to be cleaned into **XSAN** solution
- Let the solution act some 10/15 minutes.
- Rinse the parts thoroughly with a plenty of drinking water.



5.2 OUTSIDE CLEANING

Remove dust and protective film which the machine was coated with before shipment. Use just water with addition of **XSAN**, if need be, and a soft cloth.



5.3 PRELIMINARY CLEANING

Machine is off and front lid is closed: pour **XSAN** solution into the cylinder.

Select the function **CLEANING** and let the beter run as less as you can, in order to avoid a useless wear of slinding shoes and cylinder.

Drain the cylinder by opening the drain door.





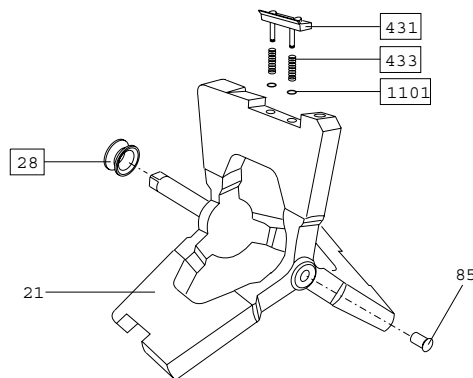
5.4 BEATER DISASSEMBLY

Remove the beater from the freezing cylinder by slightly turning it anticlockwise and pulling it softly upwards, minding not to damage it.

WARNING

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

- Disassemble all beater parts (see the picture)

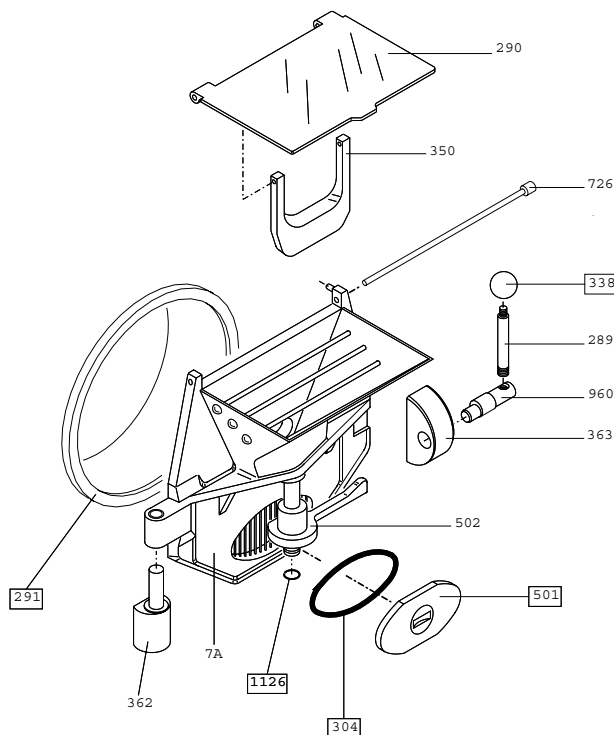


5.5 FRONT LID DISASSEMBLY

- Lift lid locking lever and shift it towards right.
- Open the lid by rotating it on its hinge.
- Remove lid while lifting it.
- To carry out cleaning operations, remove all movable parts and seal with barrel.

5.5.1 Ice cream Door Disassembly

- Lift the lid by turning the lever (ref. 502) by 90° towards the left.
- Lift the lever and the door and lock the lid upwards by turning the lever rightwards till its stop.
- Remove the OR from the lid sliding rod, now, and take it out, in order to release the lever, as well.
- Remove the OR of the lid seal.



5.5.2 Hopper cover disassembly

Machine is off: In order to clean the mix filling area, remove cover clamping rod (pos. 726). The cover is provided with a small wall preventing ice-cream comes again up to the hopper which must be disassembled for cleaning.

5.6 WASHING AND SANITIZING THE PARTS

- Remove coarse residual food by hand
- Remove the smallest residues with bolt water
- Dip all parts into **XSAN** solution to clean them
- Let the solution act some 10/15 minutes.
- Rinse the parts thoroughly with a plenty of drinking water.
- Place the parts on a clean tray and let them dry in the air
- Dip a brush into the sanitizing solution and clean the cylinder.
- Dip a brush into the cleaning solution and clean the beater housing hole.
- Spray the solution onto the cylinder walls

Repeat operations as at items 7, 8 and 9 a few times



5.7 REASSEMBLING THE PARTS

1. Reassemble the beater (OR and blades) providing to lubricate ORs with an edible fat film.
2. Reassemble the front lid parts providing to grease the gaskets with an edible fat film.



5.8 SANITIZING THE MACHINE

Your machine needs be sanitized before its use. Procedure to follow:

1. Fill the cylinder with **XSAN** solution prepare in water at 45-60°C (1,5 lt. max) and let it in the cylinder.
2. Select the function Cleaning and let the machine run 10 seconds. Press the key STOP. Cylinder and pump have by this been filled with **XSAN** solution
3. Fill a pail with **XSAN** solution.
4. Dip a brush into the solution and clean the ice-cream door. Repeat this operation twice.
5. Clean the machine external surface with a sanitizing cloth. Repeat this operation twice.
6. Wait for 5 minutes before carrying out the operations hereafter escribed
7. Place a pail under the outlet door and open it to drain all **XSAN** solution from the cylinder
8. Rinse the cylinder by filling the cylinder with drinking water.
9. Drain all water from the outlet door.



WARNING

Too a long running in "CLEANING" position with empty cylinder or after just filling it with sanitizer may cause a quick wear of the beater sliding shoes.



CAUTION

Do not touch sanitized parts with napkins or else.



5.9 HYGIENE

Ice-cream fat contents are ideal fields of mildew and bacteria proliferation. To eliminate them, it is necessary to wash and clean parts in contact with mix and ice cream with utmost care, as described above.

Stainless steel and plastic materials, as well as rubber employed in the construction of the machine parts and their special design make cleaning easy, but cannot prevent mildew and bacteria if the machine is not properly cleaned.

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, disassembling of beater assembly, of ice cream door as well as of hopper cover are to be carried out at the end of a working day, so as to speed up servicing operations required.

Herebelow you can find a list of routine servicing operations:

- **Cleaning the beater**
To be carried out at the end of every working day
- **Cleaning the front lid**
To be carried out at the end of every working day
- **Cleaning the panels**
To be carried out daily with neutral soap, seeing to it that cleaning solution never reaches beater assembly at its inside.
- **Cleanout and sanitization**
At the end of each working day, according to procedures described in section 5 of this manual.

WARNING

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



6.2 WATERCOOLED MACHINES

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



6.3 AIRCOOLED MACHINES

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.



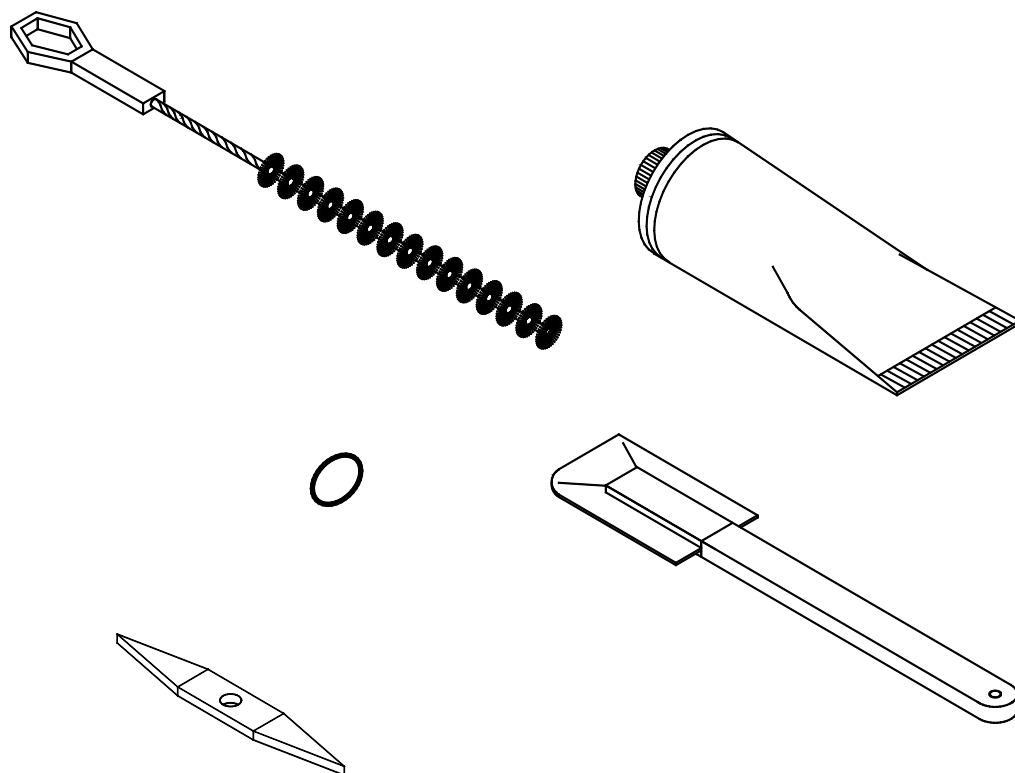
ATTENTION

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 ACCESSORIES KIT



7. TROUBLESHOOT GUIDE

IRREGULARITY	CAUSE	REMEDY
Machine does not start	1. Fuses burnt 2. Machine not properly plugged 3. Alarms on the display	1. Check and replace 2. Check and plug in again
Compressor starts, then stops after a few seconds	1. By watercooled machine: water is not circulating 2. By aircooled machine: air is not circulating	1. Open water cock and check whether water tube is squashed or bery doubled up. 2. Check that rear of machine is at least 12 inches (30 cm.) from wall or any obstacle. Clean condenser if obstructed by dust or else.
Ice cream comes out from front lid	1. OR missing or not properly installed	1. Check and put remedy
Bacteria tests show too high level	1. Too high bacteria charge in mix 2. Machine not clean enough and not sanitized 3. Mix left longer than 72 hours in the machine without washing and sanitizing it	1. Improve preparation procechure by sanitizing all containers. Have mix analyzed before pouring it into the machine. Storage temperature too high: storage thermometer to be set. 2. Empty the machine: clean it with care and sanitize it as described in chapter Sanitation. 3. Empty the machine, clean and sanitize it and then fill with fresh and pasteurized mix at a temperature of 4°C.

