



INSTRUCTION HANDBOOK

LABO XP

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:

- 98/37/CE Machines Directive;
- 73/23/CEE Low tension Directive;
- 89/336/CEE EMC Directive;
- 89/109/CEE Food Contact Directive.

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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.

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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.

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.: frontlid microswitch).

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.

 ANZOLA EMILIA - BOLOGNA - ITALY		 <small>10089654588-4</small>	
A	B	F	G
Matr. ●		●	●
Cod.			
V ●		● Hz	● kW
	● A		
Gas	● kg		
			
C	D	E	H
			I

Legend:

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

1.1.2 Information about service

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

1.1.3 Information to the user

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



1.2 INFORMATION ABOUT THE MACHINE

1.2.1 General data

LABO XP are batch freezers for the production of ice cream.

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

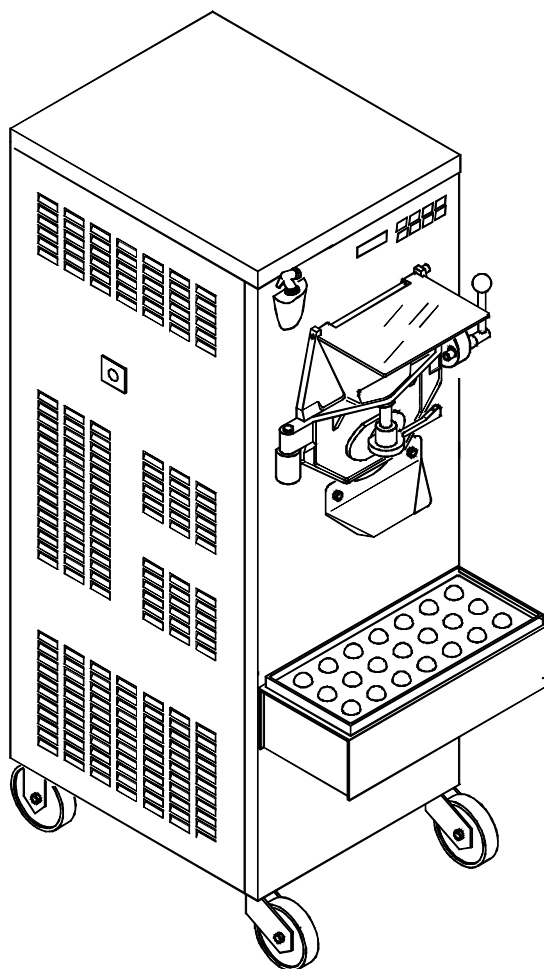
Bearing in mind the above statements, please take heed of the following suggestions:

- Make your mixes yourselves from high quality natural ingredients or buy them from reliable companies.
- Follow closely instructions given by your mix supplier for the preparation of the mixes.
- Do not alter your mix supplier's 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**.

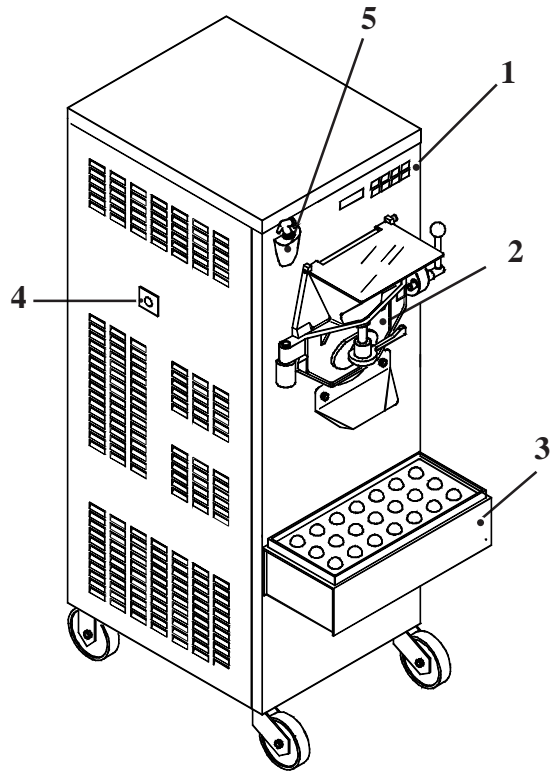
1.2.2 Technical features

MODEL	Production output		Mix q.ty per batch		Electric spec.			Rated Power kW	Condenser	Dimensionscm			Net weight kg
	kg	litres	Min. kg	Max. kg	Volt	Hz	Ph			Width	Depth	Height	
Labo 20 30 XP	20/30	28/40	3	5	400	50	3	2,9	Water	50	65	140	230
Labo 30 45 XP	30/45	42/60	5	7,5	400	50	3	4	Water	50	65	140	270
Labo 40 60 XP	40/60	56/84	7	10,5	400	50	3	6	Water	60	85	140	370

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



1.2.3 Location of machine groups



Caption

- 1 Control panel
- 2 cylinder front lid
- 3 Shelf for drip tray
- 4 drip drawer
- 5 shower

1.3 INTENDED USE

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

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

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

1.4 NOISE

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

1.5 STORING A MACHINE

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

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

1.6 DISPOSAL OF PACKING STUFFS

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

2. INSTALLATION

2.1 ROOM NECESSARY TO THE MACHINE USE

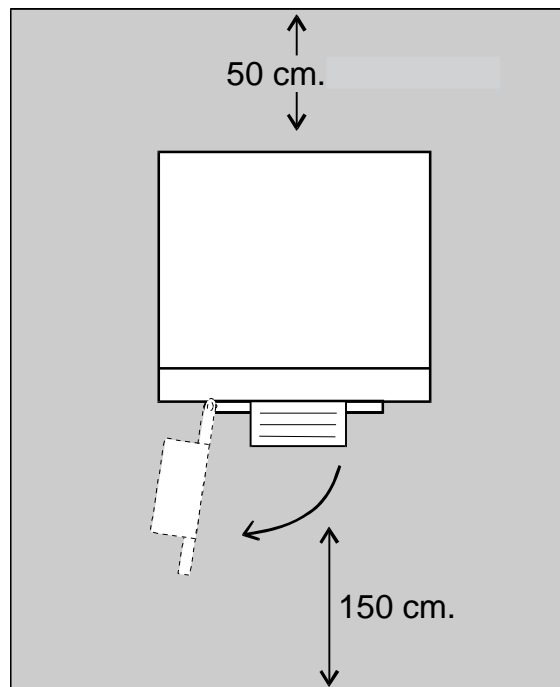
The machine must be installed in such a way that air can freely circulate all around.
Rooms for the approach to the machine must be left free in order to enable the operator to act without constraint and also to immediately leave working area, if need be.
The minimum approach room to working area should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

ATTENTION

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

NOTE

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



2.2 WATER SUPPLY CONNECTION

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

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

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

2.3 MACHINE WITH AIRCOOLED CONDENSER

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

NOTE

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





2.4 MACHINES WITH WATERCOOLED CONDENSER

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

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

Connect inlet pipe marked by plate "Water Inlet" 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.

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

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

IMPORTANT

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

2.5.1 Replacing the power cable

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

IMPORTANT

**Direction of rotation
Beater rotation is anticlockwise**

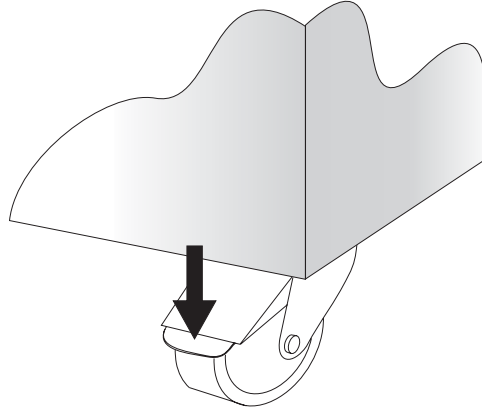
Reversal of rotation

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



2.6 LOCATION

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



2.7 REFILLING

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

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

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



2.8 MACHINE TESTING

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

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

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



3. DIRECTIONS FOR USE

3.1 MACHINE SAFETY WARNINGS

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

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

- An uncorrect use or handling is avoided
- Safety devices must neither be removed nor tampered
- 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:

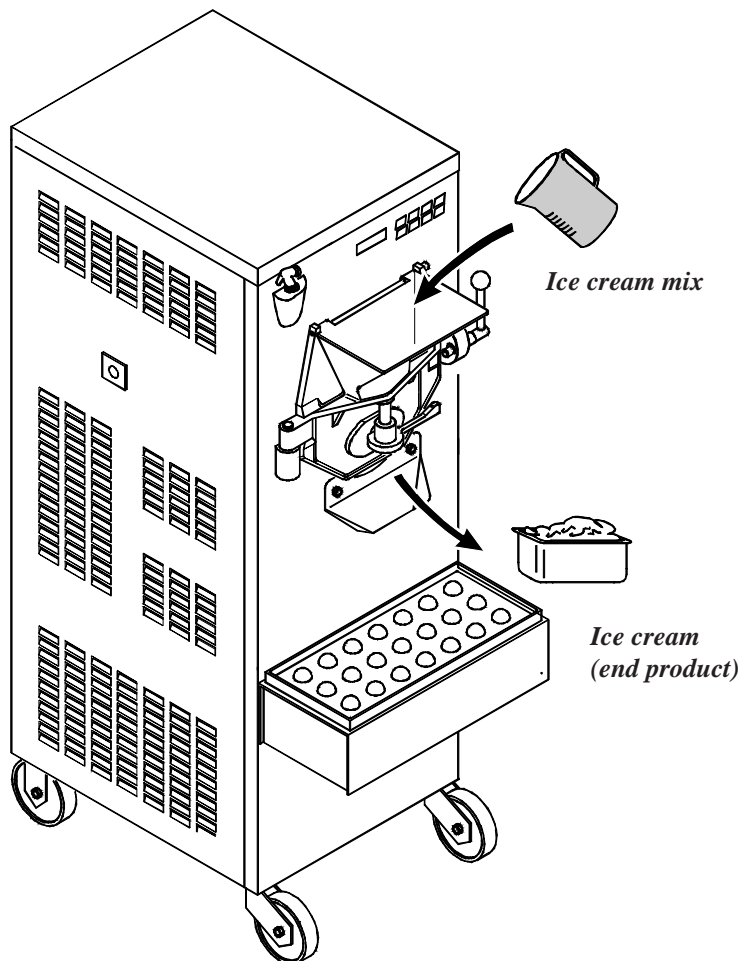
- At working place an instruction manual relevant to the machine should be available.
- Such documentation must be carefully read and regulations must consequently be followed.
- Only adequately skilled personnel will have to be assigned to electrical equipment.



3.2 MACHINE CONFIGURATION

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

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

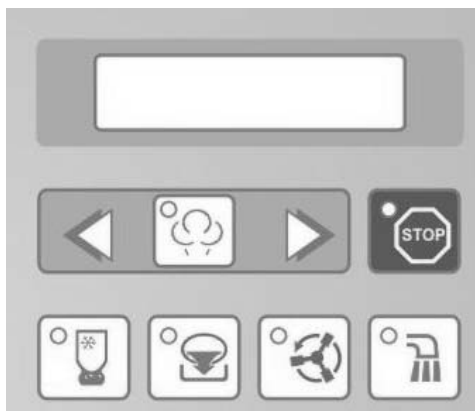




3.3 CONTROLS

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

3.3.1 Electronic control keyboard



STOP

In this function, machine is still and relevant red led is on. The display shows STOP.



PRODUCTION

When selecting this function, the product inside the cylinder is cooled down to reach the set time/consistency value.

On display:

SET	100
ICECREAM	000

SET means set value, which can be modified da 50 to 150 with keys INCREMENT and DECREMENT.

ICE CREAM indicates set value already reached.

When production process is over a intermittent beep will sound



CREMOLATA

When selecting this function, the production of cremolata will start.

On display:

SET	16:00
SLUSH	08:56

SET indicates total production minutes (modifiable value during production 2 to 20 minutes with keys INCREMENT and DECREMENT).

SLUSH indicates time and increment every second.

When production process is over a intermittent beep will sound

**DISTRIBUTION**

When selecting this function, relevant led lights up and fast beater motor will start in order to take out ice cream from the cylinder easier.

On display:



To stop beating, press **STOP** or just wait for 3 minutes.

From **DISTRIBUTION** you may access to the function **COOLED DISTRIBUTION** by pressing the key **PRODUCTION**. In this case, **PRODUCTION** key led will light and the compressor will run 20 seconds, after which you return to the standard distribution mode.

**CLEANING**

When selecting this function, the beater starts running, whilst the freezing unit is off.

Caution

3 minutes after the function insert, the machine will automatically set at "STOP" in order to avoid a heavy wear of both beater and cylinder.

**WATERINLET**

When selecting this function, relevant led will light and water inlet will be activated through the shower on machine front.

**INCREMENT**

This key increases those values that can be modified both in Programming and in the values where allowed.

**DECREMENT**

This key decreases those values that can be modified both in Programming and in the values where allowed.

3.4 ICE CREAM PRODUCTION (WORKING PROCESS)

After washing, sanitizing and thoroughly rinsing the machine right before its use, as per instructions given in section 5, cleaning, draw the mix from the pasteurizing unit, pour the desired quantity through the lid filling hopper into the cylinder, paying attention to respect minimum and maximum quantities indicated in table, paragraph 1.2.2.

Before pouring the mix, make sure that frontlid and icecream outlet door are perfectly closed. Select the function **PRODUCTION**.

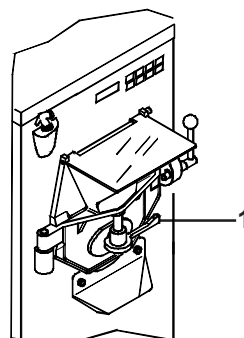
When the program is over, a beep will warn the operator.



3.4.1 Ice cream distribution

When the production program is completed, ice cream will be taken out from the cylinder as follows:

- Place a tank on the shelf, under the icecream outlet.
- Turn the lid unlocking lever leftwards (ref. 1).
- Lift the lever together with the lid
- Lock the lid upwards by turning the lever rightwards till it stops.
- Select the function **DISTRIBUTION**.

**SAFETYNOTE**

To avoid a useless wear of sliding shoes and cylinder, the machine will set at STOP after 3 minutes continuous running





3.4.2 Use of ice cream distribution handle

Locking

Lock ice cream door turning the handle (ref. 1) rightwards till the stop.

Opening

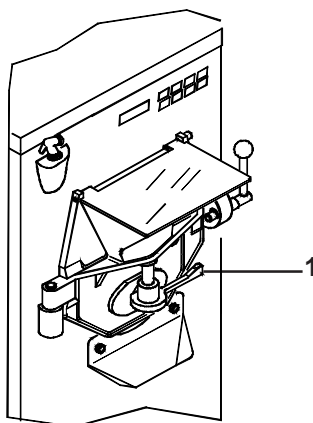
Turn the handle (ref. 1) 90° leftwards.

Lift handle and ice cream door.

Lock ice cream door upwards by turning the handle (rif. 1) rightwards till the stop.

Closing

Repeat in the opposite direction opening sequence described above.



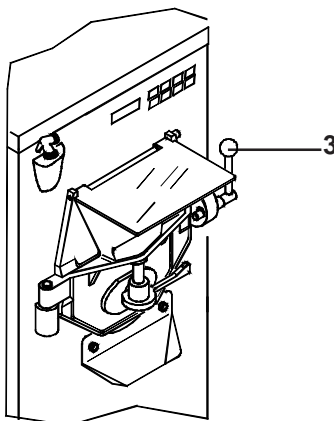
3.4.3 Front lid cam locker (rif. 3)

Opening:

Push the knob to the front and pull it rightwards.

Closing:

Close the lid, push the knob leftwards and lower.



4. SAFETY DEVICES

4.1 FRONT LID MICROSCHITCH

On closing lid of the freezing cylinder in which inside there is the beater assembly, you can find a microswitch controlling the immediate machine stop when the front lid is opened.



WARNING
TAMPERING OR REMOVING DEVICES FOR THE OPERATOR'S SAFETY IS SEVERELY FORBIDDEN.



ATTENTION
CARPIGIANI will not be responsible for any damages to people and/or to the machine, if safety devices turn to be tampered with or removed.



4.2 ALARMS

Hereafter the main alarm messages indicated on display:



Door Opened	Safety magnet switch or front lid open In any function, the machine will set at STOP.
Alarm PR	Pressures switch When the pressure switch trips, all outputs are off and the machine sets at STOP. "Alarm PR" will be displayed till the alarm is active.
Alarm RTL	Thermal relay slow beating When the thermal relay slow beating trips, all outputs are off and the machine sets at STOP. "Alarm RTL" will be displayed till the alarm is active.
Alarm RTV	Thermal relay fast beating. When the thermal relay fast beating trips, all outputs are off and the machine sets at STOP. "Alarm RTV" will be displayed till the alarm is active.
Alarm RTC	Thermal relay compressor. When the thermal relay compressor trips all outputs are off and the machine sets at STOP. "Alarm RTC" will be displayed till the alarm is active.

5. CLEANOUT DISASSEMBLING AND REASSEMBLING OF PARTS IN CONTACT WITH THE PRODUCT

IMPORTANT

Cleanout and sanitation must be carried out at the end of every working day as a habit and with utmost care in order to guarantee the production quality in the observance of necessary healthy rules.

WARNING

**Ideal water temperature for washing and sanitizing the machine is 55°C.
Water temperature must never be higher than 60°C and lower than 45°C.
Wash the disassembled parts by hands: do not use automatic washing machines.**

WARNING

Never use solvents, alcohol, or detergents that can damage the machine parts or pollute production functional parts.

5.1 OUTSIDE CLEANOUT

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

5.2 PRELIMINARY CLEANOUT

With machine off and beater front lid closed, let water in the barrel by means of the hose placed on machine front side and opening shut-off valve.

Select the function CLEANOUT and let the beater run the least in order to avoid a useless wear of sliding shoes and cylinder.

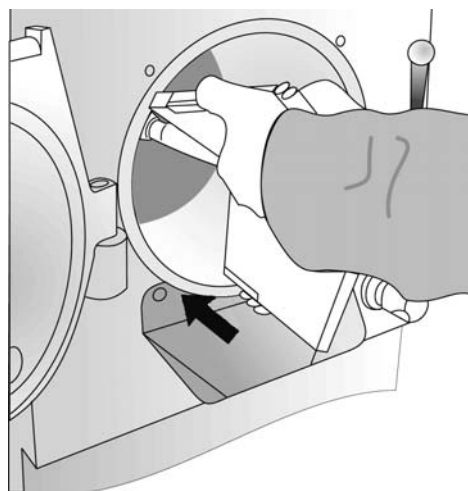
Drain all water from the cylinder, open its lid so as to remove the beater.

5.3 BEATER DISASSEMBLY

Remove beater with care, so as not to damage it.

WARNING

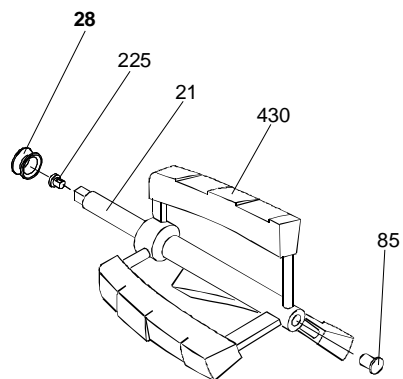
Carry out this operation with utmost care, since beater may be damaged in case it falls to the ground.



To reassemble the beater, hold it with both your hands and deeply push and rotate it so as to insert the shaft into its seat thoroughly.



- Remove the stuffing box from its seat on the beater shaft pos. 28.
- Wash the parts disassembled with water and a cleansing solution; rinse.
- Reassemble the parts and grease the stuffing box with a film of edible fat.



5.3.1 Stuffing box

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

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



IMPORTANT

Stuffing box must be replaced each time ice cream drops are found on withdrawing drip drawer placed at the machine side.

Keeping on operating the machine after finding ice cream drops brings about a bigger leakage from stuffing box, thence a malfunctioning of the machine which consequently affects production.



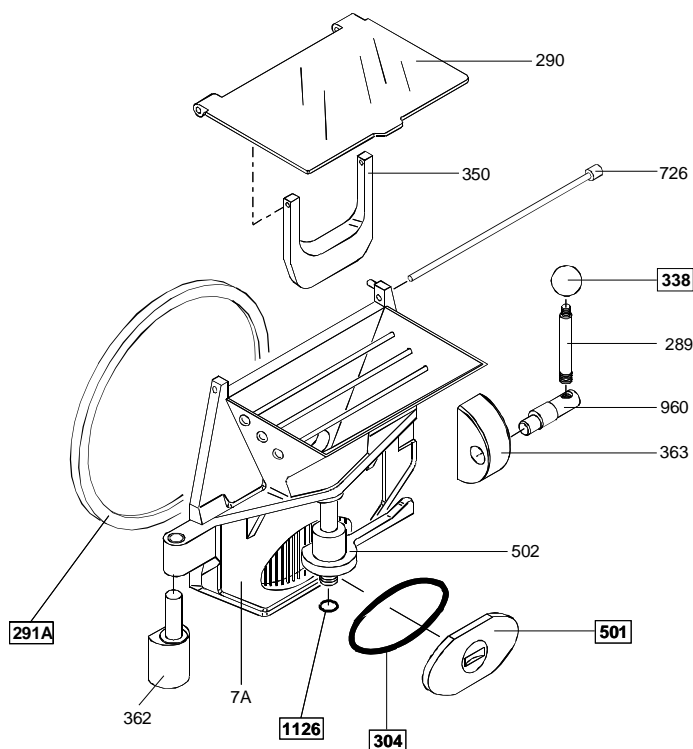
CAUTION

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



5.4 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.
- Wash all parts previously disassembled with water and a cleansing solution, then rinse.
- Reassemble all parts previously disassembled, minding to grease the OR and the support rif. 362 with a film of edible fat.



5.4.1 Ice cream door disassembly

- Lift the lid by turning the lever (ref. 1) 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 itself.
- Wash all disassembled parts with water and a cleansing solution, then rinse.
- Reassemble all parts previously disassembled, minding to grease the OR with a film of edible fat.

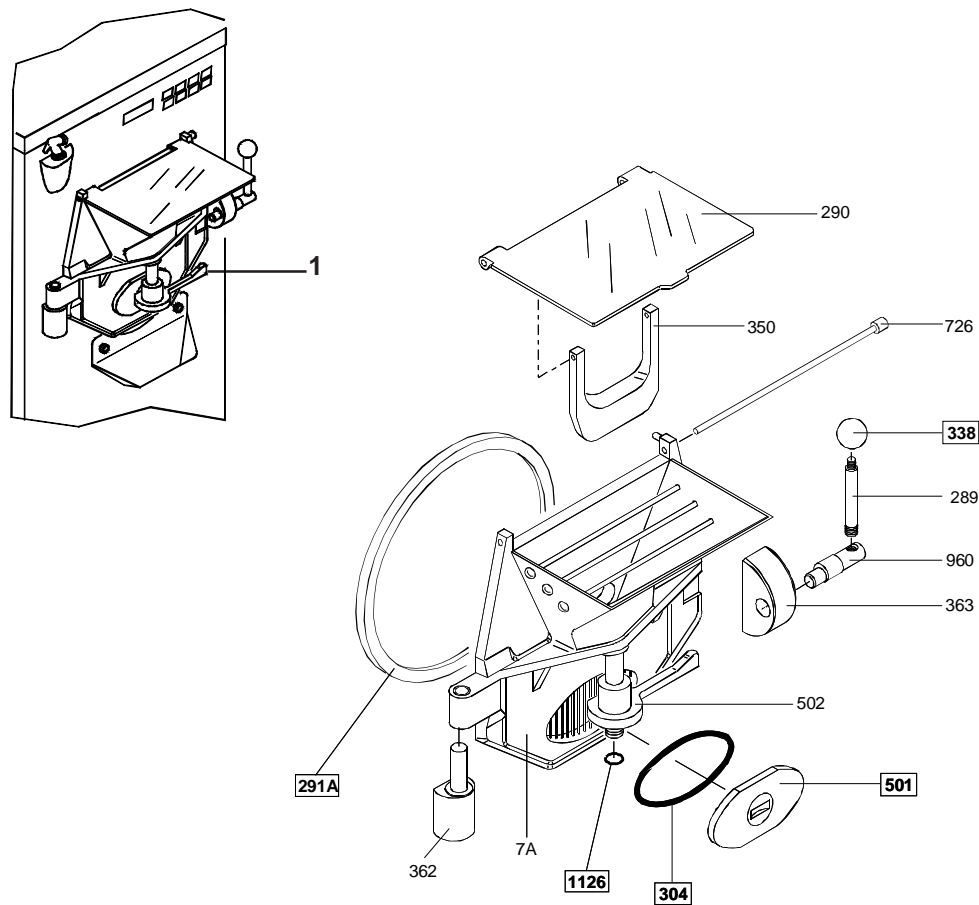


5.4.2 Hopper cover disassembly

To clean the mix filling area, withdraw the cover fixing rod (pos. 6) and remove it.

The cover is provided with a small panel to prevent ice cream from going back to the hopper, which must be disassembled to be cleaned.

Wash all disassembled parts with water and a cleansing solution, then rinse.





5.5 SANITIZATION

- With machine off and beater assembly lid closed, pour a NON CORROSIVE sanitizing solution into the the freezing barrel.
- Select "CLEANOUT" function. Let the machine run 10/15 seconds.

WARNING

Too long running at "CLEANOUT" position with empty barrel or with water and cleansing solutions will wear out beater very quickly.

- Let the sanitizing solution act into the cylinder about 10/15 minutes according to the instructions given by the manufacturer.
- Fully draining the sanitizing solution from the freezing cylinder.

ATTENTION

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

WARNING

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

5.6 HYGIENE

Ice cream fat contents are ideal fields for proliferation of mildew and bacteria. To eliminate them, parts in contact with mix and ice cream must be thoroughly washed and cleaned. Stainless steel materials as well as plastic and rubber ones used for the construction of these parts and their particular design make cleaning easy, but cannot prevent the growth of mildew and bacteria if not properly cleaned.

6. MAINTENANCE

CAUTION

Never put your hands into the machine, either during the operation or during cleaning. Before servicing, make sure the machine has been set in "STOP" position and the main switch has been cut out.



6.1 SERVICING TYPOLOGY

ATTENTION

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

Cleaning and lubricating moving parts is forbidden!

Repairs 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**

Cleaning should be carried out at the end of a working day, whilst replacement only after checking of stuffing box and in the event product drips inside drip drawer.

- **Cleanout of beater**

At the end of a working day

- **Cleanout of 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 WATERCOOLING

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



6.3 AIRCOOLING

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



ATTENTION

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



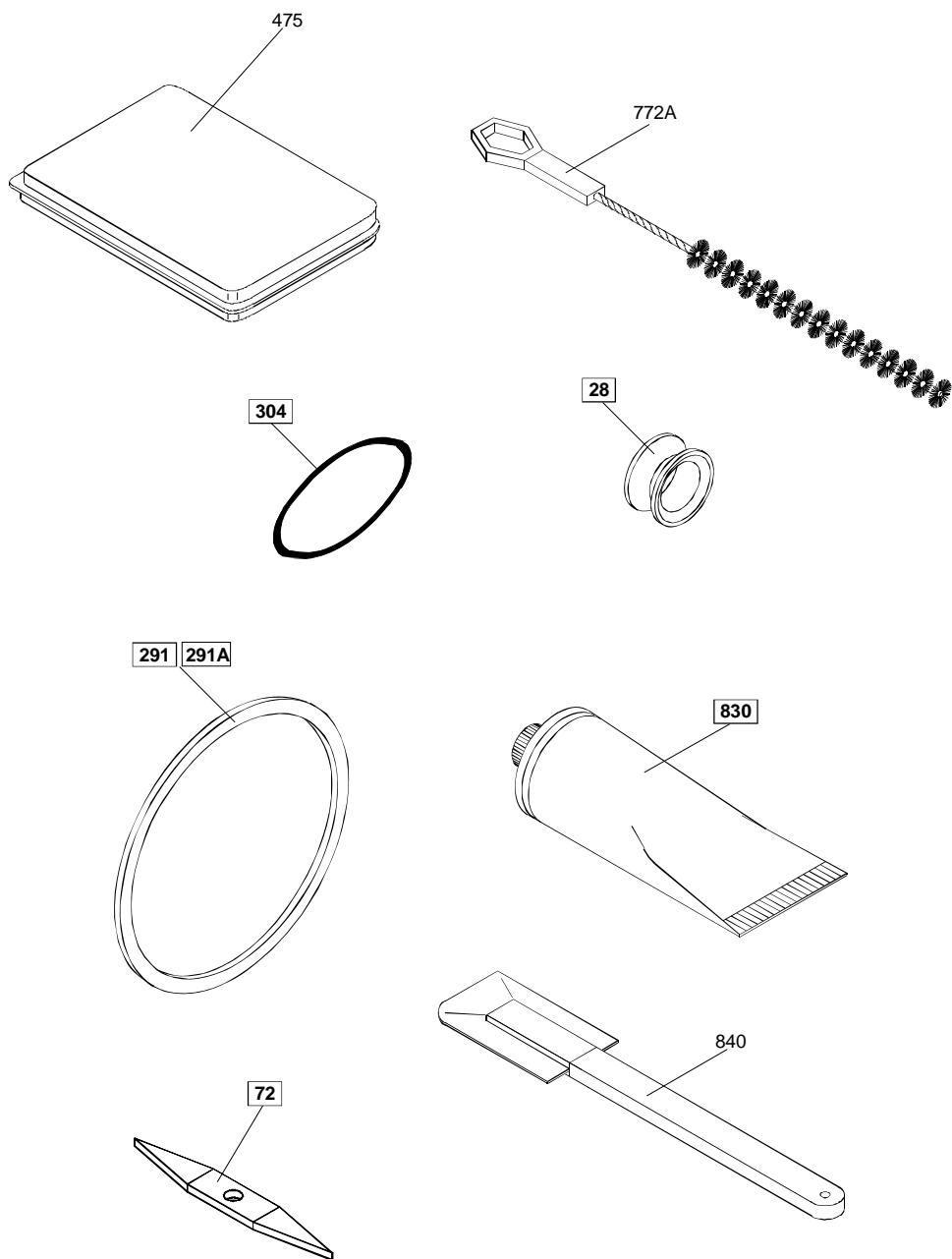
Note: never use sharp metal objects to carry out this operation. Good working of a freezing plant mostly depends on cleaning of condenser.

6.4 ORDERING SPARE PARTS

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



6.5 ACCESSORIES KIT



Description	Position number
Beater stuffing box	28
O-ring extractor	72
Hose adapter	287
Lid gasket	291
Gaskets for hose adapter	352
Accessories case	475
Brush	772A
Food-grade lubricant tube	830
Ice cream spatula	840

7. TROUBLESHOOT GUIDE

IRREGULARITY	CAUSE	PROCEDURE
Machine does not start	Main switch is off	Switch it on
	Machine unplugged	Check and plug in
PRODUCTION	Machine is not set at for PRODUCTION is lit	Check push button
	Front lid is not closed well	Check front lid closure
Compressor starts and then stops after a few seconds without ice cream being thick	Watercooled machine: water does not circulate	Open water tap
		Check that hose is neither squashed nor doubled up.
	Aircooled machine: air does not circulate	Check that rear of machine is at least 50 cm from wall
		Clean condenser from obstructions
After 30 minutes processing mix has not frozen and the machine returns to Stop	No gas	Check leakage and weld
	Pressure switch has broken down	Check connection and replace, if need be
Mix in drip drawer	Stuffing box missing or ruined	Install if missing Replace if ruined
Ice cream comes out from behind front lid	Gasket missing or not properly installed	Check and fix or replace

