

APPLICARE
TARGA
CARATTERISTICHE

INSTRUCTION HANDBOOK

LABO XPL P

*We wish to thank you for the preference granted to us by purchasing one of **Carpigiani** machines.*

*To the best guarantee, since 1993 **Carpigiani** has submitted its own Quality System to the certification according to the international Standard ISO 9001, nowadays its production has got UNI-EN-ISO 9001:2008 Certified Quality System.*

Moreover, Carpigiani machines comply with following European Directives:

- “Machinery” Directive 2006/42/EC,
- “Low Voltage” Directive 2006/95/EC,
- “EMC” Directive 2004/108/EC,
- “PED” Directive 97/23/EC,
- Regulation 2004/1935/EC relating to “Materials and articles in contact with foodstuffs”

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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 CARPIGANI 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 DANGER FROM HIGH TEMPERATURES

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



CAUTION CRUSHING HAZARD

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



CAUTION: GENERAL HAZARD

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



NOTE

It points out significant information for the staff involved.



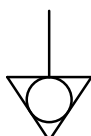
WARNINGS

This warns the personnel involved that the non-observance of warning may cause loss of data and damage to the machine, or cause risks for noncompliance with any applicable law/regulations.



PERSONAL PROTECTIONS

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



EQUIPOTENTIAL CONNECTION

For connecting all appliances with this type of connection.

Warning: do not connect to ground.

SYMBOLGY QUALIFICATION OF THE STAFF

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



MACHINE OPERATOR

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



QUALIFIED ENGINEER

He/she is a skilled engineer for the installation and 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 assigned by the manufacturer to 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);
- suitable personal protective equipment is worn;
- high care must be paid during hot product cycling.

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;

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 (refer to “Symbology qualification of the staff”).

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.
- **CARPIGANI** 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.



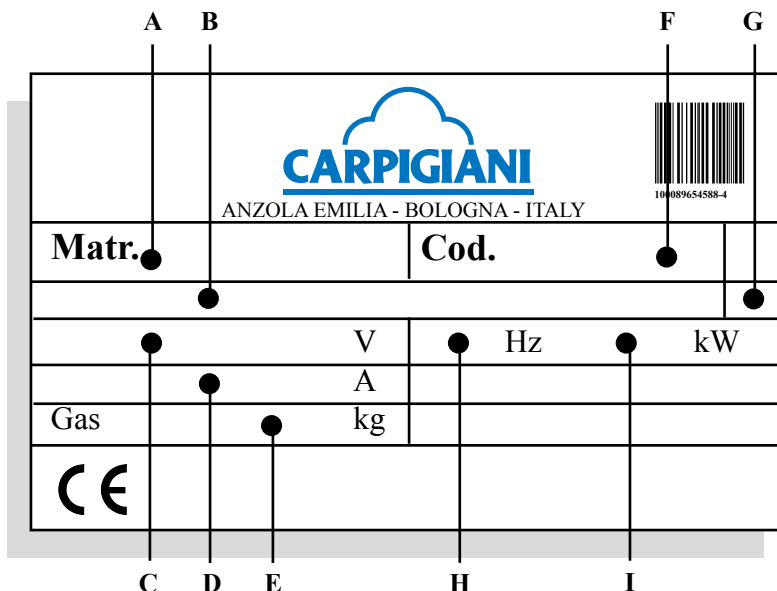
1. GENERAL INFORMATION

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.



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 XPL P 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		Slush kg	electric spec.			Rated Power kW	Condenser	Dimensions cm			Net weight kg
	kg	litres	Min. kg	Max. kg		Volt	Hz	Ph			Width	Depth	Height	
Labo 20 30 XPL P	20/30	28/40	3	5	4	400	50	3	4	Water/Air*	52	65 W 93 A	140	230
Labo 30 45 XPL P	30/45	42/60	5	7,5	6,5	400	50	3	5,2	Water/Air*	52	65 W 93 A	140	270
Labo 40 60 XPL P	40/60	56/84	7	10,5	9	400	50	3	6	Water/Air*	52	65 W 93 A	140	370

The quantity per cycle and hourly production change according to the mixes used.

The values "Max" refer to the Italian classic easy-to-work ice-cream.

* The air-cooled condenser is available with an extra charge.

The following characteristics are purely indicative, Carpigiani reserves the right to make all the changes whenever necessary and without being bound to previous statements to the purchaser.

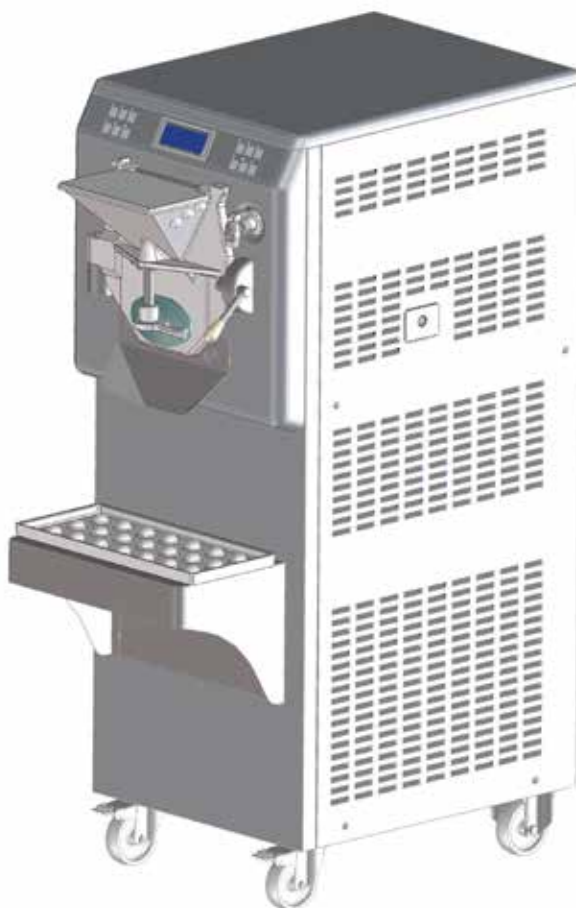
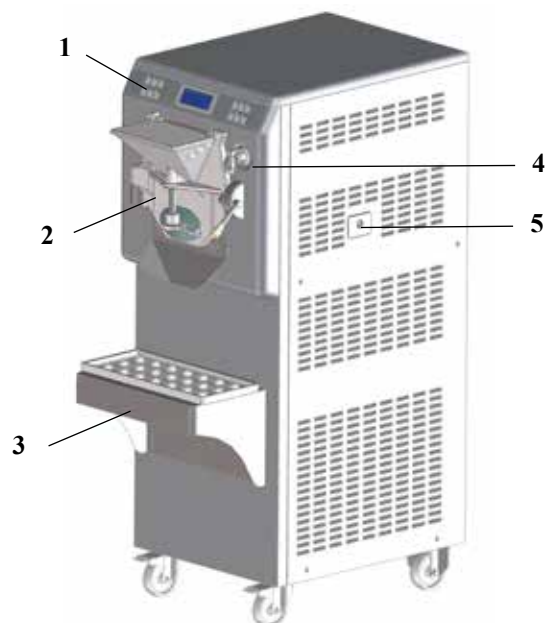


Fig. 1

1.2.3 Location of machine groups



Caption:

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

Fig. 2

1.3 INTENDED USE

The **LABO XPe** 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.

1.7 WEEE (Waste Electrical and Electronic Equipment)

In conformity with the European Directives 2006/66/EC, on batteries and accumulators and waste batteries and accumulators, and 2002/96/EC, also known as WEEE, the presence of the symbol on the side of the product or packaging means that the product must not be disposed of with normal urban waste. Instead, it is the user's responsibility to dispose of this product by returning it to a collection point designated for the recycling of electrical and electronic equipment waste. Separate collection of this waste helps to optimize the recovery and recycling of any reclaimable materials and also reduces the impact on human health and the environment.



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

2. INSTALLATION

2.1 ROOM NECESSARY TO THE MACHINE USE

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

ATTENTION

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

NOTE

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

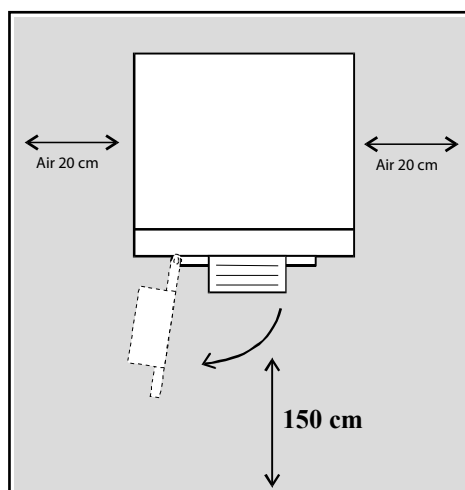


Fig. 3

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

NOTE

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





2.4 MACHINES WITH WATERCOOLED CONDENSER

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.

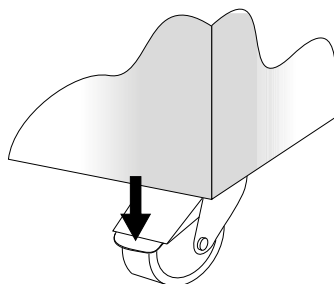


Fig. 4

2.7 REFILLING

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

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

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

2.8 MACHINE TESTING

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

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

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



3. DIRECTIONS FOR USE

3.1 MACHINE 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 incorrect 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);
- suitable personal protective equipment is worn.

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.

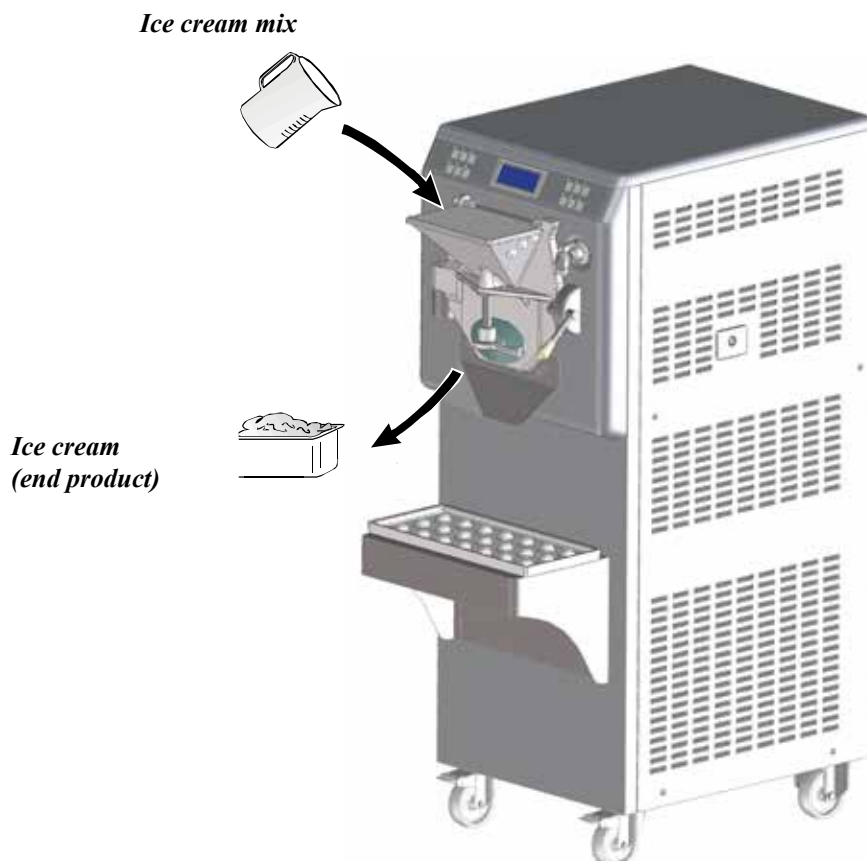


Fig. 5



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, the machine is idle and the relevant red LED is on. The display shows STOP. The backlighting on the display will switch off after 3 minutes; press any key to switch it on again.



WATER DISPENSER

Pressing the water dispenser key at any time activates the dispensation of water by the wand positioned on the front panel. Press the water dispenser key again or press the STOP key or wait 3' to stop the supply of water.



PRODUCTION

Pressing the production key will show the cycles on the display:
 - GELATO - SLUSH FRUTI (cremolata)
 - GELATO FRUIT (Sorbet),

Use the Increment and Decrement keys to move the asterisk to the required cycle.

* GELATO
GELATO FRUIT

Press Production again to start the cycle or wait 5".

GELATO/ GELATO FRUIT (SORBETTO) CYCLE

The product is chilled in the cylinder for the time set on the display or to the set consistency (Hot). According to the chosen cycle, Gelato or Gelato Fruit, a suitable Set HOT Consistency is automatically set.

For the Ice cream cycle the following is displayed:

SET 100
HOT 005

While for Fruit Ice cream cycle:

SET 090
HOT 005

SET is the consistency to be reached (it can be modified by pressing Increase/ Decrease keys)

HOT is the current consistency

If the Production key is pressed for 3", the display will show the timers:

060 20:00
HOT 033

The timer, after the threshold is displayed in the upper left area, the timeout prd in the upper right area and real HOT at the bottom.



After 60" the buzzer rings intermittently.
 After 20" the buzzer turns off.
 After the 15'-timer reaches zero (HOT<threshold) the machine goes to Stop and the alarm is displayed:

Timeout Prd

SLUSH FRUIT (CREMOLATA) CYCLE

The product is chilled in the cylinder for the time set on the display or to the set consistency (Hot).

The display shows:

SET: 10:00
 SLUSH F: 08:56

SET stands for the total batch freezing minutes. The time can be changed in 1-minute steps from a minimum of 2 to a maximum of 20 minutes using the **INCREMENT** and **DECREMENT** keys.

SLUSH FRUIT is the time passing and decreasing every second.

The last minute of batch freezing will be beating only.

At the end of batch freezing, there will be an intermittent acoustic signal.



CLEANING

When selecting this function, the beater starts running, whilst the freezing unit is off. The **INCREMENT** and **DECREMENT** keys can be used to pass from slow speed to fast speed and vice versa.

CAUTION

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



EXTRACTION

This function can only be accessed from Production.

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:

TIMER: 03:00

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.



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. Furthermore, it is used to reset the alarm messages.

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.

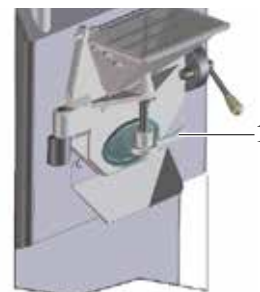
Before pouring the mix, make sure that frontlid and icecream outlet door are perfectly closed. Press the **PRODUCTION** button and select the required cycle with the **INCREMENT** and **DECREMENT** keys.

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**.



SAFETY NOTE

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

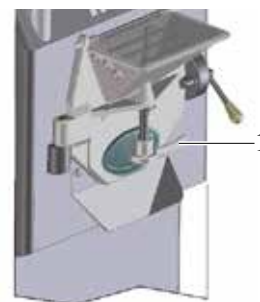
Turn the handle (ref. 1) 90° leftwards.

Lift handle and ice cream door.

Lock ice cream door upwards by turning the handle (ref. 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.

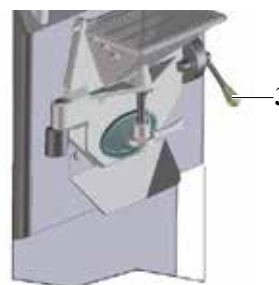


Fig. 9

3.5 USER PROGRAMMING

By pressing simultaneously the **STOP** and **DECREASE** buttons, the display will read “Manager Menu” and subsequently;

Step	U15
------	-----

Press **STOP**, this way each value of the following table will appear sequentially – all adjustable with the **INCREASE** and **DECREASE** buttons.

Step	Display	Notes	U.M.	MIN	MAX	Default
U15	BackLight Time		Min	000	030	003

U15 is the number of minutes after which the backlighting of the display switches off when the machine is in Stop. This is switched on again when a function is enabled, during Programming or when the OK key is pressed.

To quit the user programming mode, wait approx. 30" without pressing any keys or to quit immediately, press **CLEANING/EXTRACTION**.

The changed values will automatically be stored to memory.



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

LABO XPL P machines are equipped with a series of safety devices to safeguard the machine and those who use it. Each time the protection systems intervene, there is a corresponding alarm message on the fourth line of the display. For example:

STOP Allarme RTL

In case of an alarm, the display will flash. When the alarm is reset, the message will remain on the display, but not flashing.

To delete the message after resetting the alarm, press the Decrease key. If the alarm will not reset, this means it is still active.

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.
Timeout Prod	Timeout Prod (Cooling fault) It is triggered when the machine cooling is faulty. If compressor remains continuously on for more than 15', during freezing, and HOT does not reach the threshold of the corresponding cycle, the machine sets to STOP with "Timeout Prd" on the display. It can be reset by pressing Decrease key. One of the possible causes for this type of problem could be no gas in the system.



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

5.1 GENERAL DESCRIPTION

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

Giving dirt the time to dry out can greatly increase the risk of rings, marks and damage to surfaces. Removing dirt is much easier if it is done immediately after use because there is the risk that some elements containing acid and saline substances can corrode the surfaces. A prolonged soaking is recommended.



5.2 WASHING CONDITIONS

- **Avoid using solvents, alcohol or detergents that could damage the component parts, the machine or pollute the functional production parts.**
- When manually washing never utilise powder or abrasive products, abrasive sponges or pointed tools. There is a risk of dulling the surfaces, removing or deteriorating the protective film that is present on the surface and scoring the surface.
- Never use metal scouring pads or synthetic abrasives that could cause oxidization or make the surfaces vulnerable to attack.
- Avoid using detergents that contain chlorine and its composites. The use of these detergents such as bleach, ammonia, hydrochloric acid and decalcifiers can attack the composition of the steel, marking and oxidising it irreparably and causing damage to the parts made from thermoset materials.
- Do not use dishwashers and their detergent products.



5.3 SUGGESTIONS

- Use a non-aggressive detergent solution to wash the parts.
- Manually wash the parts in water (max 60°C) using a non-aggressive detergent and the cleaning brushes supplied as standard.
- Use drinking water (bacteriologically pure) to rinse the parts.
- To sanitise leave the disassembled parts in sanitised tepid water for 10-15 minutes (use the sanitising product following the instructions of the manufacturer) and rinse them before reassembling.
- When the washing procedure has been completed and before the reassembly of each component dry thoroughly with a clean and soft cloth that is suitable for coming into contact with foodstuffs, to avoid leaving any humidity rich in mineral salts and chlorine that could attack the metal surfaces and leave opaque traces.



Carpigiani recommends the use of a cleaning/sanitising solution to wash the machine.

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

WARNING

Every time the machine is washed and its parts that come into contact with the ice cream mix are disassembled it is essential to carry out a visual control of all the parts manufactured in thermoset materials and metal such as sliding shoes, pump gears, beaters, etc. All parts must be integral and not worn, without cracks or splits, or opaque if originally polished/transparent.

Carpigiani declines all responsibility for any damage caused by imperfections and/or undetected breakages and not promptly solved by the substitution of original spare parts and is available for consultation and for any specific requests made by the customer.



5.4 HOW TO USE CLEANING/SANITISING SOLUTION

Prepare a solution of water and sanitising detergent following the instructions shown on the label of the product being utilised.



Washing/sanitisation by immersion of components

- Manually remove the bulk residues utilising the supplied brushes.
- Remove finer residues with a jet of water.
- Immerse the parts to be cleaned into the solution.
- Let the solution react for the time indicated on the label of the product being utilised.
- Rinse the parts with care, using plenty of clean drinking water.

5.5 OUTSIDE CLEANOUT

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



5.6 PRELIMINARY CLEANOUT

With machine off and beater front lid closed, let water in the barrel.

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

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



5.7 BEATER DISASSEMBLY

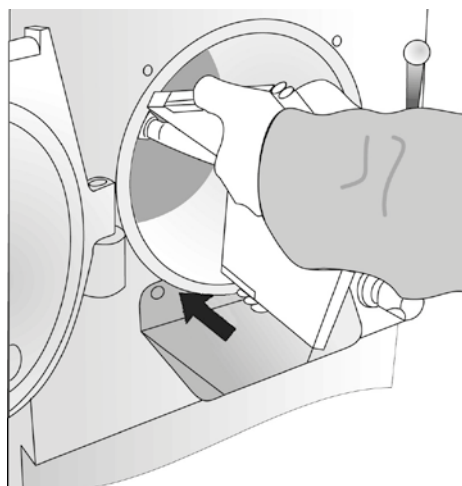
Remove the agitator by pulling gently outwards. Be careful not to damage the scraping palettes and dent the cylinder walls with the agitator shaft.



WARNING

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

When reassembling the beater, catch it with both hands and push the sliding shoes in order to insert it easily. Push to the beater to the bottom and at the same time let it turn in order to fully insert the beater shaft into its seat.



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

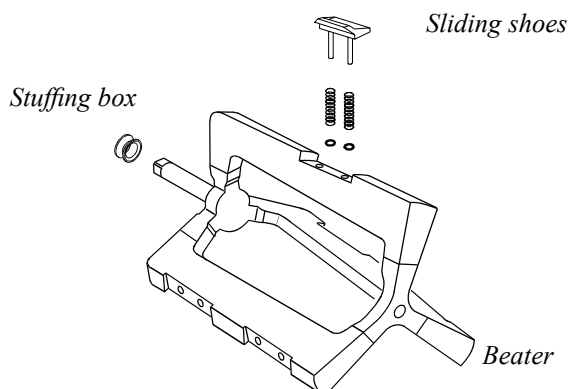
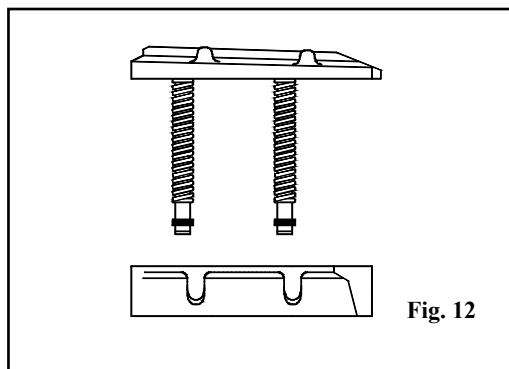


Fig. 11

5.7.1 Sliding shoes disassembly

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



5.7.2 Stuffing box

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

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



IMPORTANT

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

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



CAUTION

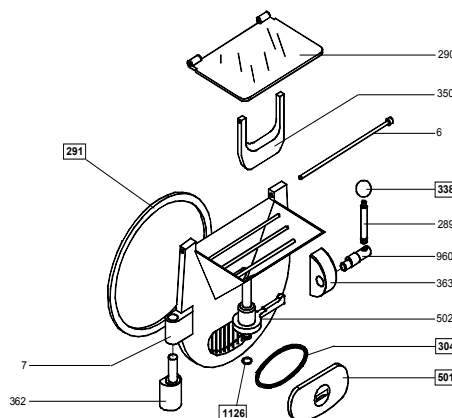
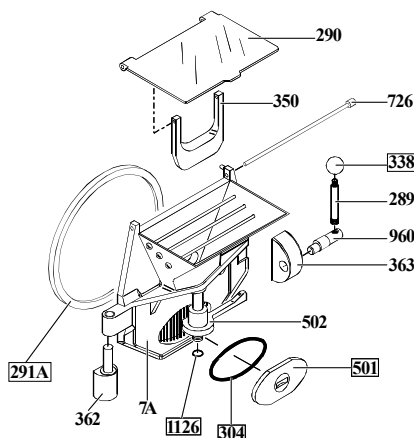
When you do not use the machine, leave beater lid open in order to avoid stuffing box buckling.



5.8 FRONT LID DISASSEMBLY

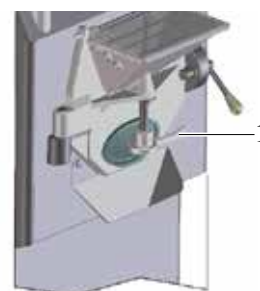


- Lift lid locking lever and shift it towards right.
- Open the lid by rotating it on its hinge.
- Remove lid while lifting it.
- To carry out cleaning operations, remove all movable parts and seal with barrel.
- Wash the disassembled pieces with water and cleaning/sanitizing solution and then rinse.
- Reassemble all parts previously disassembled, minding to grease the OR and the support rif. 362 with a film of edible fat.



5.8.1 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 (1126) from the lid sliding rod, now, and take it out, in order to release the lever, as well.
- Remove the OR (304) of the lid itself.
- Wash the disassembled pieces with water and cleaning/sanitizing solution and then rinse.
- Reassemble all parts previously disassembled, minding to grease the OR with a film of edible fat.



5.8.2 Hopper cover disassembly

To clean the mix filling area, withdraw the cover fixing rod (pos. 726) 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 the disassembled pieces with water and cleaning/sanitizing solution and then rinse.



5.8.3 Product chute removal

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



5.9 SANITIZATION

- Operation required before each production process.
- With the machine switched off and the beater lid closed, pour the detergent/sanitising solution into the whipping cylinder.
- Press the "CLEAN" button and start the "CLEAN" programme. Let the machine run for 10/15 seconds.

WARNING

Prolonged operation on the "CLEAN" setting with the cylinder empty or containing water/sanitising solution will cause the beater sliding shoes to wear quickly.

- Let the detergent/sanitising solution react in the cylinder for the time indicated on the label of the product being utilised.
- Fully drain the detergent/sanitising solution from the whipping cylinder.
- Rinse utilising abundant clean water.

ATTENTION

Do not touch the sanitized parts with the hands, cloths or anything else.

WARNING

Before starting again with the ice cream production, rinse thoroughly with water so as to remove any residues of the sanitizing solution.

5.10 HYGIENE

Ice cream fat contents are ideal fields for proliferation of mildew and bacteria.

To eliminate them, parts in contact with mix and ice cream must be thoroughly washed and cleaned.

Stainless steel materials as well as plastic and rubber ones used for the construction of these parts and their particular design make cleaning easy, but cannot prevent the growth of mildew and bacteria if not properly cleaned.



6. MAINTENANCE

CAUTION

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



6.1 SERVICING TYPOLOGY

ATTENTION

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

Cleaning and lubricating moving parts is forbidden!

“Repairs to the wiring, mechanical, air supply or cooling systems, or to parts of same must be carried out by qualified personnel with permission to do so and if necessary, according to the routine and extraordinary maintenance schedules as envisaged by the customer with reference to specific intervention methods, according to the use for which the machine is destined”.



WARNING

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



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

- Cleaning the metal sheets and drip tray

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

- Cleanout and sanitization

At the end of each working day, according to procedures described in section 5 of this manual.

- Sprayer maintenance

If there is a water leak from the sprayer, we advice you to replace the seals (ref. 1, 2, and 3) in case they are broken, see the drawing. In order to replace the seals (ref. 1 and 2) it is enough to undo the front white plug. On the other hand, to replace the seal (ref. 3) it is necessary to undo the front white plug and remove the handle pin (ref. 4).





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:

nevere 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

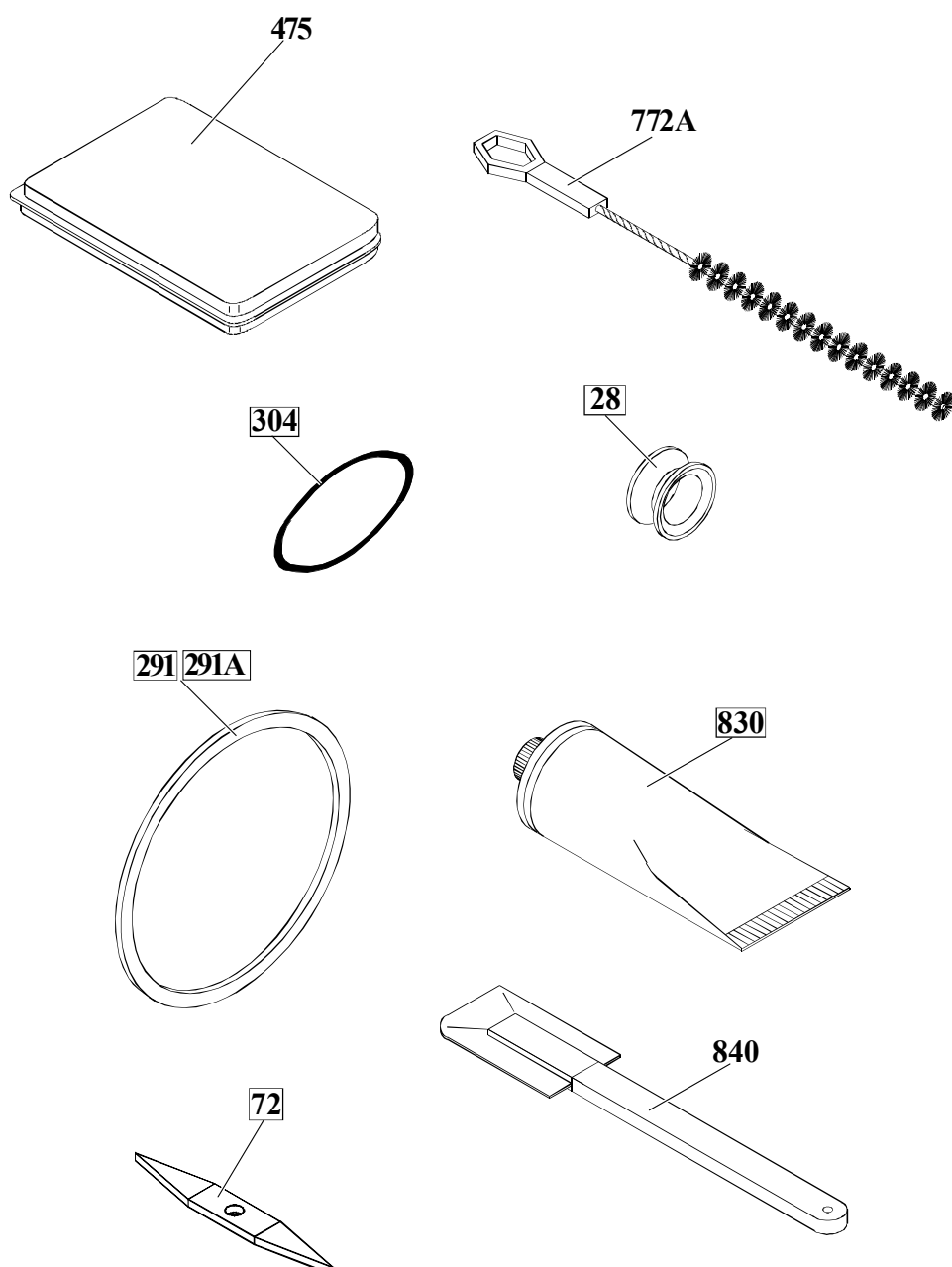


Fig. 15

Description	Position number
Beater stuffing box	28
O-ring extractor	72
Lid gasket	291/291A
Door seal	304
Accessories case	475
Brush	772A
Food-grade lubricant tube	830
Ice cream spatula	840



7. TROUBLESHOOT GUIDE

IRREGULARITY	CAUSE	PROCEDURE
Machine does not start	Machine unplugged.	Check and plug in.
	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.