macchine per gelato
ice cream machines

Use and Maintenance Manual

S. Hoop

Soft ice cream machine

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ENG

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Dear Customer,

First of all, thank you very much for your choice, you have bought a machine of top-quality and we hope that you will take great satisfaction from your new purchase.

S. Hoop

Soft ice cream machine

INNOVA
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USE AND MAINTENANCE MANUAL

a) RECOMMENDATIONS AND PRECAUTIONS

Security measures and Precautions
This manual must be carefully read before installing the machine.
It contains all the instructions for a correct installation, the appropriate use and the recommended maintenance. The non-respect of the prescribed directions, besides compromising the perfect running of the machine and security, means the withdrawal of any kind of warranty.

a.1) Technical documents
The documents must be carefully kept for the whole life of the machine, in accordance with the EC rules, they contain the following items:

a) Instructions for use
They contain all the directions for installation, use and maintenance.
Furthermore, they give the way-out to the main operational defects.

b) EC conformity declaration

In case of sale or transfer of the equipment the whole set of documents must be transmitted to the new user.

a.2) Prevention of accidents
In order to guarantee the security of the operative people, the following prescriptions must be accurately respected:

a) Don't modify the equipment in any part (otherwise any warranty will fall-off).
b) Avoid the use of the machine by children or not entitled people.
c) Don't modify the electrical installation. This must be done only by qualified and entitled people.
d) Disconnect the electric power in case of maintenance of moving parts.
e) Carry out only cleaning operations and ordinary maintenance on the equipment. All operations for extraordinary maintenance must be carried out exclusively by the authorised Service people.
f) Don't remove in no case the body or the door of the electric panel.
g) Don't remove, displace or ruin the technical data plate.
h) Don't introduce any object or foreign matter into the grids on the side.

As for all electric devices, it is important that some essential rules may be respected during the use:

a) Don't tear the power feeding cable for disconnecting the machine.
b) Don't use the equipment having wet feet.
c) Don't touch the machine with wet hands or feet.
d) Don't let the machine under rain.

a.3) Prevention of material damages

In order to avoid any damage to the machine , the following norms must be accurately rexpected:

a) The machine has been conceived for production of express ice-cream and yoghurt ice-cream. All other use is illegitimate.
b) The cylinders must never dry run. During running, the mixture must always be present in the tubs and cylinders.
c) The mixer must never be installed with cylinder at operating temperature, but at room temperature only.
d) Don't never pour cold or hot water into the cylinders immediately after ice-cream production.
e) Do not damage the components of the machine by strokes.
f) Use original spare parts only.
g) In case the machine should not work for a long time, proceed as indicated under chapter **g.3**
h) For cleaning use only the products mentioned under chapter **g**

a.4) Important suggestions for correct use

a) Make sure that after the output the levers are lifted up again and are in the correct position.
b) Periodically, mix the mixture contained into the tubs scraping the sides of the tubs in order to avoid solidification and making ice crystals.
c) Make sure that there are a correct quantity of mixture in the tubs.
d) Never take off the compression pipes inserted in the tubs when the cylinders are under pressure.
e) During the cleansing phase wash accurately the parts that get in touch with the mixture.
f) Replace periodically the rubber gaskets of the stuffing box in order to avoid dangerous lack of mixture.
g) After every ordinary cleaning, check that the gaskets are in good conditions and provide for lubrication with food-grade lubricant.
h) Clean carefully all the parts which get in touch with the mix in order to produce an ice-cream of good quality.

b) TECHNICAL DATA

b.1) Technical data tag and EC-marking
The data tag and EC-marking must absolutely neither be removed nor damaged.
It reports the following data:

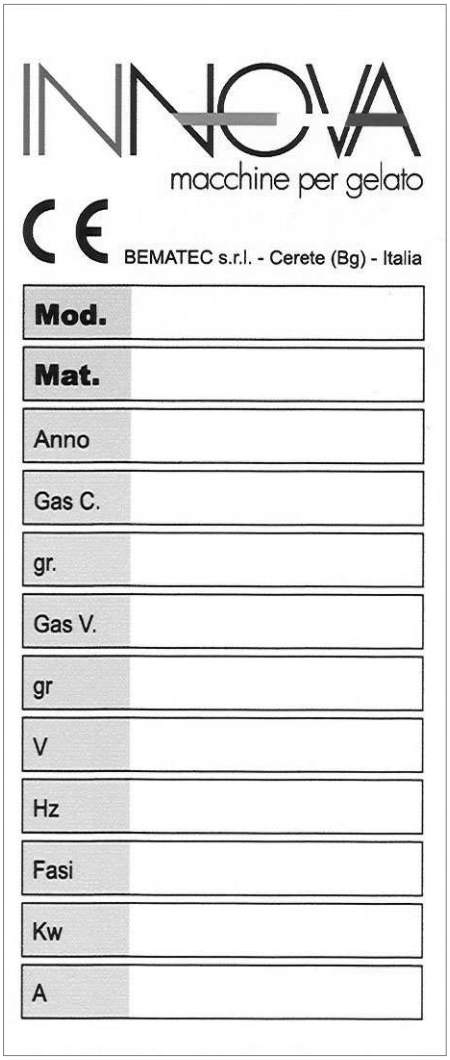


Fig.1

Name and address of manufacturer – EC-mark

Machine model

Machine series-No.

Year of manufacturing

Type of refrigerating gas for production plant

Quantity of gas for production plant

Type of refrigerating gas for preservation plant

Quantity of gas for preservation plant

Electric power

Frequency

Phase number

Power

Electricity

b.2) Acoustic pressure level
Measured following the norms < 70 dB (A).

c) TRANSPORT AND UNPACKING

Handle the equipment with care during the transport and unpacking and keep it in vertical position. For lifting use only means having appropriate capacity.

c.1) Transport of the packed equipment
The packing has been conceived for an optimal protection against any kind of strokes. Carry the packed equipment as near as possible to the set-up site. For lifting use only the points indicated by the Manufacturer (fig.2).

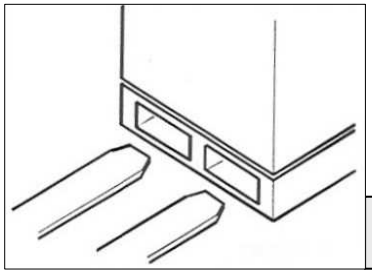


Fig.2

c.2) Unpacking
Remove the packing following these instructions:

a) Cut-off the straps and lift the upper cover.
b) Slip off the side cardboard and the protection bag.

IMPORTANT: Verify the integrity of the equipment. In case of evident damages revert to the retailer or the manufacturer.

Lifting the machine with the appropriate means, extract the foot-board.

IMPORTANT: **1)** ***Take care that the power supply cable should not be damaged.***
2) Don't use strings or chains that could damage the machine.
3) The side panels must be opened by the Service personnel only.

After having finished these operations, dispose of the packing that is made of completely recyclable materials.

d) INSTALLATION

The set-up must be carried out only by Technical personnel entitled by the manufacturer. During the installation phase the following norms must be respected:

d.1) Placing on site

a) Place the equipment on a horizontal plane surface.
b) Avoid the direct exposure to sun rays.
c) Avoid to place near heat sources.
d) Let at minimum 50 cm free space in front of the grids in order to permit the perfect functioning of the refrigerating system.

d.2) Preparation

a) The components must be completely assembled before wiring.
b) Assemble all those parts that are delivered not assembled.

d.3) Wiring

a) Check that the line voltage and frequency correspond to those required for the machine.
b) The power supply must be fitted with an approved socket type.
c) A main switch must be incorporated in the socket or located in a place within easy reach for cutting off completely the current from the socket in case it should be necessary to intervene on some moving parts (fig. 3).
d) All sockets must be controlled by one or more differential switches and must be fitted with grounding.
e) The plant must be sized in accordance with the absorbed power and protected against overloading by means of magneto-thermical switches or by adequate fuses.

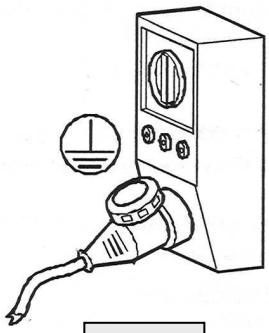


Fig.3

Notes: **1)** ***The electric installation for power supply to the equipment must be carried out carefully.***
2) The manufacturer is not responsible if the power supply and grounding are not in accordance with the norms.
3) The wiring must be carried out by qualified personnel only.

d.4) Power supply to the machine

a) The plant must terminate with a socket (at 3 or 5 poles in line with the type of machine) that is approved and in accordance with the existing laws and the present power.
b) Check that the grounding pole is connected in a correct way.
c) In case of tri-phase equipment assure the correct power supply to all phases in order to avoid irreparable damage of the motors.

d.5) Control of the rotation sense
After having set-off and connected the equipment, check the rotation direction of the mixers.

The machine has its own control that verifies it, after having connected the equipment, put the machine on "STAND-BY" mode and if the rotation direction is wrong, the machine shows "PH ERROR" with an acoustic alarm too.

Apply for the Servicing or the authorized personnel and invert the power phases.

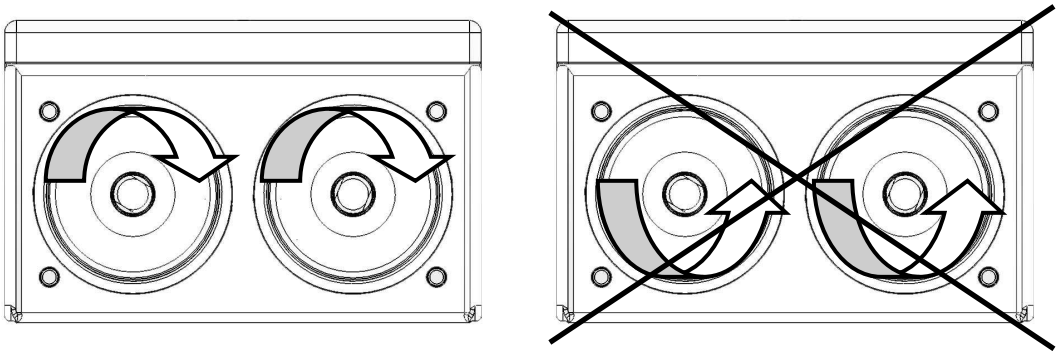


Fig.4

e) USE OF THE EQUIPMENT

IMPORTANT: During the use of the machine respect carefully the prescriptions under chapter a

e.1) Controls and indicators

The user interface is composed by an alpha-numeric display and by 6 function buttons. When the equipment is put under power without pressing any button, the display lights up and after a few seconds the word “INNOVA” appears.

ON/OFF

Pushing this button the equipment starts up and is set in position “STAND BY” waiting for further commands. With the machine running the equipment can be switched off by means of this button during every operating cycle.

PRESERVATION

Pushing this button the preservation cycle is activated during the prolonged production pauses.

PRODUCTION

Pushing this button the production start at the previously defined consistency.

RESET and PROGRAMMING
Pushing this button the alert signals are reset and the cream consistency is regulated.

WASHING
Pushing this button the cleaning cycle is activated. The mixers can work freely without activating the refrigerating system so that the washing water in the cylinders may not freeze.

FILLING
Pushing this button the mix is filled into the cylinders as by detailed instructions under chapter **e.2**

PUSH
This button is placed on the left side of the front panel.
Pushing this button the production start at the previously defined consistency, **recommend that you press before delivering each portion.**

The display lights up only if there is power supply and shows:

a) Operating state of the equipment.
b) Temperature soft-ice cylinders or counter portions (value is indicated during production cycle only).
c) Temperature preservation tubs.
d) Asterisks for lever operation:

Right lever	→	right asterisk
Left lever	→	left asterisk
Middle lever	→	both

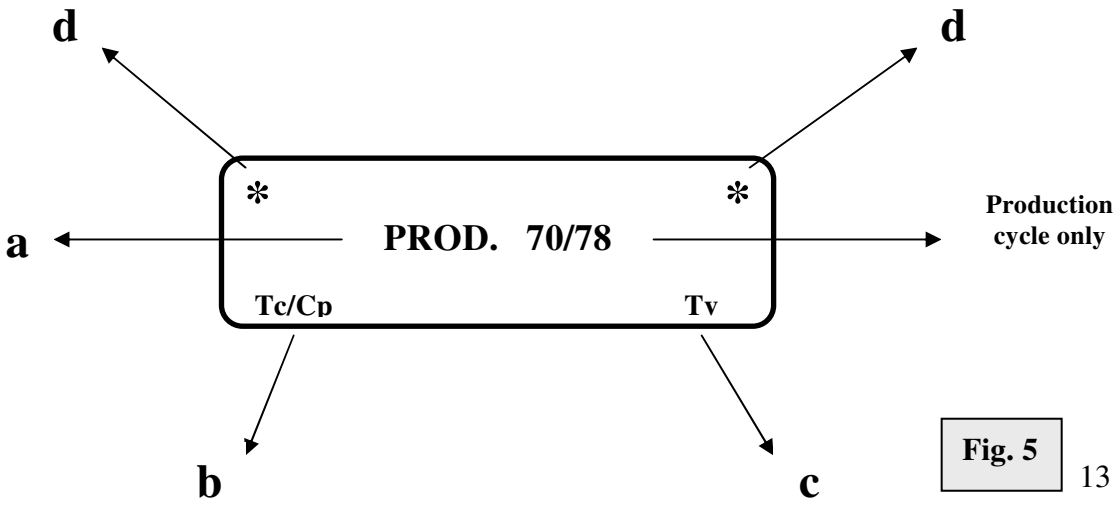


Fig. 5

In particular, the following is shown in the cell "STATO":

a) INNOVA = the machine is under power but turned off.
b) STAND BY = the machine is on waiting for commands.
c) PROD 70/78 = the machine is in production and/or output phase, it shows in real time the consistency of the ice-cream chilled at the prefixed value.
d) PRESERVATION = the machine is in the preservation phase.
e) FILLING = the machine is in the filling phase.
f) WASHING = the machine is in cleansing phase.
g) WARNING SIGNALS

Important:
The control panel is equipped with a keyboard-lock starting if no button has been pressed for at least 2 minutes in production phase and 1 minute in conservation phase.
When the keyboard is locked, the machine is regularly operating, maintaining the current layout. On pressing any buttons, the display shows the message "LOCKED" and the equipment can't receive any commands.
By pressing the buttons ON/OFF and RESET at the same time the keyboard is unlocked, the display shows "UNLOCKED" and the control accepts commands by pressing the relative keys.
Every time the machines goes into warning state, the keyboard is unlocked.

e.2) Preparation for production
Assemble all the components and accessories of the equipment, as described under chapter **f.6** taking particular care to the different phases:

a) Correct set up of the stuffing boxes on the mixers.
b) Correct set up of the mixers in the cylinders.
c) Adequate tightening of the fastening knobs of the tap.
d) Complete shut-off of the output levers (pushing them towards the equipment).
e) Side collection drawer completely inserted.
f) Correct installation of the pumps omitting the introduction of the compressor levers.

After having completed the assembling, supply power to the equipment.

Note: Do not start the equipment with dry running.

Filling of the cylinders

a) Check that the compressor tubes of the pumps are not inserted in order to allow the descent per gravity of the mix in the cylinders (fig. 6).
b) Fill carefully the mixes in the correspondent tubs, avoiding to fill up too much (fig. 7).
c) Push the filling button. The mixers in the cylinders are activated. When the mix level in the tubs does no more decrease, reassemble the compressor tubes.

d) Put the mix in the cylinders under pressure withdrawing about 1 liter of mix from each cylinder, operating alternatively the right and the left lever (don't act absolutely on the central lever). Check that the mix in the cylinders is effectively under pressure. The part of mix taken can be reinserted into the tubs. Replace the cover on the tubs and let the machine in filling.

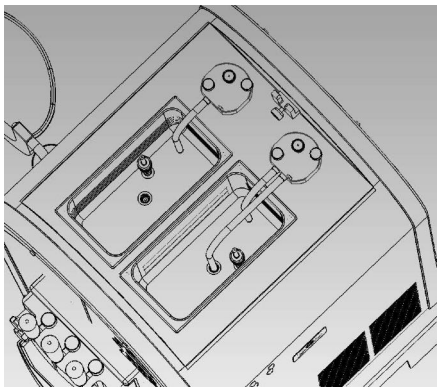


Fig. 6

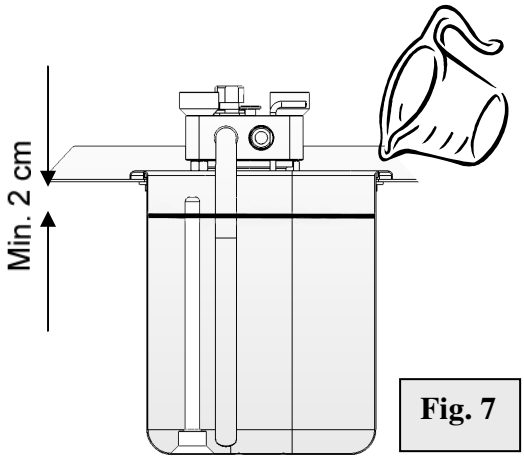


Fig. 7

e.3) Set-up

During the testing phase the equipment is programmed with the optimal values for functioning. Eventual amendments must be agreed with the manufacturer or the retailer. The only adjustable parameter is the cream consistency that can be modified during the running phase.

e.4) Production

Push the production button. The mixers and the refrigerating system of the cylinders start contemporaneously. The display shows the consistency of the ice-cream in relation to the prefixed value (example 60/81) that begins to increase. When the programmed consistency has been achieved the mixers and the refrigerating system will stop and the ice-cream is ready for being served. If the consistency does not correspond to the expectations the value may be increased pushing the buttons of reset and programming. The consistency can be programmed in a range between 60 and 99, with variations of three units at a time.

Guide-lines

a) Before taking off the first produced ice-cream or after a long running pause, discharge a small quantity from both cylinders by means of the three levers. Place a container under the output taps in case some sprays should be produced.
b) Place the cone or the cup under the wanted output tap:

Right lever	→	flavour of right tub
Left lever	→	flavour of left tub
Central lever	→	blend of flavours

Draw the lever slightly towards yourself. On the display appears the following:

Right lever	→	right asterisk lighted
Left lever	→	left asterisk lighted
Central lever	→	right and left asterisks lighted

After having withdrawn the wanted ice-cream replace the lever in its rest position assuring that it is completely set back.

c) In case that the lever should not be placed correctly in the rear position the asterisks on the display won't disappear, the cycle won't stop causing a premature wear and tear of the moving organs.
d) Check periodically the level of the mix in the tubs, topping up in case of lack, eventually signalled by an alert, in order to prevent ice formation in the cylinder that would block the mixer.
e) Periodically, mix the mixture contained into the tubs scraping the sides of the tubs in order to avoid solidification and making ice crystals.
f) In case the ice-cream should be withdrawn more frequently or in excessive quantities for a longer time the creamy texture will be drastically reduced. In order to avoid that this occurs, wait for a few seconds between one supply and the other or interchange the flavours.
g) Empty out periodically the condense collecting drawer on the side. Normally some traces of mix may be found in the drawer inside, but if they increase, the stuffing box gaskets on the mixers must be replaced.
h) During the night pause use the function preservation in order to avoid that the mix should go bad.

e.5) Preservation

The equipment is planned for keeping the mix temperature in the tubs and in the pressure pumps at 4° C approx. In this way the growth of the total plate count will be interrupted. This value must be kept always under the limits stated by law.

By pushing the preservation button a conservation cycle will start also for the mix contained in the soft ice-cream cylinders in order to prevent degradation during the not productive phase.

In spite of the function preservation the user must drain and sanitise all those parts that are in touch with the mix, when the products have reached their expiry date. The date to be considered is the date of the ingredients that have been added first after sanitization, without considering the successive toppings.

Activation of preservation

a) Check that the levers are in a correct position.
b) Clean the tap suppliers from eventual dropping or ice-cream residuals.
c) Check the correct positioning of the tubs cover.
d) Push the preservation button.

Note: During this phase the mixers will periodically run in order to avoid formation of ice crystals in the ice-cream.

Deactivation of preservation

a) If the preservation temperature shown on the display is too high (over 6°C) , or if an alarm signal appears, the mix has not been conserved correctly. Remove it completely from the cylinders as well as from the tubs, clean the equipment carefully and sanitize all those parts that have been in contact with the mix.
b) If the conservation temperature is correct, push the production button and wait until the ice-cream becomes consistent as programmed. **At restart, the mixture contained into the tubs has to be mixed in order to give a better fluidity, avoiding a mix too dense.**

e.6) Control of the mix level

The tubs are fitted with level gauges.
An acoustic alert signal and an intermittent alarm message that appears on the display indicate when the mix has reached the minimum level in the tub.
When the alert signal appears top immediately the tubs because less than 1 litre. Once the topping has been done both alarm signals will disappear automatically.
In case you want to use up the product contained in the tubs push the reset button for deactivating the acoustic signal.

f) WASHING AND SANITIZATION

During this operation all the fixed and mobile parts of the equipment will be cleaned. The washing is carried out with water only, whilst for the sanitization water plus cleansing agent for food machines must be used. The only washing with water does not assure the hygiene of the equipment.

Note: before proceeding with any kind of washing or sanitizing wait until the complete defrosting of the creaming cell (the correspondent temperature is shown by the display).

f.1) Washing

Set the equipment in position "STAND BY", put pressure into the cylinders by means of the supply levers (pumps are deactivated) and wait until the creaming cells are defrosted.
Dismantle the pumps completely.
Push the washing button for activating the mixers (during this phase the freezing device is disconnected).
Act on the supply levers in order to drain out the residual mixture from the cylinders and the tubs.
Top up the tubs with warm water and repeat the draining. Repeat this operation until the output rinse water becomes clean.

f.2) Specific cleaning

Disconnect the power supply.
Take off the tap and extract the mixers. For this refer to chapter **f.5**
Dismantle carefully all the components of the tap, of the mixers and of the pumps and provide for an accurate washing with warm water and food suitable detergent.
Clean properly the platform, the tubs and the cylinders with water and a proper detergent.
Re-assemble completely and carefully all the components of the equipment as described under chapter **f.6**

f.3) Suggestions for cleaning

All the components must be always carefully cleaned, overall those that are in contact with the food mixtures.

a) All the operations must be done after having disconnected the power supply.
b) Don't use detergents that are inappropriate for food applications.
c) Don't use any kind of solvent.
d) Don't use abrasive matters or powders.
e) Avoid absolutely to wet the internal parts (example the motor, etc.).

Remember that the above mentioned cleaning operations must always be done for getting the best exploitation of the mixtures having the maximum performance of the equipment.
Keep also the external surfaces (washing and drying) always clean.

f.4) Sanitization

The operations for sanitization are the same as for washing, but must be carried out with a solution of warm water and a liquid sanitizing detergent for food components.

With regard to the modalities for use and dosage of the sanitizing product follow the relating instructions. If required, make a final rinsing with water only.

After sanitizing don't touch any more by hands and don't dry the parts that will get in touch with food.

f.5) Disassembly of the parts

All the parts that are in contact with the mixture may be disassembled one by one and in an easy way by the user .

The disassembly must be carried out only when the equipment is not under power .

Dismantling of the pump covers

a) Make sure that pressure has been discharged from the cylinders.
b) Slip off the intake pipe (fig. 8 – n° 1).
c) Take off the security key from the compression pipe.
d) With a horizontal move slip off the compression pipe from the cover and then extract it from the tub bottom with a vertical move (fig. 8 – n° 2).
e) Unscrew the knobs and extract the pump cover.
f) Unscrew the air regulator extracting the internal components.
g) Unscrew the by-pass screw extracting the internal components.

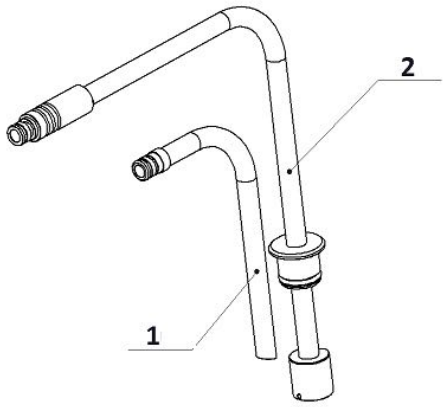


Fig. 8

Disassembly of the pump body (fig. 9)

a) By means of the supplied lever lift the pump and extract the body.
b) Extract the propeller pushing the lower part. Pay particular attention to the reaction of the blades.

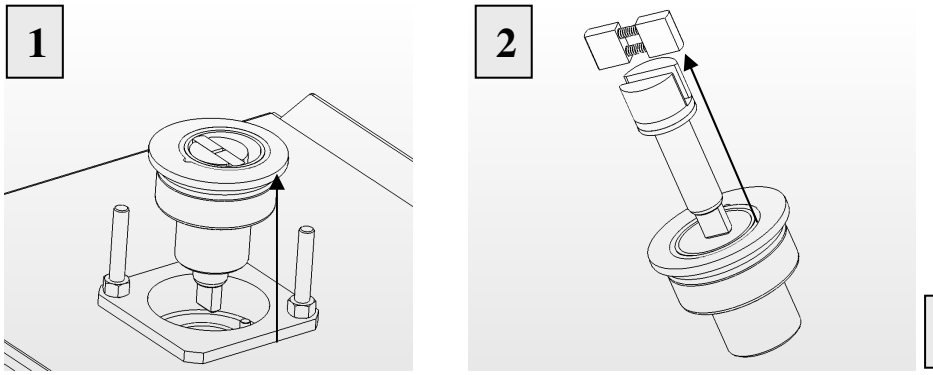


Fig. 9

Disassembly of the tap (fig. 10)

a) Unscrew the fastening knobs and draw off the tap.
b) Put the levers down carrying the pistons at their running limit and slip off the cross pin.
c) Take off the free levers, the central lever is higher than the lateral ones.
d) Extract the three pistons without damaging, the central piston is different from those lateral.

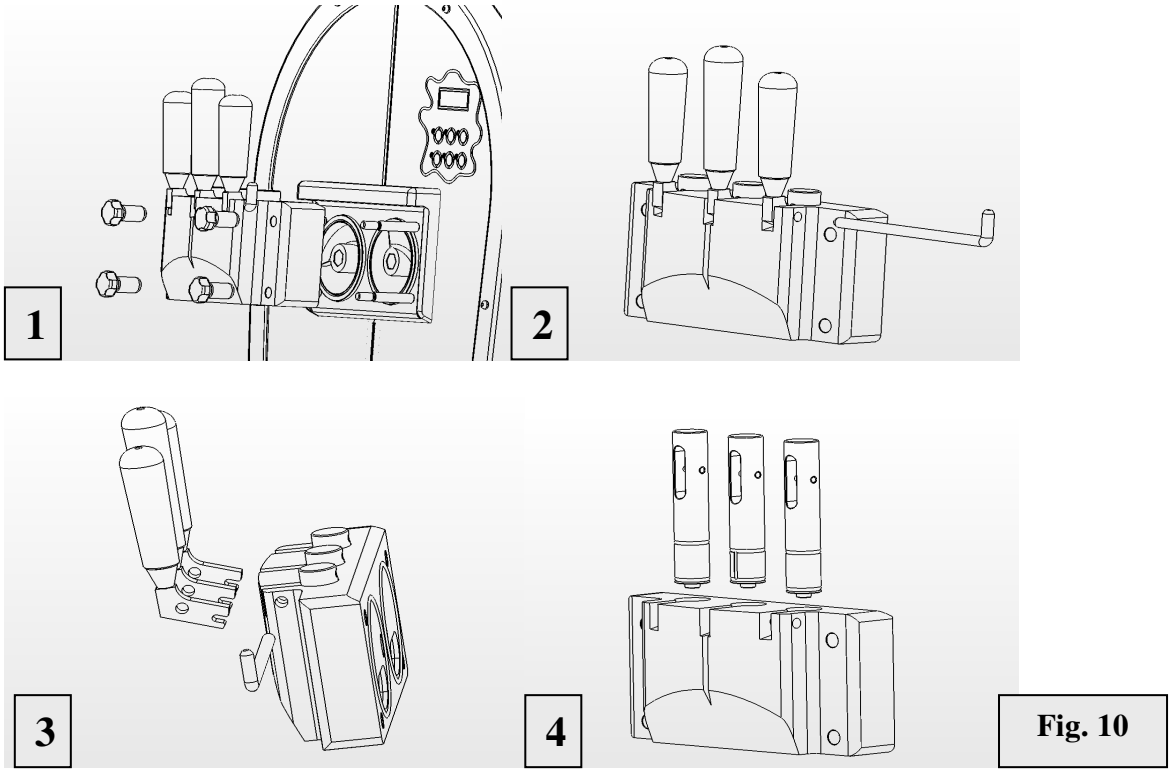
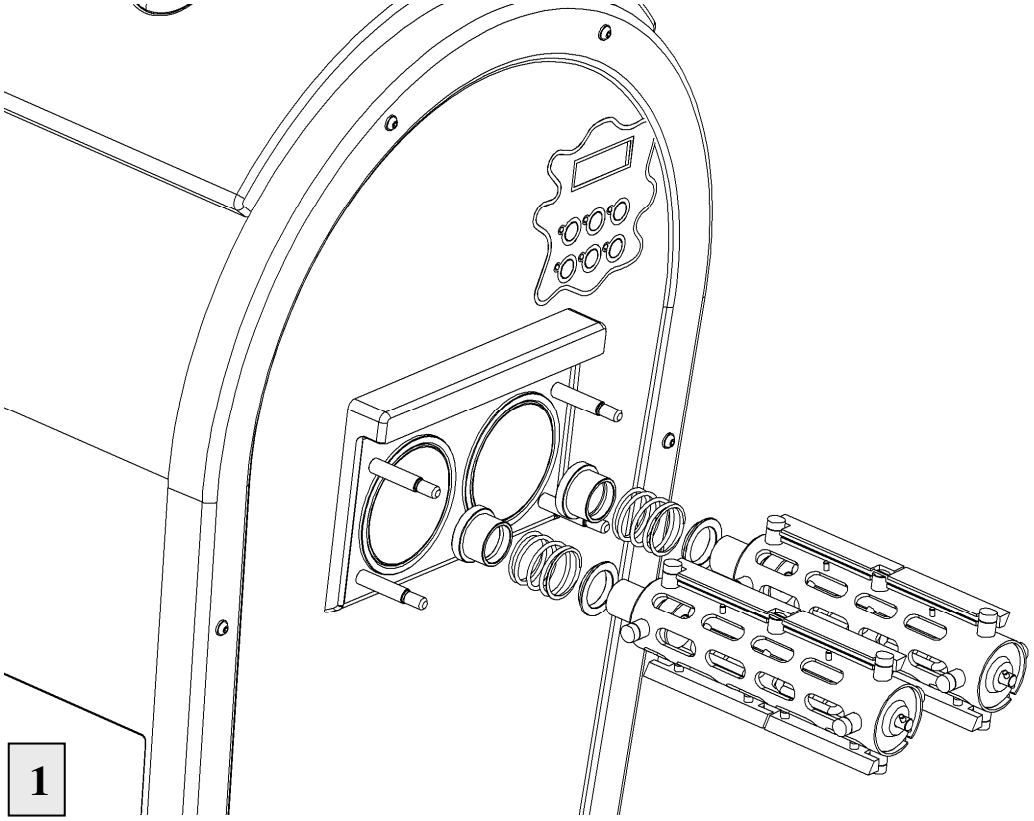


Fig. 10

Disassembly of the mixers (fig. 11)

a) Take off the mixers from the cylinders.
b) Slip off the colloidal section.
c) Lift up scrapers.
d) Dismantle the stuffing boxes and the springs.



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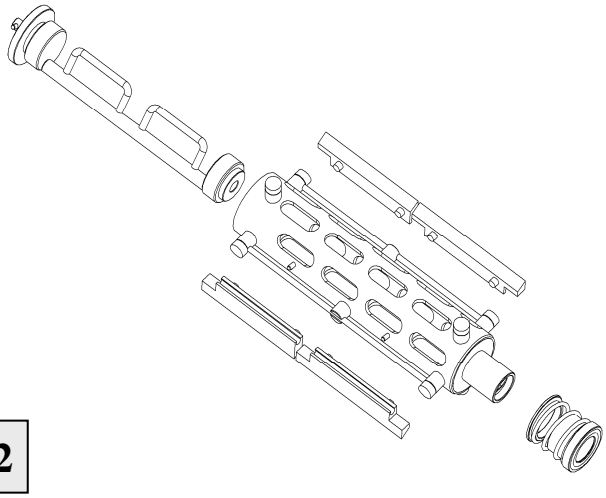

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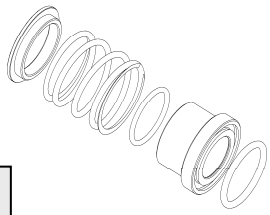

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Fig. 11

Disassembly of the lateral condense drawer (fig. 12)

a) Extract the drawer.

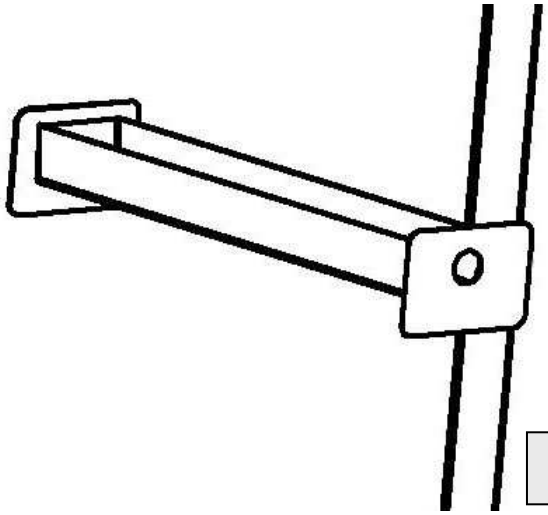

Fig. 12

Disassembly of the level gauges

a) Extract the level gauges from the tubs for checking the mixture level.

Note: During the disassembling of all the components, the existing gaskets must be removed(don't use sharp items that may damage the gaskets).

f.6) Re-assembly of the parts

It is important that during the re-assembly of the parts the equipment is absolutely not supplied with power.

Re-assembly if the pump body (fig. 9)

a) Reassemble the gaskets using the special food-grade lubricant.
b) Insert the rotor into the pump casing keeping the blades in the proper seat charging the springs.
c) Place the pump casing into its seat coupling the motor with the motor joint with slight rotation.
d) Once the rotor has been inserted, carry out an additional rotation of the pump body until it get stuck with the internal seat and twist the rotor until it is inserted into the motor joint.
e) Make a slight pressure downwards until finding correct position.

Re-assembly of the pump cover

a) Reassemble the by-pass screw and all the internal components (fig. 13).
b) Reassemble the air regulator and all the internal components (fig. 13).
c) Fasten the pump cover and screw the knobs.
d) Replace the compressor pipe (fig. 8 – n° 2).
e) Replace the intake pipe (fig. 8 – n° 1).

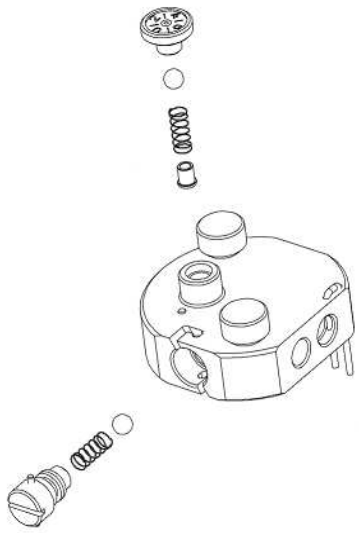

Fig. 13

Re-assemble of the mixers (fig. 11)

a) Mount scrapers.
b) Slip on the colloidal section.
c) Assemble and lubricate the stuffing box gaskets.
d) Insert the stuffing boxes on the shaft (fig. 14).
e) Fit the mixers in the cylinders.

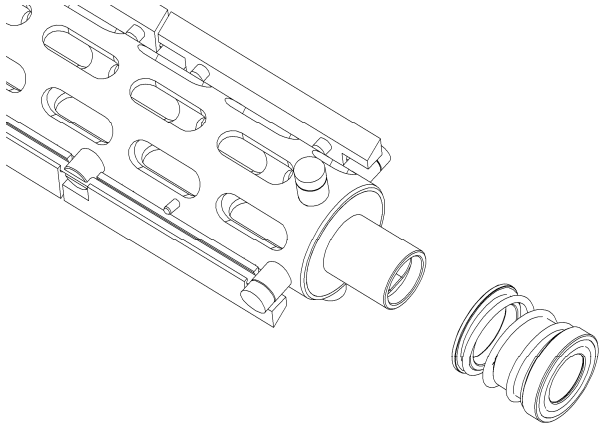

Fig. 14

Re-assembly of the tap (fig. 10)

a) Mount and sprinkle with food-grade lubricant the pistons gaskets.
b) Install the pistons in the tap body, remember that central piston is different from those lateral.
c) Assemble the levers inserting the horizontal pin, remember that central lever is higher than the lateral ones.
d) Mount and sprinkle with food-grade lubricant the cylinders gaskets.
e) Fasten the tap tightening the knobs in a uniform and crossed way.

Note: Before assembling, check that the gaskets are intact, in case they should show signs of wear, they would break under short time failing to ensure the proper functioning of the machine.

g) MAINTENANCE

g.1) Recommendations for the user

In the following you will find the recommended standard maintenance operations:

a) Empty the collecting drawer on the side and check that only a low mixture quantity is left.
b) Periodically, mix the mixture contained into the tubs scraping the sides of the tubs in order to avoid solidification and making ice crystals.
c) Keep the equipment area free of dust or some other items that could be sucked into the condensation plant causing operational defects.
d) Check that the equipment keeps steady without problems the temperature in the tubs and in the cylinders as well as the correct ice-cream consistency.
e) All the gaskets must be replaced at least once a year (even more if the machine is working regularly).
f) Only original gaskets supplied by the manufacturer and food-grade lubricants must be used.

g.2) Annual and extraordinary maintenance

The extraordinary maintenance must be carried out once a year (or even more in function of the climate, the use etc.) by the authorized personnel only. It refers to the internal parts of the equipment that would be reached with difficulty by the user.

Note: Ask for the intervention of the service.

g.3) Long period of inactivity

In the following we give you the necessary indications for preparing the equipment to a long period of inactivity. All the operations concerning washing and complete sanitizing of the equipment must be carefully carried out as described under chapter **f**
Overall it is important to lubricate perfectly all the tightening components.

h) FAULTS AND ALARMS

In the following some faults of the equipment are listed.

Note: If the fault is not listed here below, call the customer service.

h.1) Running stop without any alarms

- ***The equipment does not run or operation is interrupted. The display does not lighten.***

Causes:

a) The plug is not correctly inserted in the socket.
b) Lack of electric power in the network or in the socket.

Solution:
Check if the control panel is correctly supplied with power and/or re-insert the plug.

Causes:

c) A fuse is burnt out.
d) The plug is broken.
e) The power supply cable is damaged.

Solution:
Call a qualified technician or the customer service.

- ***The display is lightened but the equipment does not run.***

Cause:
There is a failure inside the equipment.

Solution:
Call the customer service.

- ***The equipment causes repeatedly the snaps of the electric protections.***

Causes:

a) The input power is too weak for the equipment.
b) The features of the magnetothermics or the fuses are not suitable for the existing power.
c) There is a failure inside the equipment.
d) For the machines with tri-phase power supply, no current in one phase.

Solution:
Call the customer service.

Note: Pay attention because if the equipment works with a phase that is not power fed the motor will he seriously damaged.

h.2) Performance drop

- ***The temperature in the tubs does not decrease to the pre-selected value.***

Causes:

a) The equipment is placed near a heat source.
b) The equipment is exposed directly to sun rays.
c) The minimum distance between the equipment and the surrounding walls has not been respected and/or there are some obstacles placed before the condensation plant opening.
d) The room temperature of the installation site is too high.

Solution:
Remove the improper conditions or change the operating place.

Causes:

e) The air condenser of the refrigeration system is dirty.
f) The condenser fan of the refrigeration system is not efficient.
g) Refrigerating system failure.

Solution:
Call the customer service.

- ***The cream consistency is not reached or is reached after a long time.***

Causes:

a) The formula for the mixture is not correctly balanced.
b) Wrong planning of the consistency in function of the mixture type.

Solution:
Check the effected operations. Change the mixture or re-set the creamy consistency.

Cause:
Emptying of one or both cylinders with squeaking.

Solution:
Check the tubs level and respect the following procedure:

1. Put the equipment in phase “STAND BY”.
2. Discharge the pressure from the cylinders by means of the output levers.
3. Slip-off the compression tubes and let the mixture discharge from the cylinders.
4. Wait until the cylinders are defrosted.
5. Repeat the filling operation verifying that the pumps are efficient.

Causes:

a) Insufficient condensation of the refrigeration system, shown by an increase or slow decrease of the temperature.
b) Wear of the scrapers.

Solution:
Call the customer service.

h.3) Output problems

- ***Output of air or product sprinkles.***

Causes:

a) One tub is empty.
b) One cylinder does not receive the mixture and is charged with air only.

Solution:
See chapter **h.2**

- ***The ice- cream does not come out of the tap or output is very slow.***

Causes:
One of the cylinders does not receive the mixture, the failure could be caused by:

a) Pump motor is out of order.
b) The intake or output pipes are obstructed.
c) The mixture flowing channels in the pump inside are obstructed.
d) The pump has not been correctly installed.

Solution:
Remove the eventual obstructions and check if the pumps have been installed correctly. If the problem persists, call the customer service.

Cause:
The cream consistency is too high.

Solution:
Lower the value of the consistency and take off some ice-cream portions.

h.4) Excessive noisiness
The equipment has been conceived and constructed for working at low noise levels and in any case in accordance with the minimum levels prescribed by the existing norms.
However, following to the wear of the moving components or some operating failures, it may be possible that some irritating nosiness appears.

Causes:

a) The scrapers are worn.
b) The cylinder walls are ruined.
c) The mixers or cylinders strain oneself mechanically, their coupling conditions having been modified by a thermic shock.
d) The driving system is worn (driving belt, bearings, etc.).
e) Anomalous running of the pump.

Solution:
Call the customer service.

h.5) Alarms
The equipment is fitted with process and security controls, that in case of necessity emit a warning signal and, if the problem is critical, stop the running completely.
In the following the main alarms are listed:

- ***NTCV ALL***
  This alarm is activated when the tubs temperature sensor is fault.
  The equipment goes in position "STAND BY".

Solution:
Call the customer service.

- ***NTCC ALL***
  This alarm is activated when the cylinders temperature sensor is fault.
  The equipment goes in position "STAND BY".

Solution:
Call the customer service.

- ***L LEVEL and R LEVEL***
  This alarm is activated when the mixture contained in the tubs decreases under the allowed minimum level. Besides the visible warning signal an acoustic alert signal appears, it can be reset by means of the reset button.

Solution:
Top the tub. The alert signal disappears when the level is restored.

- ***HIP ALL***
  This alarm is activated when there is an increase of the gas pressure in the cylinders refrigerating system.
  The equipment goes in position “STAND BY”.

Causes:

a) The refrigerating system is started and stopped continuously.
b) The condenser is dirty, obstructed or the fan is not efficient.
c) The minimum distance between equipment and surrounding walls has not been respected or some obstacles are placed in front of the condensation plant opening.

Solution:
In case that the equipment is in the condition cited cause “c” displace the machine or remove the obstacles that impede the free air circulation.
Wait a few minutes then reset by means of the reset button.
For the other problems call the customer service.

- ***HITP ALL***
  This alarm is activated when there is an excessive absorption of the pump motors. The intervention of this protection avoids that it becomes damaged.
  The equipment goes in position “STAND BY”.

Causes:

a) Wrong installation of the pump group.
b) Motor’s anomaly.

Solution:
Check that the pump organs can rotate freely.
Wait a few minutes then reset by means of the reset button.
In case that the alarm should continue call the customer service.

- ***HIC o HITM ALL***
  This alarm is activated when there is an excessive absorption of the mixers motor. The intervention of this protection avoids that it becomes damaged.
  The equipment goes in position “STAND BY”.

Cause:
The ice-cream in the cylinders has an excessive consistency due to a wrong set-up, too high, in respect to the type of mixture.

Solution:
Lower the consistency.
Wait a few minutes, reset by means of the reset button and reactivate the wanted cycle after the filling phase.

Cause:
No current in one mixers motor phase.

Solution:
Call the customer service.

This kind of alarms can be generated also by some other mechanic irregularities, for example the presence of foreign matters in the creaming cell, and must be evaluated and solved case by case.

- ***T. OPEN***
  This alarm is activated when the tap has not been fitted properly.
  The equipment goes in position "STAND BY".

Solution:
Make sure correct closing of the tap.
In case that the alarm should continue call the customer service.

- ***PH ERROR***
  This alarm is activated when there is an wrong direction of mixers rotation.

Solution:
Invert the power phases.

- ***HIPTC ALL***
  This alarm is activated when there is an overheating of the compressor motor. The intervention of this protection avoids that it becomes damaged.
  The equipment goes in position "STAND BY".

Solution:
Call the customer service.

- ***MAX TIME***
  This alarm is activated after that in spite of the correct time the mixture contained in the cylinders has not reached the programmed consistency.

Causes:

a) One of the cylinders, or both, could be empty.
b) The mixture is not correctly balanced or its formulation is not right.

Solution:
See chapter **h.2**

Cause:
The refrigerating system does not work correctly.

Solution:
Call the customer service.

- ***POWER FAIL***
  This alarm is activated after the temporary interruption, independently from the length of time, of the electrical power. The machine restarts in the previous functional state before the interruption.

Cause:

a) Electrical power interruption from the company which supplies this service.
b) Switching off the machine through the general switch of the plug.

Solution:
Machine auto-restores.
Reset by means of the reset button.

Note: Make sure that the mix has not suffered deterioration.

b.1) Technical data tag and EC-marking

The data tag and EC-marking must absolutely neither be removed nor damaged.
It reports the following data:

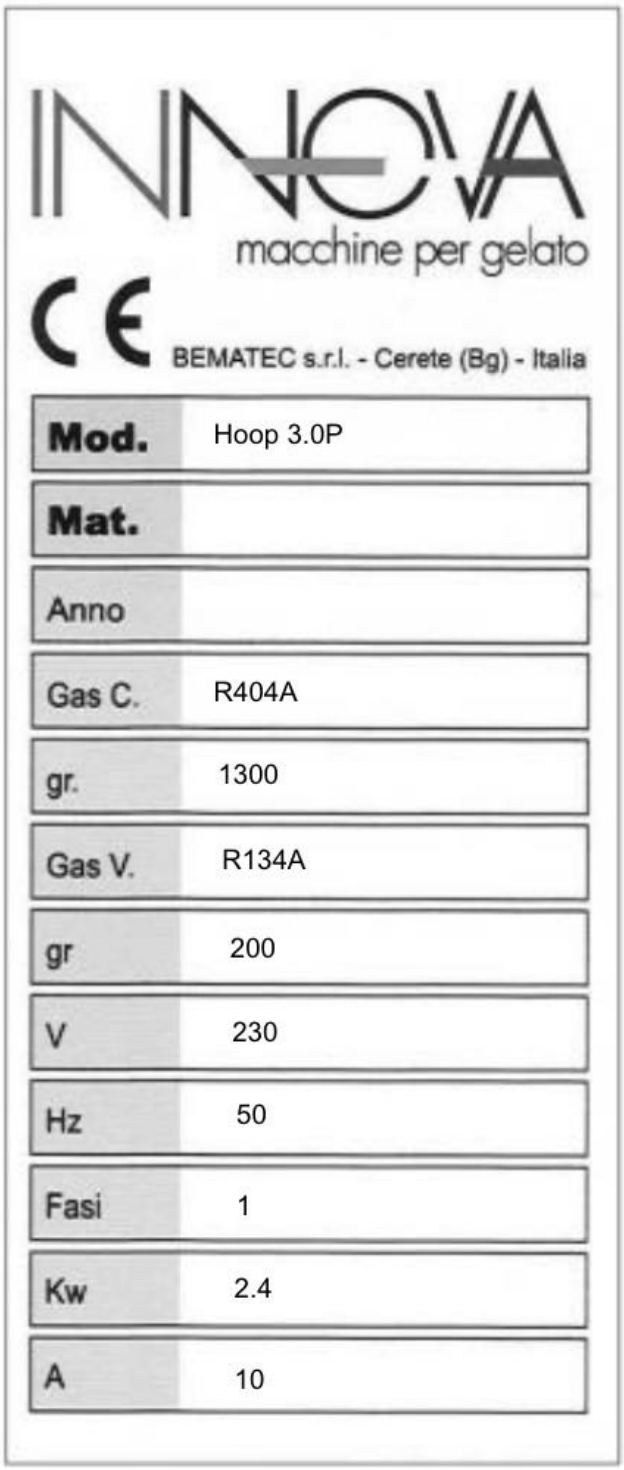

Fig.1

Name and address of manufacturer – EC-mark

Machine model

Machine series-No.

Year of manufacturing

Type of refrigerating gas for production plant

Quantity of gas for production plant

Type of refrigerating gas for preservation plant

Quantity of gas for preservation plant

Electric power

Frequency

Phase number

Power

Electricity

b.2) Acoustic pressure level

Measured following the norms < 70 dB (A).