

KISS 3 POWER



**MANUALE D'USO E
MANUTENZIONE**

**OPERATING INSTRUCTIONS
AND MAINTENANCE**

**MANUEL D'UTILISATION ET
D'ENTRETIEN**

Serie

| | |
|-------------------------|-----------|
| KISS 3 POWER | 01 |
| KISS 3 POWER EMU | 01 |



**ISTRUZIONI ORIGINALI
ORIGINAL INSTRUCTIONS
INSTRUCTION ORIGINALES**



Azienda Certificata
UNI EN ISO 9001:2000

Numero Certificato
50 100 5650

IMPORTANT

We recommend that you read this manual fully and carefully before using your appliance.

It is in your interest to pay special attention to the warnings marked as follows:



Failure to comply with this signal causes very serious risks for health, death, and medium and long term permanent damage.



Failure to comply with this signal can cause very serious risks for health, death, and medium and long term permanent damage.



Failure to comply with this signal can cause injuries or damage to the machine.



Comply with these warnings for your machine to work properly and/or to be serviced correctly.



The machine can perform at best only through compliance with these warnings.

We congratulate you for having chosen to purchase a **FRIGOMAT** machine.

This manual, supplied together with the machine, must be considered an integral and essential part and must be delivered to the final user. Before carrying out any operations, we recommend studying these instructions carefully. Only by reading them carefully can you obtain the maximum performance from your machine. The following pages carry all of the indications required to perform installation, operation, adjustments and routine maintenance correctly. FRIGOMAT S.r.l. reserves the right to carry out the modifications it deems necessary to improve its product or the technical manual without prior warning, inserting the variations in the subsequent editions.

Total or partial reproduction, adaptation or translations of this manual without prior written consent by FRIGOMAT S.r.l is prohibited.

The machine is covered by warranty according to the terms illustrated in the "WARRANTY CARD" supplied. It must be duly filled in and returned to:

FRIGOMAT s.r.l., via 1° Maggio, 28 26862 GUARDAMIGLIO (LODI) – ITALY

Please write the serial number of your machine in the field below.

Serial number

Dealer's stamp

| | |
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1 TRANSPORTATION, HANDLING AND STORAGE.

1.1 PRELIMINARY INSPECTION AND STORAGE

The machine is transported at the risk and peril of the customer. If you notice any damage to the packaging, immediately inform the carrier.

Inform the carrier immediately after opening the package if the machine is damaged even if a few days after delivery.

It is always preferable to accept goods **SUBJECT TO CLEARANCE**.

The appliance must be handled with care; it can be damaged by falls and blows even without exterior damages.

Storage temperature must be between 0° and +50°C, and humidity must be between 30 and 95% with no dew.

Once the appliance has been unpacked, the packaging must be kept in a dry place out of the reach of children. If stored properly, it can be reused if the machine is moved.

1.2 DIMENSIONS AND WEIGHTS OF PACKAGED MACHINES

| MODEL | CRATE | | BOX PALLET | |
|---------------------|----------------------|--------------------|----------------------|--------------------|
| | MEASUREMENTS (CM) | WEIGHT N-G (KG) | MEASUREMENTS (CM) | WEIGHT N-G (KG) |
| KISS 3 Power | 90 x 60 x 109 | 200 - 225 | 90 x 60 x 109 | 200 - 210 |

1.3 INDICATIONS FOR DECOMMISSIONING

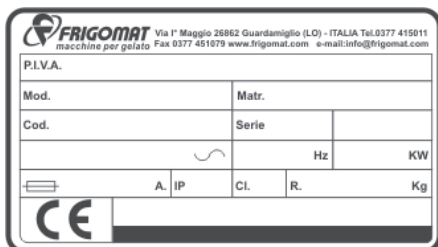
The machine contains electrical and/or electronic materials and can contain fluids and/or oil. If it needs to be decommissioned or disposed of, comply with the standards in force in the Country where it is used.

Even packaging materials (crates or boxes) must be divided by type and disposed of in compliance with Standards in force in the Country where it is used when the machine is decommissioned.



2. MARKING AND GRAPHIC SIGNS

The machine is provided with an identification plate and several pictograms. They must be known along with the manual to guarantee safe use.



Machine data plate

The adhesive plate applied on the rear enables to identify the model. It includes the following indications: Name and address of the manufacturer; machine model and version; serial number; nominal electrical features; type and weight of gas used; year of manufacture.

Indication

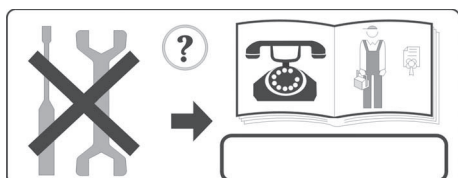
Lifting equipment attachment points.

This plate indicates the points where the lifting hooks must be placed in order to carry out this operation safely. Use a Phillips screwdriver unscrew the two side panels of the machine and position the lifting equipment in the relevant points, making sure that they cannot accidentally slip off during lifting operations.



Attention!

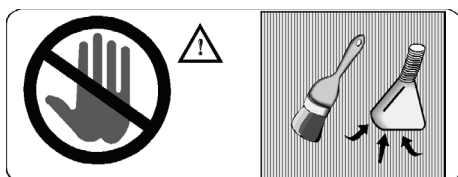
Maintenance reserved for qualified personnel. This plate applied on the rear panel prohibits extraordinary maintenance and/or repairs to any one but authorised personnel, whose address is indicated in the space provided.

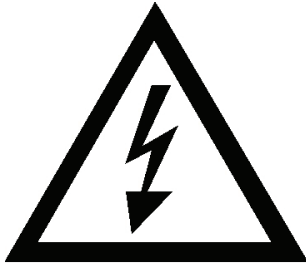


Attention!

Do not touch with your hands.

This plate applied on the left side panel of the machines with air cooling indicates that the heat exchanger can only be cleaned using a brush or suction device.



**Attention!**

High voltage inside; electrocution hazard.

This plate is applied on the electrical box and warns the operator that the maintenance of the electrical/electronic components is reserved for qualified personnel.

3. GENERAL SAFETY STANDARDS



Strictly observe the general safety and accident-prevention standards listed hereafter:

- Use of the machine is NOT suitable for persons (including children) having reduced physical, sensorial or mental abilities, or lacking in experience and knowledge, unless supervised or trained on using the machine by a personal responsible for their safety.
Children must be supervised to avoid them playing with the machine.
- Use of the machine is reserved for operators only, who have read, understood and acknowledged all that is included in this manual.
- It is forbidden to remove or tamper with the safety systems installed on the machine.
- While the appliance is operating, it is mandatory to check that danger situations for persons do not occur. Should these conditions occur, stop the appliance immediately.
- When you have finished working with the machine, it is mandatory to cut power by acting on the master switch.
- When unusual noise or anomalous functioning is perceived, it is mandatory to immediately stop operations in progress and to search for the cause of these irregularities. If in doubt, avoid improper operations by contacting the technical assistance service of the manufacturer.
- Any tampering or modification of the machine automatically entails the immediate termination of the warranty and relieves the manufacturer of all and any liability for direct or indirect damage caused.
- It is mandatory to check that the place where the machine is installed is ventilated and correctly illuminated. The surface where the appliance is installed must be solid, flat and levelled.
- During loading, unloading and handling operations, it is mandatory to use equipment with a capacity adequate for the mass (weight) of the machine, using hoisting devices and accessories with features and state of use suitable for the purpose.
- Use only original FRIGOMAT spare parts when performing maintenance. The manufacturer will not be held liable for damage caused by use of non-original spare parts. Use of non-original spare parts entails automatic termination of the warranty.
- It is mandatory to position the machine far away from equipment which emits electromagnetic radiation which could cause the circuit boards to malfunction.
- If fire-prevention equipment is necessary use types which are compatible with the presence of voltage on board.
- It is forbidden to wear long and loose apparel, ties, jewellery, scarves or similar clothing which could get caught in the moving parts of the machine.
- Hair must be tied back and shirt-sleeves tight.

4. INSTALLATION

4.1 USE

Appliance suitable for preservation and batch freezing of soft ice cream mixtures, according to use allowed by Law.

4.2 WORKING LIMITS

Do not use the machine with inconstant power supplies or +/- 10% beyond the value indicated on the plate or with the power cable damaged;

Do not use the machine in explosive atmospheres;

Do not wash the machine with high-pressure water jets or with harmful substances;

Do not expose the machine to excessive heat or humidity;

Do not use unbalanced mixtures and/or amounts which do not comply with the specifications carried on the packs.



Use not expressly indicated in this manual is to be considered improper and therefore must be strictly avoided.

The manufacturer will not be held liable for direct or indirect harm to persons or animals or damage to objects caused by improper use of the machine.

4.3 NOISE

| SOUND EMISSION LEVEL EXPRESSED IN DECIBELS (measurement method A) As foreseen by Machinery Directive 89/392 EN 23741 Standard (A-weighted equivalent continuous sound pressure level) | |
|---|---------------|
| MODEL | LEVEL (A) |
| KISS 3 Power | < = 70 dB (A) |

4.4 SUPPLIED WITH MACHINE

- Scrapers
- Brushes
- Gasket extractor
- O-ring kit
- Rubber seal
- FRIGOMAT lubricant
- Use and maintenance manual
- Declaration of conformity
- Warranty certificate
-

4.5 ACTIVATION (FOR THE TECHNICIAN)



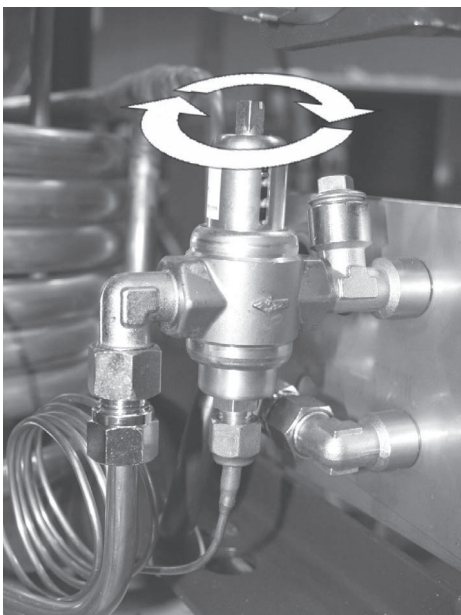
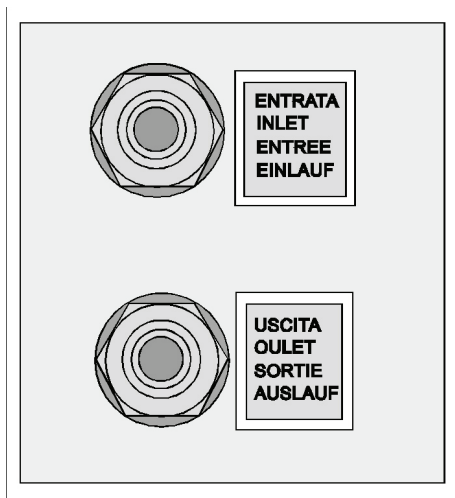
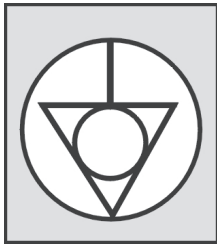
FRIGOMAT declines all and any liability for damage caused by failure to comply with the following indications. This lack of compliance causes the warranty to terminate.

Connection of the machine to the water mains must be performed in compliance with national regulations of the Country where the machine is installed.

To commission the machine, bring it to the place of use, checking what is requested for its installation:

- 1. Electrical power supply 3 phases + neutral + earth (5 wires - 400V three-phase mod.)**
Electrical power supply 3 phases + earth (4 wires - 220V three-phase mod.);
- 2. Cold water mains supply (13° - 20°C, only water mod.);**
- 3. Condensation water drain (only water mod.).**

- Make sure the appliance is positioned on a solid, stable, flat and levelled surface.
- Leave at least 10 cm from the panel on the right hand side and 30 cm from the panel on the left hand side. For machines with water condensation, the distance between the wall and the side panels must be 10 cm. In any case, the rear panel must be at just 5 cm from the wall or other obstacles.
- Check the exact correspondence between the voltage and power of the mains compared to the values carried on the data plate applied on the rear panel.
- Connect the machine to the electrical power supply system. Install a omnipolar master switch upstream the appliance with minimum contact opening of 3 mm of adequate power, with a fuse and circuit breaker protective system. Use an approved interlocking plug to allow only the open circuit to connect and disconnect.
- The cable must be well laid, without being rolled-up or overlapped. It must not be exposed to blows or tampering. It must not be in the vicinity of liquids or water and heat sources. It must not be damaged in any way. If so, before connecting the machine to the mains, have it replaced by qualified personnel with another having a 5G4 H07RN-F (400 V version) or 5G6 H07RN-F (220 V/3 version).
- For safety purposes, make sure the earthing system to which the machine plug is connected is compliant with standards and perfectly efficient.



- If needed, carry out an equipotential bonding, using the screw placed on the rear of the machine below the frame and marked with the symbol shown to the left.
- Make sure that the cold water supply line intended for condensation has pressure values between 1 and 3 BAR (between 100 kPa and 300 kPa) and temperature between 13° and 20°C (water mod only).
- Connect the cold water supply pipe intended for condensation onto the machine inlet as shown in the figure. Use a Ø1/2" fitting and place a gate valve within the operator's reach (water mode only).
- Connect the condensation water drain pipe onto the machine outlet as shown in the figure, using a Ø1/2" fitting (water mode only).
- Always use new pipes suitable for hot water and for pressure up to 10 bar both for delivery and draining. Never use worn or consumed piping. Use suitable DIN 3017 hose clamps (water mode only).
- The drain pipe must have an inclination of at least 3 cm for each meter of length (water mode only)..
- After having connected the water inlet and outlet pipes, with the machine stopped, open the cut-off cock and make sure that water does not leak from the drain (water mode only).
- Turn off the master switch and press the **PRODUCTION** button to check the following:

1. Beater motor rotation direction.

The machine is equipped with a sophisticated electronic system which is able to automatically detect if the beater motor rotation direction is the correct one (anti-clockwise).

If the phases are inverted in the plug, after a few seconds of operating in production mode, the machine stops and the display shows the relative alarm message.



To connect the phases properly cut the power and invert the two phase wires in the plug.

2. Condensation pressure (water models only).

With the machine in production mode, after a few seconds condensation water must come out of the drain pipe at a temperature of about 35°C. If this is not the case, the pressure switch valve shown in the figure must be adjusted.



Three-phase machines are powered with three-phase + neutral lines: be careful never to connect the phase lines with neutral. FRIGOMAT will not be held liable for damage to the machine deriving from non-compliance with this rule.

- Operating temperature should be between 15° and 35°C.
- Humidity should be between 30 and 60%.



FRIGOMAT s.r.l. will not be held liable for personal harm and/or damage to objects deriving from incorrect installation and/or by failure to comply with work accident-prevention standards. Never intervene on the machine with your hands, neither during normal operating cycles or during cleaning and maintenance, without first having stopped the machine by pressing the **STOP** button and having turned off the master switch. Never clean the appliance using a high-pressure water jet. Never shut the water cut-off cock while the machine is running. Be careful never to damage the power cable. If so, have it replaced.

Machines with water cooling which are left in places at a temperature below or close to 0°C, must first have all the water drained from the condenser.

5. SAFETY DEVICES

Shearing-prevention safety device: Implemented by means of a micro and a safety circuit compliant with European standards; it intervenes by blocking the beater motor when the dispenser door is removed.

Motor overheating safety device: Implemented by means of automatic reset thermal-current sensors or thermal relays; they protect the machine's beater motors from overloads, by signalling the relative alarm message on the display, emitting an intermittent acoustic signal and enabling to reset directly from the push button control panel.

Semi-hermetic compressor motor overheating safety device: Implemented by means of an automatic reset thermal relay; it protects the machine compressor motor operation from overloads, by signalling the relative alarm message on the display, emitting an intermittent acoustic signal and enabling to reset directly from the push button control panel.

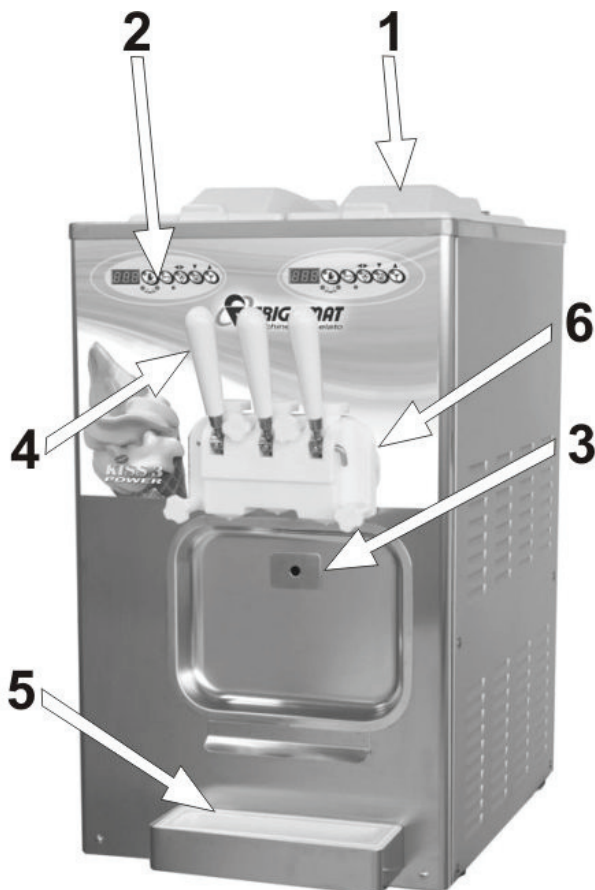
Chiller circuit over-pressure safety device: implemented by the approved automatic-restoration safety pressure switch; it protects the integrity of the chiller circuit from overpressure.

Protection against short circuit of auxiliary utilities: Implemented by fuses which intervene on the logic unit or auxiliary power supply in the event of short-circuits.

SELV safety circuit: the push button control panel is powered at low voltage by means of an approved dual-insulation safety transformer, protected against short circuits by fuses.

6. OPERATION

6.1 MACHINE



1. Tank lid

It prevents the product in the tank from coming into contact with dust or other impurities.

2. Control panel

Enables to select the work programs.

3. Door

Closes the cylinder hermetically during the processing phases. It can be easily removed for cleaning.

4. Dispenser lever

Allows the operator to dispense the product.

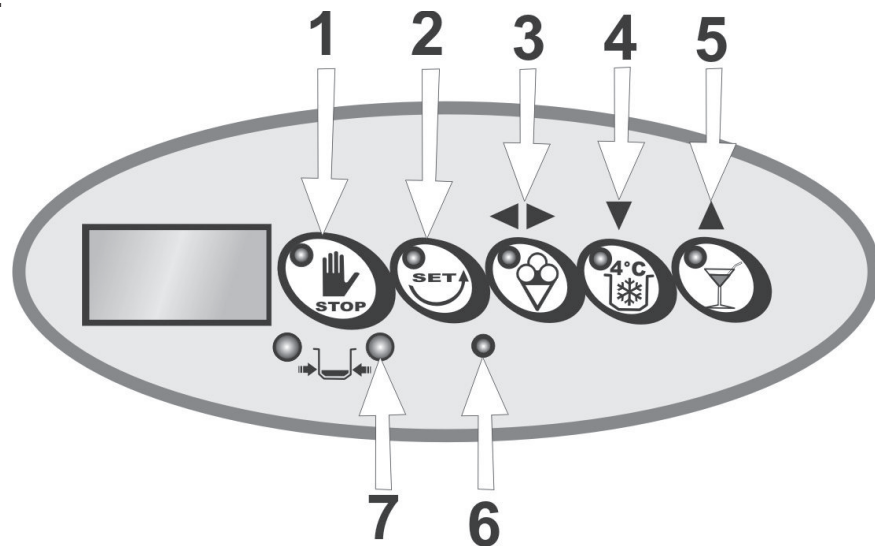
5. Drip tub

It collects ice cream residues that might remain on the door after dispensing the product.

6. Drip drawer

Collects leakage of liquid from the cylinder gland follower.

6.2 CONTROL PANEL



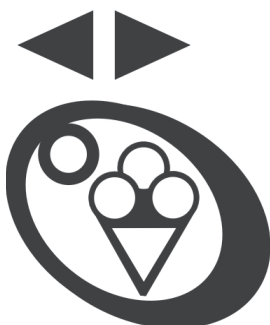
1. STOP

In whatever operating phase the machine is in, pressing the STOP key stops the machine and cancels the function in progress.



2. MIX / SET

Regardless of the operating phase the machine is in, pressing the MIX button will only start the beater motor. The "MIX safety Timer", which automatically stops the beater motor after 30', is active for this function.



3. PRODUCTION / CONFIRM (◀▶)

This button has 2 functions:

1. In whatever operating phase the machine is in, pressing the PRODUCTION key turns on the key's LED and starts batch freezing the product according to the texture value set for this function.
2. During programming, by pressing the CONFIRM key it is possible to confirm the value of the selected parameter.



4. PRESERVATION / DOWN (▼)

This button has 2 functions:

1. In whatever operating phase the machine is in, pressing the PRESERVATION key turns on the key's LED and starts preserving the product in the tank according to the texture value set for this function and relative to the latest working programme selected.
2. During programming, by pressing the DOWN key it is possible to reduce the value of the selected parameter.



5. CREATIVE / UP (▲)

This button has 2 functions:

1. **(Programming step P5=1 - default)** The CREATIVE function allows to make products that require low textures, such as frozen yogurts, sorbets, fruit and cream parfaits, mousses, etc.

(Programming step P5=2 – contact the technician to enable this function) With P5=2 the CREATIVE function is replaced by a second ice cream batch freezing cycle with a variety of customisations. It is particularly recommended to process even very special mixtures.

In whatever operating phase the machine is in, pressing the CREATIVE FUNCTION key turns on the key's LED and starts processing the product according to the texture value set for this function.

2. With the machine in the program, by pressing the UP key it is possible to increase the value of the selected parameter.



6. LED SET

The flashing LED tells the user that the dispenser lever is open position.

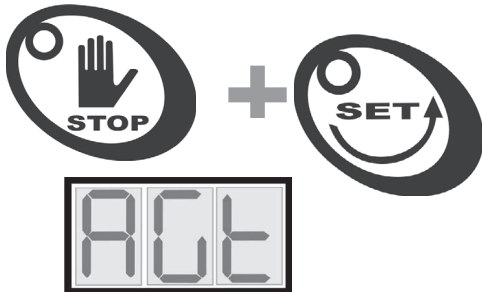


7. LOW MIXTURE LED

The LED turns on when there is not enough liquid mixture in the tank.

TANK MIXING CONTROL (OPTIONAL)

1. MANUAL TANK MIXING CONTROL WITH MACHINE IN STOP and/or MIX MODE.

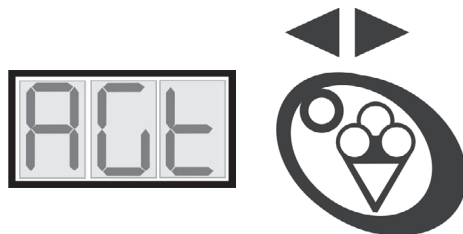


With the machine in STOP and/or MIX mode, by pressing the STOP and MIX keys a few seconds, the display shows the AGT lettering and enables continuous mixing in the tank.

Press the STOP key to stop mixing in the tank.

The "MIX safety Timer", which automatically stops the beater motor after 30', is active for this function.

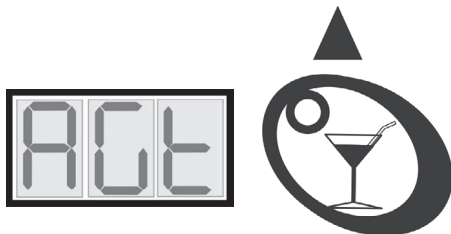
2. MANUAL TANK MIXING CONTROL WITH MACHINE IN PRODUCTION MODE.



With the machine in PRODUCTION mode, by pressing and holding the PRODUCTION key for at least 3", the display shows the AGT lettering and enables continuous mixing in the tub.

Press and hold the PRODUCTION key again for at least 3" to stop mixing in the tub.

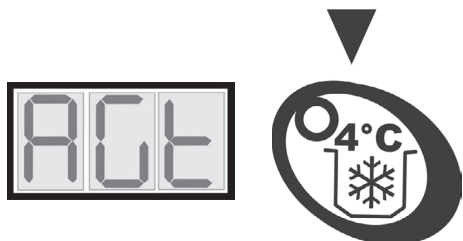
3. MANUAL TUB MIXING CONTROL WITH MACHINE IN CREATIVE PRODUCTION MODE.



With the machine in CREATIVE PRODUCTION mode, by pressing and holding the CREATIVE key for at least 3", the display shows the AGT lettering and enables continuous mixing in the tub.

Press and hold the CREATIVE key again for at least 3" to stop mixing in the tub.

4. MANUAL TUB MIXING CONTROL WITH MACHINE IN PRESERVATION MODE.



With the machine in PRESERVATION mode, by pressing and holding the PRESERVATION key for at least 3", the display shows the AGT lettering and enables continuous mixing in the tub.

Press and hold the MIXING key again for at least 3" to stop mixing in the tub.

6.3 PRODUCTION OF SOFT ICE CREAM

6.3.1 PRELIMINARY CHECKS

After having installed the machine in compliance with the instructions of chapter 3 and having accurately washed and sanitised it, according to the instructions contained in chapter 7, proceed to conduct the preliminary checks listed below before starting to make any ice cream:



- Make sure that the gate valve of cold water for condensation is open (water models only).
- Make sure the master switch is closed and that the machine is powered correctly.
- Make sure that the door, the gland follower and the mixer have been installed correctly on the machine. Check that the lever of the dispenser door is in closed position.



To avoid any malfunction or damage to the machine, it is necessary to also conduct the checks below on the product you wish to use:



- Check that the mixture has been made and balanced expressly for use in soft machines.
- Check the mixture is fluid, even and well combined.
- Always mix before pouring the mixture in the tub.
- NEVER use mixtures containing solid parts, even small ones (eg: strawberry pips, chopped granola, etc.), as they might damage some parts of the machine.



To achieve maximum performance from the machine, we recommend always mixtures stored at 4°C.

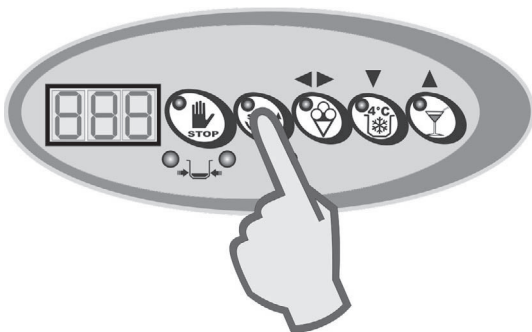
6.3.2 OPERATION OF GRAVITY MODELS



- Lift the lid and remove the power supply needle from the bottom of the tank.
- Pour the mixture into the tank, strictly observing the minimum and maximum amounts listed in the table below:

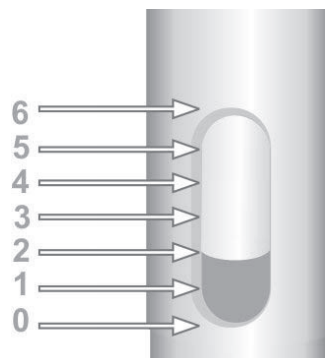
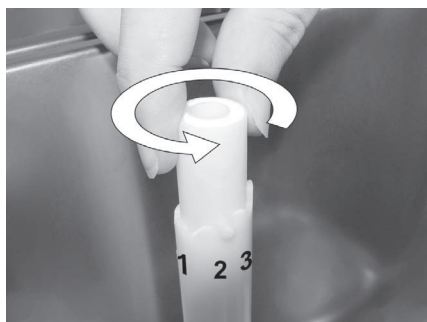
| MODEL | MIN. (litres) | MAX. (litres) |
|----------------|---------------|---------------|
| KISS 3 Power G | 4 | 12 x 2 |

- Press the MIX key and leave the beater to turn for about 2-3 minutes.
- In the meantime, place the power supply needle back at the bottom of the tank.
- Select the desired volume increase by placing the mix inlet regulator on one of the seven possible positions. The higher the value, the higher the amount of mixture introduced into the cylinder and, as a result, this reduced the amount of air in the ice cream. Vice versa, positioning the mix inlet regulator on positions closer to 1 increases the amount of air in the product.



The 0 position corresponds to a complete closure of the inlet hole of the mixture and therefore this must NEVER be used when producing the ice cream.

Particularly thick mixtures require placing the regulator on positions close to the highest values (4,5 or 6), otherwise there is the risk of blocking the machine owing to insufficient supply from the batch freezing cylinder.





! ATTENTION !

Changes to the increase in volume after each change on the control will be visible only the complete replacement of the ice cream in the batch freezing cylinder.

- After filling of the batch freezing cylinder, discharge excess air by placing a container under the tap and slowly lowering the dispenser lever.

! ATTENTION !

This operation facilitates proper filling of the batch freezing cylinder, preventing the formation of ice, which might block the beater during the subsequent batch freezing stage and trigger the machine's alarm.

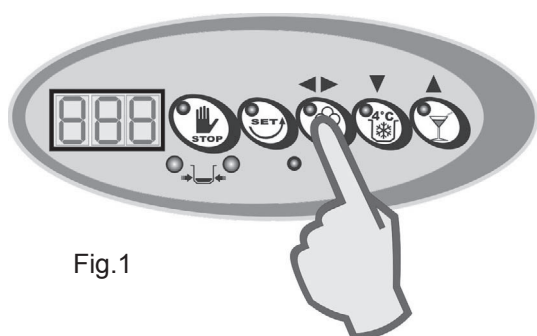


Fig.1

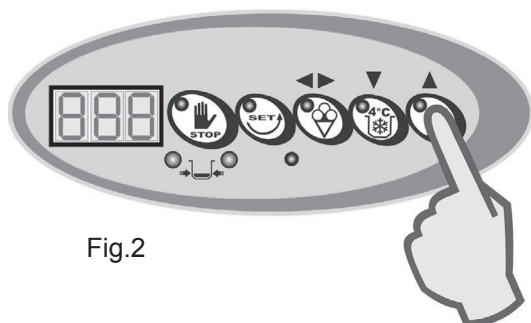
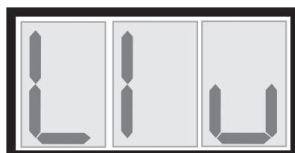


Fig.2

- Lower the tank lid to prevent that, during processing, dust and other impurities may come into contact with the product.
- Press the PRODUCTION key to start the production of soft ice cream (fig.1) or press the FUNZIONE CREATIVE FUNCTION key to start the production of frozen yogurts, sorbets, fruit and cream parfaits, mousses, etc (fig.2).
- Three flashing lines are shown on the display for a few seconds to confirm the automatic cycle has been selected; subsequently, during batch freezing, the instantaneous consistency numerical value is displayed.
- At the end of the production cycle, once the consistency setting related to the desired function has been reached, the machine stops automatically. The ice-cream is ready to be extracted.



Lower the dispenser lever to extract the ice cream.

- If the consistency of the product is not satisfactory, it is possible to change the value directly from the push button control panel by following the instructions contained in chap.6.5.
- If no ice cream has been extracted, the machine automatically checks the consistency of the ice cream every 10 minutes and, if necessary, starts the compressor to achieve optimal conditions. This means that the ice-cream is always ready to be extracted.
- During operation, check that the level of the mixt in the tank never drops below the recommended minimum quantity (reserve 1 and 2 lights off).

When, however, the level becomes low, the light of reserves (1) lights up to indicate that you need to add liquid mixture in the tank before further dispensing.

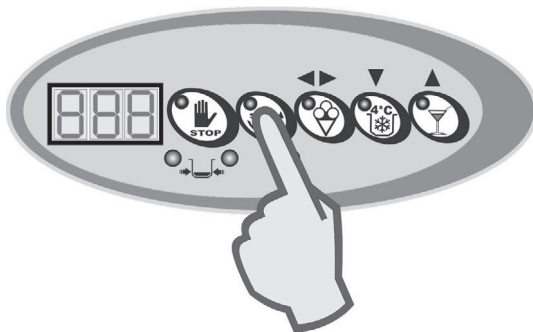
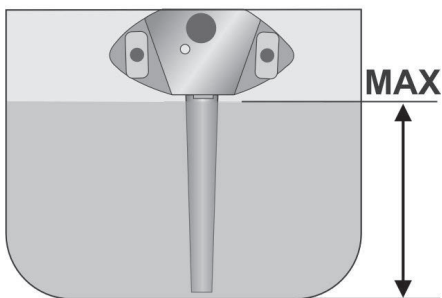


If the level in the tank is lowered further, thus reaching the minimum allowable value to ensure the safety of the machine, the indicator lamp of reserve 2 lights on and it interrupts the operational functionality of the machine.

With both 1 and 2 backup lights on, lowering the levers of supply, it is displayed a message LIV that reminds to the operator that the dispensing is suspended until mix is filled in the tank.

During this phase, the machine guarantees the preservation of the product contained in the tanks and in the cylinders of freezing at temperatures below 4 ° C.

6.3.3 OPERATION OF PUMP MODELS



- Lift the lid and pour the mixture into the tank, strictly observing the minimum and maximum amounts listed in the table below:

| MODEL | MIN. (litres) | MAX. (litres) |
|----------------|---------------|---------------|
| KISS 3 Power P | 4 | 8 x 2 |



The pressurising pump must always remain above the level of the mix in the tank. Should be submerged, this may lead to malfunctioning and serious damage to the machine.

- To select the desired increase in volume, turn the liquid control, located on the bottom of the pump lid, to the position corresponding to the adequate volume increase.
Turning to the left reduces the amount of air incorporated in the product, turning it to the right increases the amount of air.



Changes to the increase in volume after each change on the control will be visible only the complete replacement of the ice cream in the batch freezing cylinder.

- Lower the tank lid to prevent that, during processing, dust and other impurities may come into contact with the product.
- Press the MIX key and let the machine operate for about 2' to allow the pump to fill the batch freezing cylinder.



After filling of the batch freezing cylinder, discharge excess air under pressure in the cylinder by placing a container under the tap and slowly and carefully lowering the dispensing lever.



This operation facilitates proper filling of the batch freezing cylinder, preventing the formation of ice, which might block the beater during the subsequent batch freezing stage and trigger the machine's alarm.

- Lower the tank's lid and press the PRODUCTION key to start the production of soft ice cream (fig.1) or press the CREATIVE FUNCTION key to start the production of frozen yogurts, sorbets, fruit and cream parfaits, mousses, etc.. (fig.2).
- Three flashing lines are shown on the display for a few seconds to confirm the automatic cycle has been selected; subsequently, during batch freezing, the instantaneous consistency numerical value is displayed.
- At the end of the production cycle, once the consistency setting related to the desired function has been reached, the machine stops automatically. The ice-cream is ready to be extracted.
- Lower the dispenser lever to extract the ice cream.
- If the consistency of the product is not satisfactory, it is possible to change the value directly from the push button control panel by following the instructions contained in chap.6.5.
- If no ice cream has been extracted, the machine automatically checks the consistency of the ice cream every 10 minutes and, if necessary, starts the compressor to achieve optimal conditions. This means that the ice-cream is always ready to be extracted.
- During operation, check that the level of the mixt in the tank never drops below the

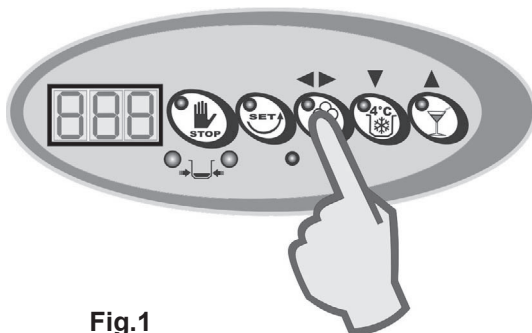


Fig.1

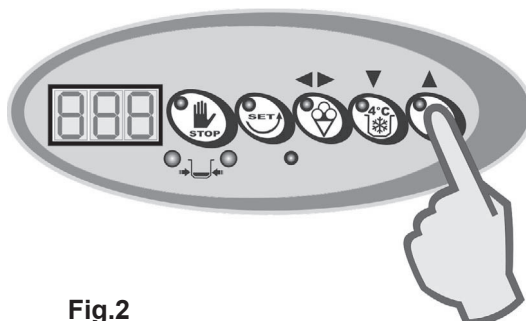


Fig.2



recommended minimum quantity (reserve 1 and 2 lights off).

When, however, the level becomes low, the light of reserves (1) lights up to indicate that you need to add liquid mixture in the tank before further dispensing.



If the level in the tank is lowered further, thus reaching the minimum allowable value to ensure the safety of the machine, the indicator lamp of reserve 2 lights on and it interrupts the operational functionality of the machine.

With both 1 and 2 backup lights on, lowering the levers of supply, it is displayed a message LIV that reminds to the operator that the dispensing is suspended until mix is filled in the tank.

During this phase, the machine guarantees the preservation of the product contained in the tanks and in the cylinders of freezing at temperatures below 4 ° C.

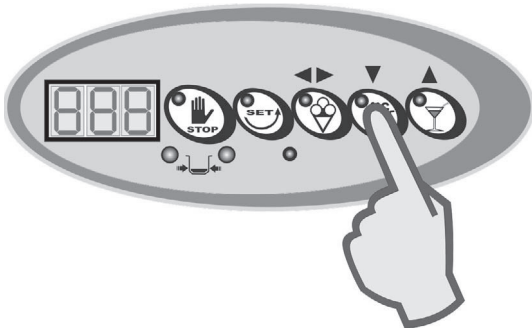


The KISS 3 Power models are fitted with a double push button control panel to allow the user to manage the two batch freezing cylinders with the corresponding tanks to preserve the mix separately. So each push button control panel controls the corresponding cylinder and tank. When working with both tanks it is necessary to select the desired operating functions on both panels, while when working with just one tank, one only needs to use the corresponding panel (right or left).

The advantages of this solution are listed below:

- Ability to adjust different values of consistency in the two cylinders to match quality with different characteristics and different quantity and frequency of delivery.
- Ability to select both the PRODUCTION function for a cylinder and the CREATIVE function for the other cylinder to always get that perfect combination of products.
- Ability to turn off half the machine during low season or during routine cleaning and/or when changing just one flavour and keep the other part in operation.

6.4 PRESERVATION



The KISS Series models are fitted with the handy "preservation" function that allows the operator to switch the machine from the production phase to that of stand-by when delivery of the product is interrupted, i.e. at night, when the premises are closed, etc.

At this stage, both the product in the tank and the processed product in the cylinder are maintained at an adequate temperature; the machine also performs consistency tests with longer sampling times compared to the ones carried out at the production phase. This will preserve the quality of the product even after many hours in the cylinder.

If the temperature at which the product is preserved in the tank is not satisfactory, it is possible to adjust it directly from push button control panel by following the instructions contained in chap. 6.5.

To enter the preservation programme, simply press the button "PRESERVATION" key on the panel.



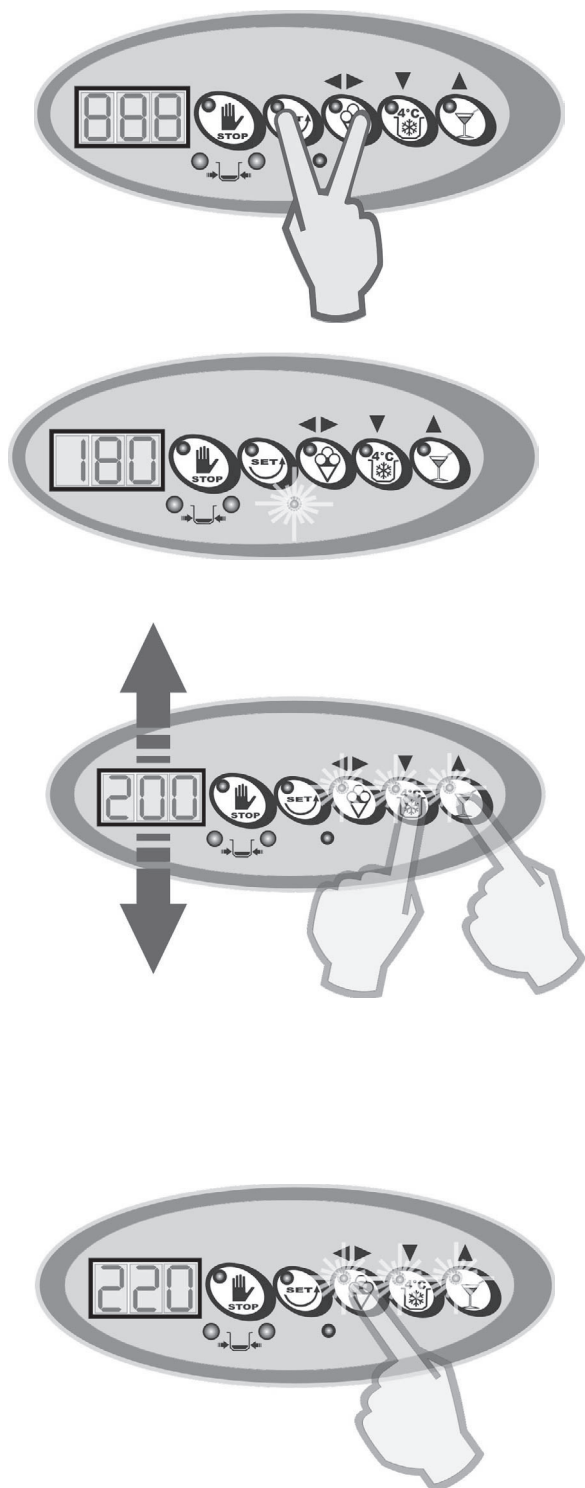
It is recommended to maintain the optimal level of mix in the tank indicated when the "tank level indication" LED is off.



By selecting the preservation function, the machine keeps the consistency value of the last programme selected (either CREATIVE FUNCTION or PRODUCTION).

6.5 ADJUSTING THE TEXTURE

6.5.1 ADJUSTING THE TEXTURE DURING ICE CREAM PRODUCTION



If the consistency of the product is not satisfactory, it is possible to change the value directly from the push button control panel by following the instructions below:

- Make sure the machine is turned on, it contains enough and set for the PRODUCTION of soft ice-cream.
- At any time, to enter the mode to adjust the texture, press and hold the PRODUCTION and SET keys until the display shows the last set of consistency programmed. The SET LED turns on.
- The LEDs of the UP (▲), Conferma (Confirm) (◀▶) and DOWN (▼) keys start flashing and the numbers relative to the consistency setting to be configured, expressed by a numerical value between 60 and 250, appear on the display: press the "UP (▲)" and "DOWN (▼)" keys to increase or decrease this value.

Higher consistencies correspond to high numbers, lower consistencies correspond to low numbers.

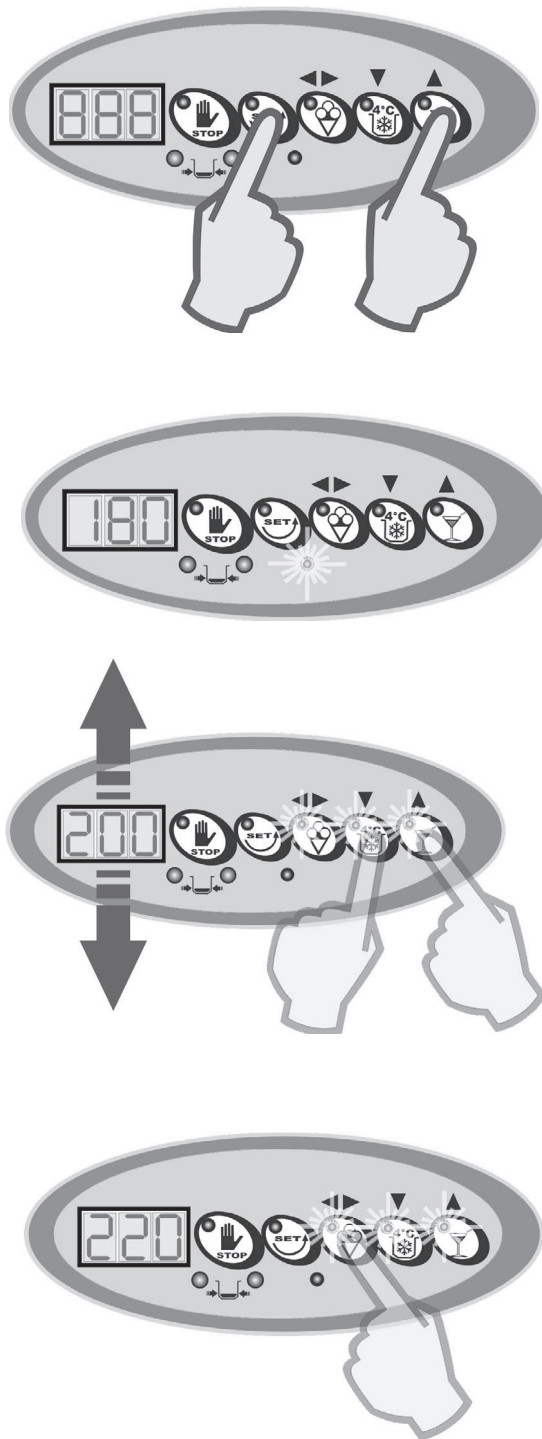


The maximum programmable consistency value is equal to 250 numbers but not all mixtures can reach such a high consistency value.

For mixtures particularly low in sugar and fat, it is recommended to not select consistency numbers close to 250.

- Subsequently, press the Conferma (Confirm) (◀▶) key to save the new consistency value programmed.

6.5.2 ADJUSTING THE TEXTURE DURING CREATIVE PRODUCTION



If the consistency of the product is not satisfactory, it is possible to change the value directly from the push button control panel by following the instructions below:

- Make sure the machine is turned on, it contains enough product and is set for the CREATIVE FUNCTION.
- At any time, to enter the mode to adjust the texture, press and hold the CREATIVE FUNCTION and SET keys until the display shows the last set of consistency programmed. The SET LED turns on.
- The LEDs of the UP (▲), Confirm (◀▶) and DOWN (▼) keys start flashing and the numbers relative to the consistency setting to be configured, expressed by a numerical value between 60 and 250, appear on the display: press the "UP (▲)" and "DOWN (▼)" keys to increase or decrease this value. Higher consistencies correspond to high numbers, lower consistencies correspond to low numbers.

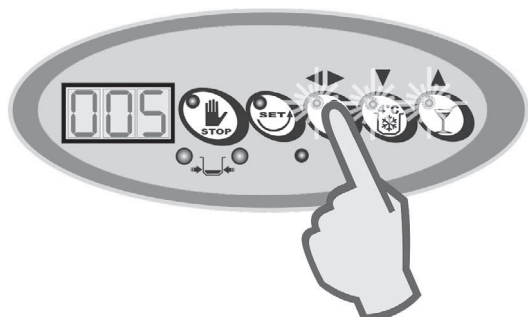
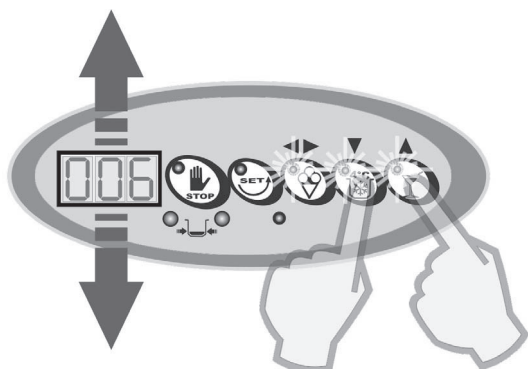
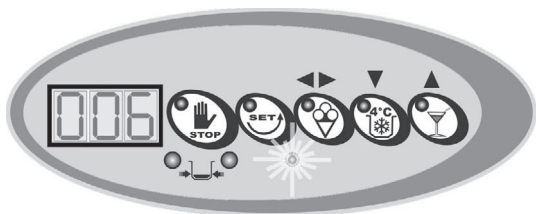
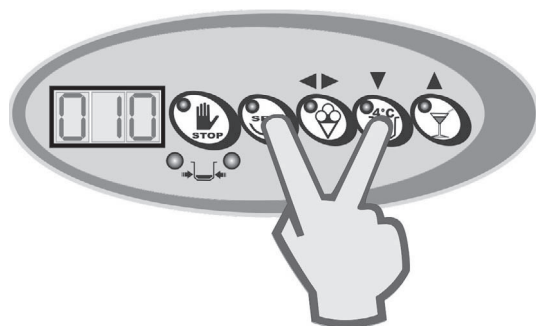


The maximum programmable consistency value is equal to 250 numbers but not all mixtures can reach such a high consistency value.

For mixtures particularly low in sugar and fat, it is recommended to not select consistency numbers close to 250.

- Subsequently, press the CONFIRM (◀▶) key to save the new consistency value programmed.

6.5.3 ADJUSTING THE PRESERVATION TEMPERATURE IN THE TUB



If the preservation temperature of the product in the tub is not satisfactory or if on the contrary is so low that it created ice along the walls of the tub, it is possible to change the value directly from the push button control panel by following the instructions below:

- Make sure the machine is turned on, it contains enough product and is set for the PRESERVATION function.
- At any time, to enter the mode to adjust the texture, press and hold the PRESERVATION and SET keys until the display shows the last set of temperature programmed. The SET LED turns on.
- The LEDs of the UP (▲), CONFIRM (◄►) and DOWN (▼) keys light up and the numbers relative to the temperature setting to be configured, expressed in centigrade degrees between 0° and 10°, appear on the display: press the "UP (▲)" and "DOWN (▼)" keys to increase or decrease this value.
- Subsequently, press the CONFIRM (◄►) key to save the new temperature value programmed.



To adjust the storage temperature in the tank correctly it is important that the level of mixture is always greater than the minimum allowed (low mixture LED off) and that after each change of the temperature from the push button control panel the user waits at least 2 hours before proceeding with further adjustments.

7. MAINTENANCE

7.1 ROUTINE MAINTENANCE (INTENDED FOR USER)



The fats present in the ice cream mixtures are ideal fields for the proliferation of bacterial loads and mould. To eliminate this serious problem, all the parts which come into contact with the product must be thoroughly washed and sanitized by careful procedures and using suitable sanitizing products. The stainless and plastic materials used on our machines, in fact, comply with the strictest international provisions and their special shape facilitates their washing. However this is not enough to prevent the formation of mould and bacteria caused by insufficient or incorrect cleaning.

FRIGOMAT recommends thoroughly washing and sanitizing the parts in direct contact with the product after each work shift and in compliance with hygienic standards in force in the Country where the machine is installed.

To correctly clean your machine, refer to the following operations:

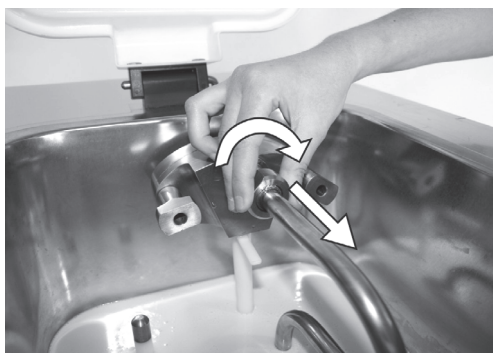


PREWASHING

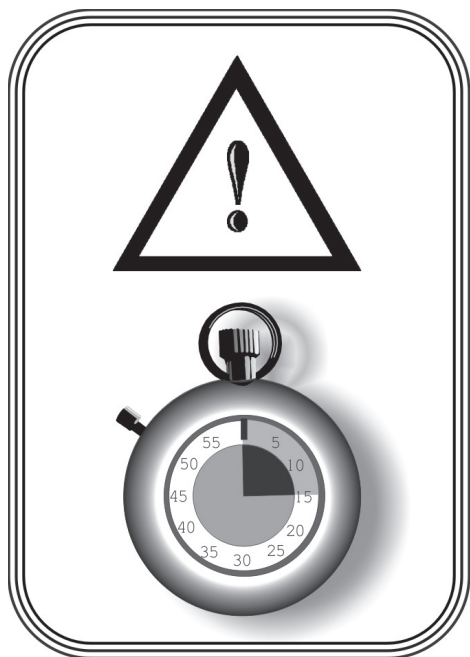
- Press the STOP key, discharge any excess air under pressure in the cylinder by placing a container under the faucet and slowly and carefully lowering the dispensing lever.

- **Pump model:** disconnect the pressurising pump from the tank by rotating the fitting of the delivery pipe. Turn the pump a few degrees clockwise to release it from the stopping hook and then remove it from the support. Remove the delivery pipe from the tank by pulling it upwards.

Gravity model: remove the power supply needle from the tank by pulling it upwards.



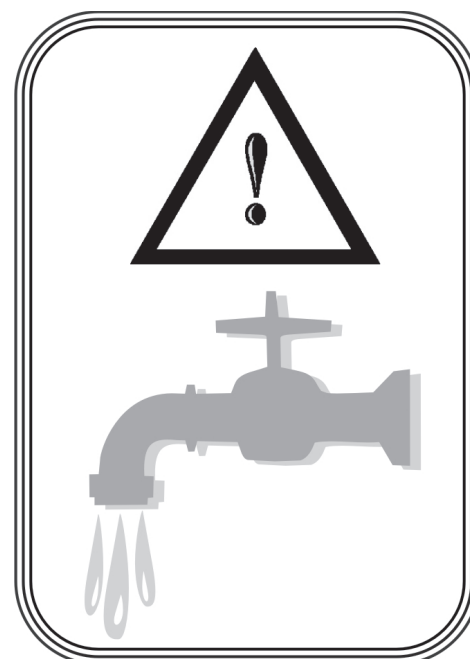
- Press the STIRRING key and let it run for a few minutes, so that the ice cream in the cylinder softens; place a container under the door and slowly pull the dispenser lever to allow the ice cream and the liquid mix in the tank to come out. Press the STOP key.
- Pour the maximum admitted load of warm (approximately 50°C) drinking water into the machine.



- Press the MIXING button in order to start the beater motor and let it run for about 3'. Pull the dispenser lever down to drain all the washing water. Repeat the procedure until the water coming out is clear and clean.
- Pour the maximum load admitted of cleansing/sanitising solution into the machine.
- Press the MIXING button in order to start the beater motor and let it run for about 15'. Pull the dispenser lever down to drain all the sanitising solution.

We suggest using the following sanitising solution:

Ecolab P3 Topax-san
(4% dilution = 200 ml).



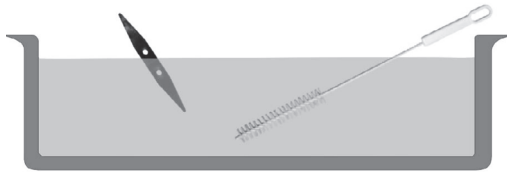
- Pour the maximum admitted load of cold drinking water into the machine to rinse the surfaces which were just treated with the sanitiser.
- Drain the rinse water and turn the machine off.
- When pre-washing is over, all the removable parts in contact with the product must be disassembled and sanitized in a separate tub.

SANITIZING REMOVABLE PARTS

PREPARATION OF WASHING TUB

- Wash your hands well and/or wear disposable gloves.
- Fill a clean tub with a sufficient amount of drinking water at approximately 50°C and the sanitizer.





We suggest using the following sanitising solution:

Ecolab P3 Topax-san

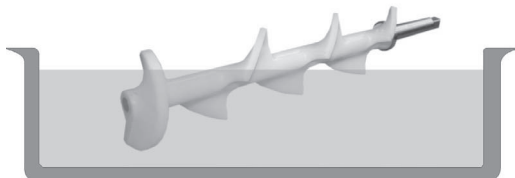
(4% dilution = 200 ml every 5 litres of water).

- Prepare the supplied brush and the OR disassembly device and immerse them in the solution.



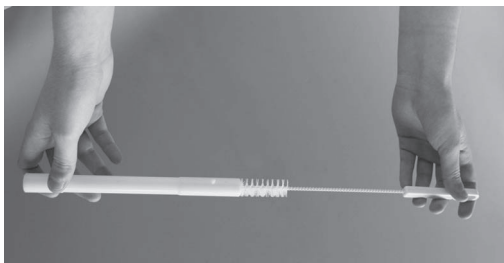
REMOVING AND CLEANING THE STANDARD DOOR

- Remove the 2 knobs that block the door to the front of the machine and place it on a clean work surface to disassemble its parts:
 5. Pull the dispenser lever down and remove the locking pin of the distribution lever.
 6. Remove the distribution lever and remove the piston by pulling it upwards.
 7. Remove the OR gaskets with the designated tool supplied.
 8. Immerse the previously disassembled components into the tub with the sanitising solution and brush the surfaces with care. Pay special attention to the running chamber of the dispenser piston and to the seats of the gaskets.



REMOVING AND CLEANING THE MONOBLOC RESIN BEATER

- Pull the beater towards you to remove it from the batch freezing cylinder.
- Recover the seal gasket placed on the back of the beater.
- Place the previously disassembled components into the tub with the sanitizer and brush the surfaces with care. Pay particular attention to the surfaces of the scrapers.



REMOVING AND CLEANING POWER SUPPLY NEEDLE (GRAVITY models only).

- Take the entire power supply needle previously removed from the machine.
- Remove the power supply needle from the mix inlet regulator.
- Immerse the previously disassembled components into the tub with the sanitizer and brush the surfaces with care. Pay special attention to the inner ducts of the needle and the regulator.



REMOVING AND CLEANING THE PUMP (PUMP models only).

• Take the pressurising pump previously removed from the machine and place it on a clean work surface to disassemble its parts:

1. Turn the liquid control to release it and remove it from its seat. Recover the spring and rubber valve.
2. In alternative, remove the right and left knobs to evenly separate the body of the pump from the lid.
3. Remove the gear toque from the body of the pump.
4. Remove the OR gaskets with the designated tool supplied.
5. Immerse the previously disassembled components into the tub with the sanitizing solution and brush the surfaces with care. Pay special attention to the slots in the lid and the body of the item, the gears' teeth and the gasket seats.



Carefully operate the pump and the gears: falls and blows can irreparably damage the parts.



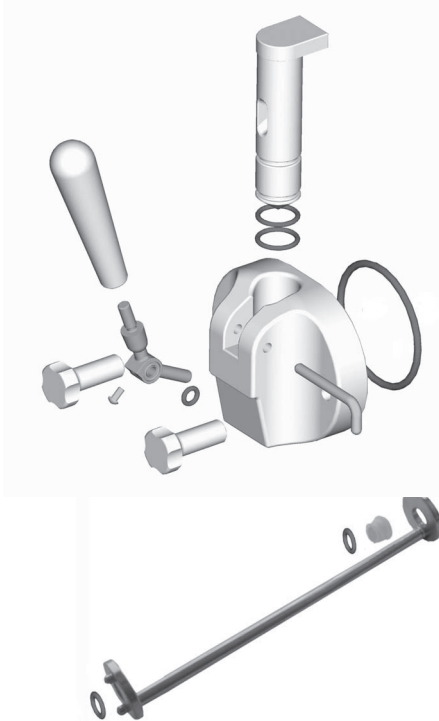
REMOVING AND CLEANING DELIVERY PIPE (PUMP models only)

1. Remove the fitting of the delivery pipe.
2. Remove the check valve positioned at the end of the pipe and pull firmly.
3. Remove the OR gaskets with the designated tool supplied.
4. Immerse the previously disassembled components into the tub with the sanitising solution and brush the surfaces with care. Pay special attention to the rubber valve, the internal duct of the pipe and to the seats of the gaskets.



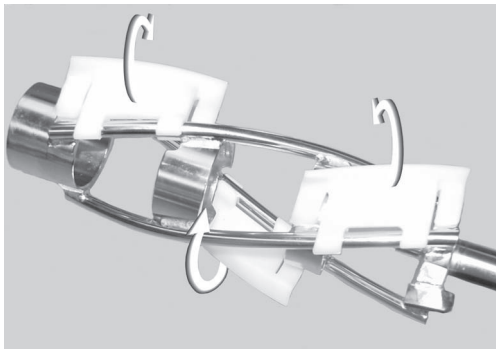
All the disassembled parts must remain soaking in the **Ecolab P3 Topax-san** sanitizer (4% dilution) for at least 15' before they are rinsed with plenty of cold drinking water.

SANITIZING REMOVABLE PARTS OPTIONAL



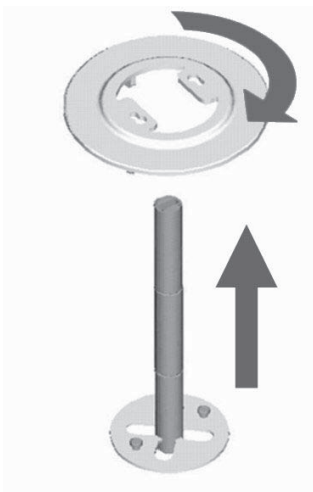
REMOVING AND CLEANING THE DOOR OPTIONAL

- Remove the 2 knobs that block the door to the front of the machine and place it on a clean work surface to disassemble its parts:
 1. Pull the dispenser lever down and remove the locking pin of the distribution lever.
 2. Remove the distribution lever and remove the piston by pulling it upwards.
 3. Remove the OR gaskets with the designated tool supplied.
 4. Remove the counter-beater and the plastic bushing.
 5. Immerse the previously disassembled components into the tub with the sanitising solution and brush the surfaces with care. Pay special attention to the running chamber of the dispenser piston, to the bushing of the counter-beater and to the seats of the gaskets.



REMOVING AND CLEANING THE STEEL BEATER OPTIONAL

- Pull the beater towards you to remove it from the batch freezing cylinder.
- Recover the seal gasket placed on the back of the beater.
- Remove the scrapers from the beater by pulling firmly.
- Place the previously disassembled components into the tub with the sanitizer and brush the surfaces with care. Pay particular attention to the surfaces of the scrapers.



REMOVING AND CLEANING THE TANK BEATER (OPTIONAL)

- Pull the beater upwards to pull it out of the tub.
- Turn the plastic impeller clockwise until it releases.
- Immerse the previously disassembled components into the tub with the sanitizer and brush the surfaces with care. Pay special attention to the inner duct of the beater shaft.



SANITIZING FIXED PARTS

While the removable parts soak in the sanitizer inside the tub, proceed sanitizing the fixed parts of the machine:

SANITISING THE CYLINDER

- Immerse a disposable paper cloth in the sanitising liquid.
- Pass the cloth over all the cylinder surfaces.
- Also pass the cloth over the outer edge of the cylinder until reaching the surfaces of the front panel.

SANITIZING THE TUB

- Immerse a disposable paper cloth in the sanitising liquid.
- Pass the cloth over all the surfaces of the tub and fixed transmission shaft (if any).
- Pass the cloth over the outer edge of the tub until reaching the surfaces of the cover and front panel.
- Use the brush previously emerged in the sanitizer to thoroughly clean the duct which connects the tank to the underlying batch freezing cylinder.



- Never use any type of solvents and/or thinners to preserve the plastic parts and gaskets during washing.
- Chemical sanitizing products must be used in compliance with standards in force and with the utmost caution.
- During sanitizing operations, do not touch parts with tissues, sponges, rags or any other non-sterile material.



RINSING AND DRYING

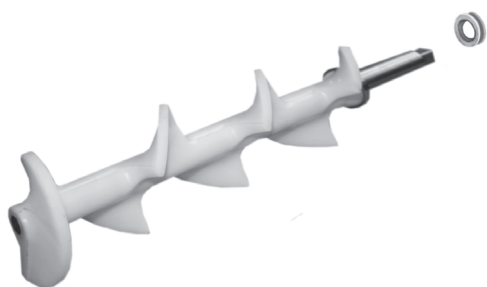
- Wash your hands well and/or wear disposable latex gloves.
- Remove from the sanitising tank all the components which were previously disassembled, brushed and immersed.
- Rinse them with plenty of cold drinking water, making sure to remove all possible leftover sanitising solution.
- Place the rinsed components on a clean table and let them dry in the air.



DO NOT use rags, sponges or anything else to dry the components. Make sure no dust or other impurities come into contact with the sanitized surfaces while they are drying.

- Also carefully rinse the fixed parts of the machine which were treated with the sanitizing solution (cylinder, tub, etc.)
- When all the components are dry, put them back onto the machine by following the instruction contained in the paragraphs below.

ASSEMBLY AFTER CLEANING



INSTALLING AND CLEANING THE MONOBLOC RESIN BEATER

- Lubricate the seal gasket and push it into the drive shaft located on the end of the beater until fully home.
- Push the beater into the batch freezing cylinder until fully home. Turn the mixer by hand a few degrees until it is inserted correctly in the drive support.

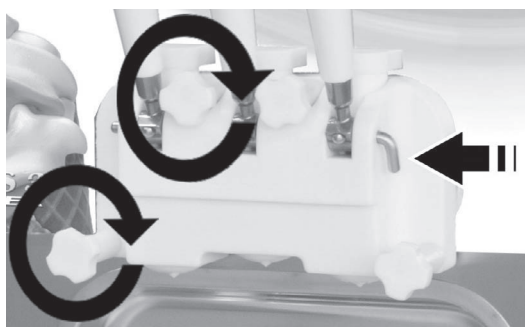


INSTALLING THE DOOR

- Place the door gaskets and dispenser piston in their seats. Carefully lubricate.
 - Insert the dispenser piston into its seat in the door, making sure that the flat top of the piston is facing the front panel of the machine.
- If the piston is inserted with the flat surface facing the user, this will prevent the machine from operating.



- Place the dispenser lever in its seat and insert the locking pin.
- Position the assembled door on the threaded pins and tighten the 2 knobs.



INSTALLING THE POWER SUPPLY NEEDLE (GRAVITY models only)

- Insert the mix inlet regulator inside the power supply needle.
- Turn the regulator to the desired position.
- Place the whole power supply needle in its seat inside the tank.



INSTALLING THE PUMP

- Place gaskets of the body of the pump in their seats. Carefully lubricate.
 - Spread a generous film of oil on the seats of the gears in the body of the pump and in the drive duct.
 - Lubricate all the surfaces of the gears and install them in the relative seats in the body of the pump.
 - Again make sure that the surfaces of the gears facing the pump's lid have been lubricated.
- Position the pump's lid on the threaded pins, close the pump and firmly tighten the 2 knobs.
- Install the extraction duct, making sure both the rubber valve and the metal spring are positioned correctly. Carefully lubricate the OR gasket.
- Place the extraction duct in the seat of the pump lid and rotate to the desired position.
- Always use the food grease supplied with the machine.



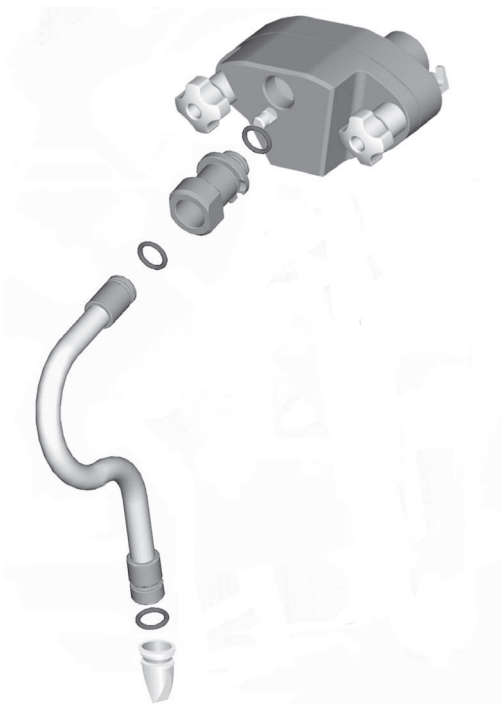
Failure to lubricate with grease can make it difficult to activate the pump during the early stages of production, generating dangerous ice formations in the cylinder that can lead to serious machine failure.

- Insert the pump into the support and rotate a few degrees counterclockwise to engage it in the stopping hook.



If the pump cannot be inserted in the stopping hook, remove it and press the MIXING key per a few seconds. Press the STOP key and try to install the pump in its seat again.





INSTALLING THE DELIVERY PIPE

- Place the gaskets of the delivery pipe and the relative fitting in their seats. Carefully lubricate.
- Insert the rubber check valve in the seat located at the lower end of the delivery pipe.
- Insert the fitting on the upper end of the delivery pipe.
- Insert the delivery pipe in its seat inside the tank.
- Connect the pressurising pump to the delivery pipe by rotating the fitting by just a few degrees.



INSTALLING OF THE OPTIONALS

INSTALLING THE TANK BEATER (OPTIONAL)

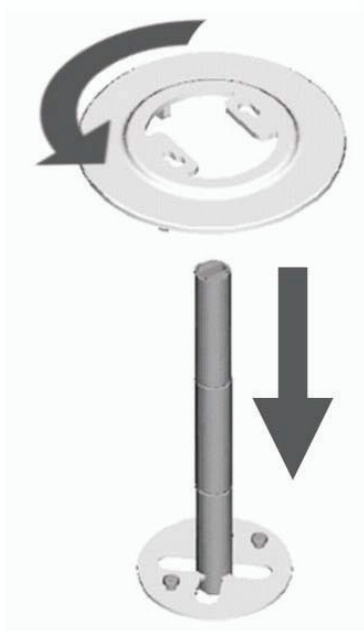
- Position the plastic impeller on the fastening pins located at the base of the beater.
- Turn the plastic impeller a few degrees clockwise until it is locked.

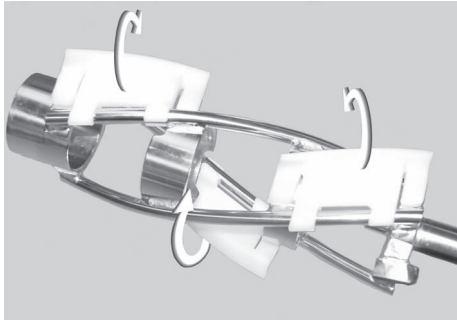
Always check that the blades of the impeller, once it has been installed on the beater, are facing downwards. If this is not the case, remove it and turn it.



If the impeller is not installed correctly, it might unhook itself during use, causing damage to the machine.

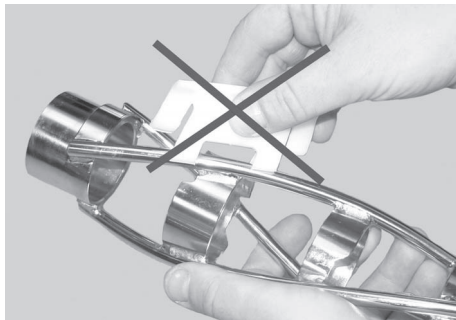
- Place the entire beater in the tank full, taking care to properly align the drive head of the drive shaft with the upper seat of the beater.





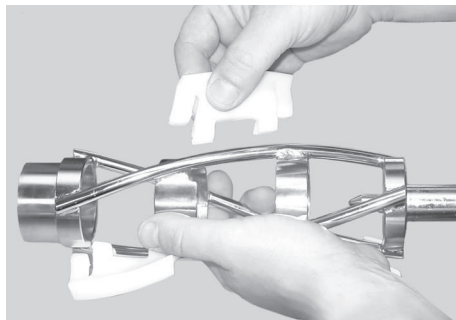
INSTALLING THE STEEL BEATER OPTIONAL

- Lubricate the seal gasket and push it into the drive shaft located on the end of the beater until fully home.
- Assemble the scrapers by carefully following the instructions below:
 1. Position the scrapers' hook teeth near the grooves of the central rings of the beater's body
 2. Make sure the scrapers are oriented correctly, i.e. as in the images to the side.



The correct assembly of scrapers on the beater is absolutely essential to ensure the machine operates properly and to prevent malfunctioning and/or serious breakage.

FRIGOMAT declines all and any liability for damage caused by failure to comply with these instructions.



- Place the terminal auger on the beater making sure that the drive part is placed in its designated seat.
- Push the beater into the batch freezing cylinder until fully home. Turn the mixer by hand a few degrees until it is inserted correctly in the drive support.



7.2 EXTRAORDINARY MAINTENANCE (INTENDED FOR QUALIFIED PERSONNEL)



These operations are reserved exclusively for authorised qualified personnel. FRIGOMAT S.r.l. will not be held liable for damage to objects or harm to persons which occur due to failure to comply with the above.

Refer to the following instructions to program the circuit board:

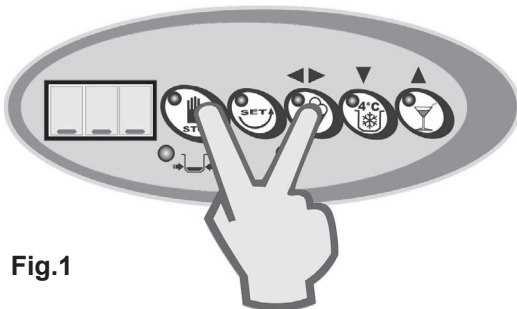


Fig.1

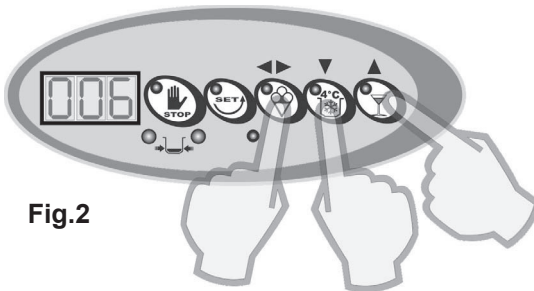


Fig.2

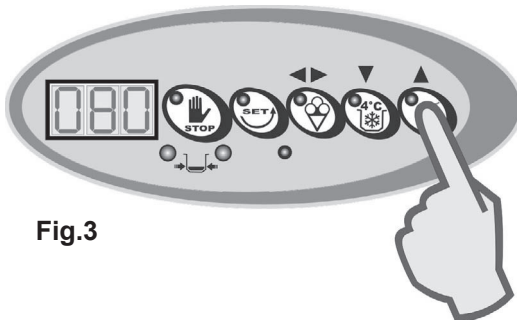


Fig.3

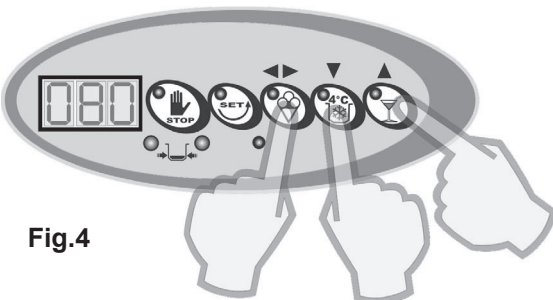


Fig.4

1. Make sure that the door is assembled on the machine.
2. Power the machine.
3. With the machine at STOP, press the "**STOP**" and "**PRODUCTION**" keys simultaneously and release them only after the password identification screen appears (fig.1).
4. Press the "**CREATIVE** (▲)" "**PRESERVATION** (▼)" and "**PRODUCTION** (◀▶)" keys to enter the password and then confirm it (fig.2). If you do not know the password, contact the Frigomat assistance service.
5. When the password has been accepted, the screen accesses the list of programming steps directly. The first programming step *P01* is selected automatically.
6. If you do not wish to change the value of the selected step, press "**CREATIVE** (▲)" to directly access the following step (Fig. 3).
7. If, instead, you wish to change the selected step, press "**PRODUCTION** (◀▶)" to access the parameters relative to the same step, and subsequently press "**CREATIVE** (▲)" or "**PRESERVATION** (▼)" to increase or decrease the value (fig.4). Subsequently, press the "**PRODUCTION** (◀▶)" key to confirm the data.
8. To exit programming and save the changed press the "**STOP**" key.

| “MEB2” BOARD PROGRAMMING TABLE (**) | | | | | |
|-------------------------------------|---|------|------|------|---|
| P | DESCRIPTION | MIN | MAX | KISS | STEP |
| P1 | Selection of the size of the beater motor | 50 | 250 | 80* | |
| P2 | Select amplification of the CREATIVE function | 10 | 40 | 12 | 1 |
| P3 | Consistency hysteresis in PRODUZIONE (PRODUCTION) | 1 | 20 | 10 | 1% of setting |
| P4 | Voltage and frequency selection | 0 | 2 | 1* | 0= 115-230/50-60/1 1= 400-440/50-60/3 2= 220/230/50-60/3 (without neutral) |
| P5 | Selection of CREATIVA (CREATIVE) or PRODUZIONE (PRODUCTION) 2 | 1 | 2 | 1 | 1= CREATIVA 2= PRODUZIONE 2 |
| P6 | Consistency hysteresis in CREATIVA / PRODUZIONE 2 (CREATIVE / PRODUCTION) | 1 | 20 | 10 | 1% of setting |
| P7 | No growth alarm | 0 | 2 | 2 | 0= Off 1= 1 hour 2= 2 hours |
| P8 | Tank probe alignment (TEV) | -10° | +10° | * | |
| P9 | PRODUCTION testing interval | 1' | 120' | 10' | 1' |
| P10 | Testing interval in CREATIVA / PRODUZIONE 2 (CREATIVE / PRODUCTION) | 1' | 120' | 10' | 1' |
| P11 | Testing interval in PRESERVATION | 1' | 120' | 120' | 1' |
| P12 | Compressor in preservation ON time | 1" | 250" | 50" | 1" |
| P13 | Compressor in preservation OFF time | 1' | 60' | 7' | 1' |
| P14 | Extra time of the beater in PRODUZIONE (PRODUCTION) | 1" | 30" | 4" | 1" |
| P15 | Extra time of the beater in CREATIVA / PRODUZIONE 2 (CREATIVE / PRODUCTION) | 1" | 30" | 4" | 1" |
| P16 | Forced batch freezing in START | 0" | 250" | 7" | 1" |
| P17 | Pump ON time when the beater starts | 0" | 360" | 120" | 1" |
| P18 | Pump is ON during PRODUCTION testing | 0 | 1 | 1 | 0= Off 1= On |

(Continues)

| “MEB ² ” BOARD PROGRAMMING TABLE (**) (continues) | | | | | |
|--|--|-----|------|------|--|
| P | DESCRIPTION | MIN | MAX | KISS | STEP |
| P19 | Pump is ON during PRESERVATION testing | 0 | 1 | 1 | 0= Off 1= On |
| P20 | Pump ON time after tap closure during production | 0" | 360" | 60" | 1" |
| P21 | Enabling mixing in tank | 0 | 1 | 1 | 0= Off 1= On |
| P22 | Beater ON time in tank in PRODUCTION | 0" | 250" | 20" | 1" |
| P23 | Beater OFF time in tank in PRODUCTION | 0' | 250' | 30' | 1' |
| P24 | Beater ON time in tank in CREATIVE / PRODUCTION 2 | 0" | 250" | 20" | 1" |
| P25 | Beater OFF time in tank in CREATIVE / PRODUCTION 2 | 0' | 250' | 30' | 1' |
| P26 | Beater ON time in tank in PRESERVATION | 0" | 250" | 20" | 1" |
| P27 | Beater OFF time in tank in PRESERVATION | 0' | 250' | 100' | 1' |
| P28 | Consistency numbers indication filter on the display | 0 | 4 | 3 | 0= Off / 1= On only+ 2=only°C / 3=filter NR 4=1+3 |
| P29 | Negative temperatures indication filter | 0 | 1 | 1 | 0= Off 1= On |
| P30 | Production block with low mixture level | 0 | 1 | 0 | 0= Off 1= On |
| P31 | Inspection of anti freeze-up safety temperature | 0° | -50° | 0 | 1°C |
| P32 | Consistency Voltmeter correction | 0 | 2 | 2 | 0= Off 1= On V/mainsV 2= On V/mainsV x coefficient |
| P33 | Dose time for stroke counter | 0" | 120" | 0 | 0= Off 1" – 120"= 1 dose |
| P34 | BL notification Service expiry | 0 | 250 | *** | |
| P35 | Forced batch freezing in testing | 0 | 1 | 0 | 0=Off 1=On |
| P36 | ----- | | | | |

(*) These parameters may vary for each unit and variant.

(**) The parameters may vary depending on the software version or customisation. It is always possible to refer to the test inspection board supplied with the machine.

(***) Contact Frigomat's support service.

CONSISTENCY CALIBRATION ON MEB BOARD

The KISS series FRIGOMAT batch freezers are fitted with an electronic board equipped with a sophisticated microprocessor able to control the consistency of the ice cream acquiring several parameters among which the absorption value of the beater motor. During the batch freezing cycle the display of the machine indicates the value in numbers from 60 to 250, directly proportional to the hardness of ice cream. Each machine is tested and calibrated by FRIGOMAT with a mixture with standard features at an absorption value of the beater motor referred to 240 numbers of hardness. This value is shown on the test sheet that accompanies the machine (see test sheet at the following entry: BEATER AMPERE @SET240); normally this calibration is able to satisfy a very wide range of applications.



For any special requirement you can however vary the consistency value of the batch freezer: this operation should be carried out only by authorised technical personnel in possession of a clamp-type ammeter or capacity wattmeter and sufficient accuracy.

Refer to the following instructions to calibrate the consistency:

1. Disconnect the machine and remove the left side (KISS 3) or right side (KISS 1) panel.
2. Locate the cable that passes through the current transformer (identified with L1 or A - see electrical diagram) and connect the clamp-type ammeter. This way you can measure the absorption of the beater motor.
3. Fill the tank with ice cream mixture in the amounts admitted for each model.
4. Power the machine.
5. Proceed to fill the batch freezing cylinder correctly, as described in Chap.6.3.
6. Press the PRODUCTION key, set the amperometric control with SETTING at 240 numbers and confirm the data by pressing **PRODUCTION (◀▶)**. The machine starts.
7. With the machine running, simultaneously press and hold FOR AT LEAST 5" the "**PRODUCTION**" and "**STOP**" keys. This way you enter the "*Calibration*" mode, the "**CREATIVE (▲)**", "**PRESERVATION (▼)**" and "**PRODUCTION (◀▶)**" keys light up and the display indicates the numerical value of the consistency that gradually increases as batch freezing proceeds.
8. Pressing the "**CREATIVE (▲)**" and "**PRESERVATION (▼)**" keys you can increase and decrease this number to set.
9. When you reach the desired consistency that corresponds to a certain value in ampere indicated on the clamp-type ammeter, press "**CREATIVE (▲)**" and "**PRESERVATION (▼)**" until number 240 appears on the display.
10. Press the "**PRODUCTION (◀▶)**" key to memorise the setting.

| CONSISTENCY VALUES @ SET 240 400/50/3 (AEG Lafert motors) | | |
|---|--------------|--|
| Consistency | KISS 3 Power | |
| Ampere | 2,9 | |
| Watt | 1350 | |

BOARD RESET AND DEFAULT STEPS RESTORATION

1. With the machine at STOP, the “**STOP**” and “**PRODUCTION**” keys simultaneously and release them only after the password identification screen appears.
2. Press the “**CREATIVE (▲)**”, “**PRESERVATION (▼)**” and “**PRODUCTION (◀▶)**” keys to enter the password related to the RESET procedure and then confirm it. If you do not know the password, contact the Frigomat assistance service.
3. Once the password has been recognised, to conduct the RESET, simultaneously press and hold for at least 5" the “**CREATIVE (▲)**” and “**PRESERVATION (▼)**” keys. The “Pot” lettering appears on the display, release the keys.
4. Press the “**STOP**” key to end the RESET procedure.

CONE COUNTER ACTIVATION AND VISUALISATION

1. P33 STEP ACTIVATION: enable the cone counter function by entering the time (in seconds) in the P33 Step related to the duration of the average dose delivered.
 NOTE: the machine will count 1 dose for each individual period of time, equal to the value set in the P33 step, during which the tap remains open.
 If the tap remains open for a period of time of time longer than the time programmed in P33, the machine will count no.1 dose every period equal to P33 and will store any partial times lower than P33 and add them to the next delivery.
 If the tap remains open for a period of time of time lower than the time programmed in P33, the machine will store any partial times and add them to the next delivery.
2. VIEWING THE DELIVERED DOSES:
 - With the machine at STOP, the “**STOP**” and “**PRODUCTION**” keys simultaneously and release them only after the password identification screen appears.
 - Press the “**CREATIVE (▲)**”, “**PRESERVATION (▼)**” and “**PRODUCTION (◀▶)**” keys to enter the password 011 and then confirm it.
 - When the password has been accepted, the screen displays the first 3 figures of the number of doses delivered. Pressing the “**CREATIVE (▲)**” and “**PRESERVATION (▼)**” the screen displays the next 3 figures of the number. The total amount of cones counted is 999,999. Once this value is reached, the machine starts counting from 0 again.
 - Press the “**STOP**” key to exit the page showing the number of cones delivered.

8. TROUBLESHOOTING INSTRUCTIONS

8.1 MANAGEMENT OF ALARMS

| MESSAGE | DESCRIPTION | REMEDIES |
|----------------------------|--|---|
| TER | A motor circuit breaker has intervened or the transformer fuse breakdown. The led flashes and the buzzer emits an intermittent acoustic signal. | Wait a few minutes and then press STOP to restore machine operation. If the alarm continues, contact the technician. |
| L23 | L2-L3 phases inverted in the plug. | Contact the technician to invert the phases in the plug. |
| L-N | The phases and neutral of the electronic card power supply are inverted. | Contact the technician to invert the phases and the neutral of the electronic card power supply. |
| T-A | Current Transformer breakdown. | Contact the technician. |
| DIS | Communication between the board and the display interrupted. | Contact the technician. |
| End | Batch freezing time-out alarm. | In the production cycle, select lower consistency levels. Make sure that the product is balanced correctly. If the alarm continues, contact the technician. |
| TEv Int TEv cor | The tank probe is interrupted or in short-circuit. The buzzer emits an intermittent acoustic signal. | Contact the technician to check and replace the faulty probe. |
| TEc Int TEc cor | The cylinder tank probe (if any) is interrupted or in short-circuit. The buzzer emits an intermittent acoustic signal. | Contact the technician to check and replace the faulty probe. |
| LIV | Mix level in the tank too low Each operational function is interrupted | Fill in mix in the tank until lights are turned off |

8.2 TROUBLESHOOTING

| PROBLEM | PROBABLE CAUSES | REMEDIES |
|---|--|--|
| The machine does not start (STOP button off). | Master switch open. | Close the switch. |
| | Electrical anomaly. | Contact the technician. |
| | Fuses blown. | Contact the technician. |
| The machine does not start (STOP button on). | Door assembled incorrectly. | Check door. |
| The machine works intermittently during cooling. | Air-cooled machines: air condenser dirty or fan faulty. | Clean the condenser with a brush, check functioning of the fan and the installation conditions on page 9. |
| | Water-cooled machines: no condensation water. | Make sure there is water in the water system to which the machine is connected. Check the pipes and cocks. |
| The machine works properly but the product is too firm. | Unbalanced mixture. | Make sure the mixture used is balanced correctly. |
| | Exceedingly high consistency. | Set lower consistency values (chap.6.5). |
| The machine works properly but the product is not firm enough. | Unbalanced mixture. | Make sure the mixture used is balanced correctly. |
| | Insufficient consistency. | Set higher consistency values (chap.6.5). |
| | Beater scrapers worn (steel beater) or worn beater (resin beater). | Check and if necessary replace worn parts. |
| | Insufficient condensation. | Check the installation conditions and that the temperature where the machine is installed does not exceed 35°C. |
| | Refrigeration system anomaly. | Contact the technician. |
| During batch freezing the machine becomes noisy and the beater stops. | The mixture is not suitable. | Check that the mixture is balanced correctly and that there are no lumps or solid parts. |
| | Insufficient power supply in the cylinder | Make sure the moving parts (pump or needle) and fixed ones (tank duct - cylinder) are clean and check the level of wear. |
| | Incorrect assemble of the beater scrapers. | Check the assembly of the parts |
| | Incorrect adjustment of the pump | Reduce the amount of air introduced in the ice cream. |
| The pump does not start | Lack of grease in the pump | Remove the pump and lubricate it with food grease |
| Presence of liquid ice cream in the drip drawer. | Beater gasket absent or worn. | Check the presence of the gasket and that it is not excessively worn. |

