

MINI SOFT ICE CREAM MACHINE OPERATION MANUAL



Dear Customer, We would like to congratulate you for choosing this high-quality product, that will certainly meet all your expectations. We thank you for the preference reserved to our company and we invite you to carefully read the following instruction manual before machine's start up.

INDEX

1.IMPORTANT WARNINGS AND ADVICES	2
2.EQUIPMENT KIT.....	2
3.TRANSPORT TIPS	2
4.LIFTING TIPS.....	2
5. TECHNICAL SPECIFICATIONS.....	3
6. POSITIONING	4
7. CONNECTION TO THE POWER SUPPLY MAINS	5
8.START UP PROCEDURES AND OPERATING INSTRUCTIONS	6
9.CLEANING AND DAILY SANITIZING PROCEDURES.....	13
10.SPECIAL MAINTENTANCE.....	20
CONDENSER CLEANING	20
CONTROL AND REPLACEMENT OF SEALS	21
11.SOFT SERVE ICE CREAM INFORMATION.....	21
12.DISCLAIMER.....	21
13.TROUBLESHOOTING GUIDE.....	22
14.WIRING DIAGRAM.....	23

1. IMPORTANT WARNINGS AND ADVICES

This installation and operation manual is an integral part of the equipment and must be kept for future consultation.

Unless otherwise stated, this manual is addressed to operators (staff members who uses the equipment on a daily basis) and to servicemen (staff members qualified to carry out the installation and /or maintenance). Please read carefully the warnings listed here below before installation and start-up of the equipment. This equipment has been designed to produce soft serve ice cream, ice milk, frozen yogurt, smoothies and similar frozen dairy products.

Upon receipt of the equipment, make sure that its part number matches the one specified in the order, which can be found on all the delivery documents.

This equipment is exclusively destined to the purpose for which it was designed. The manufacturer cannot be held responsible for any damage due to improper use.

This equipment is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, without supervision or instruction concerning its use by a person responsible for their safety. Children should be supervised to ensure that they do not play with the machine.

This equipment is not suitable for outdoor use. This machine is not suitable for installation in locations where water jets are used. This equipment must be installed in places where it can be controlled by qualified staff.

2. EQUIPMENT KIT

In the packaging of this equipment you will find also;

- operator's manual;
- 1 tube of Vaseline grease lubricant to be used for machine maintenance;
- Free spare parts;
- 1 drip tray.

3. TRANSPORT TIPS

To prevent the oil held in the hermetic compressor running into the cooling circuit, the device must be carried, stored and handled in the upright position, following the direction instructions on the packing. If the device is accidentally or intentionally (for transportation reasons) kept in any other position, it must be set again in the correct position at least twenty minutes before start-up procedures, in order to let the oil flow back into the compressor.

4. LIFTING TIPS

Each machine is equipped with a special wooden pallet that allows the handling with standard forklift trucks.

▲ Caution ▲

Never lift the machine alone, but always seek the assistance of another operator.

To prevent and avoid any damage to the machine, all loading and unloading operations should be carried out with special care. The equipment can be lifted, with either a manual or engine-powered lifting truck, by positioning the forks in the base section of the unit.

The following operations should always be avoided:

- to turn upside down the machine;
- to drag the machine with ropes or others;
- to lift the machine with slings or ropes;
- to shake or rattle the machine and its packaging.

The machine must be stored in a dry place with temperatures from 0 °C to 40 °C . No more than 2 machines should be stacked on top of each other, taking care to maintain the vertical position, as shown by the arrows on the carton.

5. TECHNICAL SPECIFICATIONS

Technical and electrical specifications

All the machine's technical and electrical specifications are stated on the identification plate, positioned in the internal part of the equipment; a sample is shown here below.

The plate specifies:

- Model: XX
- n° : XX
- Electrical specifications: Volt/Hz
- Max. current(Amp)
- Machine ambient working temperatures between 24°C and 32°C .

Dimensions and weight:

ICE6L

- Height: 65cm
- Width: 26cm
- Depth: 42.5cm
- Weight 28kg

ICE12

- Height: 65cm
- Width: 45cm
- Depth: 42.5cm
- Weight 46kg

Noise emissions

The continuous, equivalent, weighted level of acoustic pressure is below 70 dB.

In the event of breakdown:

In most cases, any technical problem can be settled with slight interventions (please see the troubleshooting guide at the end of this manual); we therefore recommend you to carefully read this handbook before contacting the manufacturer of service centre.


Disposal

▲ Caution ▲

All the parts of the packaging must be kept beyond the range of children, as they might represent a potential safety/health risk.

Important

In respect of the environment, please dispose the packaging as illustrated.

This symbol:  means that the machine cannot be disposed as common waste. It must be handled in compliance with the provisions of European directive 2003/108/EC (Waste Electrical and Electronic Devices - WEEE) and the resulting national legislation, in order to prevent any potential damage to the environment and to create health risks.

In order to correctly dispose of the device, please contact the distributor from which you purchased it or our after - sales service.

6. POSITIONING

FOR MAINTENANCE WORKER ONLY

The installation and subsequent servicing operations must be carried out by skilled members who have been trained to use the device and in compliance with the regulations in force.

a) Remove the packing (fig.1) and preserve it in order to reuse for winter storage.

▲ Caution ▲

All the parts of the packaging must be kept beyond the range of children, as they might represent a potential safety/health risk.

b) Make sure the machine is in perfect condition.

B) Rest the machine on a sturdy, flat surface making sure it is well ventilated by leaving a gap of 20 cm around it and do not install it near heat sources (fig.2); **we recommend you to maintain a room temperature between 24 and 32°C .**

c) Check that the power mains voltage meets the specifications on the equipment identification plate and that the output available meets the device's power requirements.

Fit the plug into an earthed socket, removing all multiple adaptors.

FOR FURTHER PRECAUTIONS, READ THE SECTION "CONNECTION TO THE ELECTRICITY MAINS" CAREFULLY.

d) The installation must be carried out in accordance with the manufacturer's instructions. Failure to comply with the positioning and installation instructions may impair the machine's operation.

Important

You are legally required to provide a suitable grounding system for the equipment. Before carrying out any cleaning and/or special maintenance on the device, make sure it is disconnected from the mains by unplugging it. In the event of a breakdown or malfunctioning, switch off the device and remove the plug.

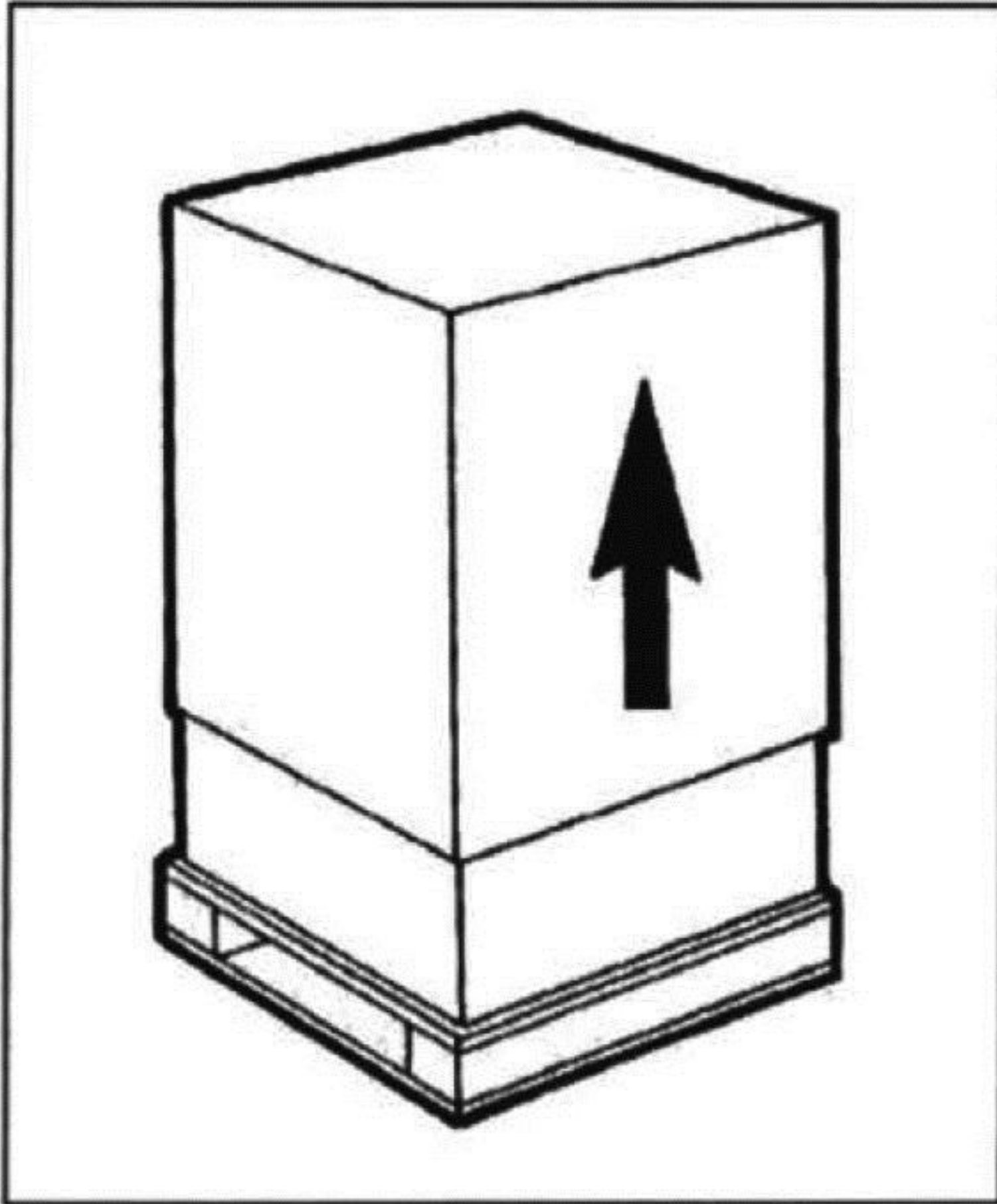


fig.2

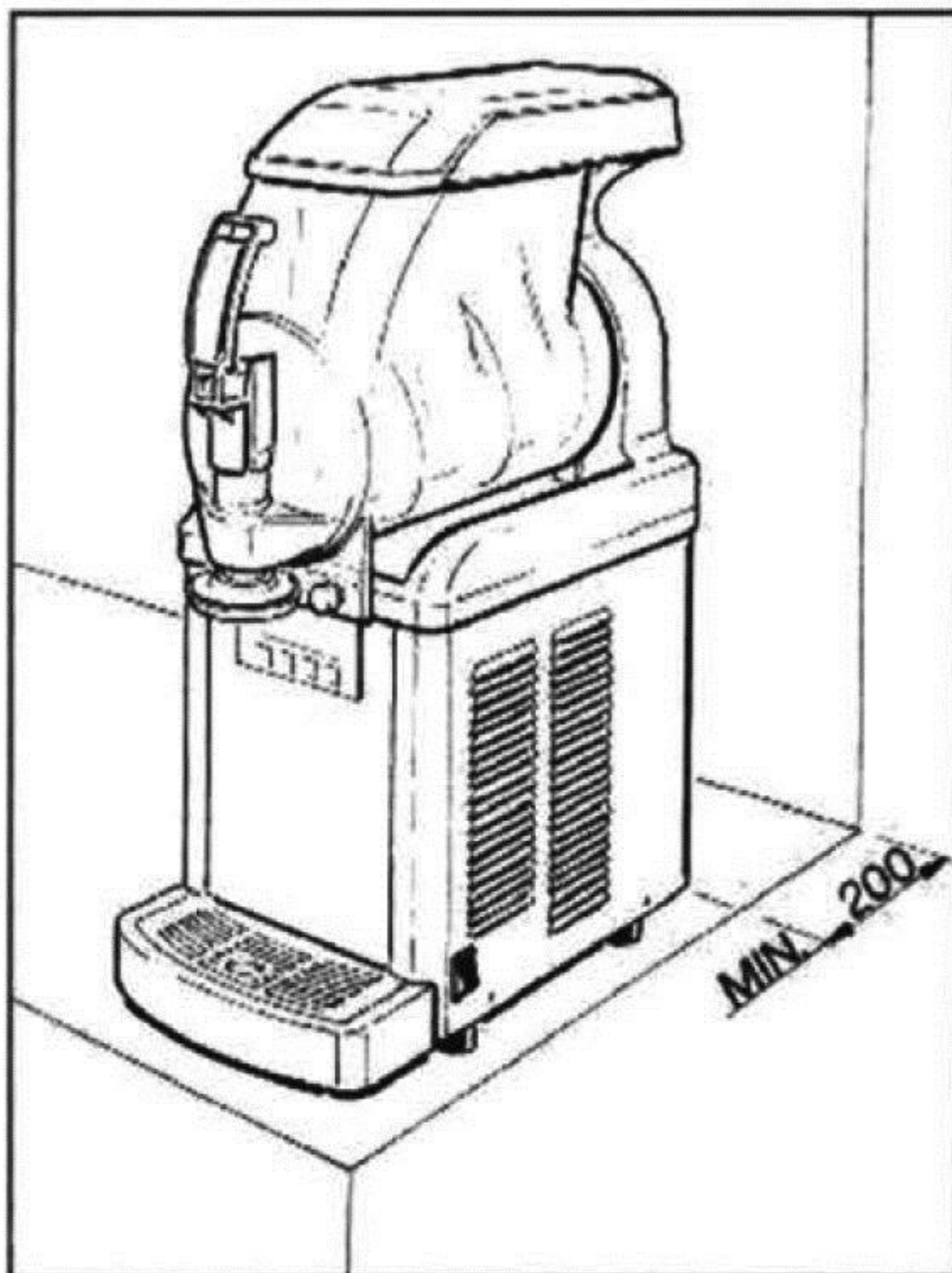


fig.2

7. CONNECTION TO THE POWER SUPPLY MAINS

FOR SERVICEMAN ONLY

Before fitting the plug in the power supply socket, for your own safety, as already mentioned in the previous paragraph, please read the following precautions.

- The machine's electrical safety is only guaranteed when it is connected to a suitable earth system, structured as provided by the national safety current regulations (fig.3). Therefore, the manufacturer cannot be held responsible for any damage due to failure of the grounding system of the machine.

- Always verify electrical specifications on the data plate of each machine. Data plate specifications always replace the information of this manual.

- For a safe and correct installation, it is essential to provide a suitable socket controlled by a thermal cut - out switch whose contacts are at least 3 mm apart, in accordance with the current national safety regulations(see fig.3).

- Never use extensions or multiple adaptors.

- Check the power lead along its entire length to make sure it is not crushed in any way.

- To unplug the device, first disconnect the power supply with the switch, then grip the plug and gently pull it out.

Important

IF THE POWER CABLE IS DAMAGED, IT MUST BE REPLACED BY THE MANUFACTURER, ITS AFTER SALE SERVICE OR BY QUALIFIED PERSONNEL, TO PREVENT ANY POSSIBLE RISK.

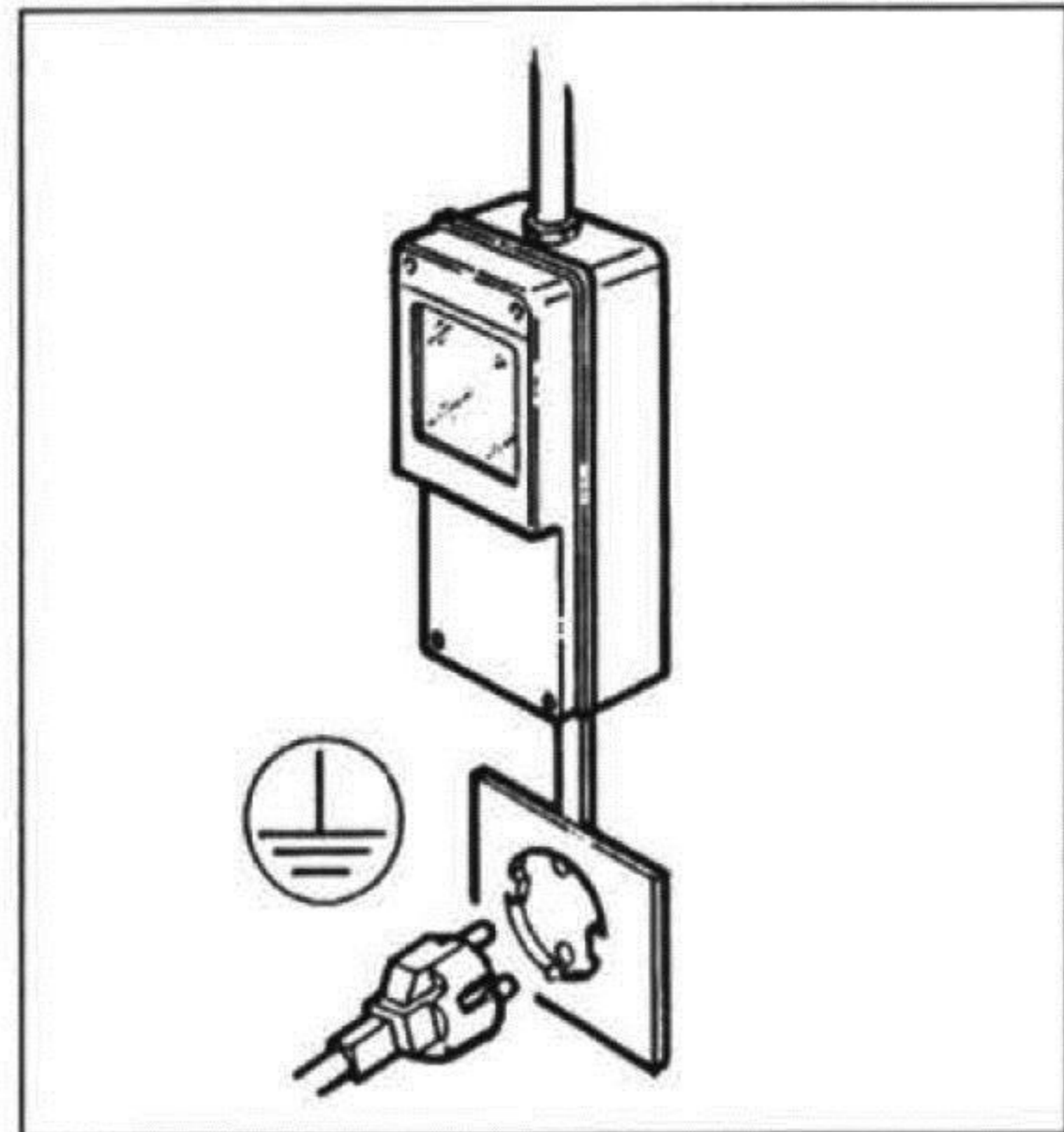


fig.3

8. START UP PROCEOURES AND OPERATING INSTRUCTIONS

!!IMPORTANT!

BEFORE STARTING THE MACHINE, CARRY OUT THE CLEANING AND SANITISING PROCEDURES DESCRIBED IN CHAPTER 9.

- Dilute and mix the product in a separate container according to the manufacturer's instructions (see fig.4).

NOTE:"Mix" is the result of the blending between water or milk with the powder to make soft serve ice cream, ice milk, frozen yogurt, smoothies and similar frozen diary products.

Don't introduce more than 2.5 litres of mix inside the bowl. This kind of product has a not negligible overrun during its freezing, so it is very important to control it in order to avoid to go over the bowl maximum level (please see the chapter about the overrun calculation).

- Pour the secondary cover and then the main one, making sure to fix it with the security key.

- Restore the secondary cover and then the main one, making sure to fix it with the security key.

Note

All the ICE units are equipped with a very efficient safety mechanism designed to protect the operator; it is activated when cover is lifted. This device automatically and immediately stops all moving parts.

If the main cover is not correctly positioned, the correspondent mixing system will not work.

- Insert the plug into the electrical power outlet and activate the main switch A on the right side of the unit (fig. 6), the touch screen will start operating by showing the main menu and all the choice possibilities.

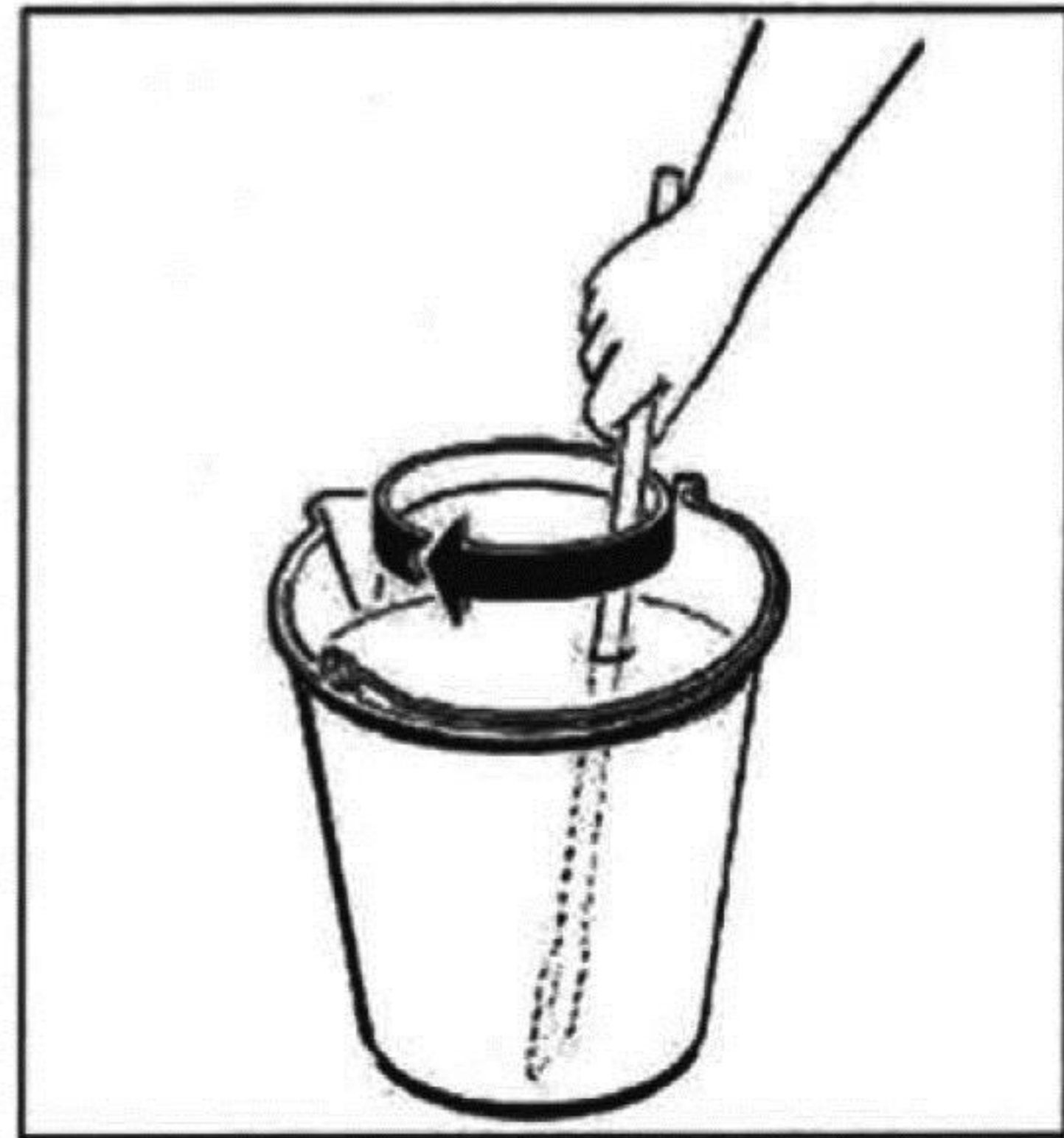


fig.4

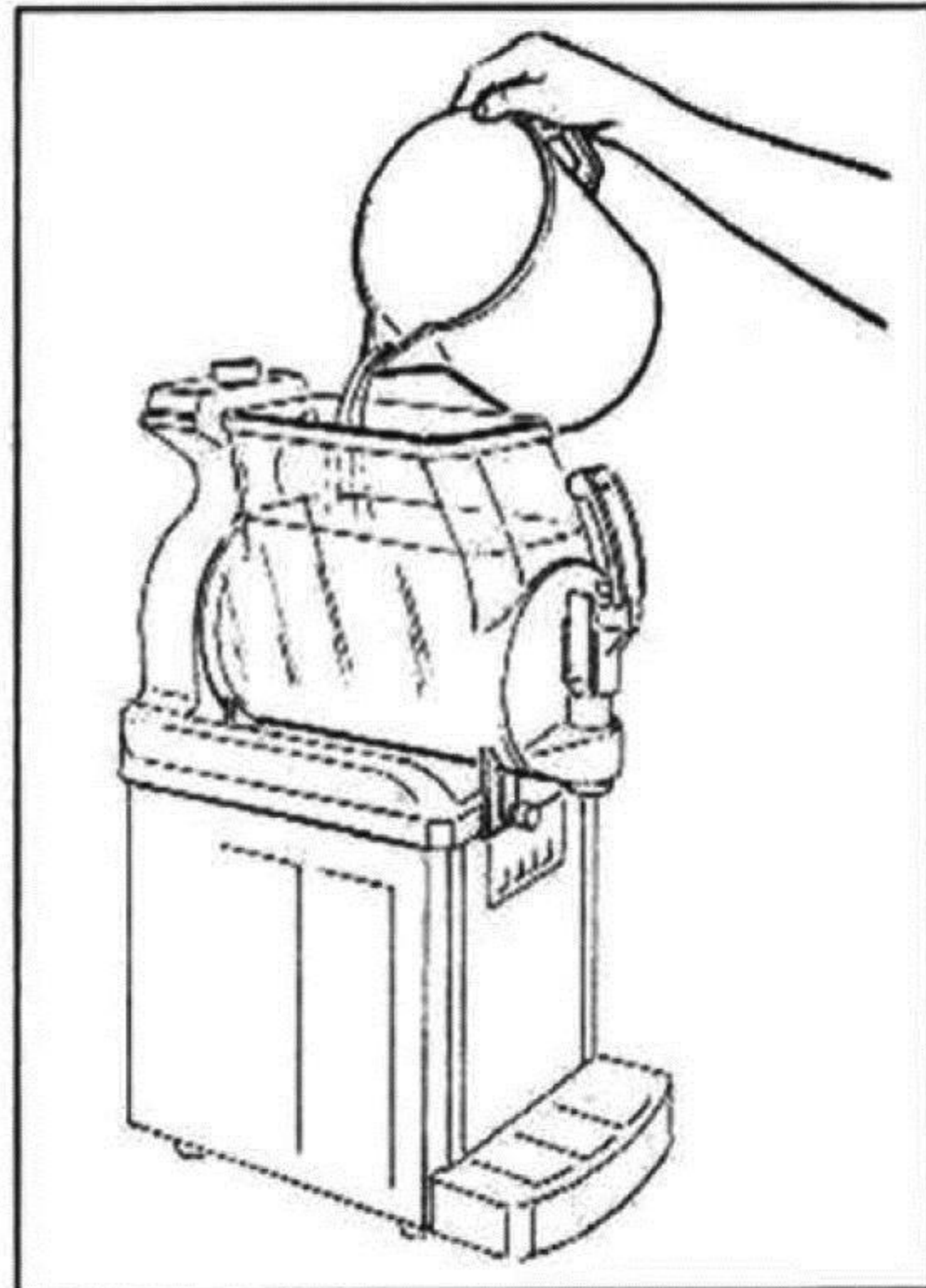


fig.5

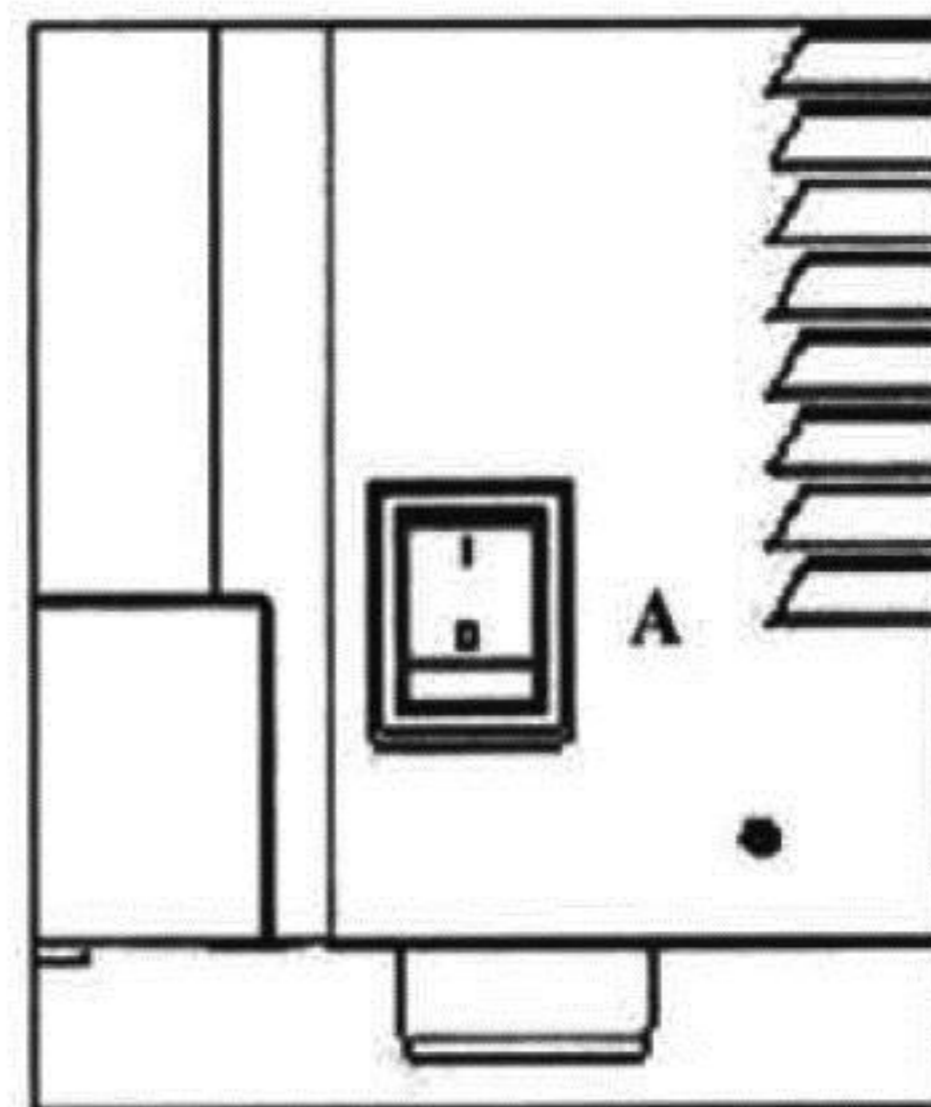
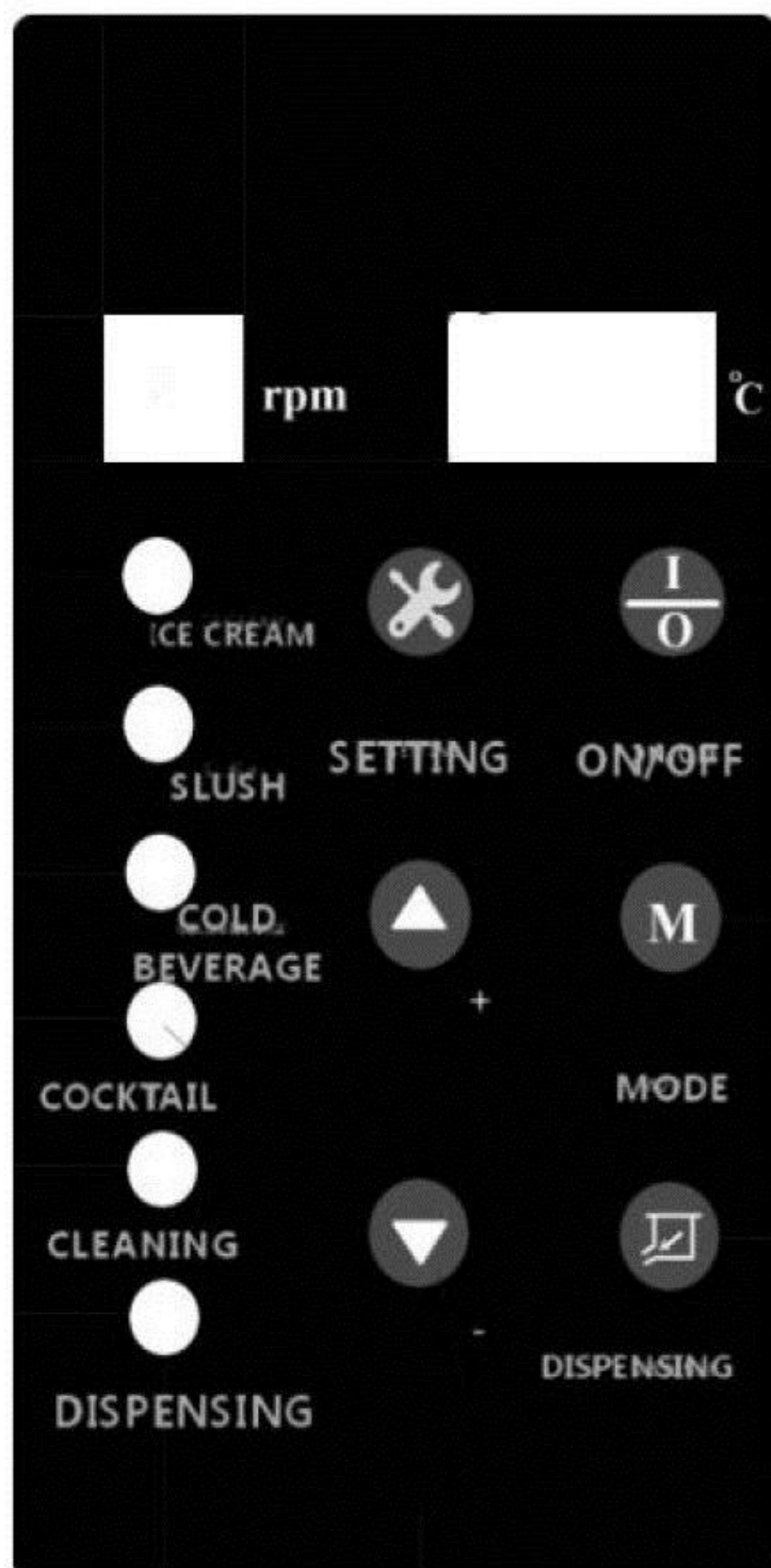


fig.6

Digital operating panel sketch

1. Connect power, press on/off, the two displays show present rotate speed and temperature
2. Power on then press "mode" to choose modes, then the red light flashes on the chosen mode, machine start to work.



Parameter setting

1. entrance mode:

After connect power,press "setting", begin to set parameter(user operate)

2. setting method

(a) Change present mode rotate speed and temperature by pressing "setting". while the light flashing in the left square, the rotate speed can be set by adjust "+ -" . while the light flashing in the right rectangle area, the temperature can be set by adjust "+ -" .

(b) Mode light flashes indicate the present setting mode

3. Attention

Only rotate speed setting during washing mode.

(b) dispense time showed in the rectangle area during dispensing mode

一、 Alarm

— —	Frozen protect (dischargeable in 5 mins)
NL	defrost (dischargeable in 3 mins)
Err	Temperature fault

9. CLEANING AND DAILY SANITIZING PROCEDURES

In order to maintain your ICE machine in like-new operating condition and to respect current regulations, it's absolutely necessary to frequently and carefully perform the cleaning and sanitizing operations as described below.

In case of prolonged shutdown (winter storage), the machine must be disassembled, washed and sanitized according to the instructions in this manual before start-up to ensure the best possible cleanliness.

▲ Caution ▲

Electric shock hazard. Do not splash water on switches or allow water to flow onto electrical components inside the machine.

▲ Caution ▲

To prevent bacteria growth, use only sanitizers approved for plastic and rubber objects, failure to do so could create a health hazard.

NOTE: it is responsibility of the operator to be aware of and conform to the requirements of current local, state and federal laws concerning the frequency of cleaning and conservation of products used.

The cleaning instructions explained in this section are essential procedures to remove bacteria and maintain a sanitarly clean machine.

We recommend to perform the cleaning and sanitizing procedures every day and anyway according to the local laws.

The machine and the mix manufacturers decline all responsibility to damage that directly or indirectly derives from people, animals, as consequence of failure to comply with all cleaning and sanitation instructions indicated in this manual.

- Empty the bowl from the remaining product as much as possible.

- Switch off the unit by pressing the min switch.

- After unlocking the main cover with its key (fig.23), remove the main cover and the secondary one under it (fig.24).

- Pour lukewarm water into the bowl (fig.25) and, after re-positioning the main cover, make sure the micro-switch is correctly activated.

NOTE

ICE is equipped with a very efficient safety mechanism, activated when the cover is lifted, designed to protect the operator. **If the cover is not correctly positioned ICE will not work.**

- Switch on the unit and go through the menu in order to select the wash mode as described before.

- Make the unit working in the wash mode for some minutes and then empty the bowl and repeat the same operations until the coming out water is clear (fig.26).

- Switch off the unit and disconnect cable from the power supply.

- Provide yourself with a sanitizer suitable for plastic, rubber and stainless steel objects (AMUCHINA®).

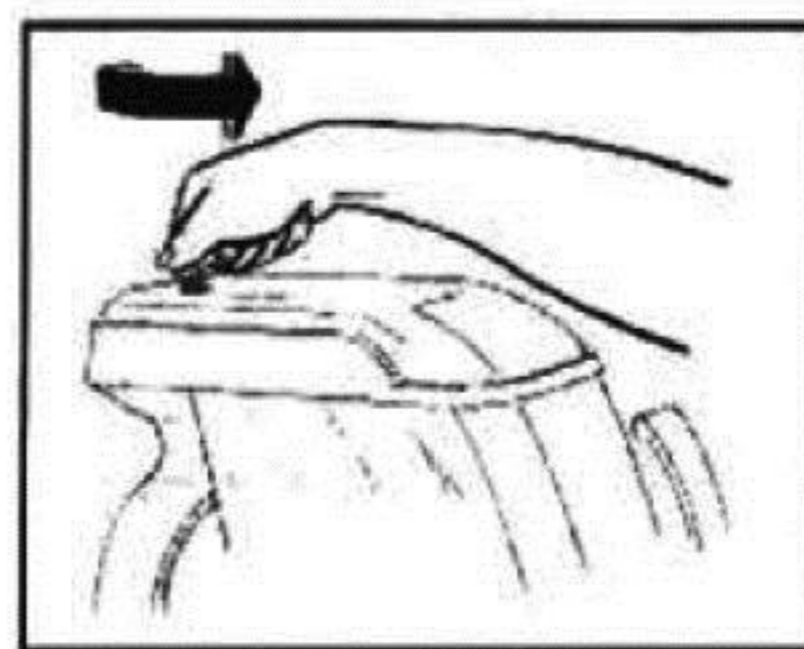


fig.23

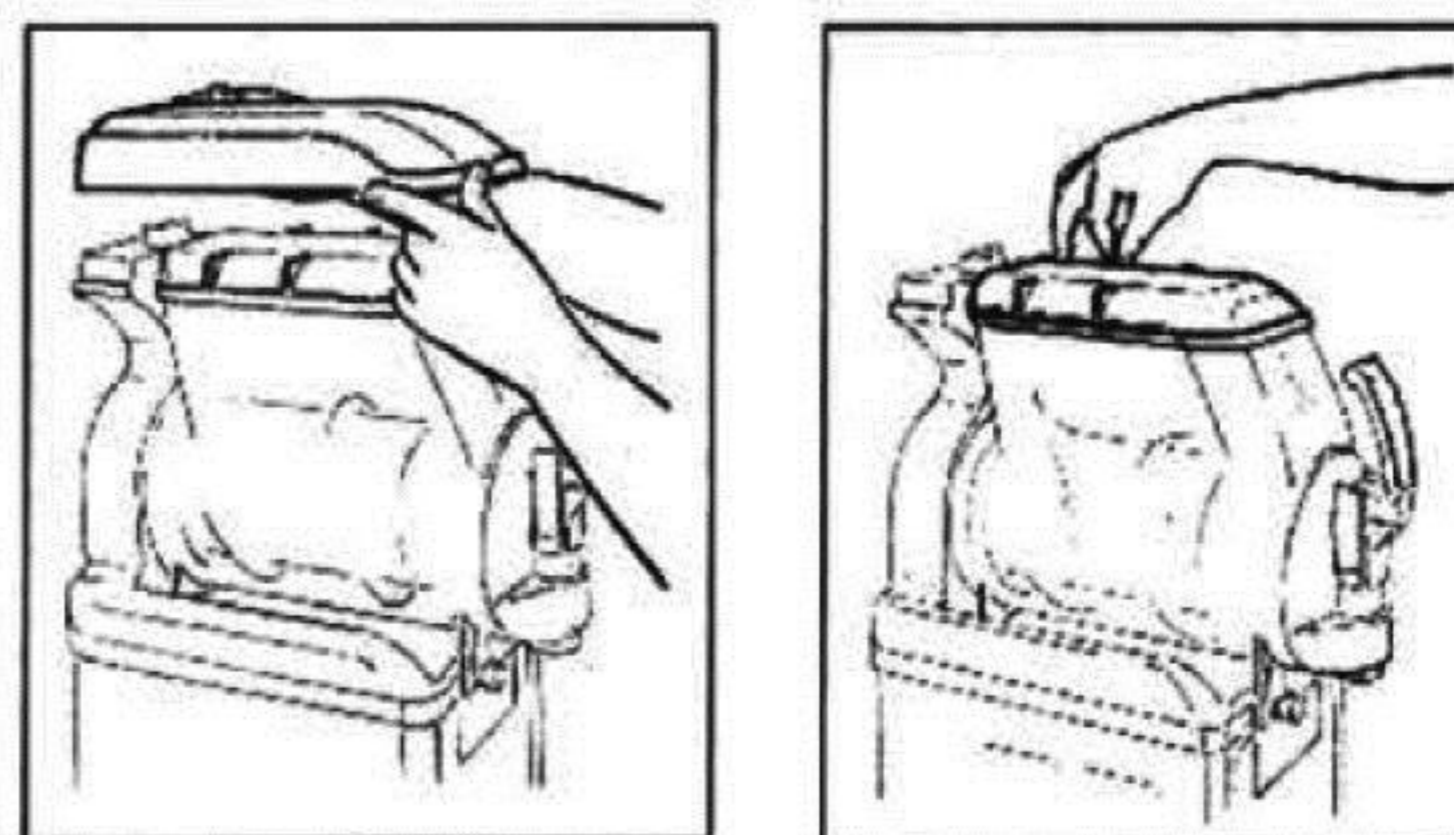


fig.24

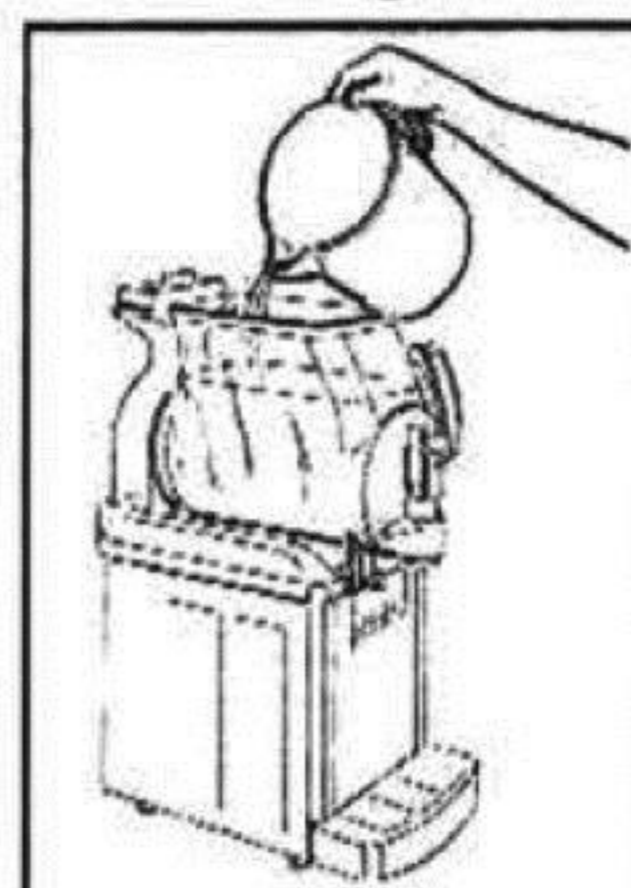


fig.25



fig.26

IMPORTANT

Carefully follow the mix producer prescriptions in terms of time and modes of conservation.

▲ Caution ▲

To avoid electrical shock or contact with moving parts, before proceeding with the disassembling operations, make sure all switches are in "OFF" position and that the main power supply is disconnected.

- Switch off the machine and disconnect the power cable.
- Remove the main cover.
- Wash and sanitize your hands and forearms.
- Unscrew the bowl knobs (fig.27).
- Remove the accessory to give a "star" peculiar shape to the dispensed product (fig.28).
- Simultaneously press the two securing tabs and lift the tap to extract it from its seat (see fig.29).

▲ Caution ▲

**To prevent bacteria growth, remove all o-rings when cleaning.
Failure to do so could create a health hazard.**

- Pull the tank outward, as shown, to completely remove it from its seat (fig.30).

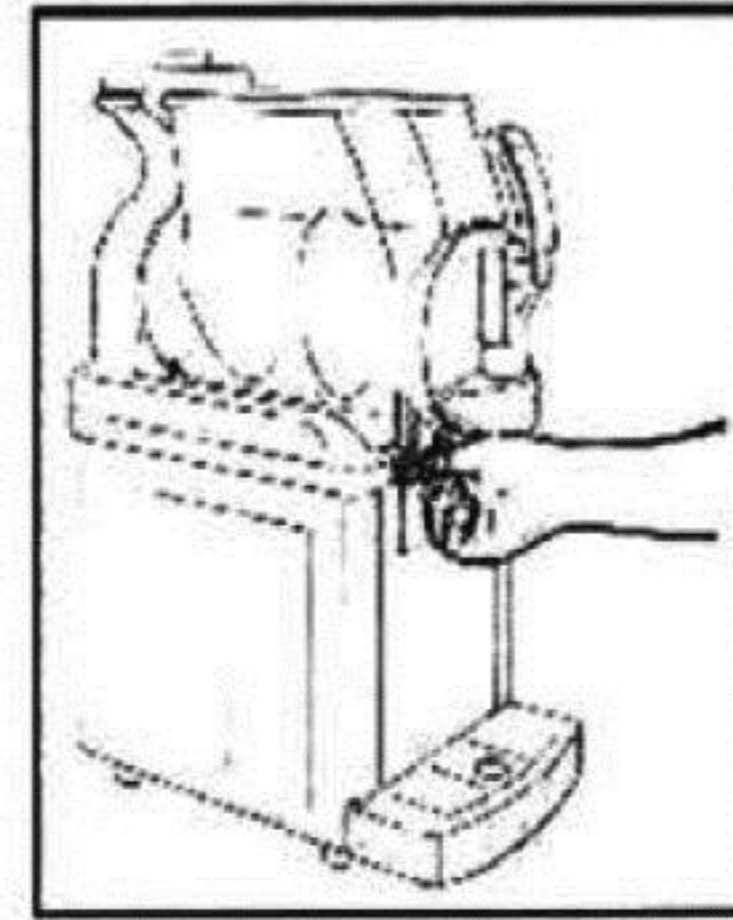


fig.27

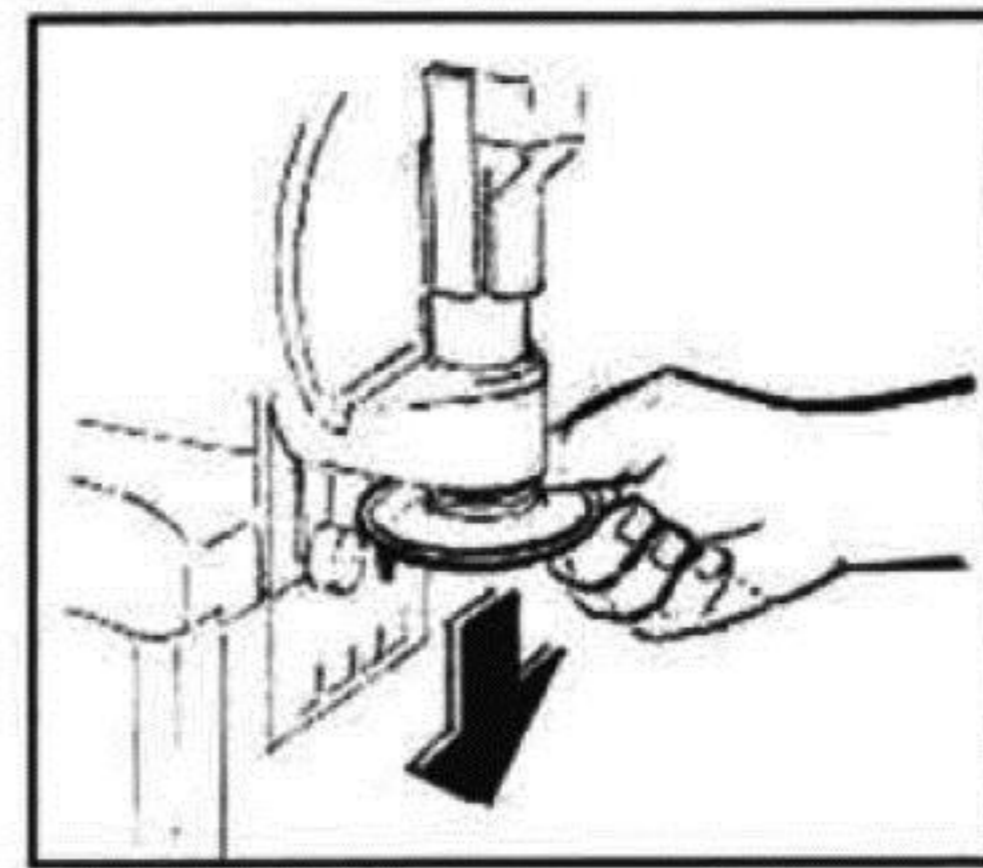


fig.28

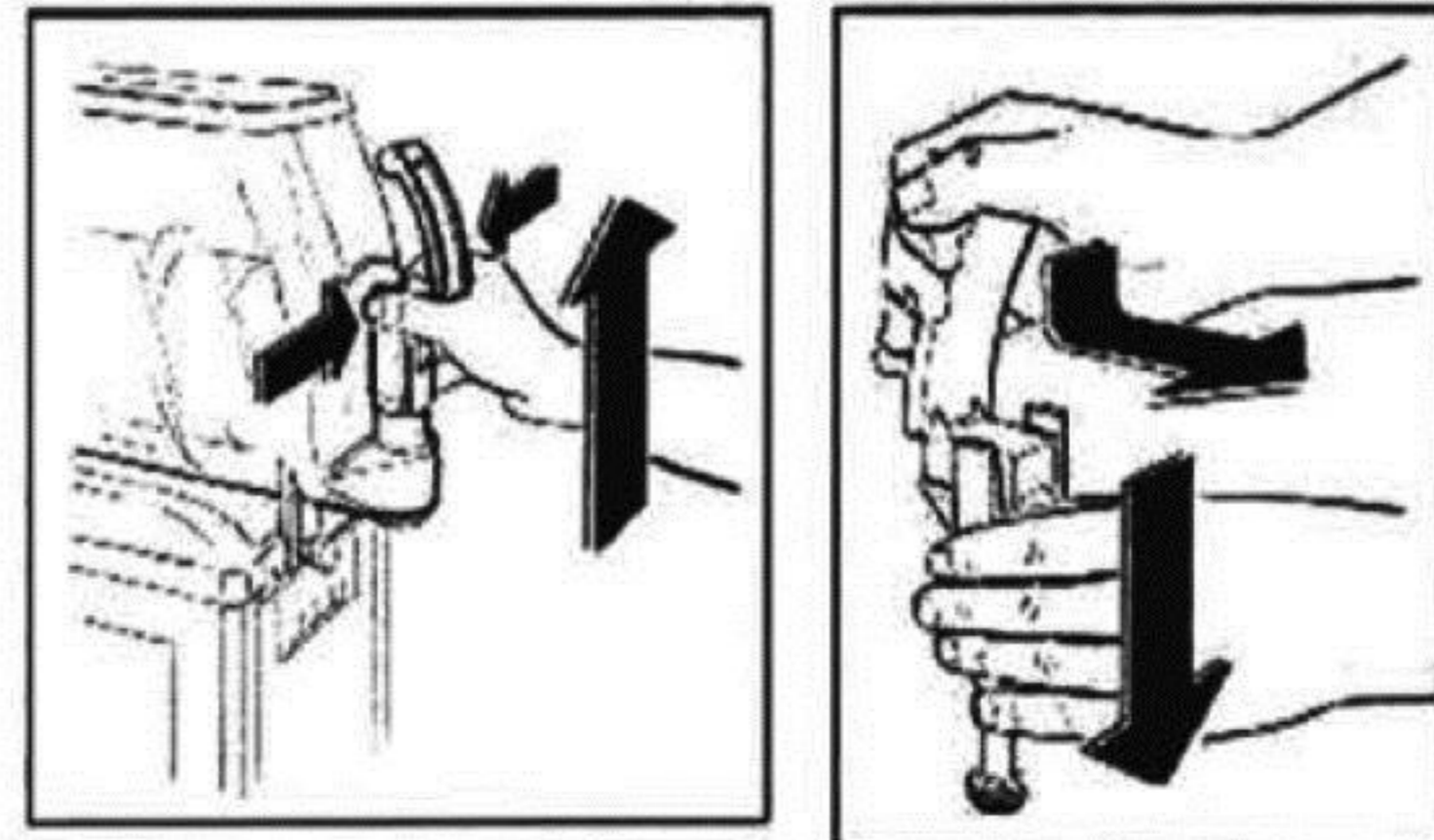


fig.29

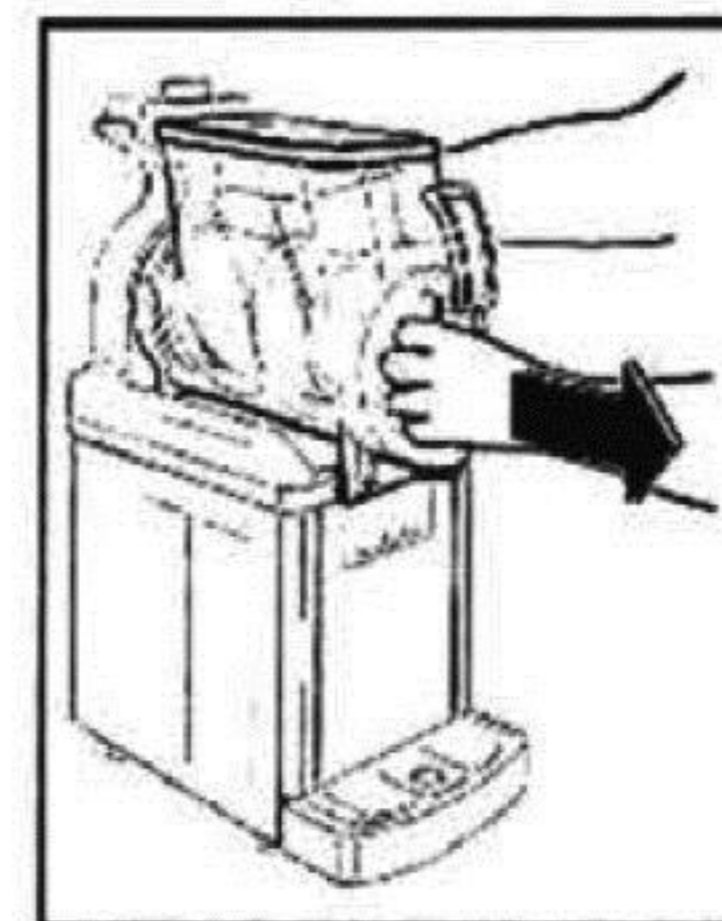


fig.30

- Unscrew the security knob in the direction of the arrow (threading on left), then pull out the mixing unit, the bell shaped seal and the bowl gasket on the back (fig.31).

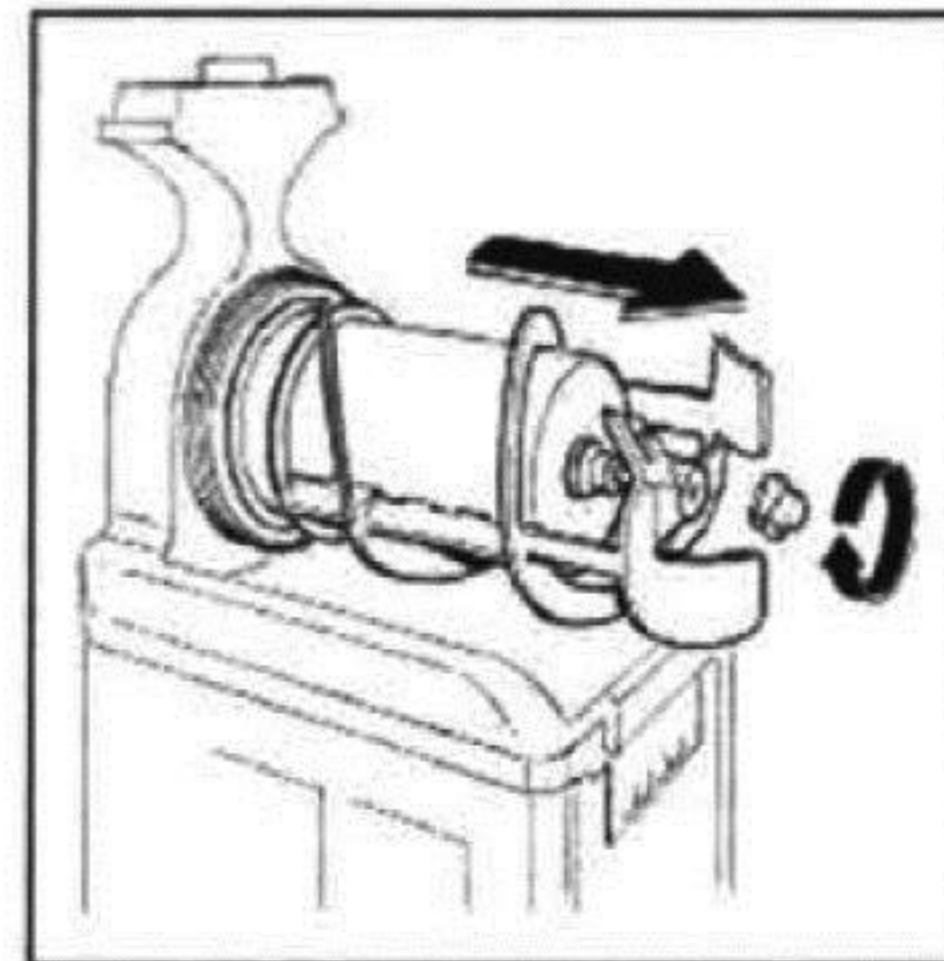


fig.31

- Remove the drip tray by pulling it outward (fig.32).

- Thoroughly wash all the removed components with hot water and dish washing, but do not use damage the bowl.

IMPORTANT

Do not use too aggressive sanitizers or detergents, these kind of products could damage the bowl and the other components.

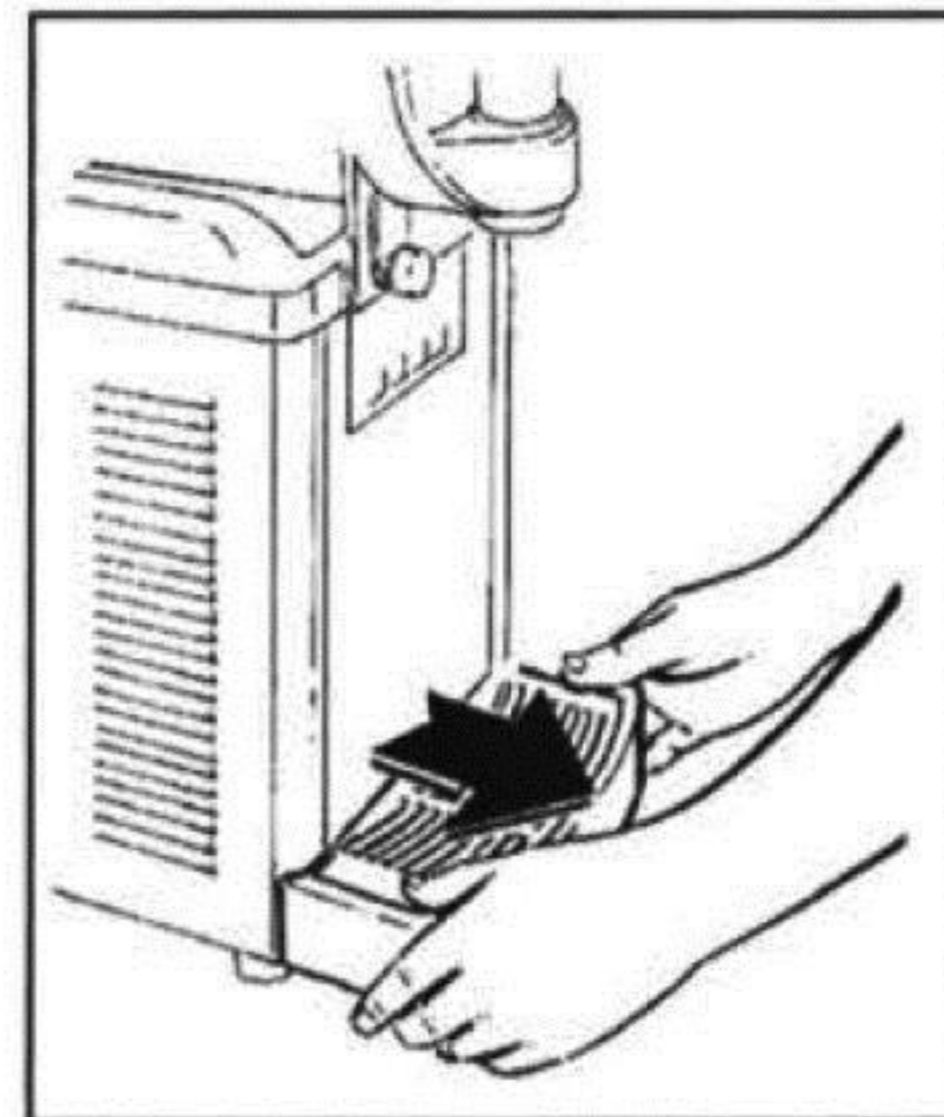


fig.32

CAUTION

Never perform these washing operation with a dish washing machine; failure to do so could seriously damage the unit's parts.

- Rinse well and then place all the components in the sanitizer solution; for proper sanitizing the parts must remain fully plunged for 15 minutes or as recommended by the sanitizer manufacturer.

- After respecting the correct sanitizing period, rinse well all the components with clean water and dry them up with a clean cloth.

- Thoroughly wash the evaporator and the drip tray surfaces with a sponge soaked with the sanitizer (see fig.33).

- Repeat all these operations with a clean sponge soaked with water and carefully dry up all the surfaces with a clean cloth.



fig.33

Once performed all these cleaning and sanitizing procedures, it's possible to reassemble all the components.

The correct assembly of the device is essential to prevent leakage of product and damage of the machine. To assemble the machine you will need an approved lubricant (such as Vaseline).

Make sure all parts have been washed and sanitized before assembling. Persons assembling the machine must first wash and sanitize their hands and forearms with an approved sanitizer.

- Spread Vaseline on the bell shaped seal internal surface before reassembling it (fig.34).

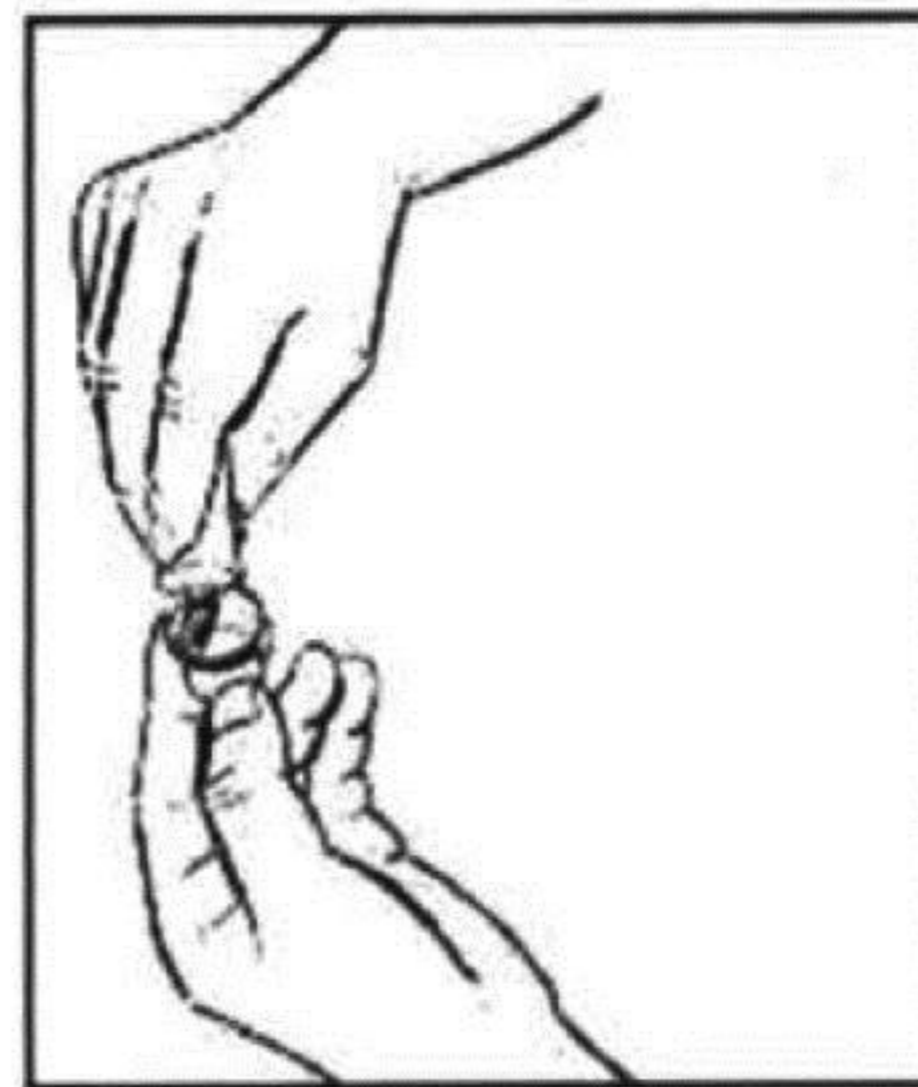


fig.34

- Reassemble the rear gasket and the bell shaped one, respecting the correct direction as indicated in figure 35.

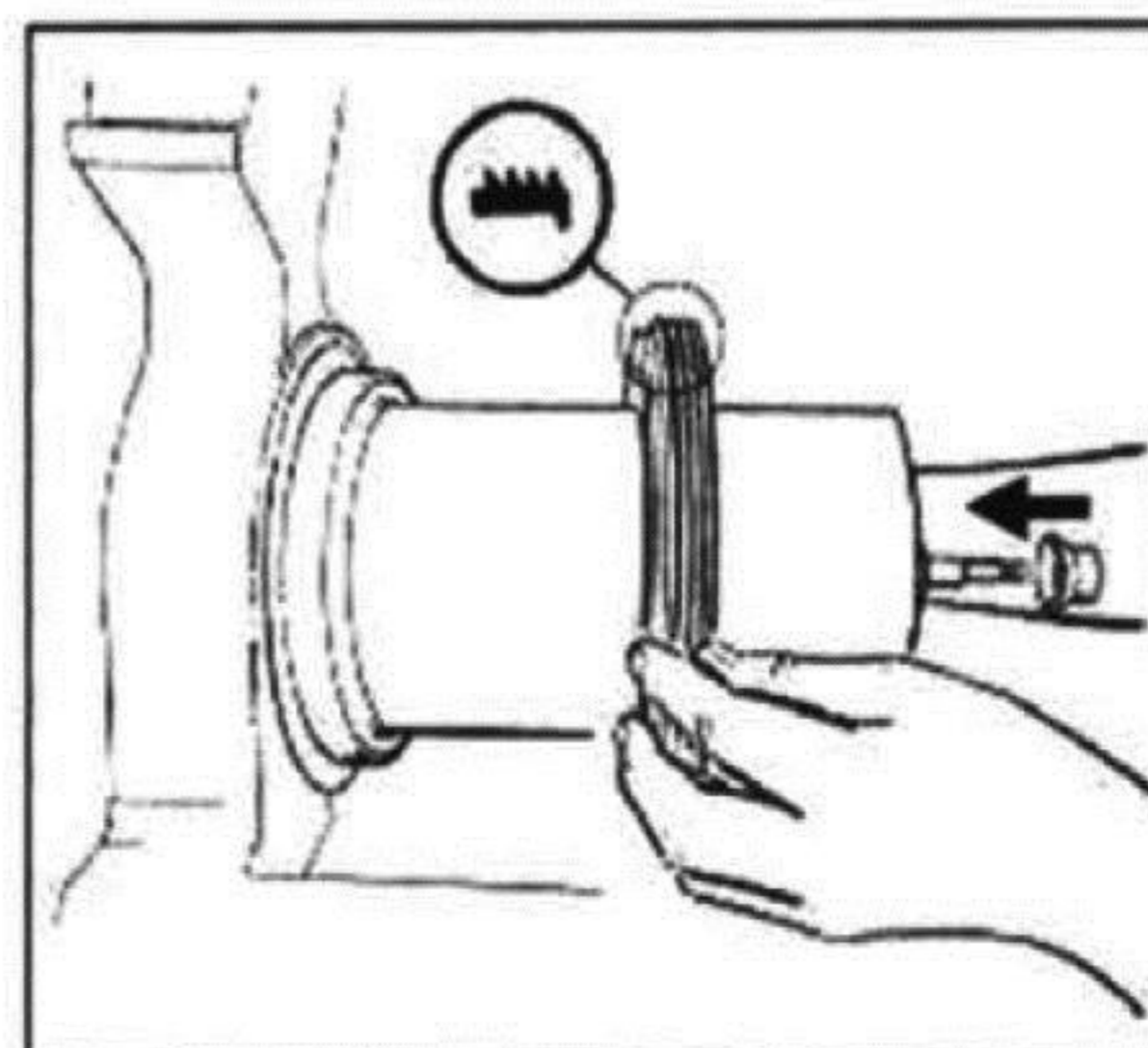


fig.35

- Reassemble the mixing unit making sure that the frontal cylinder perfectly fit inside its rotating shaft seat.

- Block all these components into place by turning the knob in counter clockwise direction (fig.36).

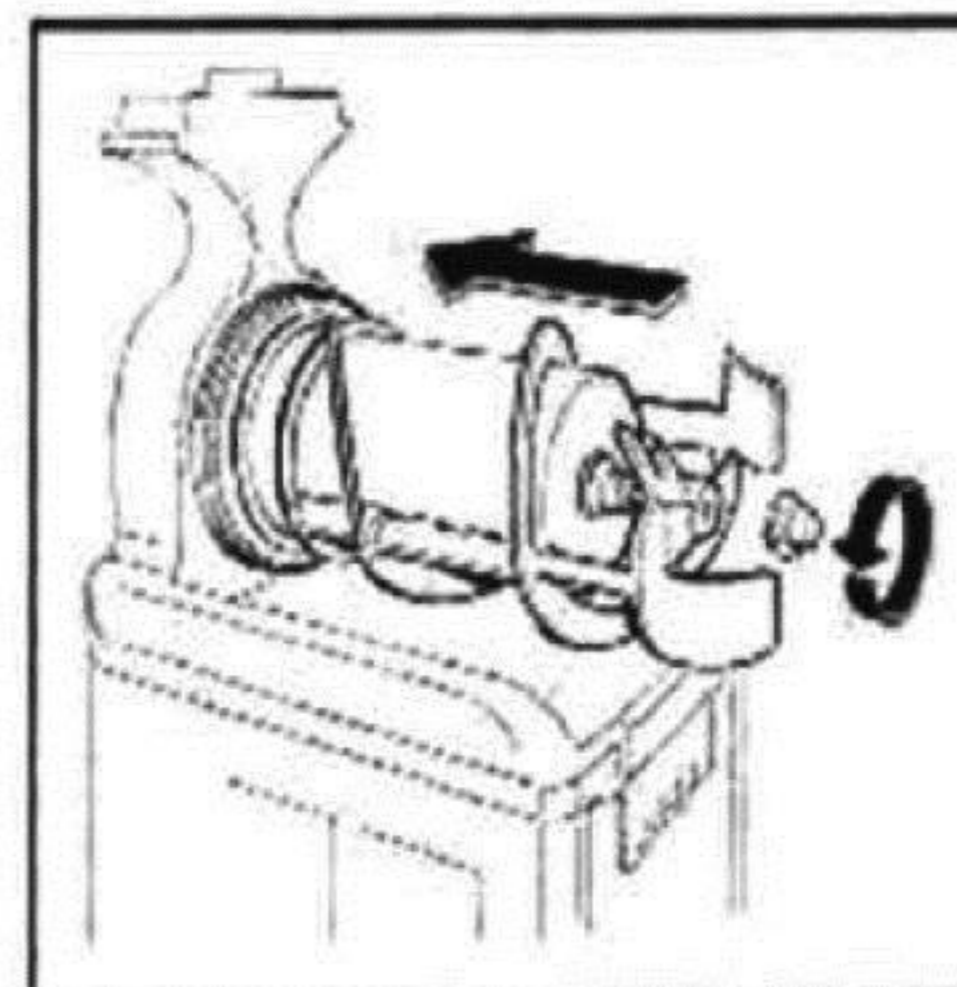


fig.36

- Moisten with water the rear of the tank where it meets with the seal to facilitate the reassembling procedures (see fig.37).

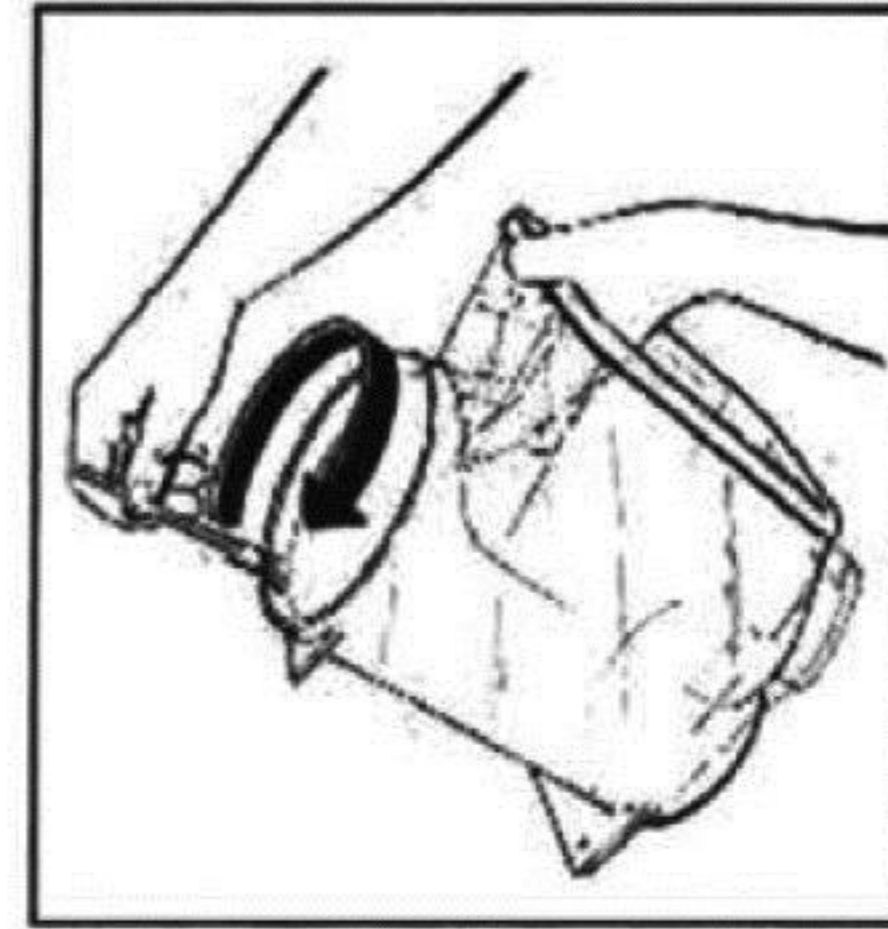


fig.37

- Reassemble the bowl by positioning it back into its seat, verifying that it faces in the correct direction and it is held in place by its seal (see fig.38).

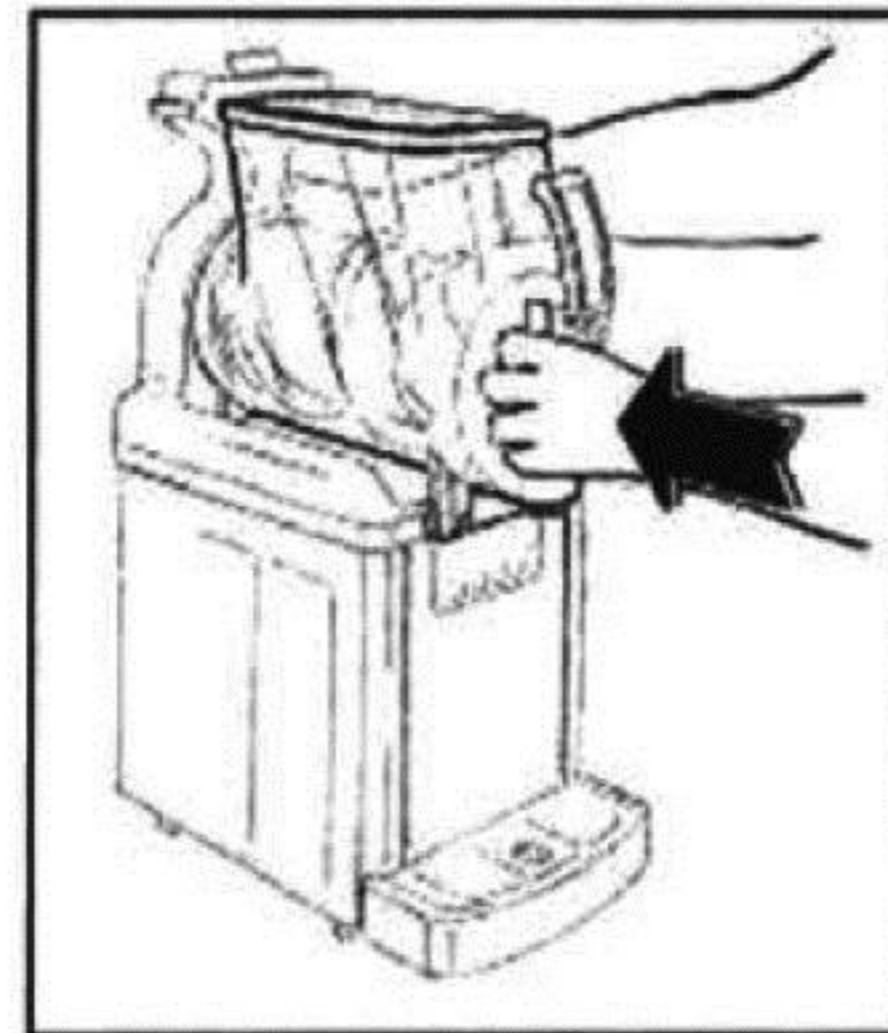


fig.38

- Fix the bowl by reinsert the knobs (fig.39).

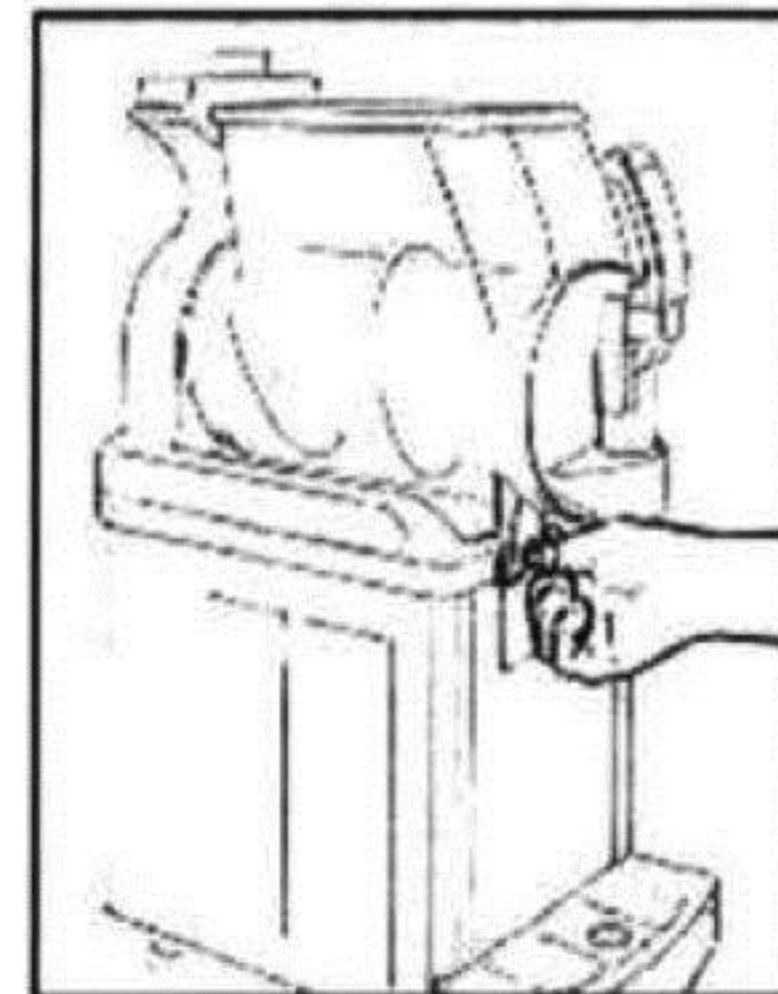


fig.39

IMPORTANT
Do not over tighten the bowl knobs.
Excessive force could damage the thread
and/or the bowl itself.

- Re-insert the tap (fig.40) spreading Vaseline on the o-rings to facilitate sliding the tap in its seat until completely inserted.

!Warning!

If the tap does not perfectly slide into position,
the sealing hold will be endangered.

- Reassemble the accessory to give a "star" peculiar shape to the dispensed product.

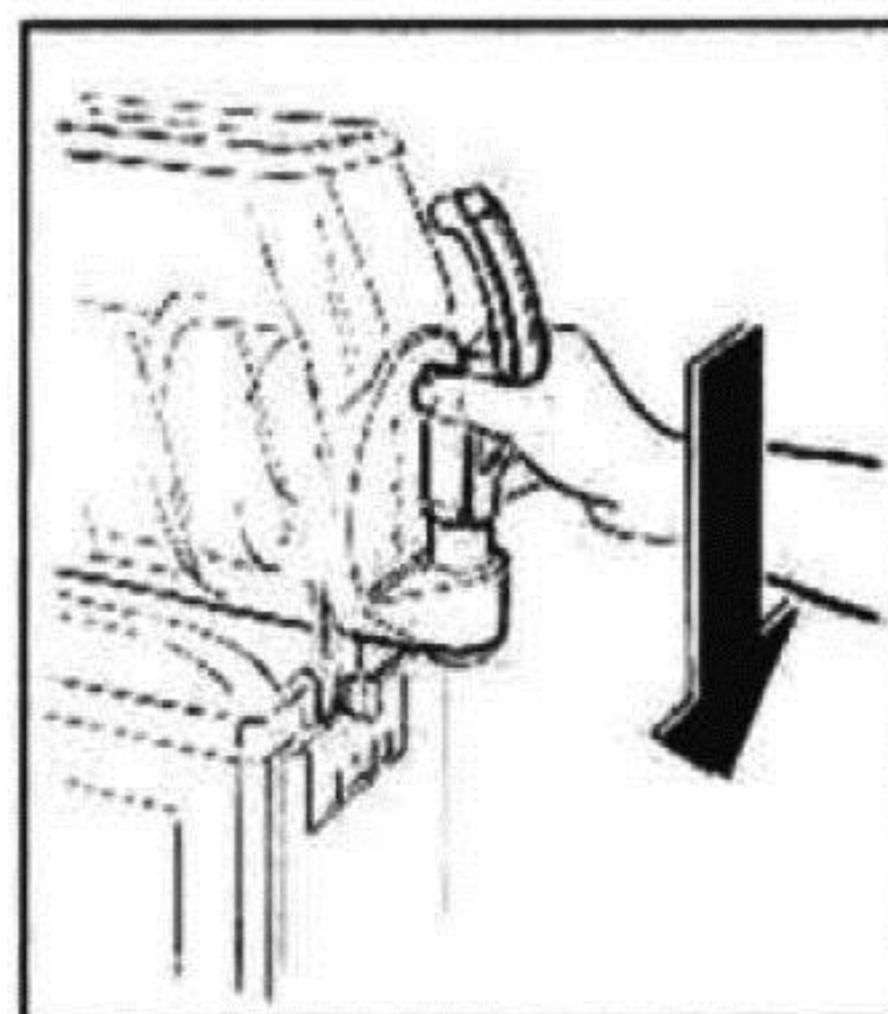


fig.40

- Reassemble the drip tray.

SANITIZING

Whenever the machine has remained unused for some days after been cleaned and sanitized as described in the chapter 10, the sanitizing procedures described below must be performed just prior to start-up the machine.

- Remove the main cover and the secondary one.
- Pour sanitizing solution into the bowl carefully following the manufacturer prescriptions.
- After restoring the main cover, switch on the machine and let the auger rotating (all control board LED switched off) leaving the sanitizing solution for the time specified by its producer.

IMPORTANT

Never let the sanitizer inside the bowl for more than 15 minutes.

- Drain the solution by opening the plunger to allow the bowl to empty. Open and close the plunger at least 10 times during draining to sanitize the product way out area also.
- Thoroughly rinse repeating these operations with clean water instead of sanitizer solution.
- Now the machine is ready to be used.

10. SPENCIAL MAINTENTANCE

▲ Caution ▲

Before proceeding with any maintenance operation, it is compulsory to switch off the machine and unplug it from the mains.

Condenser cleaning

In order to guarantee good cooling system performance, the condenser must be well cleaned **every month**.

How to reach it:

- Switch off the power supply and disconnect the power cable;
- ICE6L machine: remove the rear panel by unscrewing the two bolts fastening it (fig.41);
- ICE12L machine: remove the left side panel by unscrewing the two bolts fastening it (fig.42);
- Using a dust exhauster, remove the dust that has collected between the condenser fins (fig.43).

IMPORTANT

Never use a screwdriver or sharp object to clean between fins

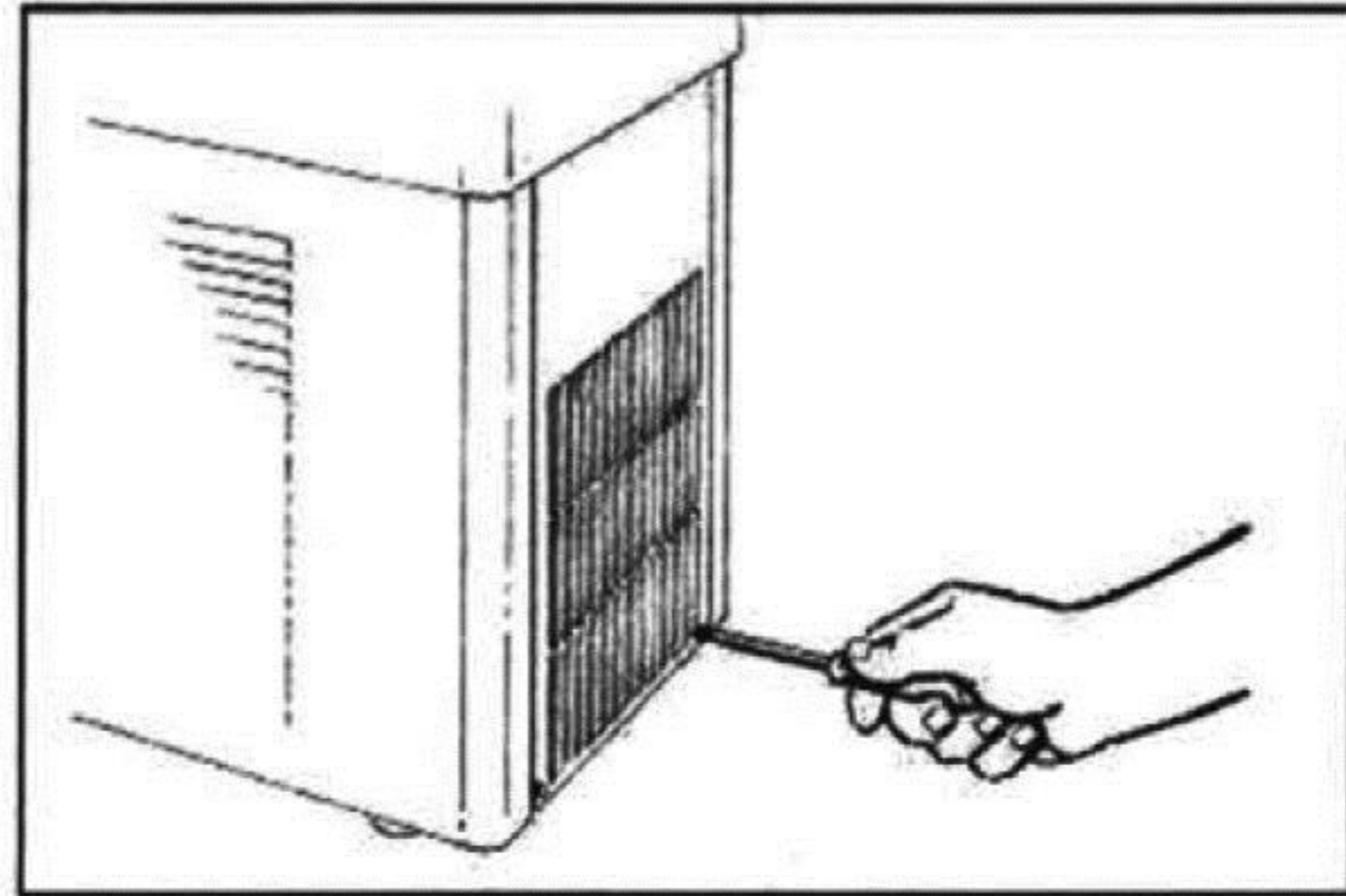


fig.41

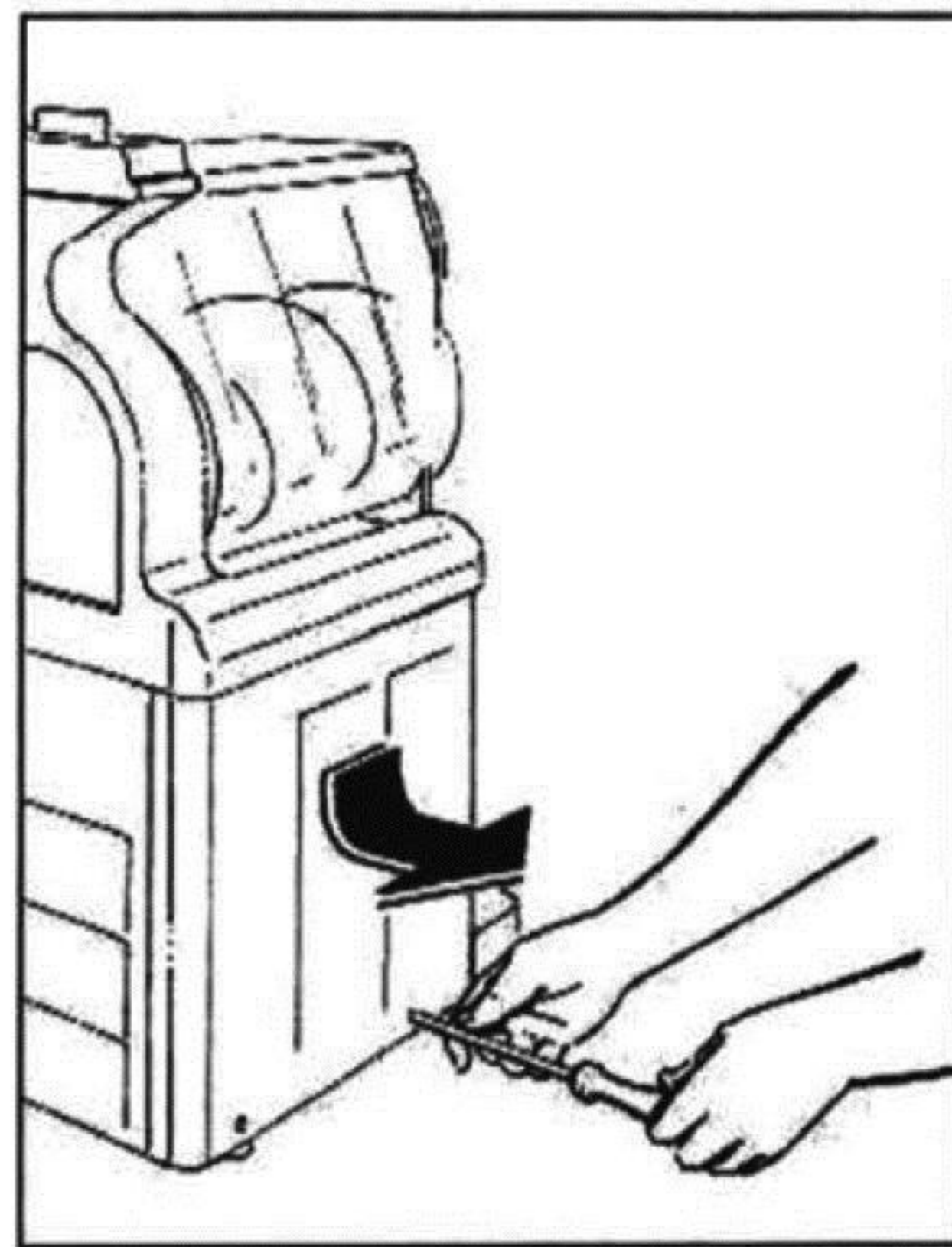


fig.42

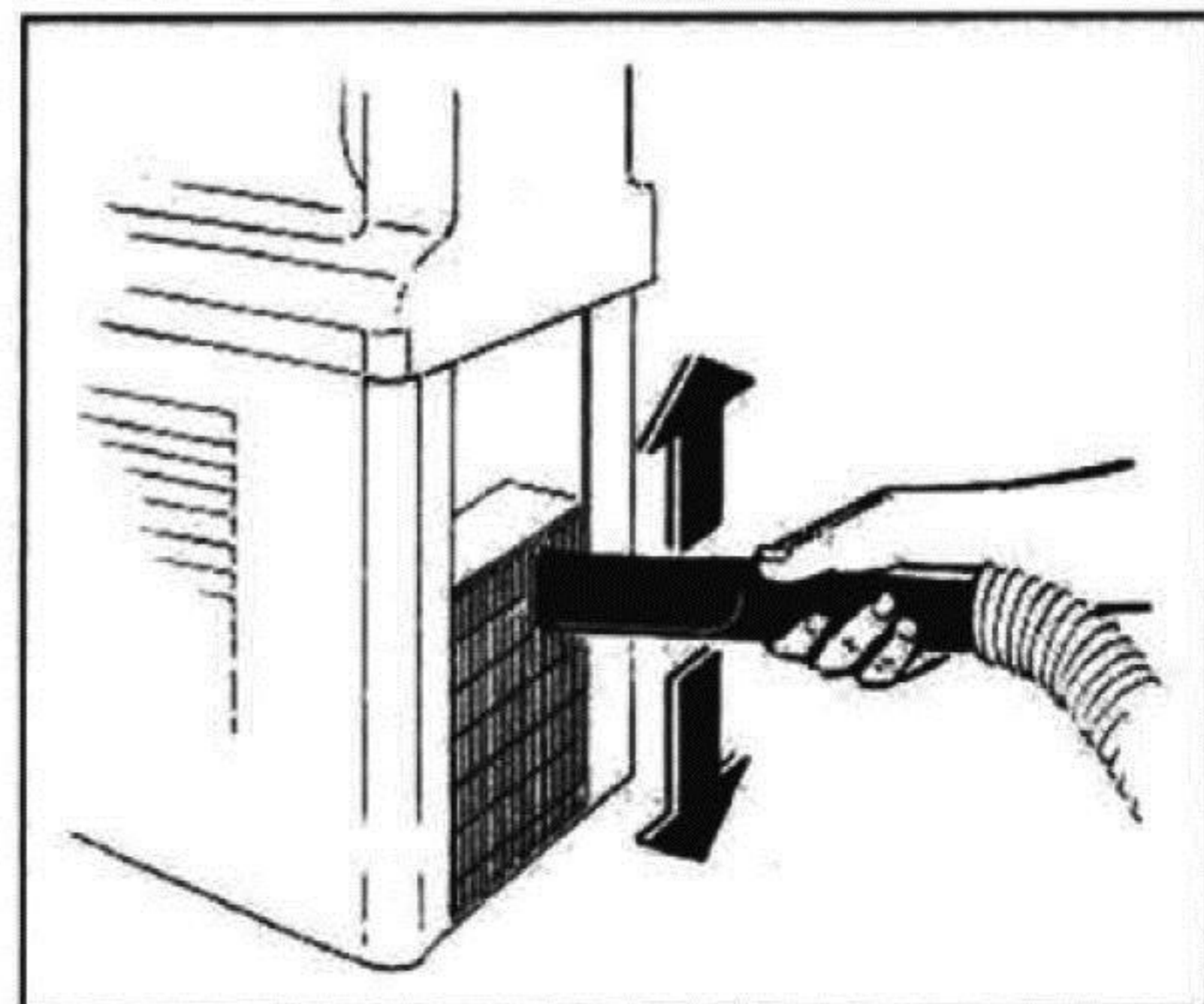


fig.43

Control and replacement of seals

BOWL GASKET (LOCATED AT THE REAR OF BOWL)

Replace it every 12 months according to the conditions of use and level of maintenance.

DISPENSE VALVE O-RING

The dispense valve o-rings should be replaced as necessary when wear is evident. Lubricate them each time they are replaced or the dispense valve is removed for cleaning.

SUCTION GASKET

Replace every 3 months according to the conditions of use and level of maintenance. This part should be lubricated during the reassembly after every cleaning with Vaseline.

Winter storage

To protect the unit during seasonal shutdown, it's important to properly store the machine using the following procedures:

- Disconnect all power to the freezer.
- Disassemble, wash and sanitize all parts that come into contact with the mix as described in chapter 10.
- Clean also all the exterior panels.
- Reassemble all these parts.
- Cover the machine with the original package to protect it from dust or other contaminating elements.
- Place the machine in dry location.

11. SOFT SERVE ICE CREAM INFORMATION

OVERRUN

While the product is frozen in the bowl, its volume increase; to control overrun is important as too much of it could go over the bowl maximum level.

To correctly measure overrun carry out the following steps:

- Place an empty container on the scale and adjust your scale to zero;
- Remove the container from scale and fill it with liquid product to the top. Weigh container and record;
- Replace liquid product with frozen one, strike off the excess of it so it is even with the top of the container and measure the weight;
- Use the following formula to figure overrun percentage;

"weight of liquid mix minus weight of frozen product divided by the frozen weight. Multiply by 100"

$$150/380=0.4$$

$$0.4 \times 100 = 40\% \text{ overrun}$$

12. DISCLAIMER

The manufacturer declines all responsibility for any damage that directly or indirectly might be brought on to people, things, animals, as a consequence of failure to comply with all instructions given in this manual with the warnings concerning installation procedures, use and maintenance of the machine.

The manufacturer cannot be held responsible for possible mistakes due to printing, copying or translating errors contained in this manual.

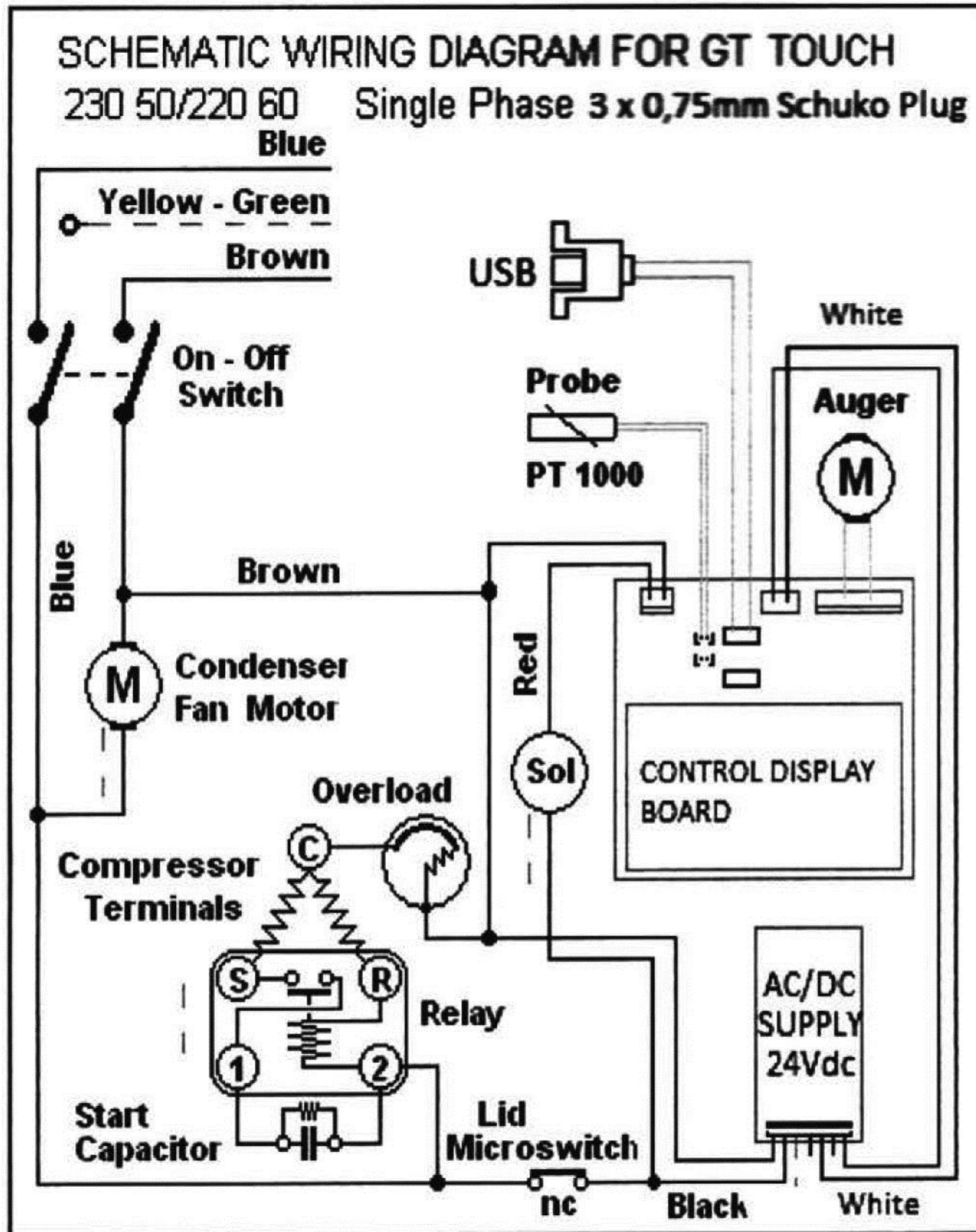
In addition, the manufacturer reserves the right to modify what deemed necessary or useful for the machine, as well as for the benefit of the user, yet at the same time maintaining the essential operative and safety characteristics of said machine.

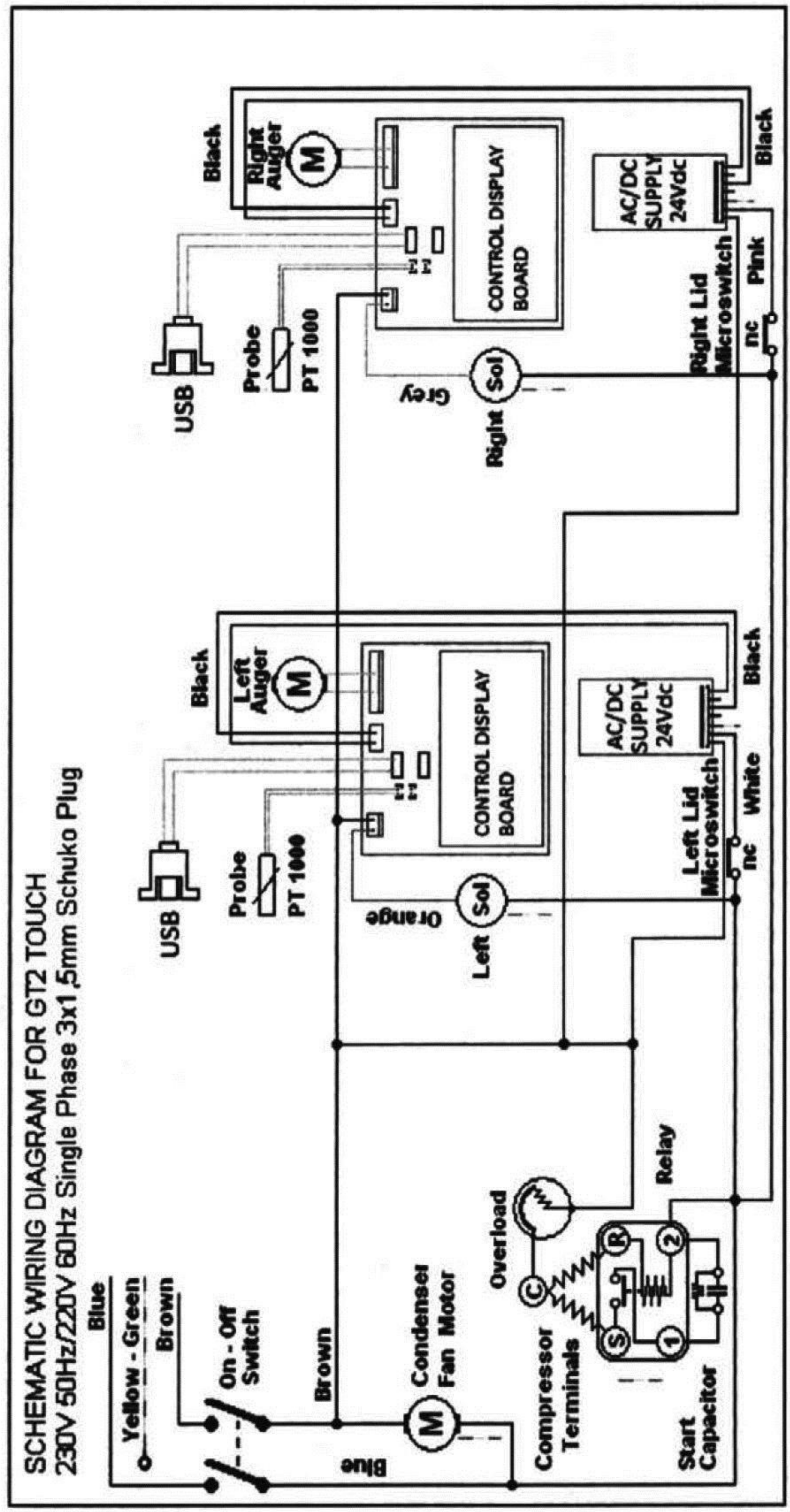
13.TROUBLESHOOTING GUIDE

NOTE: the following procedures must be performed by a qualified service technician.

Problem	Possible cause	Solution
The machine does not cool, or cools only partially and the compressor is running	<ul style="list-style-type: none"> · The space around the machine is inadequate for ventilation · The refrigeration system is working in DEFROST mode · The condenser fins are clogged with airborne particles · Fan motor is not running · Refrigerant is leaking · The electronic board is not functioning correctly · The feeder is not functioning correctly 	<ul style="list-style-type: none"> · Allow at least 20cm between the machine and anything next to it; keep it way from heat sources · Return to FREEZE mode · Clean the condenser fins · Check the fan motor's electrical connections and, if disconnected, reconnect. If still not operating, replace the motor · Locate the leak, eliminate it and recharge the system · Check and replace · Check and replace
The machine does not cool, or cools only partially and the compressor is not running	<ul style="list-style-type: none"> · Electricl components of the compressor are not functioning · Some electrical connections are not complete · The compressor is malfunctioning · The electronic board is not functioning correctly · The feeder is not functioning correctly 	<ul style="list-style-type: none"> · Replace the malfunctioning components · Check the contacts and and correct those incomplete · Replace the compressor · Check and replace · Check and replace
The main power switch is "ON" but the unit s not running	<ul style="list-style-type: none"> · The main cover is not correctly assembled · Some electrical connections are not complete · The main power switch is broken · The control board is faulty · The feeder is faulty · The compressor DC drive is faulty · The gear motor is malfunctioning 	<ul style="list-style-type: none"> · Assemble the main cover correctly · Check the contacts and and correct those incomplete · Replace the switch · Replace the control board · Replace the feeder · Replace the DC drive · Replace the gear motor
The bowl is leaking	<ul style="list-style-type: none"> · One of the bowl seal is not in place 	<ul style="list-style-type: none"> · Replace or reposition the seal
The dispensing valve is leaking	<ul style="list-style-type: none"> · The dispensing valve has been incompletely or incorrectly replaced in its position · The free movement of the valve is impeded · Dispensing valve o-rings are damaged 	<ul style="list-style-type: none"> · Reassemble and replace · Clean and lubricate the valve and the valve cylinder with the lubricant provided with the machine · Replace the o-rings

14.WIRING DIAGRAM





12L slush machine spare parts list

Number	Describe
1	Cover locker
2	Upper cover
3	Inner cover
4	Bowl
5	Handle
6	Handle basic
7	Piston
8	O-ring
9	Handle spring
10	Bowl screw
11	Dispenser faucet
12	Spiral assembly
13	Spiral screw
14	Bowl gasket
15	Evaporator
16	Sealing ring
17	Transmission shaft
18	Shaft O-ring
19	Thermostat Sensor
20	Thermostat O-ring
21	Micro switch
22	Evaporator support
23	Water drip surface
24	Tube for condensation outlet
25	Frame
26	Front panel
27	LED touch pad
28	Left/right panel
29	Switch box
30	Main power switch
31	Cover for drip tray
32	Drip tray
33	Cover for Evaporator support
34	DC motor
35	Extra fan
36	Main fan
37	Control PCB
38	Electrovalve
39	Condenser
40	compressor

