INSTRUCTIONS HANDBOOK

EFFE4 B
EFFE6 B

TO GUARANTEE SAFETY REQUIREMENTS OF THE UNIT ACCORDING TO ITALIAN AND EUROPEAN STANDARDS IT IS ESSENTIAL THAT INSTALLATION AND USE COMPLY WITH DIRECTIONS OF THIS HANDBOOK, IN PARTICULAR WITH SECTION 3 "INSTALLATION" AND SECTION 4 "INSTRUCTIONS FOR USE".

APPLICARE

TARGA

CARATTERISTICHE

cattabriga

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

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

Moreover **CATTABRIGA** machines comply with following European Directives:

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

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FOREWORD

INSTRUCTIONS HANDBOOK

Editing this handbook, it was taken into due account community directions on safety standards as well as on free circulation of industrial products within E.C.

PURPOSE

This handbook was edited while taking users' needs into due account.
Topics relevant to a correct use of the machine have been analyzed in order to keep unchanged in the long run quality features characterizing **CATTABRIGA** machines throughout the world.
A significant part of this handbook refers to the conditions required to the machine use and mainly to the behaviour to be held during routine and special maintenance.
Nevertheless, this handbook cannot meet in details all demands; in case of doubts or failing information, please apply to:

CATTABRIGA ALI S.p.A Via Emilia, 45/A - 40011 Anzola dell'Emilia (Bologna) - Italy
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HANDBOOK STRUCTURE

This handbook is structurilized in sections, chapters and subchapters in order to consult it more easily.

Section
A section is the part of handbook identifying a specific topic referred to a machine part.

Chapter
A chapter is that part of section describing a group or concept relevant to a machine part.

Subchapter
It is that part of a chapter detailing the specific component of a machine part.
It is necessary that each person involved in the machine running reads and clearly understands those parts of the handbook of own concern, and particularly:

- The Operator must have a look at chapters concerning the machine start-up and the operation of machine groups.
- A skilled technician employed in installation, maintenance, repair, etc., must read all parts of this handbook.

ADDITIONAL DOCUMENTATION

Along with an instruction manual, each machine is also supplied complete with further documentation:

- **Machine equipment**: a list of spare parts delivered together with the machine for its maintenance.
- **Wiring diagram**: a diagram of wiring connections put into the machine.

CAUTION
Before carrying out any operation, please read this instructions manual.
Read safety instructions, carefully.

SAFETY

When using industrial equipment and plants, one must be aware of the fact that drive mechanisms, high voltage components, as well as parts subject to high temperatures may cause serious damages to persons and things.
Who is in charge of plant safety must be on the look-out that:
- an uncorrect use or handling is avoided;
- safety devices are neither be removed nor tampered;
- service is regularly carried out;
- only areoriginal spare parts used especially as far as those components with safety functions are concerned (ex.: protection microswitches, thermostats);
- that appropriate individual protection equipment is used.

To achieve the above, the following is necessary:
- At working place an instruction manual relevant to the machine should be available.
- Such documentation must be carefully read and prescriptions must consequently be followed.
- Only must adequately skilled personnel be assigned to electrical equipment.

STAFF QUALIFICATION

Staff attached to the machine can be distinguished according to training and responsibility as follows:

OPERATOR
- A person who has not necessarily a high technical knowledge, just trained for ordinary operation of the machine, such as: startup, stop, filling, basic maintenance (cleanout, simple blocking, instrumentation checkings, etc.).

SKILLED ENGINEER
- A person engaged on more complicated operations of installation, maintenance, repairs, etc.

IMPORTANT!
One must be on the look-out that the staff does not carry out any operation outside its own sphere.

NOTE:
According to the standard at present in force, a SKILLED ENGINEER is who, thanks to:
- *training, experience and education,*
- *knowledge of rules, prescriptions and interventions on accident prevention,*
- *knowledge of machine operating conditions,*

is able to realize and avoid any danger and has also been allowed by the person in charge of plant safety to carry out all kinds of interventions.

WARNING

When installing the machine, insert a differential magnetothermal protection switch on all poles of the line, adequately sized to the absorption power shown on machine data plate and with contact opening of 3 mm at least.
- Never put your hands into the machine, alike during production and cleaning operations. Before carrying out any maintenance operation, make sure that the machine is in “STOP” position and main switch has been cut out.
- It is forbidden to wash the machine by means of a bolt of water under pressure.
- It is forbidden to remove panels in order to reach the machine inside before having disconnected the machine.
- **CATTABRIGA** is not responsible for any accident that might happen during operation, cleaning and/or servicing of its units, if this warning has not been fully complied with.

CONVENTIONAL SYMBOLS

ATTENTION: ELECTRIC SHOCK DANGER
The staff involved is warned that the inobsevance of safety rules in carrying out the operation described may cause an electric shock.

ATTENTION: GENERAL DANGER
The staff involved is warned that the operation described may do harm if not carried out in the observarnce of safety rules.

NOTE
It points out significant information for the staff involved.

WARNING
The staff involved is warned that the inobservance of information may cause a loss of data and damages to the machine.

MACHINE OPERATOR
It deals with an unskilled person , who has no specific competences and can only carry out easy functions, such as the machine operation by means of controls available on push-button panel , and filling and drain of products used during production.

MAINTENANCE ENGINEER
He is a skilled engineer for operation of the machine under regular conditions; he is able to carry out interventions on mechanical parts and all regulations, as well as maintenance and repairs. He is qualified for interventions on electrical and freezing plants.

CATTABRIGA ENGINEER
It deals with a skilled engineer the manufacturer puts at clients' disposal for complicated interventions und particular conditions or anyhow in accordance with agreements taken with the machine's user.

PROTECTIONS
This symbol placed by description side means that the operator must use personal protections against an implicit risk of accident.

1. RECEIPT, MOVEMENT, UNPACKING

1.1 RECEIPT

- Before unpacking the machine, check that packing shows no external damages due to collisions during transportation.
- An external damage could mean the machine itself is damaged: in this case, immediately apply to insurance company and leave everything as it was on reception.

1.1.1 Lifting a packed machine

To lift the packing, insert lift forks into the space between pallet feet, so as to balance the machine weight and consequently packing barycenter.

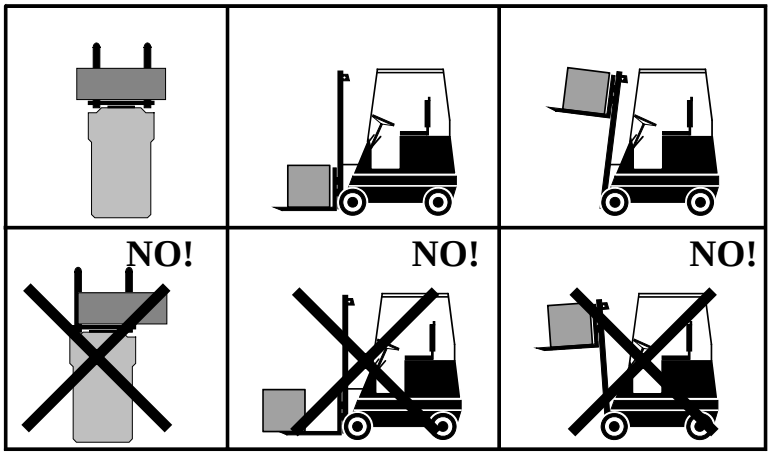


Fig. 1

1.1.2 Forbidden material handling equipment

Material handling equipment not in compliance with following safety characteristics must never be used:

- Lifting capacity lower than machine weight
- Unsuitable construction features of the lift (ex.: too short forks)
- Construction features altered by use
- Unconforming ropes and cables
- Worn ropes or cables.

1.2 UNPACKING

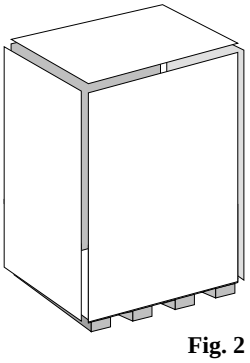


Fig. 2

Wooden packing can be opened with proper tools.

1. Remove the nails starting from the upper side until the machine still secured to the pallet (board) ist left uncovered.
2. Remove protection sheet wrapping the machine.
3. Check that the machine has not been damaged during transportation.

Board packing is closed by steel straps on outside.

1. Cut the straps with snips, while keeping one end with your hands.
2. Withdraw the packing upwards.
3. Remove poystyrene and polypropylene bag protecting the machine.
4. Cut the straps securing the machine.

CAUTION

Protect your hands with gloves as one may hurt with splinters or when cutting the straps if these are not strongly held.

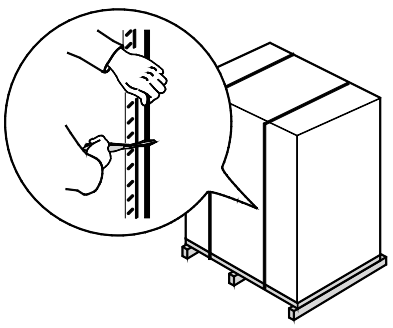


Fig. 3

1.3 STORING A MACHINE

The machine must be stored in a dry and dump-free place.
Before storing it, wrap the machine in a cloth in order to protect it against dust and else.

IMPORTANT:
When storing a packed machine, never place a crate on another.

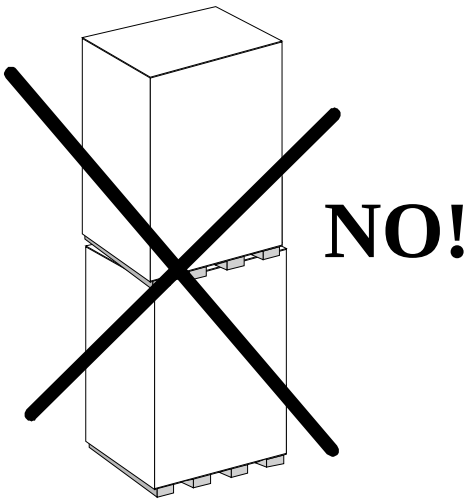


Fig. 4

1.4 DISPOSAL OF PACKING STUFFS

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

1.5 WEEE (Waste Electrical and Electronic Equipment)

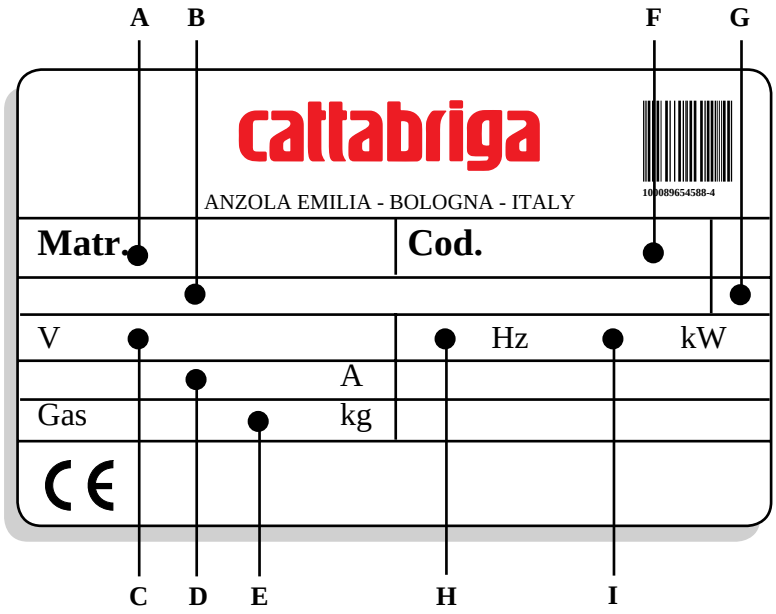
In conformity with the European Directives 2006/66/EC and 2002/96/EC, also known as WEEE, the presence of the symbol on the side of the product or packaging means that the product must not be disposed of with normal urban waste.
Instead, it is the user's responsibility to dispose of this product by returning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

2 GENERAL INFORMATION

2.1 GENERAL DATA

2.1.1 Manufacturer's identification data

The machine has a data plate carrying manufactuer's data, machine type and serial number given when it is manufactured.



A= Serial number
B= Machine type
C= Voltage
D= Fuse Current
E= Gas type and weight
F= Machine code
G=Condensation
A=Air
W=Water
H=Frequency
I= Power input

2.1.2 Client/user's identification data

CLIENT:.....

ADDRESS:.....

TELEPHONE:.....
Machine serial number:.....
Machine delivered on:.....
Instr. handbook delivered on:.....

2.1.3 Information about service

All operations of ordinary maintenance are described in section "Maintenance" of this handbook; any further operation requiring radical interventions on the machine must be agreed with the manufacturer, who will also examine the possibility of a direct action on the spot.

CAUTION
For service please apply directly to CATTABRIGA or to Retailer - Sole Distributor - Importer - authorized by CATTABRIGA.

2.1.4 Information to the user

- The manufacturer of the machine here described is at user's disposal for any explanation and information about the machine operation.
- In case of need, the interlocutor is the distributor being present in user's country, or the manufacturer if there is no distributor in that market.
- Manufacturer's service department is at clients' disposal for any information about operation, and requests of spare parts and service.
- The manufacturer reserves the right to carry out all machine changes deemed as opportune without previous notice.
- Descriptions as well as pictures contained in this handbook are not binding.
- Reproduction rights are reserved to **CATTABRIGA**.

2.2 INFORMATION ABOUT THE MACHINE

2.2.1 General information

Vertical batch freezer for production of artisan ice cream to be mounted into refrigerated cabinets properly preset to guarantee operation and safety.

CATTABRIGA recommends to always use high quality mix for ice cream production in order to satisfy your customers, even the hardest-to-please ones.

Any saving made to the prejudice of quality will surely turn into a loss much bigger than the saving itself.

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

- Make your mixes yourselves from high quality natural ingredients or buy them from reliable companies.
- Follow closely instructions given by your mix supplier for the preparation of the mixes.
- Do not alter your mix supplier's recipies, by adding, for instance, water or sugar.
- Taste ice cream before serving it and start selling it only if entirely satisfactory.
- Make sure your staff always keeps the machine clean.
- Have your machine serviced always by companies authorized by **CATTABRIGA**.

2.2.2 Groups location

CAPTION:

1 Mixer
2 Beater shafta
3 Icecream bowl shaft
4 Icecream bowl
5 Drip drawer
6 Drain plug
7 Safety bar
8 Control panel

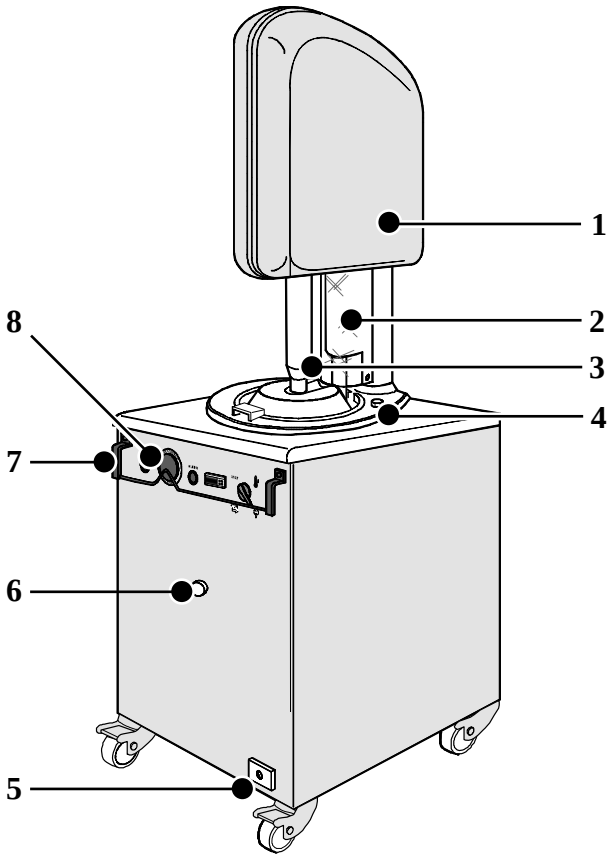


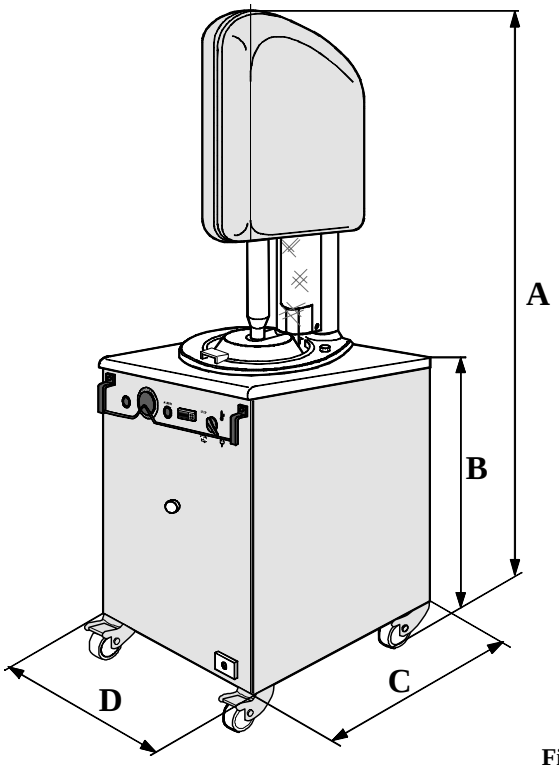
Fig. 5

2.2.3 Technical features

Model	Production per cycle	Compressor motor power	Beater motor power	Fan motor power (2)	Anti-freeze diluted 50%	Electric power			Installed power	Water consumption (3)
	litres	kW	kW	kW	litri	Volt	Hz	Ph	kW	litres/h
EFFE 4 B	4	1,1	0,75	0,13	6-7	380	50	3	2,0	170
EFFE 6 B	6	2,2	1,1	0,13	18	380	50	3	3,3	200

(2) *Machines with aircondensation, only*
(3) *Machines with watercondensation, only*

2.2.4 Machine layout



Model	Dimensions mm				Net weight
	A	B	C	D	Kg
EFFE 4 B	1860	950	695	510	225
EFFE 6 B	2000	950	835	550	295

Fig. 6

2.3 INTENDED USE

Vertical batch freezers series **EFFE B** must only be used for the production of ice cream, conforming with content of paragraph 2.2.1 "General Data", within the functional limits hereunder reported:

- Voltage ±10%
- Min air temperature °C 10°C
- Max air temperature °C 43°C
- Min water temperature 10°C
- Max water temperature 30°C
- Min. water pressure 1 bar
- Max water pressure 8 bar
- Max relative humidity 85%

- This machine has not been designed for use not in compliance with its original design and purpose.

2.4 NOISE

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

3. INSTALLATION

The machine must be installed in conformity with relevant standards **solely by technicians being expert** in this specific kind of machine.

3.1 ROOM NECESSARY TO THE MACHINE USE

The machine must be installed in such a way that air can freely circulate allaround.
Rooms for the approach to the machine must be left free in order to enable the operator to act without constraint and also to immediately leave working area, if need be.
Approach room to the machine operational area should be 150 cm at least.

CAUTION
Machines with aircooled condensers must be installed no closer than 50 cm to the rear wall, in order to allow a free air circulation around the condenser.

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

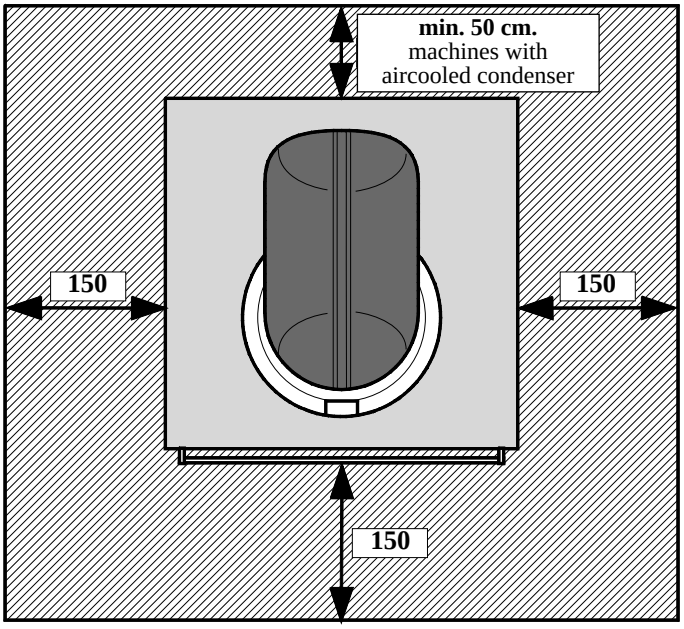


Fig. 7

3.1.1 Positioning

For an easy location, the machine has been provided with castors having mechanical locks, which once engaged, prevent the machine from moving, and so keeping it still.

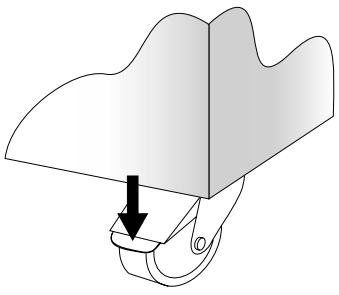
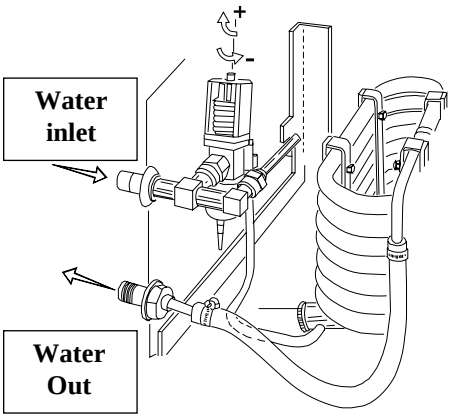


Fig. 8

3.2 CONNECTING MACHINES WITH WATERCOOLED CONDENSER TO WATERMAIN

A watercooled machine can run when only connecting it to running water supply or to a cooling tower.
Water inlet must have a pressure 100 to 800kPa (1 to 8 bar) and a delivery at least equal to the estimated hourly consumption .
Connect inlet pipe which is marked by the plate "**Entrata Acqua**" (**Water inlet**) to water supply, installing a shut-off valve, and the outlet pipe which is marked by the plate "**Uscita Acqua**" (**Water Out**) to a drain pipe, installing a shut-off valve.
Water connections (for gas cooling) are to be found on rear panels.



NOTE:
We recommend to use rubberized canvas pipes having working pressure up to 800kPa (8bar).

CAUTION
Do not leave the machine in a room with temperature below 0°C without first draining water from the condenser (see Sect. 7).

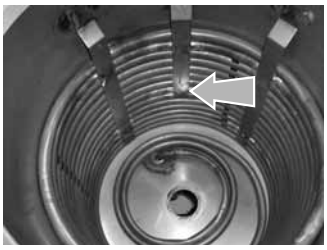
3.2.1 Water valve adjustment

IMPORTANT:
The water valve can be reached by removing the rear pane
A possible resetting of water valve must be carried out by skilled personnel, only.
Water valve adjustment must be carried out in such a way that no water flows when the machine is off and lukewarm water flows when the machine is on.

NOTE:
Water consumption increases if temperature of entering water is above 20°C.

3.3 CHARGING THE THERMIC EXCHANGE FLUID

A thermal exchange fluid is introduced to transmit the cold between the evaporator coil of the refrigeration installation and the rotating whipping chamber. This thermal exchange fluid is a mono-propylene glycol inhibitor. This fluid must be diluted in a 50% volume with water. It is advisable to always use the same type of product that has been tested by **CATTABRIGA** to ensure the safety of the machine, its components and the conformity to the machine's food norms.
To introduce the special thermal exchange fluid contained in the appropriate container into the machine, the whipping chamber must be disassembled following the instructions reported in section 6. Ensure that the front drain plug is in place. The level of fluid necessary is indicated inside the chamber by a mark highlighted on the evaporator coil (refer to the following figure) and must arrive underneath the evaporator coil fixing plate.
Place the whipping chamber into its housing and push it downwards. If the thermal exchange fluid is excessive, it will flow over from the overflow hole dropping into the appropriate oil-drip drawer positioned on the front of the machine.



WARNING
IThermic exchange fluid is not toxic if swallowed, but it is advisable to anyway handle it with care. Do NOT touch with bare hands!
In case of contact with eyes, wash with water abundantly.
Do not dispose of it in the drains directly.
Keep it out of children.

3.4 ELECTRICAL CONNECTIONS

Before connecting the machine to the mains, check that its characteristics agree with indications on machine data plate. Insert a magnetothermal protection switch with minimum contact opening of 3 mm and rated voltage at least equal to the one indicated on data plate (by fuse link symbo “ ⊣▭⊢ ”). The number of poles of sectioning switch must be equal to the number of phases plus neutral wire (N), when provided. By threephased systems neutral wire (N) MUST ALWAYS be connected to the blue cable of machine power supply.
For better protecting the operator, sectioning switch should be a differential releas coil type and with a max 30 A differential current.

WARNING

The machine is provided with an electric power cable including a Yellow/Green cable which MUST be connected to a good earth plate of the electric system.

WARNING

Earth connection and the differential magnetothermal switch are of main importance to operator's safety and they guarantee protection in case of earth faults by the electric isolation of equipment inside the machines.

CAUTION

Disconnect the main switch when you do not use the machine in order to avoid any possible damages caused by flashovers, thunderbolts, etc.

3.4.1 Replacing a cable

If the machine main cable is damaged, it must be immediately replaced with a similar one.
Replacement will have to be carried out by skilled personnel, only.

Direction of Rotation

The ice cream machine rotates in a clockwise direction.

Reversal of rotation direction

If the rotation direction must be reversed (by three-phased machine, only) , so interchange two of the three leads coming from the circuit breaker. Check then rotation direction again.

3.5 CLEANOUT

Eliminate dust from the machine, as well as the protective material the machine was strewed with.
Use just water and, if need be, add a mild soap-based detergent with a soft cloth.

ATTENTION

Do not use either solvents or alcohol and detergents that may damage the machine parts or contaminate parts coming into contact with the product.

3.6 REFILLING

Motor installed in the machine is of the type with lubrication for life; no checking/replacing or topping up is necessary.
Gas filling necessary to the freezing system is carried out at **CATTABRIGA** works during the machine postproduction testing .
If a gas addition happens to be made, this must be carried out by skilled technicans, only, who can also find out trouble origin.
When installing the machine, fill it with thermic exchange fluid according to the quantity described in chapter 3.3.

3.7 MACHINE TESTING

A postproduction test of the machine is carried out at **CATTABRIGA** premises; operation and output functionalities of the machine are thoroughly tested.
Machine test at end user's must be carried out by skilled technicians or by one of **CATTABRIGA** engineers.
After the correct machine installation and connections, all operations necessary to functional check and test of the machine are to be carried out.

4 INSTRUCTIONS FOR USE

4.1 PRODUCTION PROGRAM

To produce ice cream, pour ingredients into the ice cream bowl and start the automatic program. When program is complete, ice cream is ready to be taken out with a specially designed scoop provided with the machine.

CAUTION

To remove ice cream from the bowl use the special scoop provided, ONLY; any other tool may cause irreparable damage to the machine or endanger operator's safety.

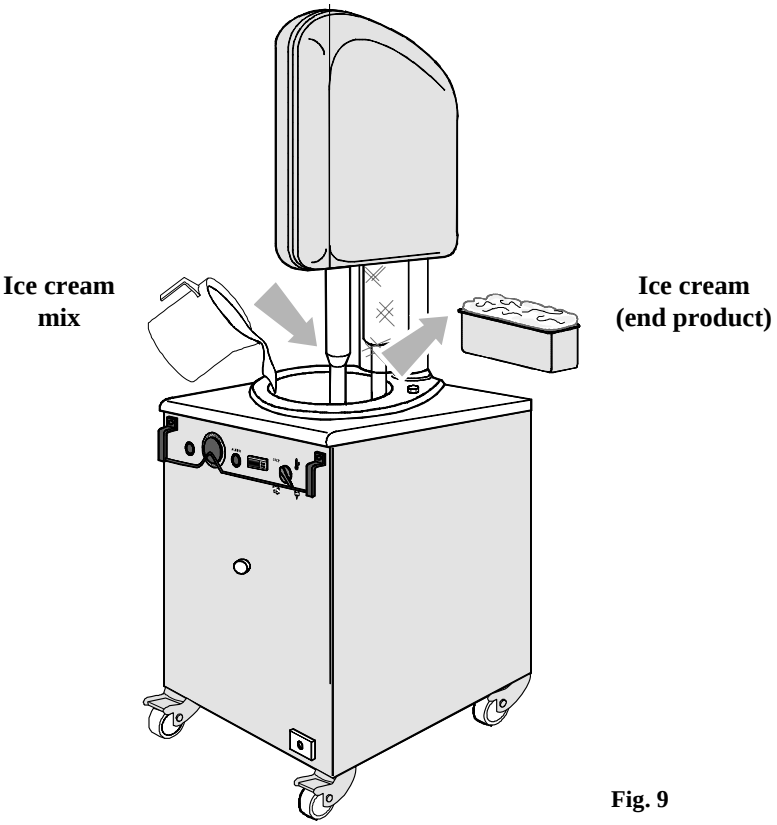


Fig. 9

4.2 CONTROLS AVAILABLE TO THE OPERATOR

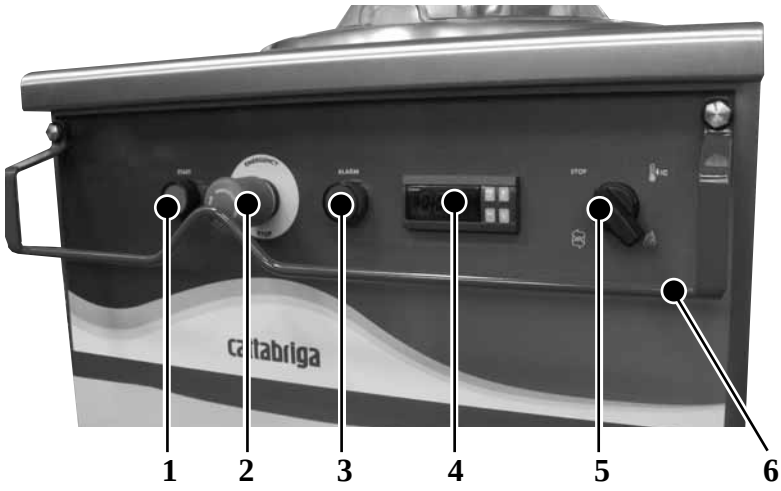
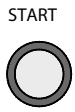


Fig. 10

Legend:

1 START push-button
2 Emergency button
3 ALARM warning light
4 Digital electronic thermostate
5 4-way switch
6 Safety bar

For the description of the controls referred to here, refer to the successive page and follow the order from left to right.

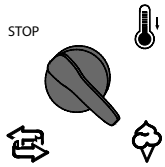


START PUSH-BUTTON
OThis push-button must be used ever time a safety device trips (emergency, thermal relays, line drop) so making ALARM (Ref.3) to light on.
Press the push-button after releasing the emergency push-button (Ref.2) and setting selector Ref. 5 at STOP; the green light of the same push-button will light on and the machine will be ready to start again.

EMERGENCY BUTTON
When pressing this push-button through the safety bar, the machine will immediately stop.
To reset machine operation it is necessary to follow procedure described in instructions START PUSH-BUTTON (Ref.1)

ALARM WARNING LIGHT
It lights (Ref. 3) on every time a safety device trips (emergency buttons, thermal relays, line drop, lid not closed).

REGULATION THERMOSTAT
This thermostat regulates the temperature of the anti-freeze fluid that cools the whipping chamber. To regulate the temperature, press Set for 2 seconds.
A flashing temperature will appear that can be increased using the $\frac{\triangle}{\text{aux}}$ key or reduced using the $\frac{\text{def}}{\triangledown}$ key.
Regulate the temperature by adjusting the thermostat between the values including -20°C and -23°C. For a good ice-cream consistency, our advice is to keep temperature setting between -20 °C and -23 °C, because lower temperatures may cause strong vibrations to the freezer and damage moving spatula and related movements.
NOTE: *do not push PROG button on temperature regulation, as it gives access to programming table steps which are not to be used by customer.*



4-WAY SWITCH
To be used when setting mixer programs (Ref. 5).

Following are its functions:

STOP	**STOP** The unit is off and ready to operation (when START light is on).
	**PRODUCTION** To start compressor and mixer; compressor is controlled by regulation thermostat Ref.4.
	**COMPRESSOR STARTING** Only will the compressor run; using this function, you can pre-cool the unit.
	**MIXER** Only does the mixer run; using this function, you can mix the liquid mix before freezing and ice cream during extraction.

4.3 PRELIMINARY OPERATIONS BEFORE STARTING THE MACHINE

Before starting the machine for the first time, it is necessary to thoroughly clean its parts and above all sanitize all parts coming into contact with the product.

To wash this machine, **CATTABRIGA** recommends the detergent/sanitizer **XSAN**. Using **XSAN** can optimize the washing and sanitizing process, since it eliminates the need for two stages (i.e. one rinse and one washing stage). In fact, using **XSAN** saves you time as well as making washing/sanitizing procedures both easier and simpler.

HELPFUL HINTS

- Before disassembling the machine, provied yourselves with a plastic pail in which all parts can be placed. This will greatly reduce the possibility of mislaying or damaging them.
- To **WASH** the parts utilise water (max 60°C) with a non-aggressive detergent. Do not use hot water for the plastic parts because they could be damaged.
- Use drinking water to **RINSE** the parts (bacteriologically pure).
- To **SANITISE** keep the disassembled parts in an **XSAN** solution for 10-15 minutes and rinse them thoroughly before carrying out reassembly.

CAUTION

All cleaning operations to be carried out when machine is not running and disconnected from the mains (switch open or plug disconnected from the socket).

4.3.1 Preliminary cleanout and sanitizer

1. Turn the selector switch to the ice cream machine positio  to make the spatula carrier rod rise and then stop it at the top dead centre position (refer to section 6.2, point 1) by turning the selector switch to the STOP Position.
2. Disassemble the parts in contact with ice cream, as described in section 6.
3. Prepare a water-based solution (temperature between 45 and 60°C) of **XSAN** (concentration ratio between 1 and 3% according to water hardness).
4. Remove larger residues by hand.
5. Remove finer residues with a jet of water.
6. Soak the parts to be cleaned in the **XSAN** solution.
7. Leave the solution to act for approximately 10-15 minutes.
8. Rinse the parts carefully, using plenty of drinking water.

4.4 MACHINE STARTING

1. After making sure that all protections and safety devices are correctly reassembled and in working conditions, connecct the machine now reassembled to the mains, release the emergency push-button and press START light push-button.
2. To pre-cool the machine, turn the selector switch to .

WARNING

If the machine is installed in rooms where the temperature is over 35°C-40°C, it is advisable to pre-cool it before filling the ice cream bowl with mix, in order to guarantee a good operation of the machine.

4.4.1 Ice cream production and distribution

1. Turn the selector switch to position and pour the mix into the ice cream bowl.
2. Follow data indicated in table Sec. 2.2.3 "Technical Features" for each machine model.
3. Check that the DETACH/SPREAD spatula lever is in position (Ref. 1 - Fig. 19).

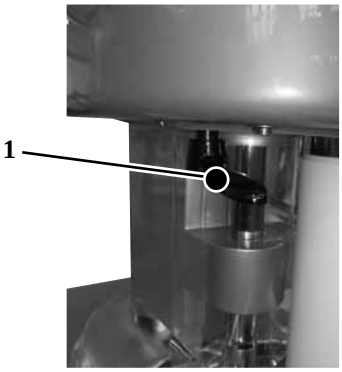


Fig. 19

NOTE:

The detach/spread spatula in the scraping position ensures the production of ice cream.

WARNING

Leaving the spatula submerged in the icecream when the icecream bowl is not turning, e.g. preparation of stracciatella ice, may cause irreparable damage to the spatula itself and to above mechanics. It is therefore necessary to stop the icecream bowl when the spatula is at top dead centre, right before spatula rotation towards the bowl.

Fig. 15

4. Replace ice cream bowl cover back to its seat.
5. Wait until ice cream look well compact and dry before extracting it.

CAUTION

To remove ice cream from the bowl use the special scoop provided, ONLY; any other tool may cause irreparable damage to the machine or endanger operator's safety.

6. When the ice cream is ready, position the selector switch in the “ICE CREAM MACHINE ON” position.
7. Remove the ice cream machine lid.

CAUTION

Without the ice cream machine lid in place, the machine signals ORGANS IN MOVEMENT accompanied by an acoustic alarm and a red luminous warning light (Ref. 3 - Fig. 10) OPERATE WITH CARE.

8. Position the paddle inside the rotating ice cream machine.
9. With the spoon of the paddle placed in the ice cream machine in the direction opposite to rotation, extract small quantities of ice cream starting from the top.
10. Extract the paddle with the ice cream and detaching it using the appropriate supplied spatula.
11. When the extraction is finished, position the selector switch in the STOP position.

5 SAFETY DEVICES

WARNING

CATTABRIGA cannot be responsible for damages to persons and/or things if one has tampered with machine safety devices or left them out.

5.1 SAFETY BAR AND EMERGENCY BUTTON

Safety bar and emergency button are installed in such a way that the operator can reach the safety bar with his hands, pelvis or hip.
When pressing the button, the unit will IMMEDIATLEY set to STOP. The button has a nonreturn mechanism. Reset is manual.

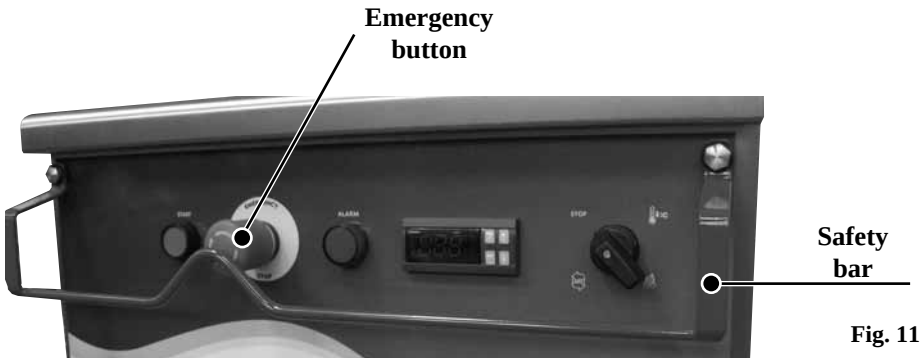


Fig. 11

5.2 SAFETY SENSOR FOR ICE CREAM BOWL COVER

Magnetoswitch activating the safety sound device on cover opening, **without stopping the machine operation** in order to take out ice cream from the bowl.

Fig. 12

5.3 SOUND WARNING DEVICE

It is activated whenever ice cream bowl cover is opened, so as to warn the operator.

5.4 HAIR SAVER COVER WITH ANTI-REMOVAL SENSOR

A mechanical protection to avoid the possible entanglement of clothing, hair, etc., with the motor transmission shaft of the ice cream machine and with the motor drive shaft. It is equipped with an anti-removal sensor that blocks the utilisation of the machine.

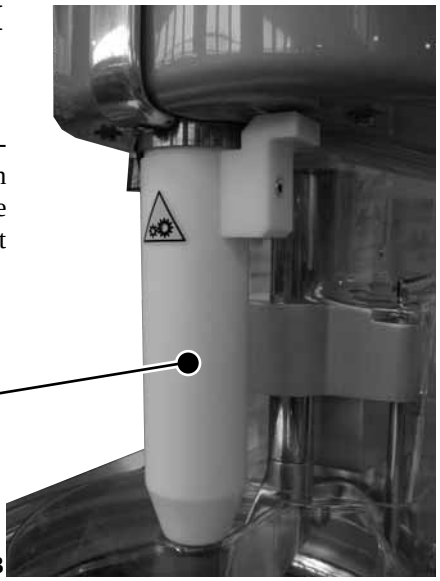


Fig. 13

5.5 ROTATION PREVENTER

Magnetic switch which tripping prevents beating and consequently beater shaft lifting/lowering inserted within the shaft.

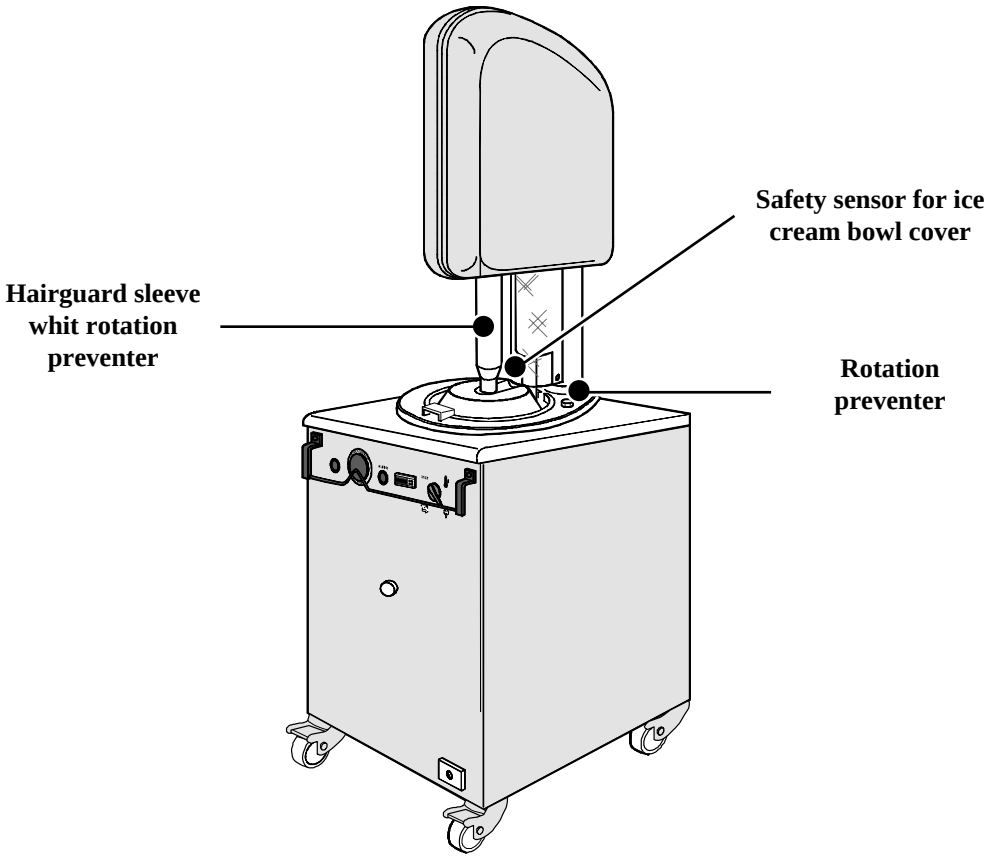


Fig. 14

6. CLEANOUT, DISASSEMBLING AND REASSEMBLING OF PARTS IN CONTACT WITH FOOD PRODUCT

IMPORTANT:
Cleanout and sanitization are important operations that must be carried out at the end of every working day with utmost accuracy, as a rule, in order to guarantee a high quality product and the observance of all hygienic rules.

Leaving dirt for enough time to dry can significantly increase the risk of stains and marks and damage to surfaces.
Removing dirt is much easier if done immediately after use and since there is a risk that some elements containing acid and saline substances can attack surfaces, prolonged soaking is not recommended.

WARNING
Do not use solvents, alcohol or detergents that can damage the component parts of the machine or pollute functional production parts.

Never use powder or abrasive cleaning products, scourers or pointed tools when cleaning by hand; there is a risk of leaving the surfaces opaque or of removing or weakening the protective film on the surface, scratching it.
Never use metal or synthetic scouring pads under any circumstances to prevent any abrasion or removal of ferrous parts leading to problems of surface oxidation or weakening.

Do not use detergents containing chlorine or chlorine compounds; using these detergents, which include bleach, ammonia, hydrochloric acid and scale removers can attack the steel compound used, causing it to stain or oxidize permanently. Only use recommended detergent/sanitizer, **XSAN**, since it has been tested and approved by our laboratories.

At the end of washing and before refitting any parts, always dry them with a clean, soft cloth that is suitable for use with foods; this is necessary even after a drying cycle in the dishwasher, since any type of moisture with a high mineral or chlorine content can attack metal surfaces and leave opaque traces.

WARNING
To wash the machine, CATTABRIGA recommends using XSAN sanitizer/detergent.

The use of **XSAN** makes it possible to optimise the washing and sanitizing process, since it eliminates two stages in the procedure (that is, one rinse and one washing stage); all in all, using **XSAN** saves time, making washing and sanitizing processes easier.

6.1 HOW TO USE XSAN SANITIZER/DETERGENT

CAUTION
All cleaning operations to be carried out when machine is not running and disconnected from the mains (switch open or plug disconnected from the socket).

Prepare a water-based solution (at a temperature between 45 and 60°C) and **XSAN** at a concentration between 1 and 3%, according to water hardness.

Washing/sanitizing by soaking
- Remove larger residues by hand.
- Remove finer residues with a jet of water.
- Soak the parts to be cleaned in the **XSAN** solution.
- Leave the solution to act for about 10-15 minutes.
- Rinse the parts with care, using plenty of clean drinking water.

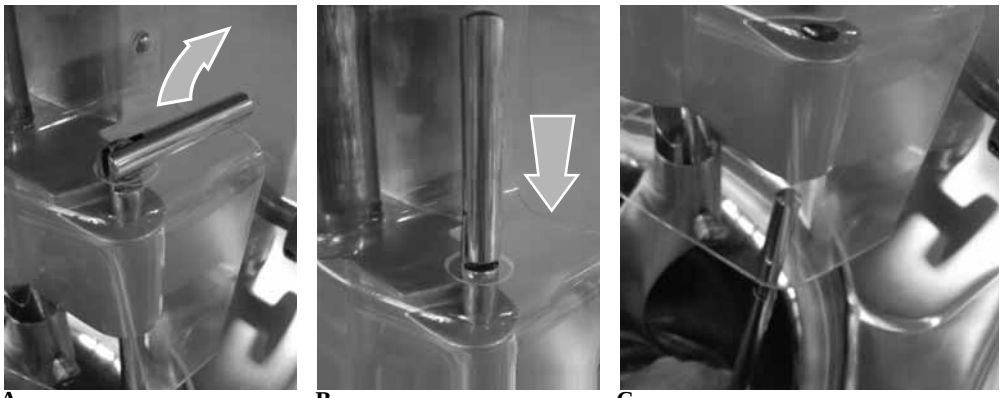
6.2 DISASSEMBLING PARTS IN CONTACT WITH PRODUCT

1. Turn the selector switch to the position (MOTOGELATIERA function) to make the spatula carrier rod rise to the top dead centre position; it is the highest point that the spatula carrier shaft reaches. It is visualised just at the moment prior to the rotation of the spatula towards the whipping chamber; at that point stop the machine.

2. Remove the transparent cover from the whipping chamber.

Fig. 15

3. Remove the rod by turning the upper knob (refer to Fig. 16 A-B) and sliding it out downwards (refer to Fig. 16 C).



A **B** **C**

Fig. 16

4. Lower the hair saver cover tube by turning it clockwise and placing it on the bottom.

Fig. 17

5. Remove the rod protection.

Fig. 18

6. Turn the black handle from position **1** (Fig. 19) to position **2** (Fig. 20).

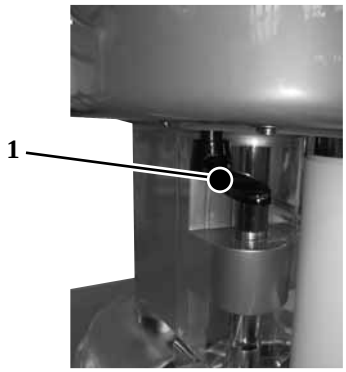


Fig. 19

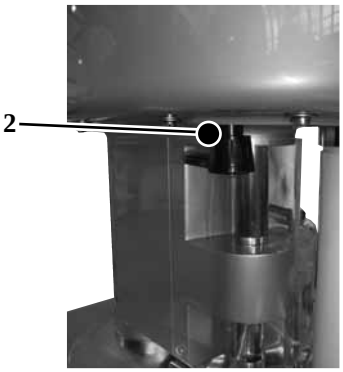


Fig. 20

7. Slide out the small knob of the spatula, rotating and pulling it towards the right and simultaneously supporting the spatula. Remove the spatula by pulling it downwards.

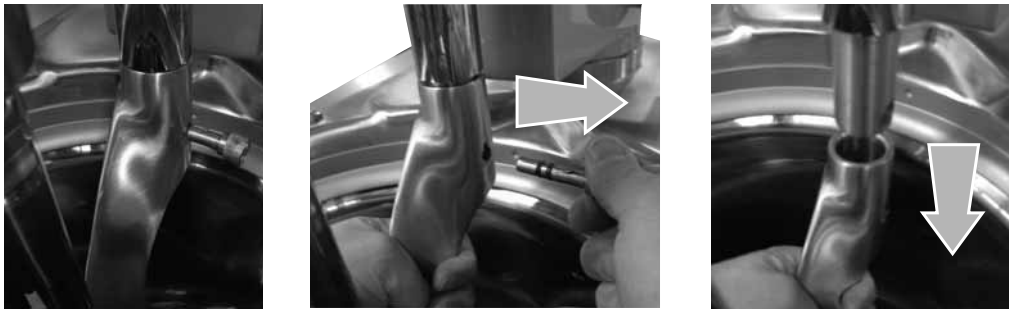


Fig. 21

8. Unscrew the conical fixing knob (Fig. 22) of the head utilising the appropriate tool (Fig. 23) if it is excessively difficult to unscrew it.

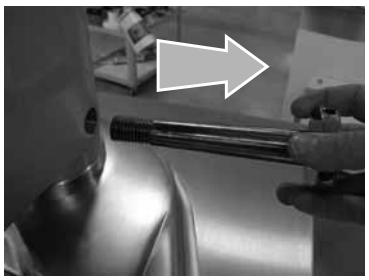


Fig. 22

Fig. 23

9. Lift the sliding sleeve to uncover the coupling joint between the whipping chamber shaft and the motor shaft.

Fig. 24

10. Manual rotate the whipping chamber until the coupling joint is positioned transversally to the machine.

Fig. 25

11. Rotate the head to the left or right of the machine.

Fig. 26

12. Remove the cover ring/chamber; it could be difficult. Using a cloth, lift it by the front first and then the rear and slide out the hair saver.

Fig. 27

13 Lift up and remove the whipping chamber.

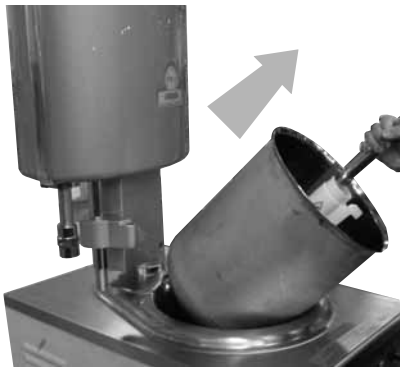


Fig. 28

6.3 WASHING AND SANITISATION OF THE DISASSEMBLED PARTS

Operation to be carried out immediately after each production process.

1. To clean disassembled parts, ice cream bowl needs to be emptied and washed separately like an ordinary pot. Clean disassembled parts with lukewarm and non-abrasive product.

WARNING

Do not use too concentrated products that may have a corrosive action on stainless steel.

WARNING

Do not use abrasive products so as not to damage the special surface finish.

2. Rinse the parts in water.

3. Immerse the parts in a solution of **XSAN** and let the sanitiser work by following the instructions reported on the packet of the product used.

4. Rinse the parts thoroughly with abundant water to remove any residues of sanitiser.

CAUTION

Never touch the sanitised parts with the hands, towels or anything else.

6.4 HYGIENE

Mildew and bacteria grow rapidly in the ice cream fat contents. To eliminate them, it is necessary to thoroughly wash and clean all parts in contact with mix and ice cream, as described above.
Staineless steel and plastic materials, as well as rubber used in the construction and also their particular shapes make cleanout easy, but cannot prevent proliferation of mildew and bacteria if not properly cleaned.

6.5 REASSEMBLING PARTS IN CONTACT WITH PRODUCT

After carrying out the washing and sanitising of the parts that come into contact with the food product, proceed with the reassembly of the same parts in reverse order of disassembly (operations 1 to 11, paragraph 6.2).

7 MAINTENANCE

7.1 PERIODICAL MAINTENANCE

CAUTION

Any servicing requiring removal of machine panels must be carried out after disconnecting the machine from the mains!

Cleanout and lubrication of moving parts are forbidden!

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

Operations necessary to a proper machine running are such that most of servicing is completed during the machine producton cycle.

7.1.1 Daily maintenance

Maintenance operations, such as cleanout of parts in contact with ice cream, etc., are to be carried out at the end of every working day, so as to speed up routine maintenance.
Herebelow you can find a list of routine maintenance operations:

- **Cleanout of panels**

To be carried out with neutral soap, daily and seeing to it that no cleansing solutions will ever reach the beater assembly inside.

- **Cleaning and sanitising**

At the end of ever working day, according to procedure described in section 6.

7.1.2 Periodical maintenance

- **Belt tensioning**

Provide periodical checks of drive belt tensioning.

- **Lubrication of gears**

Lubricating grease in gear box to be filled through proper grease nipples.

- **Thermal exchange fluid**

Depending on the amount of use of the machine, the thermal exchange fluid must be substituted in the whipping chamber compartment normally every 3/4 working months and anyway each time, when cleaning the whipping chamber, the fluid is seen to be opaque, a different colour or with ice crystals inside it or if whipping times become more prolonged.

WARNING

Thermic exchange fluid is not toxic if swallowed, but it is advisable to anyway handle it with care. Do NOT touch with bare hands!

In case of contact with eyes, wash with water abundantly.

Do not dispose of it in the drains directly.

Keep it out of children.

To remove the fluid , place a pail (preferably a throughaway one) under the drain plug on the front and take out the plug (pos. 132); allow all the fluid to flow out
Wash the housing tank of the whipping chamber.
To fill up again, proceed as per instructions in chapter 3.3.

- **Beater scraping blade**

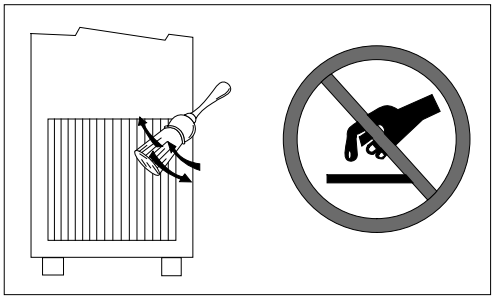
Check wear state of beater scraping blade, periodically and replace it through a new one, if need be (the substitution must be carried out once a year and depends on the production and the utilisation mode).
The part does not perfectly agree with the ice cream bowl shape on the bottom, usually, but do not worry: after a few batches the scraping blade will perfectly conform. If, however, there is a big difference in the shape, it means beater shape has changed because of an accident and needs to be replaced, otherwise the machine will not run properly.

7.2 MACHINES WITH WATERCOOLED CONDENSER

By watercooled machines, it is necessary to drain all water from the condensing unit on season end, so as to avoid drawback when storing in rooms where temperature can sink below 0°C.
After closing water inlet, pull off the outlet pipe from its seat and drain water from the circuit, completely.

7.3 MACHINES WITH AIRCOOLED CONDENSER

Clean the condenser, periodically, so as to remove dust, paper and what can prevent air from circulating.



For cleaning, use a brush with long bristles or a bolt of compressed air.

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

WARNING
Never use sharp metal objects to carry out this operation. Good working of a freezing plant mostly depends on clean out of the condenser.

8 TROUBLESHOOT GUIDE

TROUBLE	CAUSE	CURE
The scraper does not scrape along the wall of the bowl	a) Blade not sharp.	a) Substitute the small plate of the spatula.
	b) Vane springs released.	b) Replace them (this operation must be carried out by a qualified technician).
	c) Thermal exchange fluid exhausted.	a) Substitute it (refer to section 7.1.1).
	d) Thermostat set too low.	a) Set the digital thermostat between -20°C and -22°C (refer to Ref. 4, section 4.2).
During production, the ice cream mixer tends to stop	a) Thermostat setting is too low.	a) Set to values -22÷-24°C
	b) Slipping of drive belts.	a) Tighten the tensioning nut (this operation must be carried out by a qualified technician).
Smoke comes out from guard	a) Drive belts loose.	a) Tension or replace them (this operation must be carried out by a qualified technician).
Compressor does not start	a) Coolant already cold.	a) Compressor will start again when the thermostat enables it.
The compressor starts and stops repeatedly	a) Water flow through the condenser not enough or condenser is dirty.	a) Check water regulation in the condenser and make sure condenser tubes are clean.
	b) Water inlet pressure less than 1 bar.	a) Increase the pressure.
	c) Water inlet temperature more than 30°C.	a) Reduce the water temperature.
	d) Water supply hoses and/or water outlet hoses twisted or folded.	a) Eliminate curves and/or bends.
	e) Air flow insufficient or ambient temperature too high.	a) Check the fan and clean the battery of the condenser's thermal exchange.
Low efficiency, though the compressor is running continuously	a) Insufficient gas.	a) Check for gas leaks and refill.
	b) Thermal exchange fluid exhausted.	a) Substitute it (refer to section 7.1.1).