COLDELITE

IC122760

**INSTRUCTION HANDBOOK**

# Compacta 4 US

***We wish to thank you for the preference granted to us by purchasing one of Coldelite machines.***
*To the best guarantee, since 1993* ***Coldelite*** *has submitted its own Quality System to the certification according to the international Standard ISO 9001, nowadays its production has got UNI-EN-ISO 9001:2008 Certified Quality System.*

Moreover, Coldelite 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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# GENERAL INDEX

# FOREWORD

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

**PURPOSE**
This handbook was edited while taking into due account needs of machine users.
Topics relevant to a correct use of the machine have been analyzed in order to keep unchanged in the long run quality features of the worldwide **Coldelite** machines.
A significant part of this handbook refers to the conditions necessary to the machine use and to the necessary behaviour during cleanout as well as routine and special maintenance.
Nevertheless, this handbook cannot meet in details all demands; in case of doubts or failing information, please apply to:

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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.

**Before using the machine read crefully the instruction handbook.**
**Pay attention to the safety instruction.**

# CONVENTIONAL SYMBOLS

**CAUTION: ELECTRIC SHOCK DANGER**
The staff involved is warned that the non-obsevance of safety rules in carrying out the operation described may cause an electric shock.

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

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

**CAUTION: GENERAL HAZARD**
The staff involved is warned that the operation described may cause injury if not performed following safety rules.

***NOTE***
*It points out significant information for the staff involved.*

**WARNINGS**
The staff involved is warned that the non-observance of warning may cause loss of data and damage to the machine.

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

**SYMBOLOGY QUALIFICATION OF THE STAFF**

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

**MACHINE OPERATOR**
Identify unqualified personnel, those without any specific technical abilities who are capable of carrying out simple jobs, such as: operating the machine using the commands available on the keypad, the loading and unloading of products used during production, the loading of any consumable materials, basic maintenance operations, (cleaning, simple blockages, controls of the instrumentation, etc.).

**MAINTENANCE ENGINEER**
He/she is a skilled engineer for the operation of the machine under normal conditions; he/she is able to carry out interventions on mechanical parts and all adjustments, as well as maintenance and repairs. He/she is qualified for interventions on electrical and refrigeration components.

**COLDELITE ENGINEER**
He/she is a skilled engineer the manufacturer assigned to field interventions for complex jobs under particular conditions or in accordance with agreements made with the machine's owner.

# SAFETY

When using industrial equipment and plants, one must be aware of the fact that drive mechanisms (rotary motion), high voltage components, as well as parts subject to high temperatures may cause serious 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 must neither be removed nor tampered.
- The machine shall be regularly serviced.
- Only original spare parts are to be used especially as far as those components with safety functions are concerned (ex.: protection microswitches, thermostats).
- That appropriate individual protection equipment is used.
- High care must be payed during hot product cycling.

To achieve the above, the following is necessary:

- At working place an instruction manual relevant to the machine should be available.
- Such documentation must be carefully read and regulations must consequently be followed.
- Only suitably skilled personnel should be assigned to electrical equipment. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Make sure that no technician will ever carry out interventions outside his own knowledge and responsibility sphere;
- Children should be supervised to ensure that they do not play with the appliance.

**IMPORTANT!**
One must be on the look-out that the staff does not carry out any operation outside its own sphere of knowledge and responsibility (refer to “Symbology qualification of the staff”)..

***NOTE:***
***According to the standard at present in force, a SKILLED ENGINEER is who, thanks to:***
***- training, experience and education,***
***- knowledge of rules, prescriptions and interventions on accident prevention,***
***- knowledge of machine operating conditions,***
***is able to realize and avoid any danger and has also been allowed by the person in charge of plant safety to carry out all kinds of interventions.***

# WARNINGS

When installing the machine, insert a differential magnetothermal protection switch on all poles of the line, adequately sized to the absorption power shown on machine data plate and with contact opening of 3 mm at least.

- Never put your hand into the machine, alike during production and cleaning operations. Before carrying out any maintenance operation, make sure that the machine is in “**STOP/RESET**” 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 disconnecting the machine.
- **Coldelite** is not responsible for any accident that might happen during operation, cleaning and/or servicing of its units, if this warning has not been fully complied with.

# 1. RECEIVING, MOVING, OPENING THE PACKING

## 1.1 RECEPTION

- 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.

### 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 or unsuitable construction features of the lift (ex.: too short forks)
- Unconforming ropes and cables or worn ropes or cables

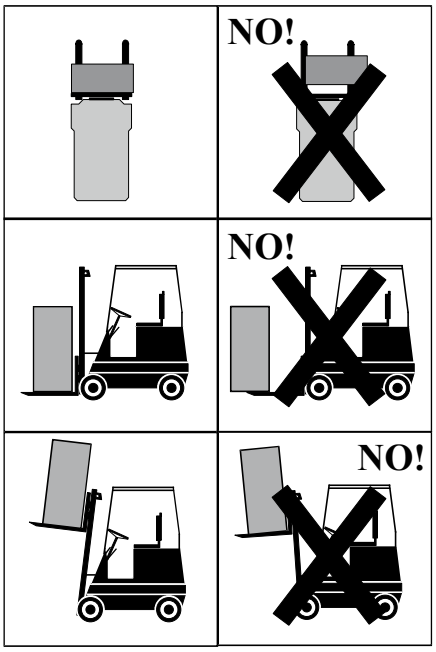



**Fig. 1**

## 1.2 OPENING A PACKING CRATE

A **wooden packing** can be opened by means of proper tools; it is recommended to protect exposed parts, such as hands with gloves, against wood splinters.

**1-** Remove nails starting from the upper part until the machine still fastened to the pallet (board) is left uncovered.
**2-** Remove protection film wrapping the machine.
**3-** Check that the machine has not been damaged during transportation.

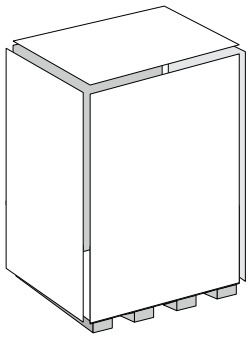


**Fig. 2**

**Board packing** is externally closed by steel straps.

**1-** Cut the steel straps with a pair of tin shears, holding one side with the free hand.
**2-** Remove the packing by lifting it vertically up.
**3-** Remove the protective polystyrene packing and the polypropilene bag.
**4-** Cut the steel straps which secure the machine to the base.

**CAUTION**
**Act with utmost care, as one may hurt himself when cutting the straps, if they are not strongly held during this operation.**

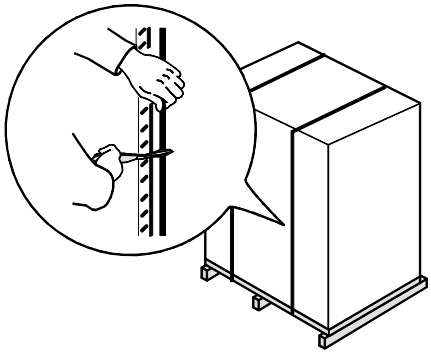


**Fig. 3**

## 1.3 STORING A MACHINE

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

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

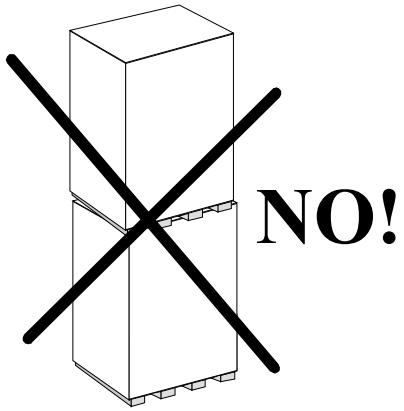


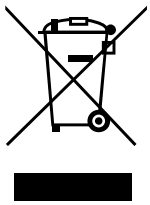

**Fig. 7**

## 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, on batteries and accumulators and waste batteries and accumulators, and 2002/96/EC, also known as WEEE, the presence of the symbol on the side of the product or packaging means that the product must not be disposed of with normal urban waste. Instead, it is the user's responsibility to dispose of this product by returning it to a collection point designated for the recycling/treatment of electrical and electronic equipment waste. Differentiated collection of this waste material 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 INFORMATION

### 2.1.1 Manufacturer's identification data

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Model No.<br>Serial No. | | | | | Fac.ID. | |
| Volts | Phase | | Hz | | | |
| Max Breaker Fuse Size<br>Minimum Circuit Ampacity | | | | | | |
| Total Load | | | | | | |
| | DESIGN PRE | | OPERATING PRE | | | |
| HIGH SIDE, PSIG | | | | | | |
| LOW SIDE, PSIG | | | | | | |
| REFRIGERANT<br>REFRIGERANT | AMOUNT (OZ) | | | | | |
| | QTY | VOLT | HP | FLA/RLA | LRA | |
| COMPRESSOR | | | | | | |
| BEATER (HIGH) | | | | | | |
| BEATER (LOW) | | | | | | |
| FAN MOTOR | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

### 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 routine 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.

### 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 no distributor is 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 **Coldelite**.

# 2.2 INFORMATION ABOUT THE MACHINE

## 2.2.1 General information

Floor-mounted machines, intended to indoor use only and for commercial purposes such as ice cream and pastry workshops, for ice cream, low-fat ice cream or fruit ice cream production.
Following are the main components of **Compacta 4**:

- Top cylinder for heating and pasteurization
- Lower cylinder for production and execution of production cycles
- Electronic control panel divided by heating and production sides
- Flexible shower-head for cleaning the cylinders
- Lids for ice cream filling in heating and freezing cylinders
- Levers for ice cream dispense and transfer from top cylinder to lower cylinder
- Front lids with safety devices for cylinders opening

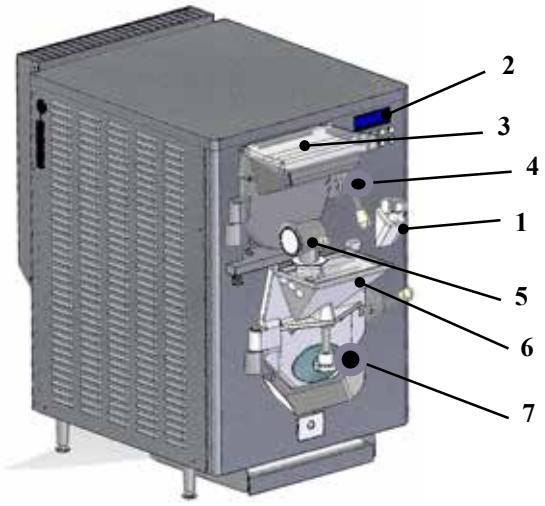
**Coldelite** recommends to always use high quality mix for milk shake production in order to satisfy your customers, even the hardest-to-please ones.
Any saving made to the prejudice of quality will surely turn into a loss much bigger than the saving itself.
Bearing in mind the above statements, please 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 milk shake 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 **Coldelite.**

***CAPTION:***

**1** Flexible shower-head
**2** Electronic control panel
**3** Lid for ice cream filling in heating cylinder
**4** Top cylinder (heating and pasteurization)
**5** Lever for ice cream dispense and pass from top cylinder to down cylinder
**6** Lid for ice cream filling in freezing cylinder
**7** Down cylinder (freezing and execution of production cycles)




Parts inside the machine

## 2.2.2 Technical features

| Model | Quantity per batch | | Electric power | | | Installed power |
|---|---|---|---|---|---|---|
| | Mix filling kg/lb | | | | | |
| | Min | Max | Volt | Hz | Phases | kW/Hp |
| Compacta 4 | 1.5/3.3 | 4/8.8 | 208-230 | 60 | 1 | 4,5/6 |

* *The hourly production and quantity of mix for ice cream can vary depending on the temperature, the type of mix utilised and the required increase in volume (over-run).*

## 2.2.3 Machine lay-out

| Model | Dimensions mm/in | | | Weight |
|---|---|---|---|---|
| | Width | Depth | Height | Kg/lb |
| Compacta 4 | 590/23 | 730/29 | 930/37 | 220/485 |

**Fig. 9**

## 2.3 INTENDED USE

The Compacta 4 must only be used, conforming with content of paragraph 2.2.1 "General Information", within the functional limits hereunder reported:

- Voltage: .....±10%
- Air min. temperature °C: .....10°C (50°F)
- Air max. temperature °C:.....35°C (109°F)
- Water min. temperature .....10°C (50°F)
- Water max. temperature .....30°C (86°F)
- Water min. pressure .....1 bar (0.1 MPa)
- Water max. pressure.....5 bar (0.5 MPa)
- Max air 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).

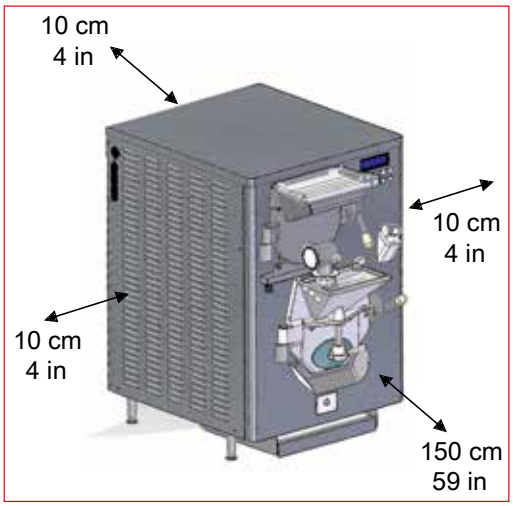
# 3. INSTALLATION

## 3.1 ROOM NECESSARY TO THE MACHINE USE

The machine must be installed in such a way that air can freely circulate all around.
Rooms for the approach to the machine must be left free in order to enable the operator to act without constraint and also to immediately leave working area, if need be.

The minimum approach room to working area should be at least 150 cm (59 in) in consideration of space taken by opened doors.


Air-cooled version




Water-cooled version

## 3.2 WATER SUPPLY CONNECTION

The machine must be connected to running water which pressure must not be higher than 5 bars (0.5 MPa).
By watercooled machines water connections (for machine wash and gas cooling) are placed under the machine.

**ATTENTION**
**The equipment is to be installed with adequate backflow protection to comply with applicable federal, state, and local codes.**

## 3.3 MACHINES WITH AIRCOOLED CONDENSER

Machines with air-cooled condenser must have 10 cm. (4 in) of free space along the sides and at least 50 cm. (20 in) above the chimney for the free circulation of the condensate air.

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

## 3.4 MACHINES WITH WATERCOOLED CONDENSER

Machines with water-cooled condenser must have 10 cm. (4 in) of free space along the sides and rear for the free circulation of the condensate air.
Watercooled machines can run when only connecting it to running water supply, as the same water inlet is also used for washing water.
Water must have a pressure of 1 Bar (0.1 MPa) at least and a delivery at least equal to the estimated hourly consumtpion.
Connect inlet pipe marked by the plate "Entrata Acqua" (=Water inlet) to water supply, installing a shut-off valve, and the outlet pipe marked by the plate "Uscita Acqua" (=Water outlet) to a drain pipe, isntalling a shut-off valve.

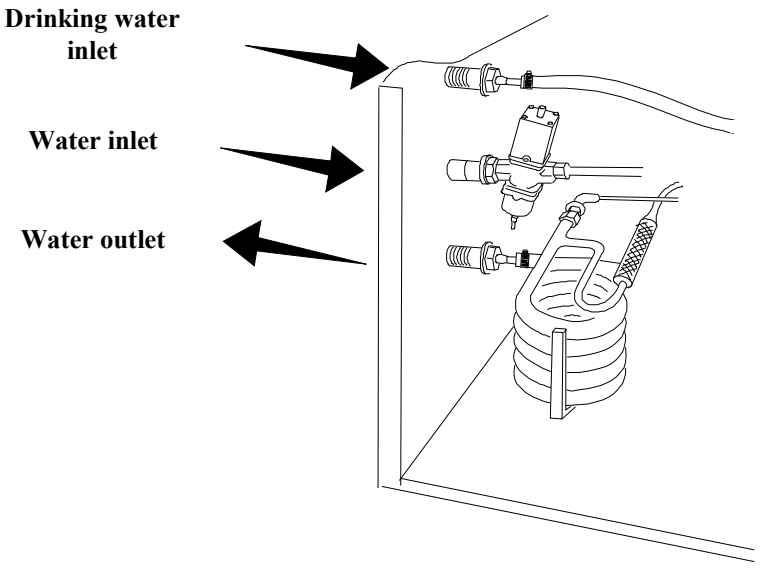



**Fig. 11**

### 3.4.1 Water valve adjustment

***IMPORTANT:***
*If water valve needs to be reset, such an operation must be effected by skilled personnel, only.*
Set water valve so that, with machine off no water comes out and lukeawarm water flows out when on.
Estimated water consumption is shown in the table at paragraph 2.2.3 "Technical features".

***NOTE:***
*Water consumption increases if temperature of entering water is above 20°C (68°F).*

**ATTENTION!**
**Do not leave the machine in a room with temperature below 0°C (32°F) without first draining water from condenser (see Section 7)**

# 3.5 ELECTRICAL CONNECTION

The machine must be installed in compliance with current electrical installation regulations.
Before connecting the machine to the mains, ensure that voltage
from the mains corresponds to the value indicated on the identification plate.
Place between the mains and the machine a differential magnetothermal protection switch ensuring complete disconnection from the mains.
The device must be adequately sized to required input power and with contact opening gap of minimum 3 mm, allowing disconnection in the conditions of overcurrent category III.
The machine is delivered with a 5 wire cable. The blue wire must be connected to the neutral.

***IMPORTANT:***
Yellow/green ground wire must be connected to a good ground plate.

## 3.5.1 Replacing the imput cable

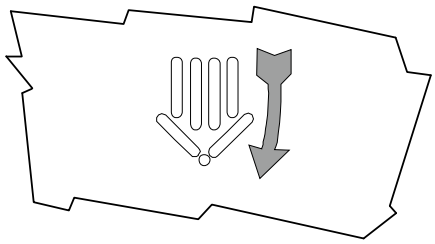
Should the main cable of the machine be damaged, it needs to be replaced immediately through a cable with similar features. Replacement shall be carried out by skilled technicians, only.

**Beater rotation**
By machine models **6** the direction of beater rotation for production side is anticlockwise
**Reversing the rotation direction**

If the direction of rotation is not correct, interchange two of the three leads coming from the circuit breaker.

***NOTE:***
*To check whether the direction of rotation is correct, close the front lid, start the machine and then eye through the arrow-shaped slit on the machine rear.*
*The direction of rotation must be the same as the arrow one.*

***NOTE:***
*When checking the direction of rotation, the machine must run but the beater relevant to the production side must be disconnected, in order to avoid a quick wear of the beater.*
*To remove the beater, withdraw it from its seat by pulling it forwards.*



## 3.6 CLEANOUT

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

**ATTENTION**
**Never use neither solvents, alcohol or detergents that may damage the machine parts and contaminate parts coming into contact with product.**

## 3.7 REFILLING

Motor installed in the machine is of the type with lubrication for life; no action of checking/replacing or topping up is necessary.
Gas filling necessary to the freezing system is carried out at **Coldelite** works during 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.

## 3.8 MACHINE TESTING

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

# 4. DIRECTIONS FOR USE

## 4.1 MACHINE SAFETY WARNINGS

When using industrial equipment and plants, one must be aware of the fact that drive mechanisms (rotary motion), high voltage components, as well as parts subject to high temperatures may cause serious damages to persons and things.
Who is in charge of plant safety must be on the look-out that

- an uncorrect use or handling is avoided.
- Safety devices must neither be removed nor tampered.
- The machine shall be regularly serviced.
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- That appropriate individual protection equipment is used.
- High care must be payed during hot product cycling.

To achieve the above, the following is necessary:

- At working place an instruction manual relevant to the machine should be available.
- Such documentation must be carefully read and regulations must consequently be followed.
- Only suitably skilled personnel should be assigned to electrical equipment. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Make sure that no technician will ever carry out interventions outside his own knowledge and responsibility sphere;
- Children should be supervised to ensure that they do not play with the appliance.

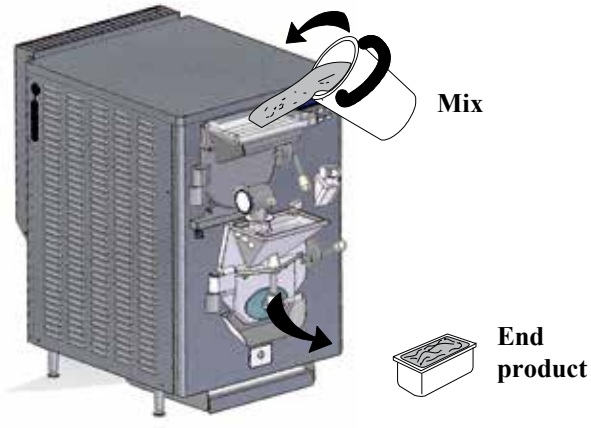
### 4.1.1 Machine configuration

The machine consists of two drive mechanisms for the running of the beater assemblies, of a cooling unit with water or air condensation (or both, depending on the version).
The product is prepared by filling the cooking cylinder or the freezing cylinder with the mix and starting the automatic production cycle.
When the cycle ends, the product is ready to be dispensed by means the special levers.

**CAUTION**
**In any case, do not touch the door during the heating stage or the stages immediately after, since it can reach very high temperatures.**

**CAUTION**
**Pay high care during hot product cycling and/or distribution, for it may cause injuries. Do not open neither door neither discharge door during product cycling.**

**CAUTION**
**To make product dispensing easier, only use the plastic spatula supplied. Never use metal spatulas as these could damage the machine.**



# 4.2 CONTROLS

## 4.2.1 Electronic control keyboard

The machine is equipped with an electronic keyboard positioned on the operator front panel. Each key is identified by explanatory symbology of the assigned function.


## 4.2.2 Common functions


**INCREASE key**
This key increases the values that can be modified in the functions where it is permitted.


**DECREASE key**
This key decreases the values that can be modified in the functions where it is permitted.
When in Stop mode, pressing this key continuously allows Autosetup to be carried out of all programmes.
This key is also used for resetting alarm messages (whether boiler alarms or whipping alarms).

**WATER DISPENSING key**
Pressing this key at any moment activates the solenoid valve for the dispensation of water.
The solenoid valve deactivates when pressing the same key again, or the Stop key (whether on the boiler side or on the whipping side) or after 3 minutes.
Once the solenoid valve is activated, the dispensing of water starts by pressing the lever on the wand.

## 4.2.3 Functions available to the operator
### BOILER UNIT (upper section)

The upper part of the machine is relative to the boiler, the keys are an orange colour and relative messages are visualised on the first line of the display.


**STOP key**
In this function, the upper part of the machine is off.
From this position one has access to all functions relevant to the section boiler (upper section).
STOP has priority over all upper section functions
On display:

| 11:15:08 MON |
|---|

**HEATING key**
This key selects the cycle to carried out.
Once the key is pressed, the cycles that can be modified using the Increase and Decrease keys are:

**HEATING+90**
**HEATING+85**
**HEATING+65**
**FREE HEATING**

After pressing the Heating key continuously for 3 seconds, the display indicates the load that can be modified using the Increase and Decrease keys:

**Maximum Load**
**Medium Load**
**Minimum Load**

The relevant cycle will restart after about 2" or when the Heating button is pressed.

If the low level in the boiler cylinder is not covered, the following message appears on the display:

| Did you fill Mix? |
|---|

In this case check for the presence of product in the cylinder and if there is product, press the Heating key to start the cycle. If there is no product in the cylinder, do not press any key and the machine will automatically go into Stop mode after 15".
The temperature of the product in the boiler cylinder is on the left on the first line of the display and the set temperature is on the right.
The display visualises:


The ramp refers to the temperature that increases.

If the Heating key is pressed again, the set temperature on the right becomes modifiable and the LEDs of the Increase/Decrease keys light up. The value Heating cycle temperature can then be modified by using the Increase/Decrease keys.
Press the Heating key again to exit from the "modify Heating temp." mode or wait 10" without pressing any key (in this mode the temperature becomes fixed and the Increase/Decrease keys switch off).
The modified temperature is memorised on exiting the function.

Heating is programmable as follows:

| Cycle | Min | Max |
|---|---|---|
| HEATING+90 | 90 | 95 |
| HEATING+85 | 75 | 85 |
| HEATING+65 | 65 | 75 |
| FREE HEATING | 55 | 95 |

On reaching the set temperature (e.g., 95°C 203°F) the resistances are deactivated and a 5" acoustic signal sounds and the display visualises, for example:

**+86 10:59 +85**

On the left is the temperature of the boiler cylinder, in the middle the decreasing temperature and on the right the set temperature.
During this period, the product is thermostat controlled. Pressing the Heating key, the set temperature becomes modifiable like during the Heating phase.
Using the Increase/Decrease keys, the cooking time can be modified from 0 to 15 minutes.
When setting the timer at zero, 15 seconds are available to modify the thermostat time.
To exit from adjusting the time, press the Heating key again.
The timer setting will be stored to memory when the function is closed and then proposed again the next time that the cycle is carried out.
When the time expires, the boiler passes to Beater for 1 minute and 30 seconds.

**BEATER key**
Pressing the beater key, the Beater starts and continues until the **STOP** key is pressed or the timer of 1 minute expires.
The display visualises the increasing time:

**TEV=+085**

**ATTENTION**
**1 minute after the Beater starts the machine goes automatically into Stop mode to avoid excessive wear of the beater and the cylinder.**

## 4.2.4 Functions and arrangements of the operator
### WHIPPING section (lower part)

The lower part of the machine refers to the whipping unit; the keys are a light blue colour and the relative messages are visualised on the second line of the display.


**STOP key**
Pressing the Stop key the machine stops and the relative LED is lit. In Stop mode, access can be gained to User Programming.
In Stop mode, pressing the Stop key continuously permits the reading of the events of the machine.


**SET BEATING SPEED button (batch freezer)**

By pressing 

button from Freezing, Extraction or Beating, Increase and Decrease LEDs turn on and, using the relevant buttons, it is possible to change Beating speed.

**BEATING / EXTRACTION Button**

**Beating function:**
By pressing BEATING button from STOP, beating mode is activated for 1 minute.
The display shows:

| Timer 01:00 VEL3 |
|---|

By pressing the button once, slow beating is activated (speed 3), the display shows the time countdown on the left and the beater speed on the right. When time is over, the machine sets to STOP mode.

By pressing 

button, Increase and Decrease LEDs turn on and it is possible to change the beater motor speed from 1 to 7.

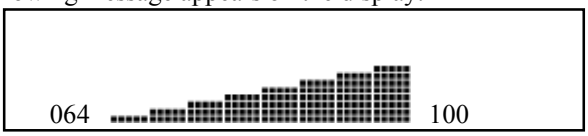
**Extraction function:**
By pressing EXTRACTION button from production mode, beating is activated with speed 7 (settable in user programming). After 3' the machine sets to STOP.
By repeatedly pressing Extraction button, the extraction speed set by the user will activate alternately (see user programming).
If extraction is activated, press Freezing button to activate cooling for a time depending on the selected charge. If the time is not sufficient, it is possible to press the button again to reactivate cooling. During cooling activation, Freezing button LED is on. When "G" speed is active, post-cooling can not be activated.

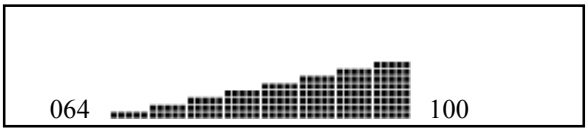
**WHIPPING key**
Pressing the WHIPPING key, access is gained to the Whipping recipes created for the production of ice cream:
- Gelato
- Fruit Sorbet
- Ice-cream
- Cooling

The "GELATO" recipes are preferably used with milk-based products to obtain the classic whipped ice cream.
The “FRUIT SORBET” recipes are preferably used with water-based products.

The set recipes are calibrated during the Coldelite testing phase and are ready to be used even by less-expert operators.

Pressing the WHIPPING key, the display visualises the last executed recipe. The recipe to be launched (e.g. "Gelato") can now be selected within 5 seconds using the Increase/Decrease keys. It will be automatically executed after 5 seconds. The following message appears on the display:



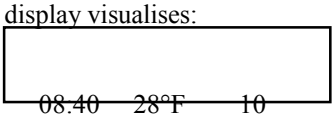

The second row will show the consistency of the product on the left, the consistency value it needs to reach on the right, and in the middle, the bars that represent the consistency's progress.

**Modifying the ice cream consistency**

To modify the set consistency, press the WHIPPING key (the LEDs of the Increase/Decrease keys light up) and within 10 seconds modify the consistency using the Increase/Decrease keys.

**Cremolata recipe**

The display visualises:




The second row shows the countdown timer on the left, the current temperature of the product being prepared in the middle and the set time for Cremolata Batch freezing on the right.

**Modifying the timer of the cremolata whipping**

To modify the whipping time, press the  key (the LEDs of the INCREASE/DECREASE keys light up) and within 10 seconds modify the timer using the INCREASE/DECREASE keys.

# 4.3 PRELIMINARY OPERATIONS, WASHING AND SANITIZING

Before starting the machine for the first time, it is necessary to thoroughly clean its parts and then sanitize the parts in contact with food products (see detailed procedure in section 6).

***IMPORTANT:***
*Cleaning and sanitizing shall be carried out as a habit at the end of each production with utmost care in order to guarantee quality and in the observance of necessary hygienic rules.*

## 4.3.1 Preliminary cleanout

To clean the machine, do as follows:

1. Fill both cylinder with water by means of the shower (**351**) installed on the machine front.
2. After letting water in, press the **BEATING** key for boiler section and the **BEATING** key for production section.
   When programmed time is over, the machine will automatically set at STOP.
3. Turn the handle (**502**) and lower the knob (**5**), so as to drain water from the cylinders.
4. Once the production cylinder has been emptied out, (front lid can be easily opened by lifting the lever (**289**) and pulling it rightwards), it is recommended to clean the cylinder with a direct water spout and keep the beater locked in its seat.
5. As to disassembling of the machine parts, see instructions given in section 6 "Cleaning, disassembling and reassembling parts in contact with food product".

**WARNING!**
**To avoid a useless wear of both freezing cylinder and beater do NOT use this function more than 3 minutes.**


To use the shower (**351**) installe onto the machine, take the hose out of its seat, press **WATER INLET** key and then to activate water spout press the push-button on the shower hose. Before placing the shower back to its seat and after deactivating it, press **STOP** or **WATER INLET**, drain water from the hose by holding down the push-button on hose.

## 4.3.2 Sanitizing

With the machine at Stop, fill the two cylinders with water and put in NON-CORROSIVE sanitising solution.
After adding the sanitizing solution, press the **BEATING** key for boiler section and the **BEATING** key for production section.

**WARNING**
**Too a long running in "BEATING" position with empty cylinders or filled with water and sanitizers brings about a quick and early wear of beaters and cyclinders.**

Wait for the sanitising solution to take effect (approximately 10/15 minutes, depending on the type of sanitiser utilised and the instructions given by the manufacturer of the sanitiser).

Bleed out all sanitizing solution using the levers (**5** and **502**).

***NOTE:***
*It is recommended to rinse with running water before starting the machine again.*

**CAUTION**
**Do not touch sanitized parts with hands, napkins or else.**

## 4.3.3 Hygiene

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

**WARNING**
**Before using the machine again, thoroughly rinse with water, only, in order to remove residues of sanitizing solution.**

# 4.4 STARTING THE MACHINE

## 4.4.1 Description and use of boiler section

The boiler unit is on the upper part of the machine and it consists of a heating/pasteurising cylinder, the chamber where mix is heated and in which you find a beater for stirring the product.
The heating cylinder is hermetically closed by a lid (**301**) that can be opened by lifting and pulling the handle (**289**) rightwards.

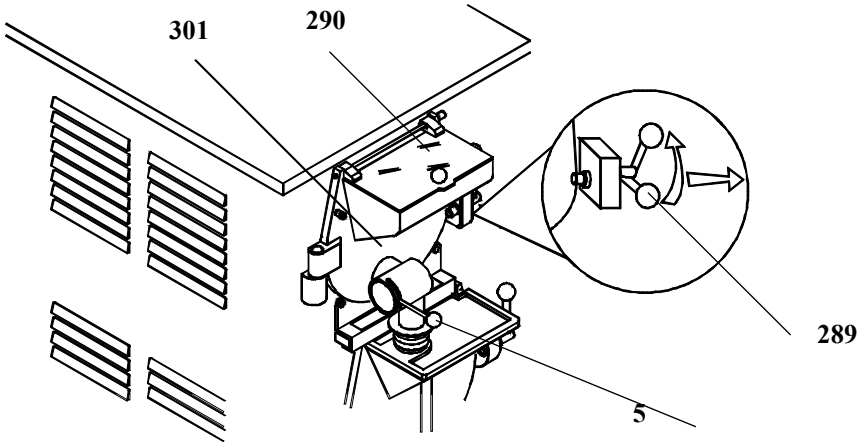



**Fig. 17**

For fillling with mix, lift the lid **290** and pour it into.

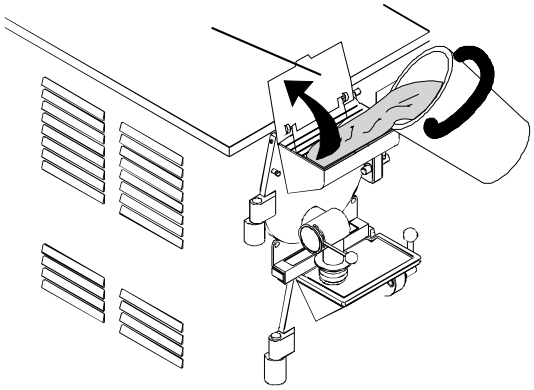


**Fig. 18**

With the STOP position enabled, the heating process for the mix inside the cooking cylinder can be started by pressing the **HEATING** key.

This button selects the cycle to be performed.
Once the key is pressed, the cycles that can be modified using the Increase and Decrease keys are:

**HEATING+90**
**HEATING+85**
**HEATING+65**
**Free heating**

After pressing the Heating key continuously for 5 seconds, the display indicates the load that can be modified using the Increase and Decrease keys:

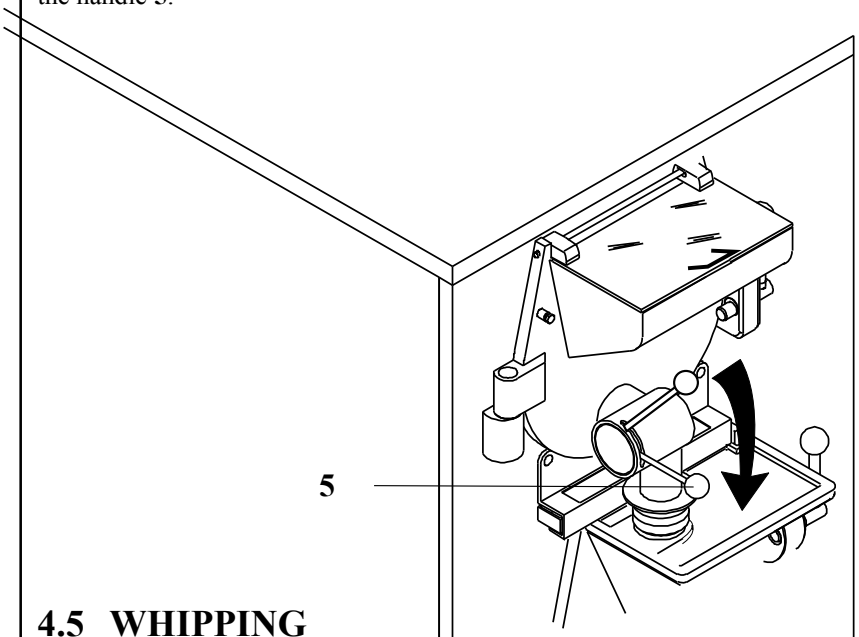
**Maximum Load**
**Medium Load**
**Minimum Load**

The relevant cycle will restart after about 5" or when the Heating button is pressed.

**WARNING!**

**The door on the heating/pasteurization section is equipped with a heatproof shield (accident prevention). In any case, avoid all contact with the door during the heating, cooking or pasteurization stages as well as in the stages immediately after, since the door reaches extremely high temperatures.**

After pasteurizing the mix, you can transfer it to the production cylinder by gradually lowering the handle **5**.




## 4.5 WHIPPING

After washing, sanitising and thoroughly rinsing immediately before using and in accordance with that mentioned previously, take the mixture from storage and pour the required quantity into the loading hopper respecting the minimum and maximum quantities indicated in the table (Section 2).

- Before pouring in the mixture, check that the door is closed properly.
- Pour the required quantity of mixture into the tank.
- Pressing the WHIPPING key, the display visualises the first foreseen whipping recipe. The recipe to be launched (e.g. "Gelato") can now be selected within 5 seconds using the IN-


It is possible to activate VEL 3 (can be set by the user) by pressing again extraction button or change the speed using button.

- Each time the button is pressed, it starts the **POST CHILLING** function for an amount of time that depends on the selected load.
- When extraction is finished, close the door using grabbing the handle and turning it in an anticlock-wise direction.

**ATTENTION**

**Never introduce objects into the metal grill of the extraction door whilst the Beater is operating; it could damage the door and the Beater of the machine.**

# 4.6 USER PROGRAMMING

Pressing the STOP (from the BATCH FREEZING side) and DECREASE buttons at the same time will enter the User Programming mode, where it is possible to set functions according to user preferences.

| | |
|---|---|
| **Time** | |
| **Step U01** | **15** |

Use the INCREASE and DECREASE keys to edit the time settings if necessary.
Press the Stop key and the steps of the following table appear in sequence that can be all modified by using the INCREASE and DECREASE keys.
To exit from User Programming, wait approximately 30” without pressing any key or press the BEATER (BATCH FREEZING side) key to exit immediately.
The modified values are memorised automatically.

| Step | Display | Notes | U.M. | MIN | MAX | DEFAULT |
|---|---|---|---|---|---|---|
| U01 | Hours | | Hours | 0 | 23 | |
| U02 | Minutes | | Min | 0 | 59 | |
| U03 | Day of the Week | | DD | Sun | Sat | |
| U04 | Day of the Month | | DD | 1 | 31 | |
| U05 | Month | | MM | 1 | 12 | |
| U06 | Year | | YYYY | 2000 | 2099 | |
| U07 | Language | Ita, Eng. Fra, Deu | n° | Ita | Deu | ITA |
| U10 | Temp. Backlight | | min | 0 | 60 | 03 |
| U11 | Extr. 1 Speed | GS=vel. Granita | no. | 1 | 7+GS | 07 |
| U12 | Extr. 2 Speed | GS=vel. Granita | no. | 1 | 7+GS | 03 |

U01÷U06: Date and time setting

U07: Language setting

U10: With the machine in Stop mode, after a few minutes (which can be set at this stage), the display will switch off to save energy. If step U10 is set to 10, the display will remain lit.

U11÷U12: When extraction function is activated, beating activates at speed set in step U11. Pressing Extraction button several times, the speeds set at steps U11 and U12 activate alternately.

## 4.7 PROCESSING AUTOSETUP

When in Stop mode (both boiler and whipper), press the Decrease key for approximately 10 seconds and the autosetup of the cycle values is carried out. The values such as set temperature and set consistency are brought back to default values in all processing (heating cycles, ice cream cycles, set and free).
The following message is visualised on the display:

| |
|---|
| AUTOSETUP<br>RECIPES |

## 4.8] ENABLEMENT/DISENABLEMENT OF PROCESSES

**To disenable the processes:**
Select the process as if to carry it out and when the display shows the name of the cycle to disable, press and hold down the  Batch freezing button if it is a Batch freezing cycle, or the Heating button if it is a Heating cycle, until the selected cycle is disabled (an acoustic warning will sound) and the next cycle appears.

N.B. If the only enabled Heating cycle is the Free Heating cycle, press the  Heating key in Stop mode and access is immediately gained to the selection of the load.

N.B. If all Heating or Whipping cycles are disenabled, the display visualises “No Programme” when the pressing the relative key. Re-enable the processes as follows.

**To enable all processes:**

From Stop, hold down the  button for 10”, the display will read “Loading Programs” and all processing (whether heating or batch freezing) will be enabled.

# 5. SAFETY DEVICES

## 5.1 MACHINE SAFETY DEVICES

**CAUTION!**
**It is forbidden to run the machine after inhibiting, changing or tampering with safety devices the machine is fitted with.**
**Coldelite is NOT responsbile for any damage to persons and/or things if protections for the operator and other machine safety devices have been inhibited, changed or tampered with.**

Following are safety systems the machine is fitted with:

**THERMAL RELAYS**
They sense anomalous inputs of beater motor and motocompressor; reaching the maximum setting values causes the machine stop and activation of alarm system.

Before resetting, it is necessary to find out reason of relay tripping.
Thermal relay reset automatically.

**PRESSURE SWITCH**
Cooling system protection. It stops the cooling compressor if there is no water into the circuit (by machine with watercondenser) or no air circulation into the condenser (by machines with aircondenser). Reset is automatic.

**CAUTION**
**Too a long operation of the compressor or repeated stops and restartings mean an insufficient condensation; check its causes.**

**FUSES**
They protect the electric circuit of controls against overloads.
When they trip and before replacing them, find out trouble causes and put remedy.

***NOTE:***
*To identify values and characteristics of fuses, please see the machine wiring diagram.*

***NOTE:***
*Whenever a safety device trips, the machine gives a message on the display showing which automatic device has tripped.*

### 5.1.1 Safety devices for the operator

This machine is fitted with safety devices on front lids in order to prevent accidents to the operator.

**PROXIMITY SWITCH FOR HEATING TOP FRONT LIDO**

Whenever you open lid mouthpiece cover **290** or front lid **301**, the beater is blocked in order to avoid possible damages to the operator.
On closing the lid mouthpice cover back, the beater starts again.

**MICRO, LOWER FRONT LID, PRODUCTION SIDE**

Whenever you open front lid **301**, a microswitch will stop the batch freezer in order to avoid possible damages to the operator; when closing back the front lid, the beater will re-start.

***NOTE:***
*Whenever a safety device trips, the machine will give a message on display, showing which automatic device has tripped.*

# 5.2 ALARMS

When the machine is in STOP, the alarm is shown in the relevant row on the display.
E.g. (TEV alarm above and PTMA breaker below):

**Tank Probe Alarm**
**Overload PTMC**

To delete the message, press the Increase key.
If the alarm is not reset this means that it is still active.

**BOILER SECTION (TOP PART)**

| | |
|---|---|
| **TER_1 alarm** | "TER1" temperature probe broken or short circuited.<br>The top part does not pass to Stop mode but it deactivates the relevant heating element.<br>Check the temperature probe TER1 and replace, if necessary. |
| **TER_2 alarm** | "TER2" temperature probe broken or short circuited.<br>The top part does not pass to Stop mode but it deactivates the relevant heating element.<br>Check the temperature probe TER2 and replace, if necessary. |
| **TER_3 alarm** | "TER3" temperature probe broken or short circuited.<br>The top part does not pass to Stop mode but it deactivates the relevant heating element.<br>Check the temperature probe TER3 and replace, if necessary. |
| **TEV alarm** | "TEV" temperature probe broken or short circuited.<br>The top part passes to Stop mode.<br>Check the temperature probe TEV and replace, if necessary. |
| **Boiler MA Breaker** | Beater(RTA) breaker switch intervention<br>An intervention by this alarm will set the top part of this machine to STOP mode.<br>When the breaker is reset, the alarm will pass from flashing to fixed and can be reset by pressing the Increase key. |
| **Lid Open** | Top Door Lid Open or Top Door Open<br>An intervention by this alarm will NOT set the machine (top part) in Stop mode but in any case, it blocks the active outputs.<br>The same IMS (IMSA on the screen) intercepts the opening of both the lid and the door. |

**BATCH FREEZER SECTION (LOWER PART)**

The alarm is visualised on the second line of the display.
To delete the message, press the DECREASE key in the alarm section where the message remains on the display.
If the alarm does not reset, this means that it is still active.

Alarm table:

| Display | Description |
|---|---|
| **RTL alarm** | Slow Beater Breaker intervention<br>The intervention of this alarm will set the machine to Stop mode. |
| **RTV alarm** | Fast Beater Breaker intervention<br>The intervention of this alarm will set the machine to Stop mode. |
| **RTC alarm** | Compressor Breaker intervention<br>The intervention of this alarm will set the machine to Stop mode. |
| **Overload PMTC** | Intervention of the Compressor thermal contact breaker<br>The intervention of this alarm places the machine in Stop mode. |
| **TEC sensor alarm** | TEC temperature sensor interrupted or in short-circuit.<br>Check the TEC temperature sensor and substitute if necessary. |
| **Door open** | Lower door open.<br>When this alarm intervenes, the machine goes to Stop and automatically resets when the door is closed. |
| **Pressure switch** | Intervention of the safety pressure switch<br>When this alarm intervenes, the compressor stops. If the pressure switch intervenes repeatedly three times, or it remains active for two consecutive minutes, the machine goes to Stop and the message “Pressure switch” appears on the display. Check the inlet and outlet water tubes to ensure that the water circulates freely when the compressor is ON. For air-cooled machines, check that the condenser fan operates when the compressor is ON, or check that the air condenser is not blocked. If blocked, clean it with a jet of compressed air. |
| **Timeout Prd** | Timeout Prod (Cooling difficulty).<br>This alarm intervenes when the machine does not cool. If the compressor remains ON continuously during whipping for more than 20’ and HOT does not reach a Discriminating value (fixed), the machine goes to Stop and the alarm message "Timeout Prd" appears on display. It can be reset by pressing any key. One of the possible causes of this type of problem could be the lack of gas in the system. |

## 5.2.1 Blackout

If there is a temporary power outage, when the power returns, the machine will switch on again in STOP mode.

# 6. CLEANING AND SANITIZATION (Removal, cleaning, sanitization and refitting of the parts in contact with the product)

## 6.1 GENERAL INFORMATION

Cleaning and sanitization must be carried out at the end of every production as a habit and with utmost care in order to guarantee the production quality in the observance of necessary healthy rules.
If dirt is left enough time to dry out, this increases the risk of stains, marks and damage to surfaces.
Removing dirt is much easier if it is done immediately after use because some elements containing acid and saline substances might corrode the surfaces. A prolonged soaking is not recommended.

## 6.2 WASHING CONDITIONS

- **Avoid using solvents, alcohol or detergents that could damage machine parts or pollute the functional production parts.**
- When washing manually, never use powder or abrasive products, abrasive sponges or pointed tools. There is a risk of dulling the surfaces, removing or deteriorating the protective film present on the surface and scoring the surface.
- Never use metal or synthetic abrasive scouring pads and avoid any other means containing ferrous particles that could cause oxidization or compromise the integrity of the surfaces.
- Avoid using detergents containing chlorine and its compounds. The use of detergents such as bleach, ammonia, hydrochloric acid and lime scale removers can attack the steel composition, marking and oxidizing it irreparably and causing damage to the parts made of plastic materials
- Do not use dishwashers and the relevant detergent products.

## 6.3 TIPS

- Use a non-aggressive detergent solution to wash the parts.
- (Manually) wash the parts in water (max 60°C 140°F) using a non-aggressive detergent and the cleaning brushes supplied as standard.
- Use drinking water (bacteriologically pure) to rinse the parts.
- To sanitize, leave the disassembled parts in sanitized lukewarm water for the time indicated on the sanitizing product label and rinse them before reassembling. Type and concentration of the sanitizing product must comply with 40 CFR §180.940 (for instance Kay-5 sanitizer).
- When the washing procedure has been completed and before reassembly, dry each component thoroughly with a clean and soft cloth that is suitable for coming into contact with foodstuffs, to avoid leaving any humidity rich in mineral salts and chlorine that could attack the metal surfaces and leave opaque traces.

**Coldelite recommends the use of a cleaning/sanitizing solution to wash the machine**.
The use of a cleaning/sanitizing solution optimizes the washing and sanitizing procedures in that it eliminates two phases of the procedure (a rinse and a washing phase). Basically, the use of a cleaning/ sanitizing solution saves time by facilitating and simplifying washing/ sanitizing procedures.

**WARNING**

**Every time the machine is washed and the parts that come into contact with the ice cream mix are disassembled, it is essential to carry out a visual inspection of all the parts made in thermosetting, plastic, elastomer-based and silicon-based materials and metal (such as sliding shoes, pump gears, beaters, etc. ).**
**All parts must be integral and not worn, without cracks or splits, or opaque if originally polished/transparent.**
**Coldelite declines any liability for damages caused by imperfections and/or undetected breakages and not promptly solved by the replacement with original spare parts. The manufacturer is available for consultation and for any specific requests made by the customer.**

## 6.4 HOW TO USE CLEANING/SANITIZING SOLUTION

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

Washing/sanitizing by soaking
- Remove larger residues by hand
- Remove finer residues with a jet of water
- Immerse the parts to be cleaned into the solution
- Let the solution react for the time indicated on the label of the product being utilized
- Rinse the parts with care, using plenty of clean drinking water

## 6.5 CLEANOUT

To clean the machine do as follows:

1. Fill both cylinders with water using the special hose.
2. After filling with water, press the key **BEATING** for heating side and the key **BEATING** for production side.
   When programmed time has elapsed, the machine will automatically set at STOP position.
3. By first turning the lever **502** and then lowering the handle **5**, let all water come out of the cylinders.
4. After emptying the freezing cylinder, (front lid is opened by lifting the lever **289** and pulling it to the right), it is advisable to clean the cylinder with a bolt of water while keeping the beater blocked in its seat.
5. Remove the drip tray **27**, then wash and sanitize it.
6. Remove the tub support shelf **50**, then wash and sanitize it.

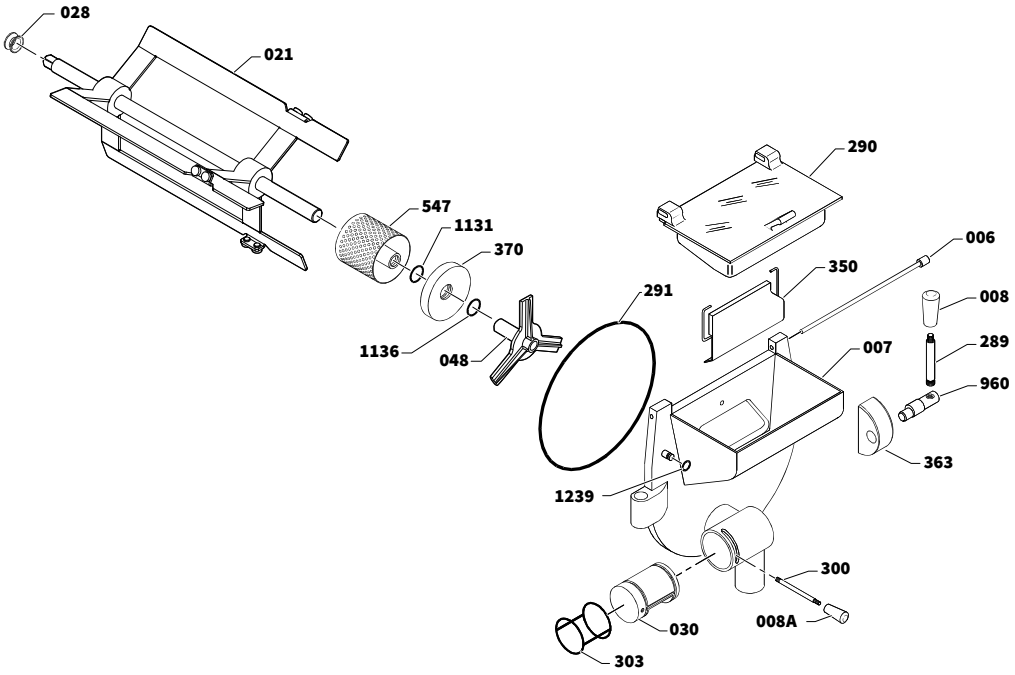
**CAUTION**
**When removing and refitting the tub support shelf, be careful of any risks to hands or fingers through crushing.**

7. Wipe the machine exterior clean with a damp cloth before sanitizing.


## 6.6 SPIGOT DOOR AND UPPER BEATER (BOILER) DISASSEMBLY

To disassemble spigot door **7**, unlock it by lifting lever **289** and moving it to the right.
- Open the spigot door, move it to the left and lift it by sliding it out of the pin.
- Disassemble spigot piston **030** by loosening pin **300** and pushing it out of its seat.
- Disassemble seals **303 and 291** using the suitable puller, thoroughly clean them and lubricate with food grade grease before re-assembling them.
- Disassemble spigot door cover **290** by sliding retaining pin **6** out and remove spigot door closure **350**.
- Clean and sanitize all disassembled parts.
- Disassemble beater **21** by removing it from its seat, slide seal **28** out and then clean and sanitize.

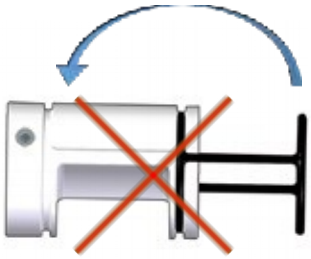
- Slide out flavor holder **547**, O-Rings **1131** and **1136**, cover **370**, spoke **48**, clean and sanitize them.
- Clean and sanitize cylinder internal wall.
- Re-assemble beater and spigot door repeating the previous procedures in reverse order.




**ATTENTION!**
**Carry out cleaning operations with sanitising solution at the end of each work day.**

**CAUTION**
**Handle with care, as a fall to the ground might damage the beater.**

**WARNING**
**Pay attention to the correct positioning of the OR 303 while refitting it on the spigot piston 030. Overturning the OR as shown in the figure is not allowed.**

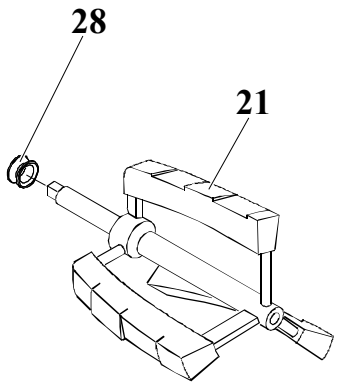


**WARNING**
**During beater re-assembly, pay attention to position spoke 48 correctly (see figure).**

## 6.7 BEATER

- Disassemble the beater **21** by withdrawing it from the cylinder, remove the stuffing box **28**.
- Thoroughly wash all parts with water and reassemble.

**CAUTION**
**Handle with care, as a fall to the ground might damage the beater.**




**ATTENTION!**
**Carry out cleaning operations with sanitising solution at the end of each work day.**

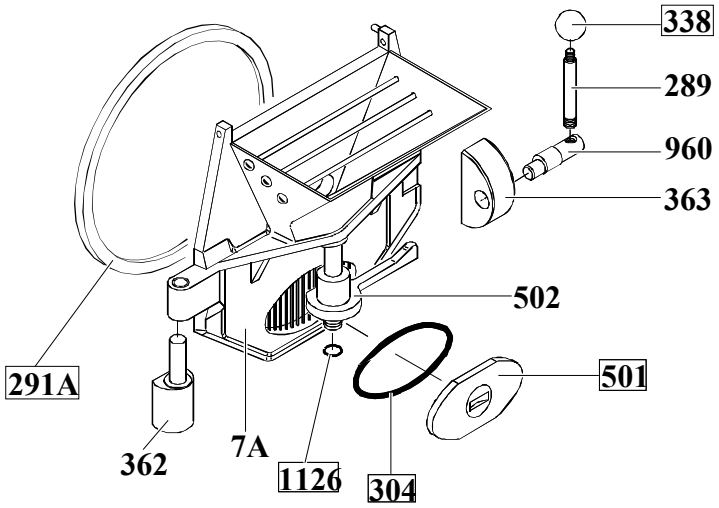
### 6.7.1 Stuffing box checking

When removing the stuffing box, check whether its shows defects. If not, after washing and greasing the stuffing box, you can use it again.
If, on the contrary, you find ice cream rests in the drip drawer **27**, you would be better to change it since, most problably, it is worn out and consequently leaks.
The spare stuffing box is to be found in the spare parts kit (see section "Maintenance").

## 6.8 LOWER FRONT LID DISASSEMBLY (BATCH FREEZER)

To disassemble front lid release it by lowering lever **289** and shifting it to the right.

- Open the front lid by shifting it to the left and lift it while extracting from spigot pin.
- Disassemble ice cream door **501** and ice cream door lever **502** by withdrawing downwards, after removing gasket **304**.
- Wash well all parts with water and reassemble.




**ATTENTION!**
**Carry out cleaning operations with sanitising solution at the end of each work day.**

## 6.9 SANITIZATION

Reassemble tub support and drip tray.

**WARNING!**
**During disassembly and reassembly of the tub support, pay attention to prevent crushing of fingers or hands.**

With machine in Stop mode, fill the boiler cylinder with water and sanitizing solution.
Activate the beater by pressing **BEATING** button (upper part).
After about 30 seconds of beating, pour sanitizing solution in the freezing cylinder then activate beating by pressing **BEATING** button (lower part) for a time equal to the section previously sanitized.

**WARNING**
**Operating the machine in "BEATING" mode for too long with empty cylinders or just filled with sanitizing solution brings about a quick wear of the beaters.**

Let the solution stay for the time necessary (10-15 minutes), then completely drain sanitizing solution using handles **5** and **502**.

***Note:***
*It is necessary to rinse with fresh and sterile water before finally starting the machine.*

**WARNING!**
**Do not touch the sanitized parts with hands, napkins, or else.**

## 6.10 HYGIENE

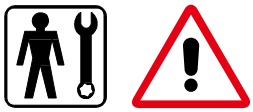
Fat contents of ice cream and other products are ideal fields for proliferation of mildew and bacteria. To eliminate them, parts in contact with the product must be thoroughly washed and cleaned as specified above.
Stainless steel materials as well as plastic and rubber ones used for the construction of these parts and their particular design make cleaning easy, but cannot prevent the growth of mildew etc., if not properly cleaned.

**WARNING!**
**It is necessary to rinse with fresh and sterile water before finally starting the machine.**

# 7. MAINTENANCE

## 7.1 SERVICING TYPOLOGY

**CAUTION!**
**Any servicing operation requiring the opening of machine panels must be carried out with machine set at stop and disconnected from the main switch!**
**Cleaning and lubricating moving parts is forbidden!**
**"Repairs to the wiring, mechanical, air supply or cooling systems, or to parts of same must be carried out by qualified personnel with permission to do so and if necessary, according to the routine and extraordinary maintenance schedules as envisaged by the customer with reference to specific intervention methods, according to the use for which the machine is destined".**



Operations necessary to proper machine running are such that most of servicing is completed during production cycle.
Servicing operations, such as cleaning of parts in contact with the product, replacing of stuffing box, disassembling of beater assembly are to be carried out at the end of a working day, so as to speed up serving operations required.

Herebelow you can find a list of routine servicing operations:

- **Cleanout and replacement of stuffing box**
  Cleaning should be carried out at the end of a working day, whilst replacement only after checking of stuffing box and in the event product drips inside drip drawer.
- **Cleanout of beater assembly**
  At the end of a working day
- **Cleanout of sliding shoes**
  At the end of a working day
- **Door cleaning**
  To be performed at the end of each shift
- **Clean the sheet metal parts, tub support shelf and drip tray**
  To be carried out daily with neutral soap, seeing to it that cleansing solution never reaches beater assembly in its inside.
- **Cleanout and sanitization**
  At the end of every working day, according to procedures described in section 6.

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

## 7.2 WATERCOOLING

By machines with watercooled condenser, water must be drained from condenser on selling season end, so as to avoid troubles in the event the machine is stored in rooms where temperature may fall under 0°C (32°F).
- Withdraw water inlet and outlet pipes from their seat and let water flow out from circuit by operating the machine a few seconds.

## 7.3 AIRCOOLING

Clean the air condenser in order to remove dust and impurities that may hinder air circulation. Use a brush with long bristles or a compressed air jet.

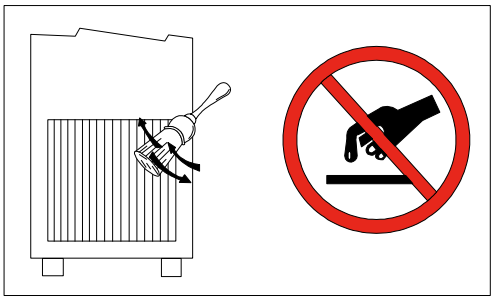


**Fig. 31**

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

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

***NOTE:***
*By machines with air- and watercondenser, take heed of cautions described at § 7.2 and 7.3.*

## 7.4 ORDERING SPARE PARTS

Should one or more parts wear out or break, place your order to a **Coldelite** Technician and always mention the machine type and its serial number stamped on data plate you find on the machine rear.

## 7.5 SPARE PARTS TABLE

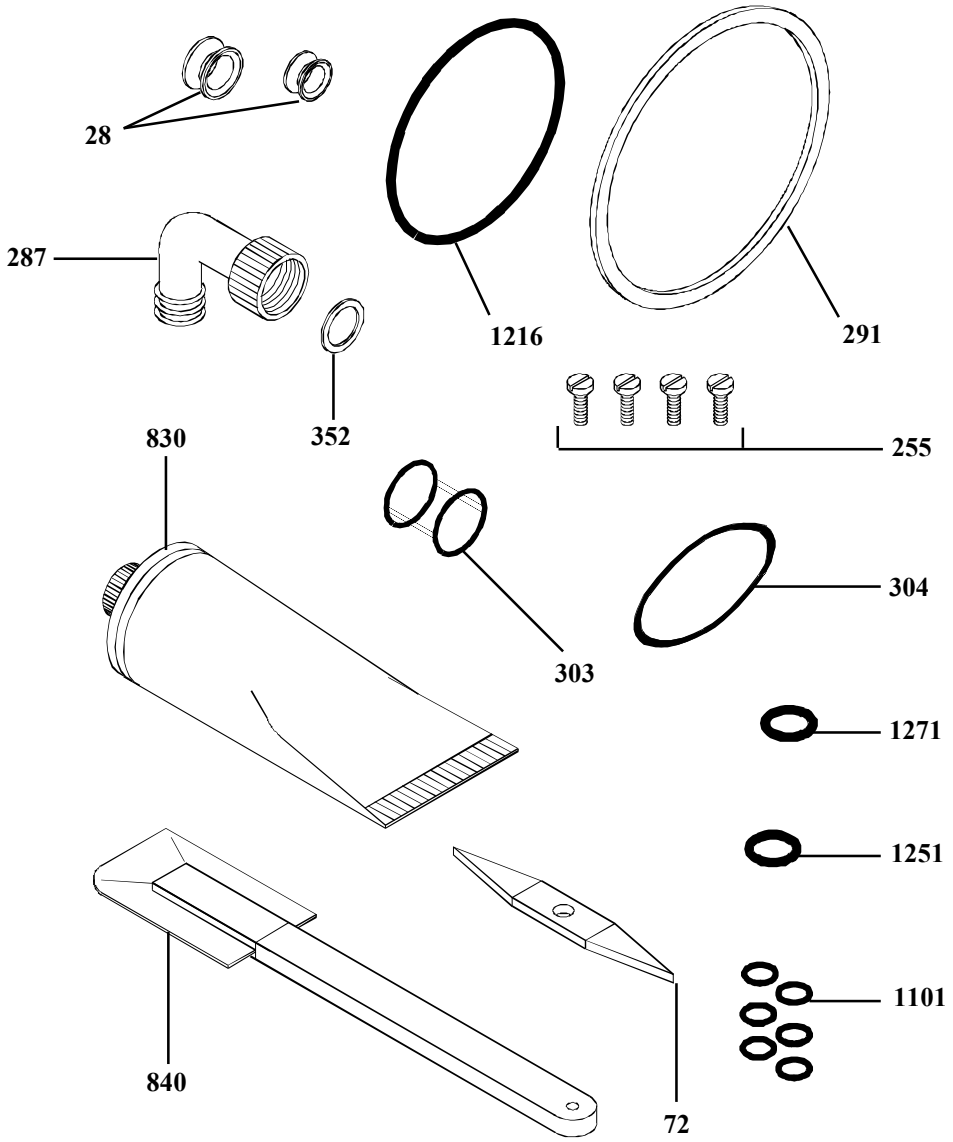



Fig. 32

| Q.ty | Description | Position |
|---|---|---|
| Nr 1 | Beater stuffing box | 28 |
| Nr 1 | Beater stuffing box | 28 |
| Nr 1 | OR extractor | 72 |
| Nr 4 | Screws | 255 |
| Nr 1 | Pipe fitting 3/4 x 16 | 287 |
| Nr 1 | Front lid gasket | 291 |
| Nr 1 | Special OR piston | 303 |
| Nr 1 | Gasket | 304 |
| Nr 1 | Pipe fitting gasket | 352 |
| Nr 1 | Petrol-gel tube | 830 |
| Nr 1 | Cleaning brush | 840 |
| Nr 6 | OR | 1101 |
| Nr 1 | OR | 1216 |
| Nr 1 | OR | 1251 |
| Nr 1 | OR | 1271 |

# 8. TROUBLESHOOT GUIDE

| Trouble | Cause | Remedy |
|---|---|---|
| **Machine does not start** | a) Main switch open | a) Close the main switch |
| | b) Machine unplugged | b) Check and plug in |
| | c) Machine not set at production, alike in production side and in cooking side | c) Check that PRODUCTION button is lit |
| | d) Front lids not perfectly closed | d) Check front lids closure |
| **Machine does not start (display is lit)** | a) The 3rd wire feeding compressor and electric motors is unconnected | a) Connect the 3rd wire or check whether a fuse burnt out. |
| **Compressor starts but stops after a few seconds without the icecream being thick** | a) Watercooled machine: water not circulating | a) Open water cock.<br>Check that rubber pipe is not squashed or very doubled up. |
| | b) Aircooled machine: air not circulating | b) Check the machine rear is at least 50 cm (20 in) far from wall.<br>Clean condenser obstructed by rags, dust, etc.<br>Check that fan motor runs regularly |
| **After 15 minutes freezing, the mix does not freeze down and the machine returns to STOP** | a) No gas | a) Check leak and then weld and refill |
| | b) Pressure switch out of order | b) Check the connection and replace it, if need be. |
| **Machine runs but no ice cream comes out of ice cream door** | a) Not enough sugar in the mix | a) Allow to thaw, then modify or replace the mix |
| **Machine runs but ice cream is too soft** | a) Too much sugar in the mix | a) Modify or replace the mix |
| **Ice cream mix in the drip drawer** | a) Stuffing box missing or worn | a) Insert if mixing. Replace if worn |
| **Ice crem comes out behind the ice cream door** | a) Gasket missing or not properly installed | a) Check and insert |
| **Bacteria tests show too high level** | a) Too high bacteria charge in the mix | a) Improve preparation procedure by sanitizing all containers, spoons, etc., and have the mix analyzed before pouring it into the machine. |
| | b) Machine not clean and sterile enough | b) Empty and clean the machine thoroughly. Sanitize as described in chapter 6. |