INSTRUCTIONS HANDBOOK

PSK KEL-1 35/65/125
MODULO 65/125

cattabriga

1927

CATTABRIGA

Via Emilia, 45A - 40011 Anzola Emilia (Bologna) - Italy

Tel. (051)6505330 - Fax (051) 6505331

SEC. 4 INSTRUCTIONS FOR USE

SEC. 5 SAFETY DEVICES

SEC. 6 CLEAN OUT, DISASSEMBLING AND REASSEMBLING OF PARTS IN CONTACT WITH THE PRODUCT

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FOREWORD

INSTRUCTIONS HANDBOOK

Editing this handbook, community directions on safety standards as well as on free circulation of industrial products within E.C. (R.E.C. Council direction 89/392 and subsequent, known as "Machines Direction") were taken into due account.

PURPOSE

This handbook was edited while taking needs of machine users 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 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:

CATTABRIGA - Via Emilia, 45A - 40011 Anzola 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.

ATTENTION!!

Before operating the machine, carefully read this handbook.

Also carefully safety instructions

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 are neither removed nor tampered.
- The machine is regularly serviced.
- Only are original spare parts to be used especially as far as those components with safety functions are concerned (ex.: protection microswitches, thermostats).

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 must adequately skilled personnel be assigned to electrical equipment.

QUALIFICATION OF THE STAFF

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 enganged 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 of konwledge and responsibility.

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.

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.

WARNINGS

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.

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PROTECTIONS

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

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 disconnecting 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.

RECEIVING, MOVING, UNPACKING

SECTION INDEX

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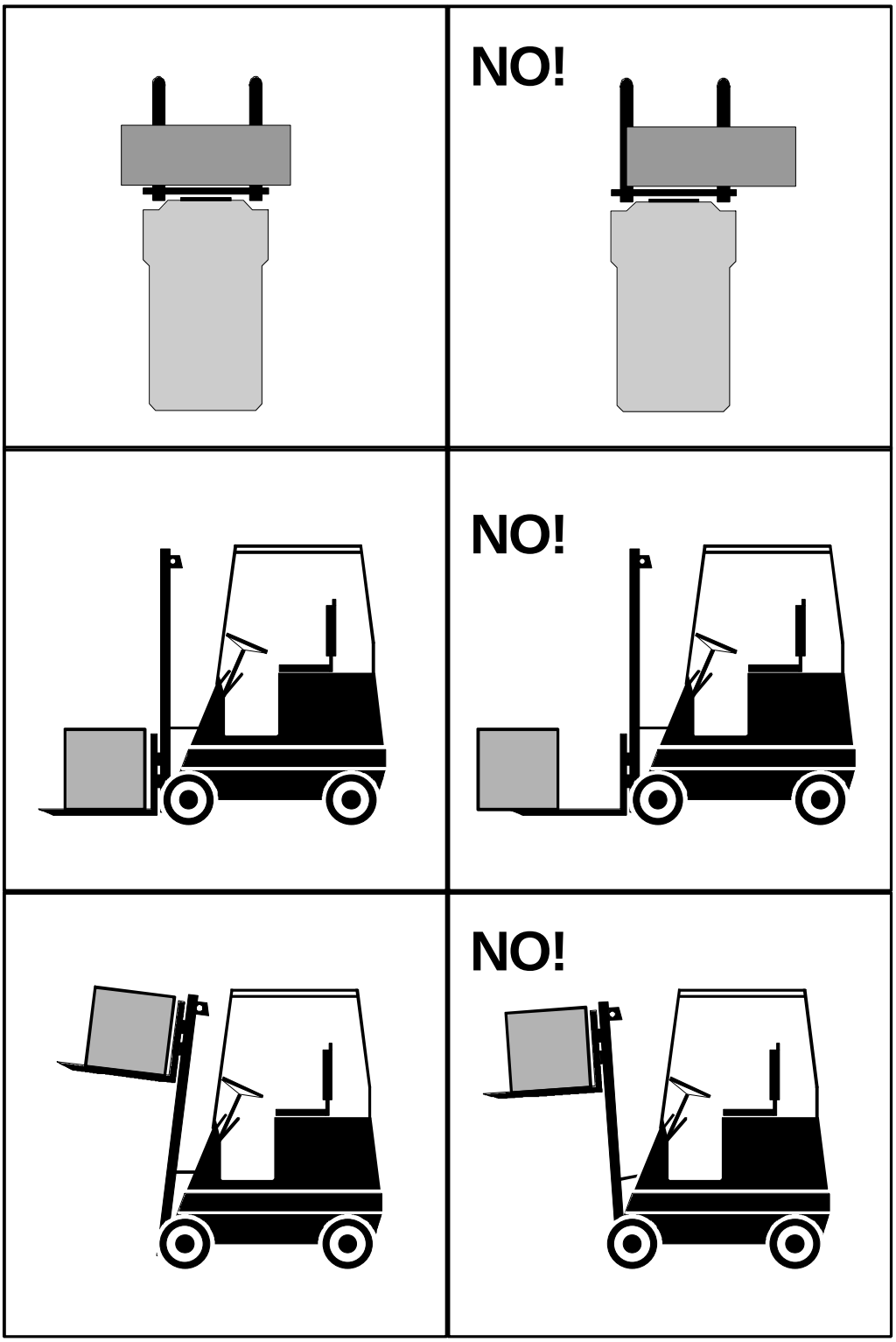
1.1 RECEPTION

- 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:

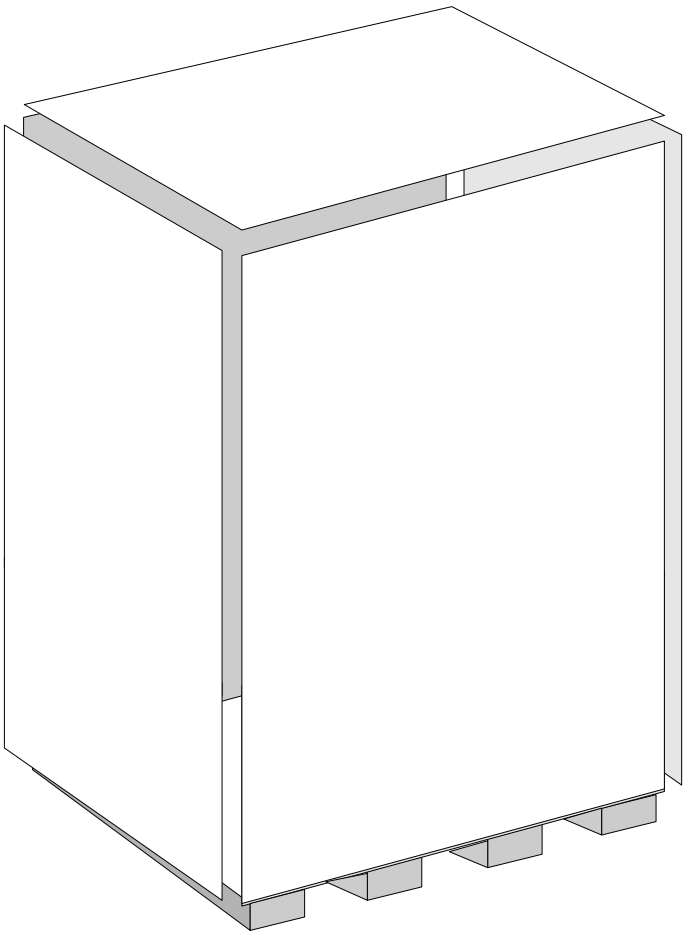
- Lifting capacity lower than machine weight
- Unsuitable construction features of the lift (ex.: too short forks)
- Construction features altered by use
- Unconforming ropes and cables
- Worn ropes or cables.

1.2 UNPACKING

There are two types of packing: wooden type or in corrugated board.

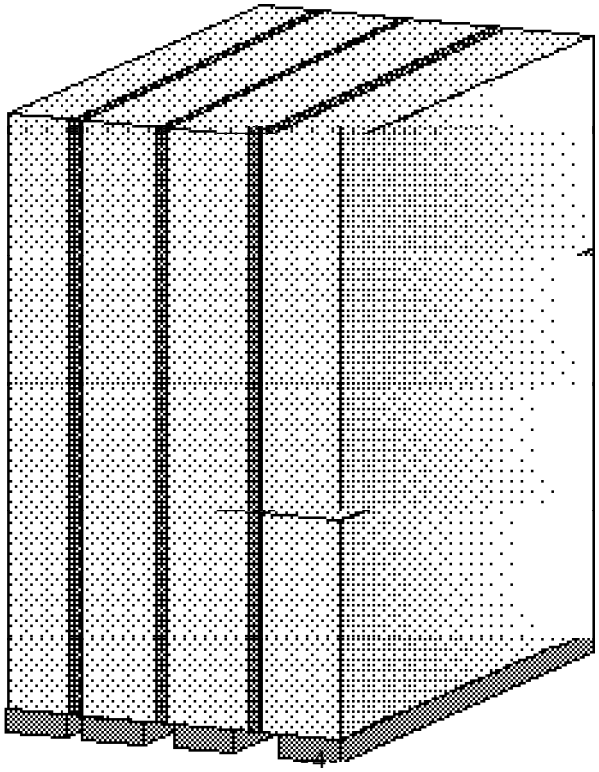
Walls of a wooden packing are nailed and the machine is fastened by means of stay bolts connecting machine frame bottom to packing wooden base .
A wooden packing can be opened by means of proper tools; it is recommended to protect exposed parts, such as hands with gloves, against wood splinters.

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



Board packing is externally closed by three steel straps.
The machine is secured through other straps at the inside.
This packing can be opened with snips.

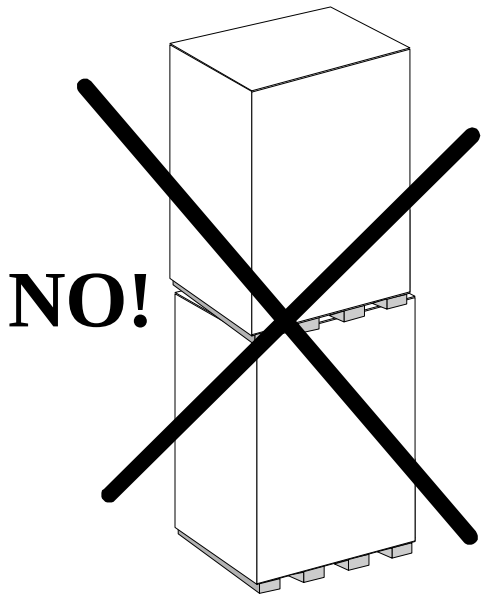
Act with utmost care, as you may hurt yourselves when cutting the straps, if they are not strongly held during this operation.



Attention:
Inside the machine you will find an instructions handbook; it is necessary to carefully read it before operating the machine.

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 agains dust and else.



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

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 the machine installation country.

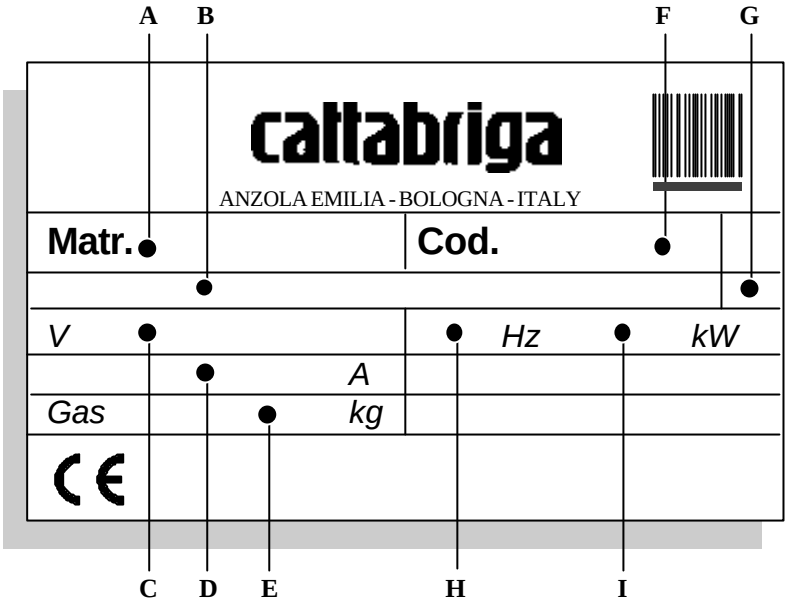
GENERAL INFORMATION

SECTION INDEX

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.



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

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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.
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2.2 INFORMATION ABOUT THE MACHINE

2.2.1 GENERAL INFORMATION

PSK KEL-1 are pasteurizing-emulsifying units which prepare, pasteurize, homogenize, age and transfer ice cream mixes to other units.
An electronic microprocessor steadily checks each working cycle selected.
Two alphanumerical monitors display all steps of a working cycle and give audio-visible messages.

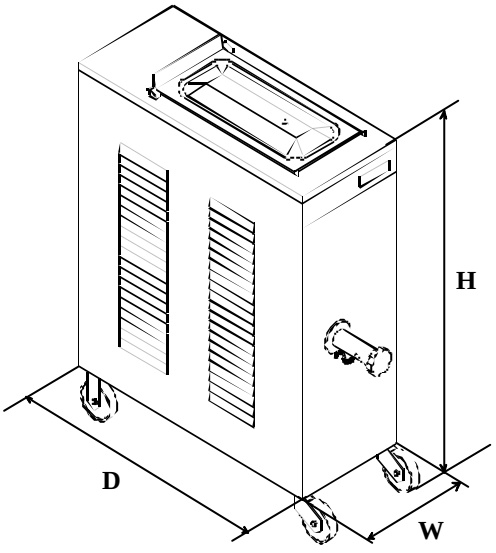
CATTABRIGA recommends to always use high quality ingredients for the preparation of confectionery products, in order to satisfy your customers, even the hardest-to-please ones.
Any saving made to the prejudice of quality will surely turn into a loss much bigger than the saving itself.
Bearing in mind the above statements, please take heed of the following suggestions:

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

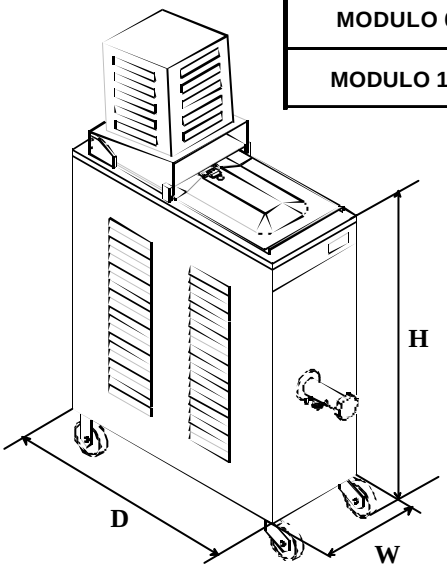
2.2.2 MACHINE LAY-OUT

NOTE:
Dimensions herebelow reported may change depending on type of condensation.

MODEL	Dimensions		
	Width mm (W)	Depth mm (D)	Heig-ht mm (H)
PSK KEL-1 35	390	870	1070
PSK KEL-1 65	390	870	1070
PSK KEL-1 125	640	890	1070
MODULO 65	390	870	1070
MODULO 125	640	890	1070



Psk Kel-1 35/65



Module 65/125

2.2.3 TECHNICAL FEATURES

MODEL	Tank capacity	Tank min. level	Tank max. level	Aver.time per cycle	Power supply*			Production per cycle	Condenser	Water consumption	Net/gross weight
	Litres	Litres	Litres	Minutes	volt	Cycles Hz	Phases	Litres		Litres/h	kg
PSK KEL-1 35	**30**	**15**	**30**	**120**	**220/380**	**50**	**3**	**30**	**Air-Water**	**150**	**158/178**
PSK KEL-1 65	**60**	**20**	**60**	**120**	**220/380**	**50**	**3**	**60**	**Air-Water**	**250**	**204/224**
PSK KEL-1 125	**120**	**40**	**120**	**150**	**220/380**	**50**	**3**	**120**	**Air-Water**	**350**	**255/275**
MODULO 65	**60**	**30**	**50-60**	**120**	**220/380**	**50**	**3**	**50-60**	**Air-Water**	**250**	**225/245**
MODULO 125	**120**	**60**	**100-120**	**150**	**220/380**	**50**	**3**	**100-120**	**Air-water**	**350**	**276/296**

* Other voltages and cycles are available

Performances featured by a 25°C room temperature and 20°C cooling water temperature.

2.3 INTENDED USE

Machine models **PSK KEL-1** must only be used for the production of ice cream conforming with content of paragraph 2.2.1 "General Information", within the functional limits hereunder reported:

Voltage:	±10%
Air min. temperature °C:	10°C
Air max. temperature °C:	43°C
Water min. temperature	10°C
Water max. temperature	30°C
Water min. pressure	0,1 MPa (1 bar)
Water max. pressure	0,8 MPa (8 bar)
Max air relative humidity:	85%

- This machine has been designed for its use in places which are not subject to explosion-proof standards; its use is thus bound to conforming places and normal atmosphere.

2.4 NOISE

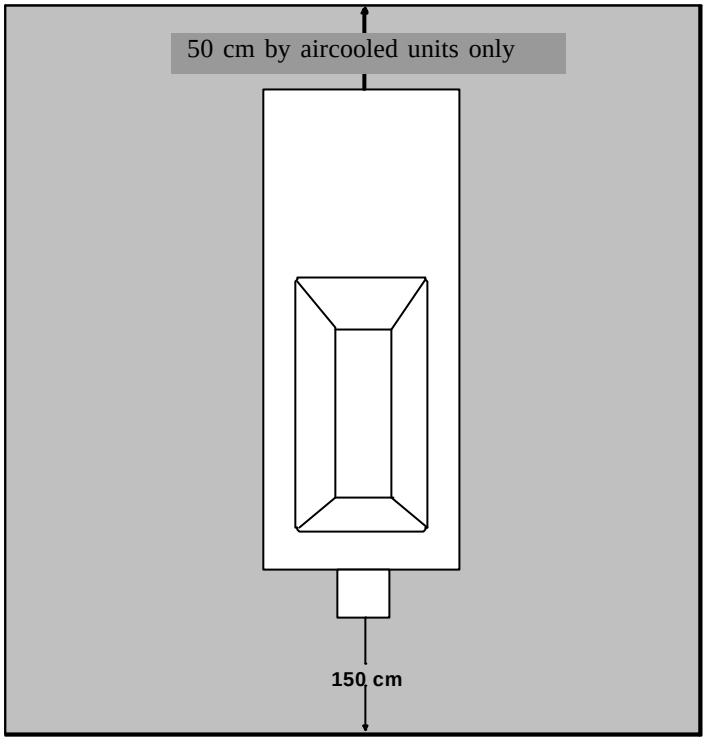
The steady acoustic pressure level weighed A in a working place alike by watercooled and by aircooled machines is less than 70 dB(A).

INSTALLATION

SECTION INDEX

3.1 ROOM NECESSARY TO THE MACHINE USE

The machine must be installed in such a way that air can freely circulate all around.
Room for the approach to the machine must be left free in order to enable the operator to act without costraint and also to immediately leave the working area, if need be.
The minimum approach room to the working area should be at least 50 cm.



3.2 MACHINES WITH AIRCOOLED CONDENSER

Machines with aircooled condenser must be installed no closer than 50 cm to any wall in order to allow free air circulation around the condenser.
Clean the floor under and near to the machine, in order to avoid that paper or else may hinder air circulation.
Furthermore, it is necessary to clean the condenser monthly, so as to avoid that dust, paper, etc. may obstruct it, thus jeopardizing the regular operation of the machine.
Connect inlet wash water connection placed under the machine plane.
(recommendations at points 3.3, 3.4 to be followed).

ATTENTION
An insufficient air circulation of the machine affects its operation and its output capacity.

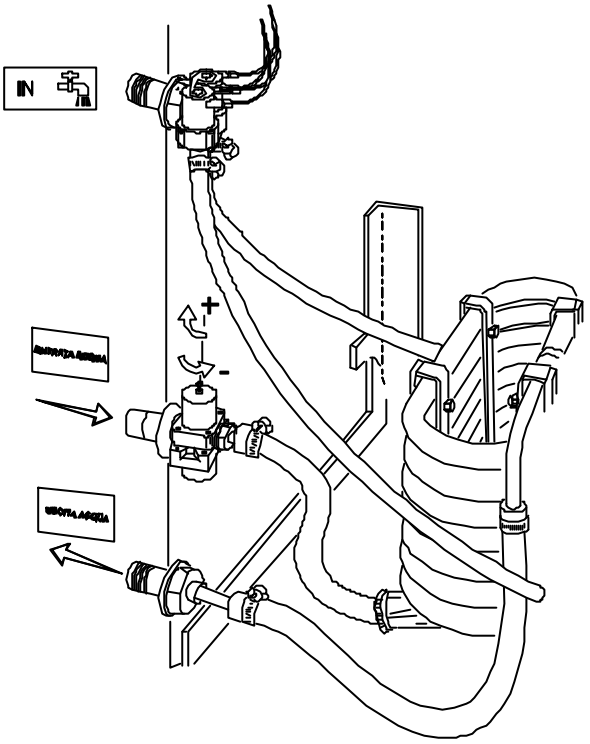
3.3 WATER SUPPLY CONNECTION

The machine must be connected to running water which pressure must not be higher than 8 bars.
By aircooled machines, water connection for drinking water (for machine wash) is placed under the machine.
By watercooled machines water connections for machine wash and gas cooling are placed on the rear panel.
There are three connections, all of them beeing alined along the same vertical.

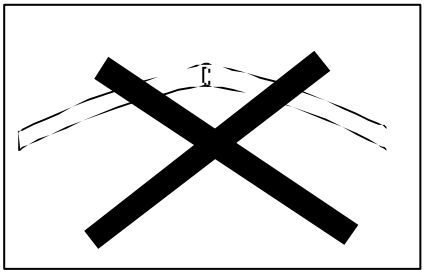
3.4 MACHINES WITH WATERCOOLED CONDENSER

Watercooled machines can run when only connecting them to running water supply or to a cooling tower.
Water must have a pressure of 1 Bar at least and a delivery at least equal to the estimated hourly consumtpion (see table sect. 2, par. 4).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.
The machine is also provided with a connection to drinking water, marked "IN".

We recommend to use rubberized canvas tubes with a working pressure up to 8 Bars.



Note:
When disconnecting and then reconnecting water pipes, pay attention not to bend them, so as to avoid any possible breakings.



3.4.1 WATER VALVE ADJUSTMENT

IMPORTANT
If water valve needs to be reset, such an operation must be carried out by skilled personnel, only. Set water valve so that, with machine off no water comes out and lukeawarm water flows out when on.
Water consumption
Estimated water consumption per hour is shown in the table page 4, Sec. 2.

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

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

3.5 WASH

Alike aircooled and watercooled machines have been provided with a separate inlet pipe for washing water. Only has drinking water to be connected to this pipe marked as per plate shown herebelow.

To make cleanout easy, we recommend to connect warm water used in your laboratory directly to wash pipe, installing a shut-off valve.

3.5.1 COOLANT CHARGING

ATTENTION
THE MACHINE IS DELIVERED WITHOUT COOLANT

Charge the machine with its special coolant, as follows:
- **Moving the right side pannel and the plastic blowoff plug.**
- **Insert the funnel into the hole blowoff.**
- **Fill up to the reference line "maximum level".**
- **Put the blowoff plug back to its place and reassemble the RIGHT side panel.**

3.6 ELECTRICAL CONNECTION

Before connecting the machine to the mains, check that the voltage is the same as the one stated on its plate. Between the machine and the mains, insert a magnetothermic differential sectioning switch properly dimensioned to the input required, and having a contact opening of 3 mm, at least.
The power cable for the machine threephased with tension 400V (or tension similar: 380, 415, 440, et cetera.), it's compound from five wire of which three for phases, blue wire to the neutral and the yellow/green for the ground.
In machines with tension 200V (or similar tension: 200, 220, 240, et cetera.) the power cable is compound from only four wire without the neutral.

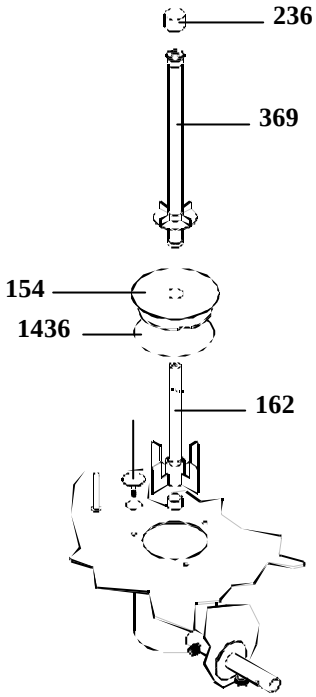
IMPORTANT
Yellow/green ground wire must be connected to a good ground plate.

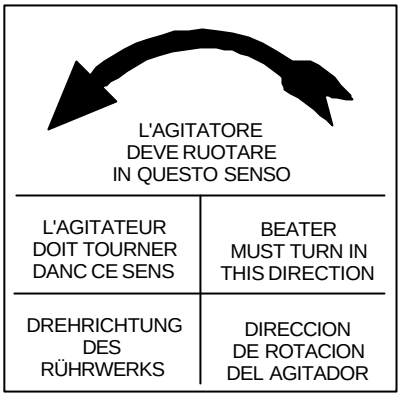
3.6.1 REPLACING POWER SUPPLY CABLE

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.

3.7 DIRECTION OF ROTATION

By *Psk Kel-1 35/65/125* rotation of the beater **369** is anticlockwise.





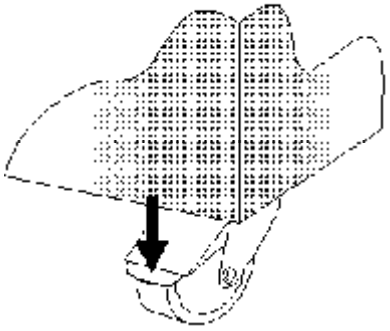
3.7.1 REVERSAL OF ROTATION

If the beater rotation is not correct, reverse it by interchanging two of the three leads coming from the circuit breaker.

ATTENTION
For a less wear of the shaft, always keep the white cover pos. 236 inserted.

3.8 MACHINE LOCATION

For an easy movement, the machine has been provided with castors having mechanical locks which, once engaged, lock the castors and so keep the machine standstill.



3.9 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
Do not use either solvents, or alcohol and detergents that may damage the machine parts and contaminate parts coming into contact with product.

3.10 REFILLING

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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 cooling system is carried out at **CATTABRIGA** works during machine postproduction testing ; new machines do not require topping-up or refilling.
If a gas addition happens to be made, this must be carried out by skilled technicans, only , who can find out trouble origin.

3.11 MACHINE TESTING

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A postproduction test of the machine is carried out at **CATTABRIGA** 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 **CATTABRIGA** engineers.
After the machine positioning and correct connections, also carry out all operations necessary to functional check and test of the machine.

INSTRUCTIONS FOR USE

SECTION INDEX

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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

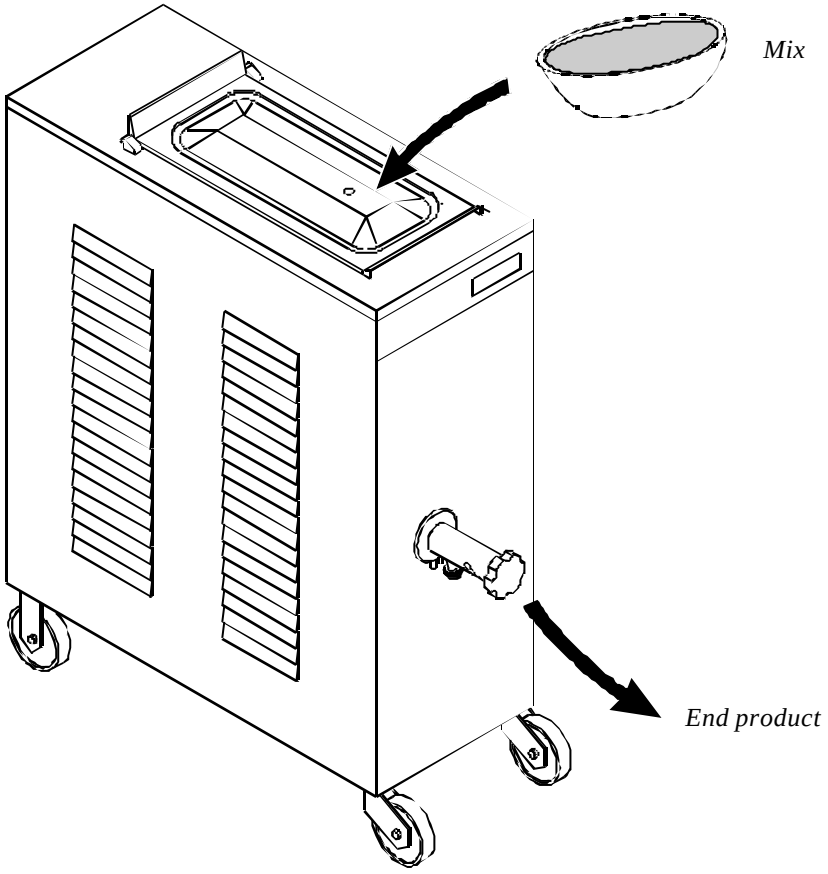
- an uncorrect use or handling is avoided
- Safety devices are neither removed nor tampered
- The machine is regularly serviced
- Only are original spare parts to be used especially as far as those components with safety functions are concerned (ex.: protection microswitches, thermal relays).

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 must adequately skilled personnel be assigned to electrical equipment.

4.2 MACHINE CONFIGURATION

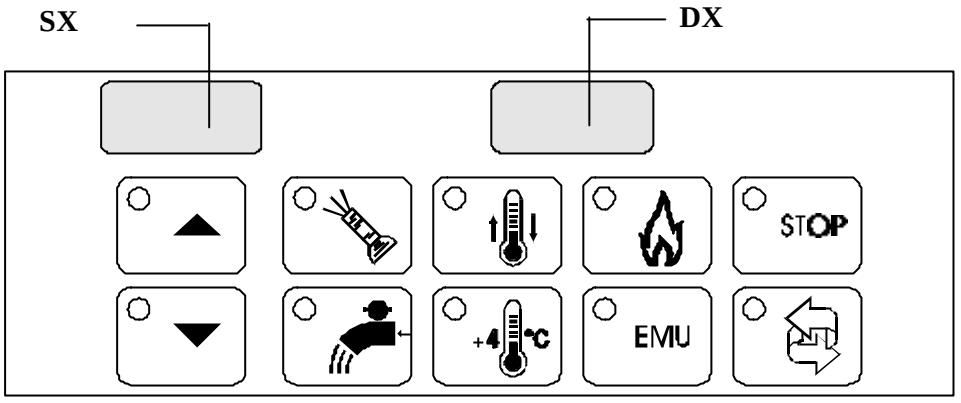
The machine consists of a transmission of movement for beater assembly, a heating and dry cooling system with aircooled or watercooled condenser.
The product is prepared by pouring the mix into the tank and starting the production cycle, while referring to minimum and maximum quantities reported in the table Sect. 2, page 4.
As the machine is provided with specific programs for the preparation of various products, one must set the program relevant to the selected product before starting the cycle.
When the cycle ends, the product can be taken out from the special spigot.



4.3 CONTROLS

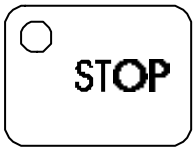
4.3.1 CONTROL PANEL

For a correct use of the buttons on the electronic control unit, press on symbol or anyway in the middle of the button.

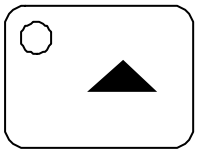


4.3.2 COMMON FUNCTIONS

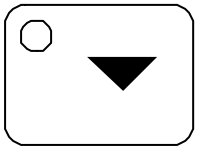
Displays (SX / DX)
The electronic pasteurizer PSK is provided with two alphanumeric displays which display a series of messages by machine turning on and during its operation.
DX rightside monitor normally displays the real temperature (in that moment) of the product in the tank (taken by TEV sensor).
SX leftside monitor displays the temperature to be reached or pause time to be carried out.
Furthermore, both monitors can display alarm messages in order to make failure location easier.



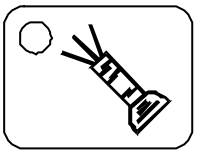
STOP button
It stops any function



INCREASE button
This push-button is used to increase the set temperature value.

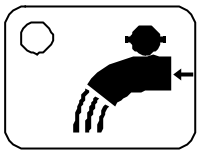


DECREASE button
This push-button is used to decrease the set temperature value.



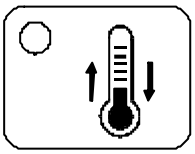
SHOWER

Shower water delivery is only allowed in STOP and BEATING. Delivery takes place by just pressing this button, and to stop it, just press SHOWER button again or STOP.
Water delivery will anyway stop after 3 minutes, as a safety time. Water delivered is not controlled by any maximum level.



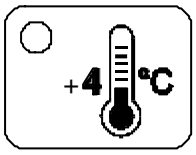
COCK WATER (for cleaning after mix distribution)

Water delivery from cock is allowed in all functions.
To deliver water it is enough to press COCK WATER button once; delivery will automatically stop after a programable time (5") or by pressing the same button.
SX monitor displays $h2_O$ (water) whilst the DX one displays the mix temperature (TEV).



PASTEURIZATION

Allowed from STOP, only.
Once the Pasteurization button has been pressed, the rightside DX display displays the current mix temperature in the tank TEV, whilst the leftside SX one displays the temperature to be reached. This temperature can be changed by means of Increase and Decrease buttons within the limits of 65, 95°C. Set value is usually 65°C. The last value will be stored and displayed also in the next Pasteurization cycle.
Pause time is automatically reckoned by the CPU unit (it depends on pasteurization temperature set).
On cycle end, i.e., when TEV sensor reaches the storage temperature, the message **"End"** will alternate on DX display with the temperature value reached inside the tank (TEV), by this confirming that the pasteurization cycle has been completed.



COOLING

Allowed from STOP.

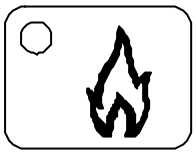
The temperature can be set 0 to 6°C. Typical value: 4°C.

SX monitor displays the temperature to be reached, whilst the DX one display mix temperature in the tank (TEV).

If BEATING (relevant led lights) is pressed during product cooling, once the temperature is reached at the end of cooling cycle, the beater will keeps on running, instead of stopping together with the compressor

If BEATING is not forced, the beater automatically starts every 30 minutes and runs 15 seconds.

In order to eliminate forced beating at the end of cooling cycle, it is enough to press the beating button (relevant led will be off).



HEATING

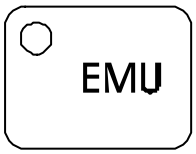
Allowed from STOP.

The temperature can be set 65 to 90°C. Typical value is 85°C.

Heating is always dynamic (i.e. with beating).

Here, too, the last temeprature of final heating is stored and will be repeated in the next heating cycle.

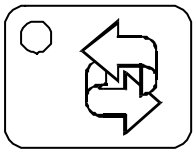
On reaching the temperature value set, heating elements will cut out, whilst the beater keeps on running.



EMULSIFYER (OPTIONAL)

By pre-set machines, the Emulsifyer can be activated from any function.

When activating it in PATEURIZATION, the emulsifyer will only operate in heating mode after the temperature of 40°C (programable) is reached, and it will stop in cooling mode at the same temperature. In pasteurization, even if the temperature is below 40°C, one can press the button  in order to "book" the automatic starting of the emulsifyer at the set temperature. In this case, relevant led will light on to confirm that the function is only active with temperatures over 40°C .



BEATING

Only does the beater in tank run and stops with STOP, only.

DX monitor displays the mix temperature in the tank (TEV), whereas SX monitor displays 3 horizontal segments.

4.4 PRELIMINARY OPERATIONS, WASH AND STERILIZATION

Before starting the machine for the first time, it is necessary to clean its components thoroughly and then also sterilize all parts in contatct with the product.

IMPORTANT
Cleanout and sterilization must be carried out at the end of every working day, as a habit and with utmost care, in order to guarantee high quality and the observance of all healthy rules.

4.4.1 CLEANOUT

With machine off, set the machine at STOP 

.

Make sure that the mix dispensing spigot is off, let water flow into the tank by pressing the button SHOWER  .

Press the button BEATING  and leave a few minutes in that position .

Press "STOP" button.

Drain all water from the tank through the dispensing spigot.
Open the tank cover.
Remove the beater (see disassembling instructions Sect. 6) by slightly pulling it upwards and minding not to damage it.

Wash all parts in water.

Also wash inside tank walls and tank cover.

Remove the spigot (see disassembling instructions Section 6), thoroughly wash and remount.

Reassemble all disassembled parts after lubricating ORs with a film of edible fat, such as GELILUBE.

4.4.2 STERILIZATON

With machine off, after removing the beater and and the cover, and checking that the dispensing spigot is closed, fill the tank with a NON CORROSIVE sterilizing solution.

Press the button BEATING  and let the beater run one minute.

WARNING

Too a long running in position "BEATING" with empty tank or just filled with water and sterilizing solution brings about a quick wear of the beater.

Drain the sterilizing solution through the dispensing spigot.

ATTENTION

Before using the machine again, thoroughly rinse with just water, in order to remove residues of sterilizing solution.

ATTENTION

Do not touch sterilized parts with hands, napkins, or else.

4.4.3 HYGIENE

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

4.5 MACHINE STARTING

After washing, sterilizing and thoroughly rinsing the machine right before its use, as per our previous descriptions, pour the mix into the tank according to the desired quantity but also respecting minimum and maximum quantities reported in the table (sect. 2, page 4); the tank is provided with an internal graduation which indicates the approximate mix contents.

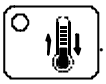
Before filling the tank with mix, make sure that the dispensing spigot is perfectly closed.

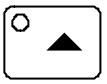
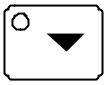
Note: *A non perfectly closed tank cover will not allow the machine operation.*

You can start the machine, now.

The working cycle of the pasteurizer starts by selecting the STOP 

function.

Press pasteurization  button.

The machine will automatically start the pasteurization cycle (Heating and cooling).
DX monitor displays the tank temperature (TEV) to be reached. At this stage, you can select another temperature value by using Increase  and Decrease  buttons.
The machine automatically selects stand-by time for middling temperature.

4.5.1 USE OF DISPENSING SPIGOT

In order to dispense the mix, it is necessary to turn the white spigot knob anticlockwise, all to the leftside.

Closing
To close the dispensing spigot, turn the knob all to the rightside, to closing position.

4.6 EMULSIFYER (OPTIONAL)

The emulsifyer can be activated from any function but only when the temperature is over 40°C. In pasteurization it will operate during heating phase, when the temperature of 40°C is reached (programable by engineer) and it will stop during cooling phase, at the same temperature. During the pasteurization cycle, even if the temperature is below 40°C, one can press the button  in order to "book" the automatic starting of the emulsifyer at the set temperature value. In this case, relevant led lights up as to confirm the function is active.

SAFETY DEVICES

SECTION INDEX

cattabriga

5.1 MACHINE SAFETY DEVICES

PSK and MODULO have been provided with a series of safety devices to protect both machine and the operator.
Tripping of each safety device comes up to an alarm on control unit display.
Please find herebelow the mentioned ALARMS:

bL OUt - BLACK-OUT
A power failure has occurred. The machine is provided with an Electronic Memory which is active even during a possible power failure.
On power return, the Electronic Memory will only restart the function in progress, if temperature and time values can grant that the mix has not been altered during black-out , otherwise a new Pasteurization restarts and the operator receives a warning message (bL OUt).

In the event of a black-out during the cooling phase of pasteurization process, the machine will only repeat the heating cycle if times are longer and thus exceed the temperature ranges given in the table herebelow:

Temperature ranges	Time
85°C to 65°C	1 hour
64°C to 50 °C	30 minutes
49°C to 15°C	10 minutes
14°C to 4°C	20 minutes
from 4°C raises OVER 10°C	or 2 hours

ALL rtA - BEATER THERMAL RELAY TRIPPING
It takes overheating of beater motor; reaching the maximum setting value brings about the machine stop: the machine sets to STOP, and the monitor displays **ALL rtA.**
To reset this alarm, it is necessary to press STOP/RESET and the machine remains in STOP.

ALL rtC - COMPRESSOR THERMAL RELAY TRIPPING
It takes overheating of compressor motor; reaching the maximum setting value brings about the machine stop: the machine sets to STOP, and the monitor displays **ALL rtC.**
To reset this alarm, it is necessary to press STOP/RESET and the machine remains in STOP.

ALL Pr - SAFETY PRESSURE SWITCH TRIPPING
It protects the cooling unit and stops the freezing compressor if there is now water inside the circuit itself (watercooled machines) or if air does not circulate inside the condenser (aircooled machines).
Reset is automatic.
If the pressure switch trips 3 consecutive times 3 or remains open 2 consecutive minutes, the machine will set to STOP and the monitor will display **ALL Pr.**
Check water inlet and outlet pipes so that water can circulate unhindered, when the compressor runs. By aircooled machines, check that condenser fan runs when compressor is on, or that air condenser is not obstructed; in this case, clean it with a bolt of compressed air.

WARNING
Too a long running of compressor or its repeated stops and restarts mean that condensation is not sufficient; check where trouble originates.

ALL IMS - TANK COVER POS. 250 IS OPEN
Whenever one opens the tank cover during the machine operation, the machine will immediately stop and will only restart after closing the tank cover (automatic reset after 2 seconds since cover closing).

ALL IML - NO GLYCOL

Check glycol level and the reason why level sensor tripped.
To restart the machine, it is necessary to restore the maximum level of the coolant (glycol) through the filler.

ALL tEV - Temperature sensor "TEV" interrupted or short-circuited

Check temperature sensor TEV which must be interrupted somewhere on the cable of the sensor itself (wire is broken or element in the sensor bulb is disconnected).
This alarm also occurs when TEVsensor is disconnected from the terminal board in wire box. Connect the wire or replace the sensor.

ALL tEC - Short-circuited temperature sensor "TEC"

Check temperature sensor TEC which must be short-circuited somewhere on the cable, on the connector or on the bulb element of the sensor itself. Eliminate the short circuit, if possible, or replace the sensor.

CLEANOUT, DISASSEMBLING AND REASSEMBLING OF PARTS IN CONTACT WITH PRODUCT

SECTION INDEX

caltabriga

IMPORTANT
Cleanout and sterilization must be carried out at the end of every working day, as a habit and with utmost care in order to guarantee high quality of product and the observance of all healthy rules.

6.1 PRELIMINARY CLEANOUT

With machine still, set it at STOP 

.
Make sure that the dispensing spigot is closed, insert water necessary to wash into the tank by pressing the button SHOWER  .

Press the button BEATING  and leave a few minutes in that position.

Press "STOP".

Drain all water from the tank through the dispensing spigot.

Disassemble the machine parts as described in following paragraphs.

Wash all parts in water.

Reassemble all disassembled parts after lubricating the ORs with a film of edible fat, such as GELILUBE.

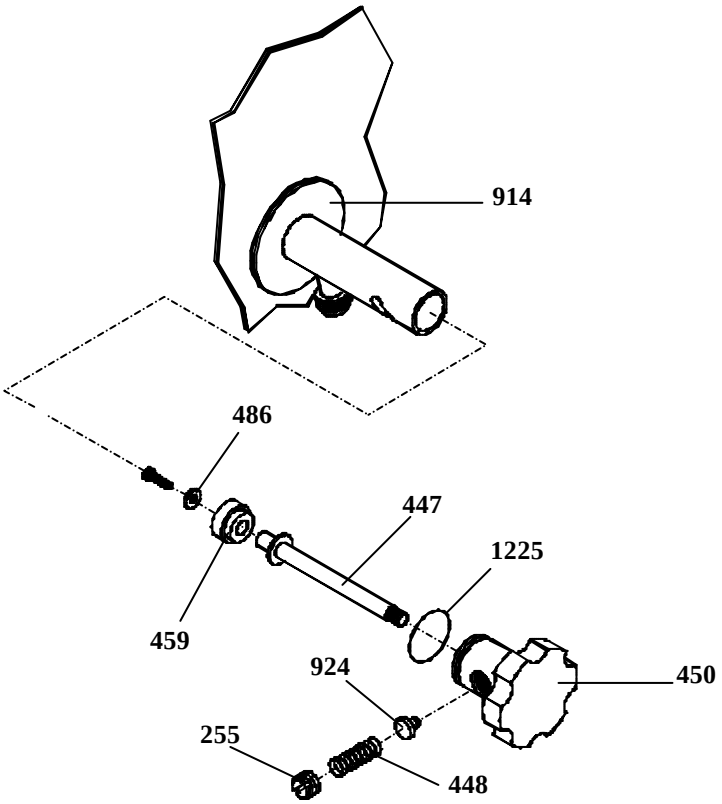
6.2 DISASSEMBLING THE SPIGOT PISTON

Disassemble the spigot knob pos. 450, by turning it anticlockwise.

Disassemble then all other parts of the spigot.

Wash all parts in water using the special brush you can find in the accessories kit.

Reassemble, keeping in mind to lubricate all ORs previously removed.



6.3 DISASSEMBLING THE TANK COVER

Note: *The machine is provided with a safety device on its cover; every time you lift the cover while the machine is running, the machine will stop.*

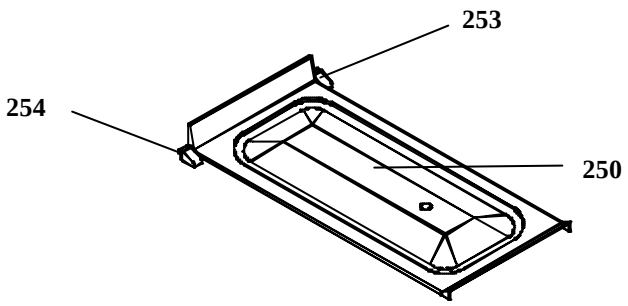
The tank cover pos. 250 is completely removable.

Place the cover vertically; deeply push on cover pos. 250 until a pin comes out.

Withdraw the cover by lifting it vertically and pushing forward on the fixed hinges 253-254..

NOTE: One can also remove just the cover by taking it out from fastening hinges which will remain fastened to the machine.

Wash the whole thoroughly and reassemble.



Psk kel-1 65

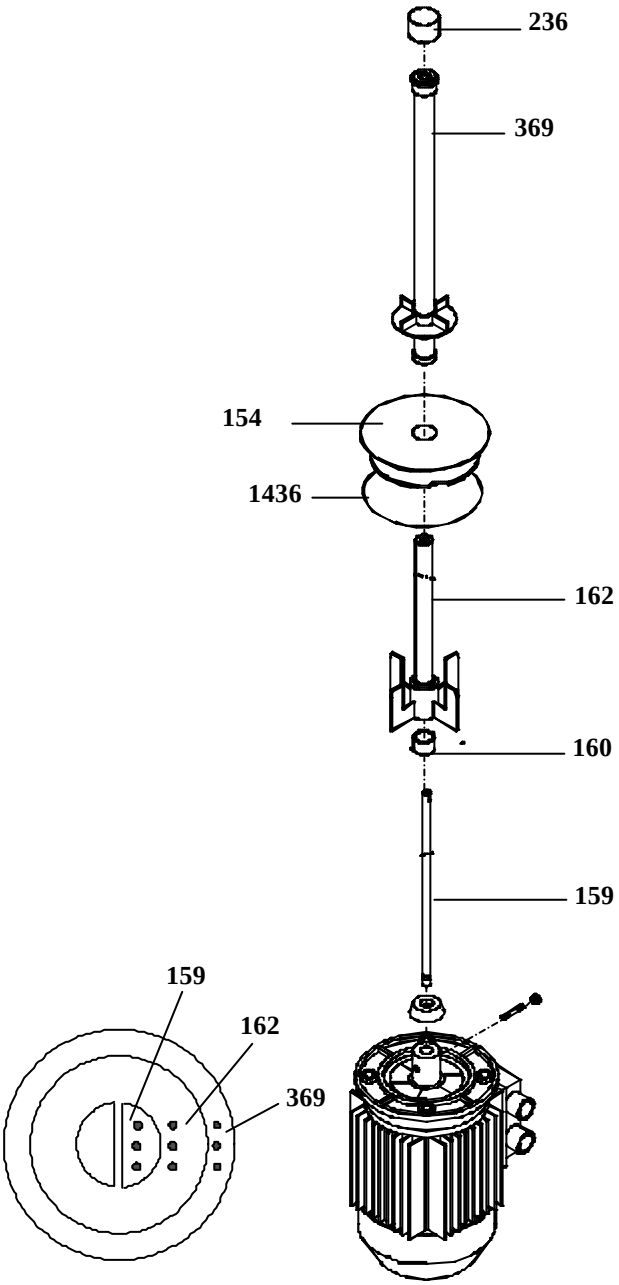
6.4 DISASSEMBLING THE BEATER

Remove cover pos. 236 and beater pos. 162 by slightly pulling upwards and minding not to damage the blades.

WARNING
Act with utmost care, as a fall to the ground might damage the beater.

Disassemble all other beater parts.

Wash the beater parts and reassemble them following the reverse procedure.



Psk Kel-1 65

CAUTION
Pumchings on Nr 159 shaft, Nr 162 fan and Nr 369 beater must always agree with the same half.

6.5 STERILIZATION

With machine off, after reassembling beater and cover, and checking that spigot pos. 505 is closed, fill the tank with a NON CORROSIVE sterilizing solution.

Press the button BEATING  and let the beater run one minute.

WARNING

Too a long running in "BEATING" position with empty tank or just filled with water and sterilizing solution, brings about a quick wear of the beater .

Drain all sterilizing solution by opening the spigot.

WARNING

Before starting again with production, rinse thoroughly with just water, in order to remove any residue of sterilizing solution.

ATTENTION

Do not touch the sterililzed parts with hands, napkins, or else.

6.6 HYGIENE

Mix fat contents are ideal fields for proliferation of mildew and bacteria.
To eliminate them, parts in contact with mixes and creams must be thoroughly washed and cleaned.
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 and bacteria if not properly cleaned.

MAINTENANCE

SECTION INDEX

cattabriga

7.1 SERVICING TYPOLOGY

ATTENTION

Any servicing operation requiring the opening of machine panels must be carried out with machine set to stop and disconnected from main switch!

Cleaning and lubricating moving parts is forbidden!

Repairs of electrical and freezing plants must be carried out by skilled engineers!

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 of beater assembly**
  At the end of a working day
- **Cleanout of panels**
  To be carried out daily with neutral soap , seeing to it that no cleansing solution reaches the beater assembly at its inside.
- **Cleanout and sterilization**
  At the end of every working day, according to procedures described in section 6.

WARNING

Never use abrasive sponges to clean machine and its parts, as you might scratch their surfaces.

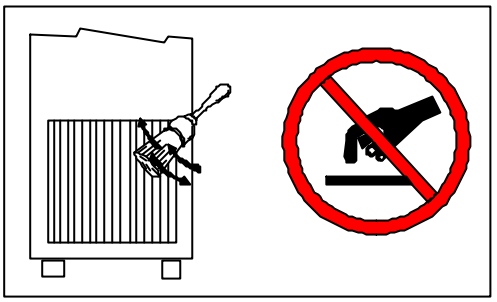
7.2 WATERCOOLING

By machines with watercooled condenser, water must be drained from condenser at the end of selling season in order to avoid troubles in the event that the machine is stored in rooms where temperature may fall under 0°C.

- After closing water inlet pipe, disconnect the drain drain pipe from its seat and let water flow out from circuit.

7.3 AIRCOOLING

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



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

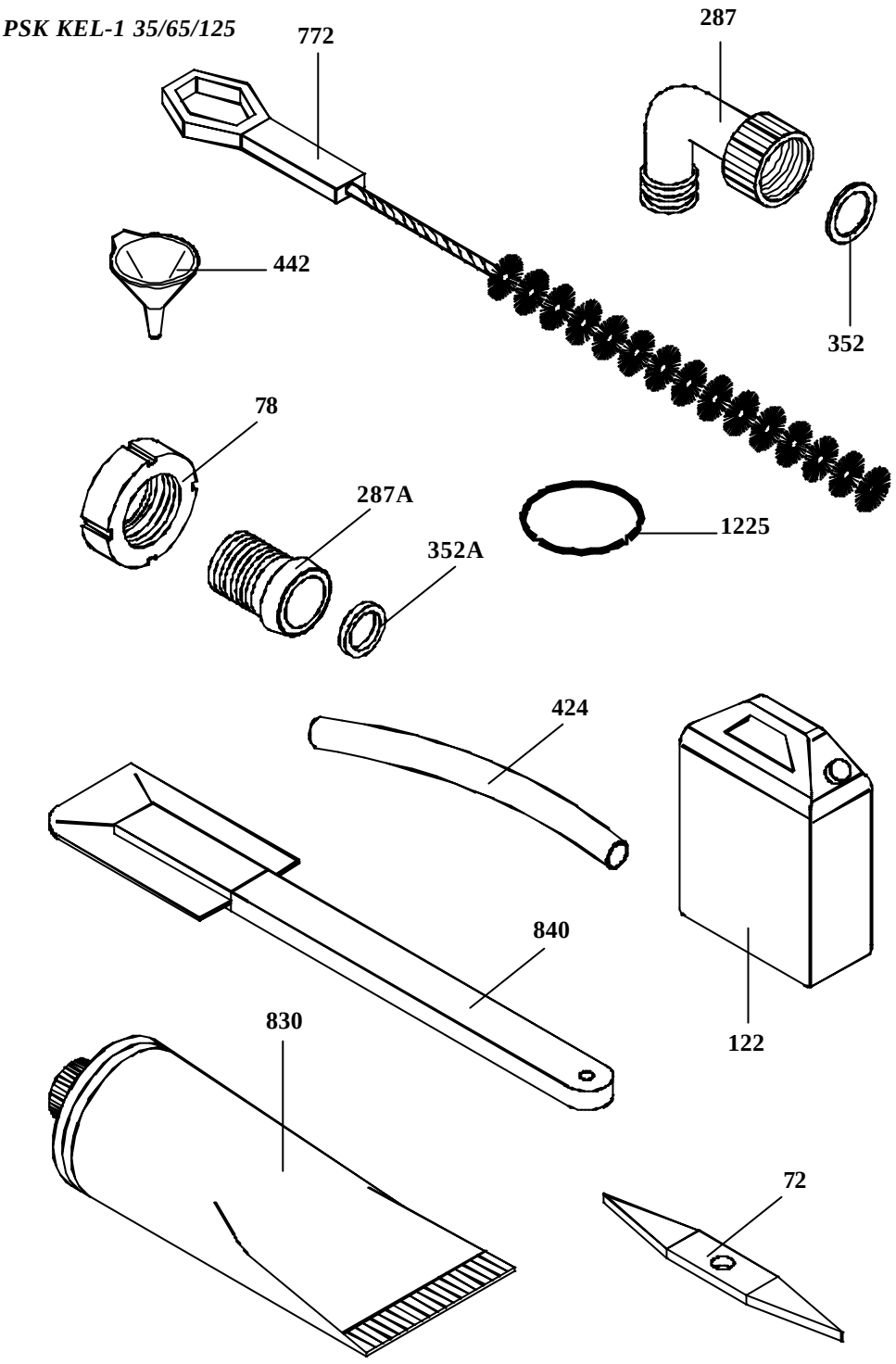
NEVER USE SHARP METAL OBJECTS TO CARRY OUT THIS OPERATION. GOOD WORKING OF A FREEZING PLANT MOSTLY DEPENDS ON CLEANING OF CONDENSER.

7.4 ORDERING SPARE PARTS

In the event of breaking or wear of one or more parts, request the new ones directly to the local Distributor, who will provide repair and replacement through original **CATTABRIGA** spare parts.

7.5 TABLE OF EQUIPMENT

PSK KEL-1 35/65/125



Q.tà	Descrizione	N° Posizione
N°1	OR extractor	72
N°1	Ring nut 121.D15/000.4	78
N°1	Full tank	122
N°3	Rubber pipe fitting 3/4 FDX.16	287
N°3	Pipe fitting 144.D15/000.4	287A
N°3	Pipe fitting gasket	352
N°3	Gasket 131.D15/000.S	352A
N°1	Hose	424
N°1	Funnel	442
N°1	Swab D 30x640	772
N°1	Petrol-Gel tube	830
N°1	Cleaning brush	840
N°2	OR	1225

TROUBLESHOOT GUIDE

SECTION INDEX

cattabriga

8 TROUBLESHOOT GUIDE

Trouble	Possible cause	Advised cures
Machine does not turn on	Supply mains	Check the supply mains
Control unit does not turn on	Connection cable	Check connection, connector control unit-card and cable
	Fuse on secondary circuit of transformer is burnt	Replace the fuse (F2A)
	8-pin connector is disconnected	Connect 8-pin connector
	CPU	Replace CPU
Control unit does not accept a function button	Control unit	Replace the control unit. Call after-sale service
Control unit is completely off and no function starts when pressing the buttons.	Eprom not installed or installed from wrong side	Install Eprom correctly
	Control unit and/or CPU	Replace control unit and/or CPU
Icing inside the tank	Product does not exchange properly	Check sensors setting
Heating does not start (resistances not activated)	Faulty sensor	Using pasteurization button, check, from beating, temperatures of TEC and TEV sensors. Replace the sensor not to scale
	Resistance disconnected	With machine off, check the resistance in Ohm at the terminals of heating elements. If there is no resistance in ohm, it is necessary to replace the spigot body.