

USER AND MAINTENANCE MANUAL DIGITAL VERSION

- Capri 114/118
- Firenze 118
- Portofino 214
- Rome 218



Manufacturer of this appliance is
S.P.M. Drink Systems S.p.A. – Via Panaro 2/b 41057 Spilamberto (MO)

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The descriptions and illustrations refer to the specific machine/plant in question. The manufacturer reserves the right to make any modifications he deems appropriate to series production at any time.

This manual:

it is an integral part of the supply and must be read carefully in order to use it correctly, in compliance with the essential safety requirements;

it is drawn up according to the provisions of the Machinery Directive 2006/42/EC and contains the technical information necessary to correctly carry out all the procedures in safe conditions;

it must be stored with care (protected in a transparent and watertight casing to prevent deterioration) and must accompany the machine throughout its life, including any change of ownership. In the event of loss or deterioration, a copy can be obtained by requesting the manufacturer, reporting the data on the identification plate

The manufacturer declines all responsibility for improper use of the machine/plant and/or for damage caused as a result of operations not covered in this manual.

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1. PREFACE AND SAFETY INSTRUCTIONS

1.1. INSTRUCTION MANUAL

The drafting of this manual takes into account the EU directives for the harmonisation of safety standards and for the free movement of industrial products in the E.C. (E.E.C. Council Directive 89/392 and following, known as the Machinery Directive).

1.2. PURPOSE

This manual has been prepared taking into account the knowledge requirements of the user in possession of the machine.

The topics relating to correct use of the machine were analysed to maintain the quality characteristics that distinguish the manufacturer.

The relevant part of the manual refers to the conditions required for use and mainly to the behaviour to be adopted during interventions concerning ordinary and extraordinary cleaning and maintenance operations.

However, the manual cannot exhaust every possible need in detail; in case of uncertainty or insufficient information, contact the manufacturer.

1.3. MANUAL ORGANISATION

The manual is structured into sections, chapters and sub-chapters for simple consultation and to easily locate the topics of interest.

Each person assigned to use of the machine must have read and fully understood the parts of the manual of relevance to them and in particular:

- The operator must have read the chapters regarding the commissioning and operation of the machine groups.
- The qualified technician assigned to installation, maintenance, repair, etc. must have read all parts of the manual.

1.4. ADDITIONAL DOCUMENTATION

Together with the instruction manual, each machine is supplied with the following additional documentation:

-Installation instructions

Installation instructions for machine model

-Spare parts supplied

List of components provided together with the simple maintenance machine.

- Wiring diagram

Wiring diagram inserted in the machine

- Seals use guide:

Visual diagram of the seals contained in the spare parts.

ATTENTION

Before operating on the machines, read the instruction manual carefully

1.5. CONVENTIONAL SYMBOLOGY



ATTENTION DANGER OF ELECTRIC SHOCK

It warns the personnel concerned that the described operation presents the risk of suffering an electric shock if not carried out in compliance with the safety regulations.



ATTENTION, GENERAL DANGER

It reports to the personnel concerned that the described operation presents the risk of suffering physical harm if not performed in compliance with the safety regulations.



NOTE

It reports to the personnel concerned, information whose content is of significant consideration or importance.



WARNINGS

It reports to the personnel concerned information whose content if not respected can cause data loss or damage to the machine.



MACHINE OPERATOR

It identifies unqualified personnel, that is, persons without specific skills, capable of performing only simple tasks, and namely, operating the machine through the use of the controls located on the push-button panel and loading and unloading of the products used during production.



MAINTENANCE TECHNICIAN

Qualified technician able to operate the machine in normal conditions, to intervene on the mechanical parts to perform all the necessary adjustments, maintenance and repairs. They are qualified to work on electrical and refrigeration systems.



AUTHORIZED TECHNICIAN

A qualified technician made available by the manufacturer to carry out complex operations in particular situations or in any case as agreed with the user.



PERSONAL PROTECTION

The presence of the symbol next to the description requires the use of personal protections by the operator as the risk of injury is implicit.

1.6. WARNINGS

When installing the machine, provide for the installation of a differential thermal magnetic circuit breaker for disconnection of all the poles of the line, correctly sized to the absorption power indicated on the identification plate of the machine and with contact opening of at least 3 mm.

- Never intervene in the machine with your hands, both during manufacturing and during cleaning. For maintenance, first make sure that the machine is in the **STOPPED** position and the main switch is disconnected.
- It is forbidden to wash the machine with a pressurised jet of water.
- It is forbidden to remove the plates to gain access to the inside of the machine before having disconnected the voltage.
- Manufacturer is not responsible for accidents that may occur during the use, cleaning and maintenance of their machines due to non-compliance with the specified safety standards

1.7. SAFETY INSTRUCTIONS

This use and installation manual is an integral part of the appliance and must be kept for any consultation. Unless otherwise indicated, this manual is intended for the operator (personnel who use the appliance daily) and for the maintenance technician (qualified installation and/or maintenance personnel). The parts of the manual intended only for the maintenance technician will be suitably highlighted. Read the warnings contained in this manual carefully before installing and using the appliance.

This appliance has been designed for the production of soft ice creams and similar products prepared by mixing water or milk with powdered products. Once the mix to be introduced into the machine has been prepared, never exceed the following maximum quantities for each side of dispensing:

Model	Pump version (litres)	Gravity version (litres)
Capri114	1.95+8	1.95+12
Capri118	1.95+11	1.95+13
Portofino214	1.95+8	1.95+12
Firenze118	1.95+11	1.95+13
Roma218	1.95+11	1.95+13

Upon receipt of this appliance, make sure that its identification code matches the one you ordered and always shown on the transport documents, namely:
- "appliance name" followed by the progressive serial number.

This appliance is intended solely and exclusively for the use for which it was designed and the manufacturer cannot be held responsible for any damage caused by improper use.

This appliance is not intended for use by children under the age of 8 years and by persons with reduced physical, sensory or mental abilities, or lacking in experience and knowledge, unless they have been supervised or instructed regarding the use of the appliance by a person responsible for their safety. Children should be supervised to make sure they do not play with the appliance.

Cleaning and sanitisation operations cannot be carried out by children unless they are carefully supervised.

This appliance is not suitable for outdoor use. This appliance is not suitable for installation in places where a jet of water can be used and it must not be cleaned with water jets.

This appliance must be installed in places where it can be checked by qualified personnel.

Do not store flammable gas cylinders inside this equipment.

This equipment has been designed for applications such as:

- Kitchen areas for staff in shops, offices or other working environments;
- Common areas in hotels, motels or other residential environments in general;
- Bed and breakfast establishments
- Catering and similar applications

Place the appliance on a horizontal and solid surface making sure that the body of the appliance is well ventilated (at least 20 cm of free space, fig. 1); install the appliance in a dry environment and avoid installing it near sources heat. The ambient temperature of use of the machine must be between 24°C and 38°C.

It is essential, for correct and safe installation, to provide a dedicated socket controlled by a magneto thermic switch with contact opening distance equal to or greater than 3mm, in compliance with the current national safety regulations.

If the power cable is damaged, it must be replaced by the manufacturer or by its assistance service or in any case by a person with a similar qualification, in order to prevent any risk.

- ATTENTION: do not place multiple portable sockets or portable power supplies on the back of the appliance.
- ATTENTION: when positioning the appliance, check that the power cable is not blocked or damaged.

The equivalent, weighted continuous sound pressure level is less than 70 dB.

This manual is also available in an alternative format on our website www.spm-ice.it.

1.8. CLEANING AND SANITISATION OPERATIONS

In order to always ensure good functioning of the appliance and to comply with the current health regulations, it is essential to frequently and thoroughly carry out the cleaning and sanitising operations described below, always making sure that the person assigned to such operations has previously washed and sanitised their hands and forearms.

In the event of prolonged inactivity of the appliance (seasonality) always carry out these operations before putting the machine back into operation.

!Attention!

In order to avoid risks of electric shock, during cleaning operations, do not spray water on the switches and avoid a situation whereby the internal electrical components come into contact with the water and products used.

!Attention!

To prevent the formation of bacteria, use only products approved for the disinfection of plastic and rubber objects; failure to comply with these procedures can cause health risks.

N. B.: it is the user's responsibility to be aware of current regulations in order to comply with federal, state or local laws, in terms of the frequency of cleaning and storage of the products used.

The procedures described below are essential to prevent the formation of bacteria and thus to keep the machine in excellent hygienic conditions.

It is advisable to carry out these procedures daily and in any case always respecting the regulations in force.

Neither the manufacturer of the machine nor the manufacturer of the food preparation introduced into it can be held responsible for any damage that may directly or indirectly be suffered by persons as a result of failure to comply with all the provisions indicated in this manual and especially concerning the warnings on cleaning and sanitising the appliance.

Before putting the machine into operation for the first time, it is necessary to carefully clean its component parts and to sanitise the parts in contact with the ice cream.



IMPORTANT

Cleaning and sanitisation are operations that must be carried out habitually at each end of production with the utmost care to ensure the quality of production and in compliance with the necessary hygiene standards



1.8.1. Preliminary wash

1. Fill the two tanks with water, adding detergent solution.



2. Select on the Touch Screen the "WASH CYCLE" function

3. Lower the dispenser lever and let all the water contained in the tanks drain out.

4. Regarding the disassembly of the machine parts, see the instructions described in the section "Cleaning, disassembly and reassembly of the parts in contact with the product".

IMPORTANT

Do not leave the washing cycle function on for more than 5 minutes



1.8.2. Sanitisation

Have available a common product suitable for the disinfection of stainless steel, plastic and **NON-CORROSIVE** rubber objects (2% Sodium Hypochlorite).



With the machine stopped, with the dispenser levers closed, fill the two tanks with water and also insert a quantity of sanitising solution.



Select on the Touch Screen the "WASH CYCLE" function

WARNING

Prolonged operation in the "WASH CYCLE" position with the cylinder empty or with water and sanitising agent inside causes wear of the auger



Leave the machine running only for the time necessary for these operations (recommended time 10/15 seconds).

Drain out the sanitising solution completely through the product extraction taps.

Note: it is advisable to rinse with running water before actually putting the machine into operation

ATTENTION

Do not touch the sanitised parts with your hands, wipes or anything else.



1.8.3. Hygiene

The fat contained in ice cream are ideal fields for the proliferation of mould, bacteria etc. To eliminate them, the parts in contact with the mixture and ice cream must be washed and cleaned with the utmost care as indicated above.





The stainless materials, the plastic materials and the rubbers used in the construction of these parts and their particular shape facilitate cleaning, but do not prevent the formation of mould etc., in case of insufficient cleaning.

IMPORTANT

Cleaning and sanitisation are operations that must be carried out habitually at each end of production with the utmost care in order to guarantee the quality of production and in compliance with the necessary hygiene standards.





1.8.4. Pump machine cleaning



1. Start "wash cycle" , discharge the remaining product using the pump suction with a spatula; close the regulator and select "off" , release the delivery pipe and remove the pump unit.
2. Loosen the tank fitting, pour water into the tank, washing all the surfaces thoroughly
3. Select "wash cycle" , open the dispenser and empty the tank.
4. Close the dispenser and select "off" 
5. Carry out the rinsing operation with water and sanitiser for several cycles; end the rinse when the waste water becomes clean.
6. Loosen the dispenser knobs, remove the dispenser and then the auger
7. Clean the batch freezing cylinder both inside and outside.
8. Remove the pump unit and the delivery unit (paragraph 1.8.7, paragraph 1.8.6)
9. Wash the components in the dishwasher or manually.
10. Assemble the pump unit with all the components and the delivery unit using the "seal guide" supplied (paragraph 1.8.7, paragraph 1.8.6)
11. Insert the auger into the cylinder with the relative GLAND (paragraph 1.8.9)
12. Insert the dispensing unit and tighten the knobs.
13. Tighten the fitting on the bottom of the tank, insert the pump unit and connect the delivery pipe

1.8.5. Gravity machine cleaning

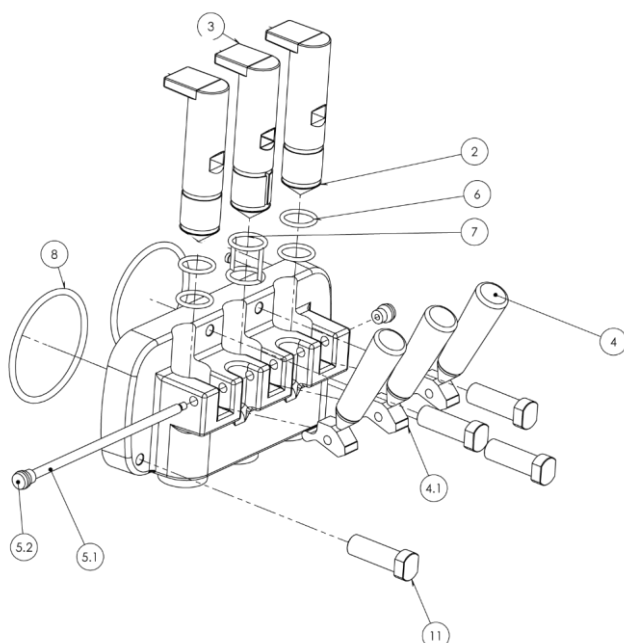


1. Start the "wash cycle" , discharge the remaining product facilitating the passage of the mixture through the gravity piston with a spatula; close the regulator and select "off" , unscrew the gravity piston.
2. Pour water into the tank, thoroughly washing all the surfaces.
3. Select "wash cycle" , open the dispenser and empty the tank.
4. Close the dispenser and select "off" .
5. Carry out the rinsing operation with water and sanitiser for several cycles; end the rinse when the waste water becomes clean.
6. Loosen the dispenser knobs, remove the dispenser and then the auger
7. Clean the batch freezing cylinder both inside and outside.
8. Remove the gravity piston and the delivery unit (paragraph 1.8.7, paragraph 1.8.6)
9. Wash the components in the dishwasher or manually.
10. Assemble the gravity piston with all the components and the delivery unit using the supplied " seal guide " (paragraph 1.8.7, paragraph 1.8.6)
11. Insert the auger into the cylinder with the relative PRESSER (paragraph 1.8.9)
12. Insert the dispensing unit and tighten the knobs.
13. Tighten the gravity piston onto the bottom of the tank.

1.8.6. Dismantling the dispensing unit (1 flavour or 2+mix machine)

To disassemble the nozzle proceed as follows:

- Loosen the knobs pos.11;
- Remove the pistons pos.3 and the piston pos.2;
- Loosen the dispenser rod knob pos.5.2 and remove the dispenser rod pos.5.1
- Remove the dispenser levers pos.4
- Remove all the ORs using the appropriate extractor, wash them thoroughly and grease them with vegetable type grease



ATTENTION

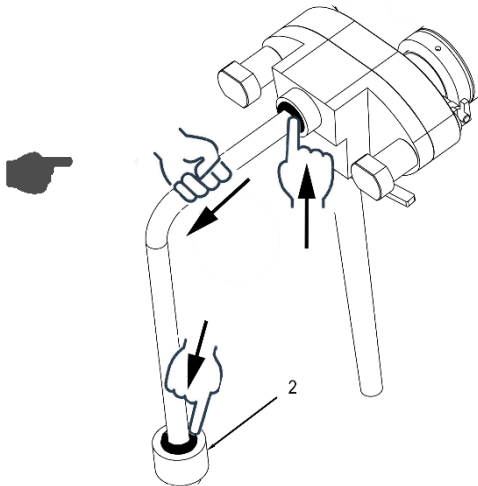
To assemble the dispensing unit onto the machine, tighten the diametrically opposite knobs at the same time in order to achieve a perfect seal



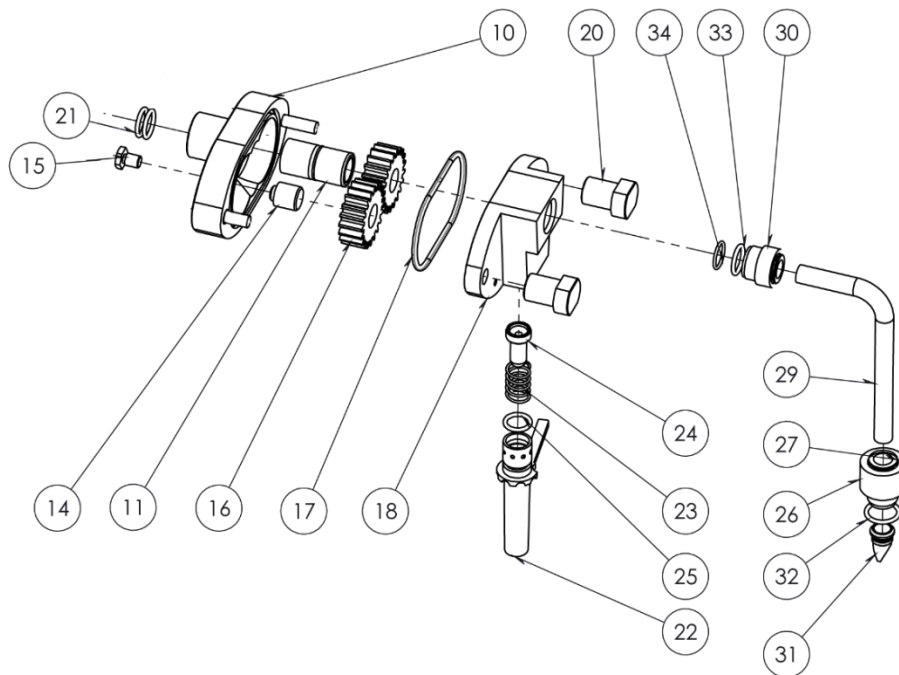
1.8.7. Dismantling the pump unit (pump machines only)

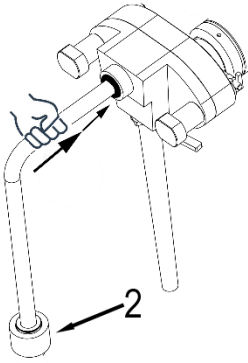


ATTENTION
Depressurised cylinders and the control selectors on "off"



1. Disconnect the delivery pipe from the pump using the quick release technology by simultaneously pressing the dark collar inwards and with the other hand remove the pipe.
2. Rotate the pump unit 45° and remove it from the transmission flange
3. Proceed with disassembly of the pump unit and all its components.
4. Remove the delivery pipe from the tank fitting pos. 1
5. Loosen the tank fitting
6. Wash all the components in the dishwasher or manually.
7. Reassemble all the components proceeding in the reverse order of the disassembly operations, lubricating the ORs with the food grease supplied.
8. Insert the pump unit inside the transmission flange and turn the pump unit anti-clockwise until it locks on the locking pin





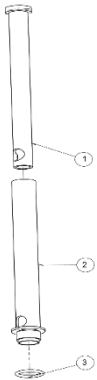
ATTENTION

When inserting the delivery pipe in the pump and in the tank fitting, always be sure to obtain two "clicks" signalling locking of the pipe and manually check the tightness of the pipe.

Grease the thread of the tank fitting pos.2 with food grease and slowly tighten the fitting onto the bottom of the tank.



1.8.8. Removing the product air regulation pipe (gravity machines only)



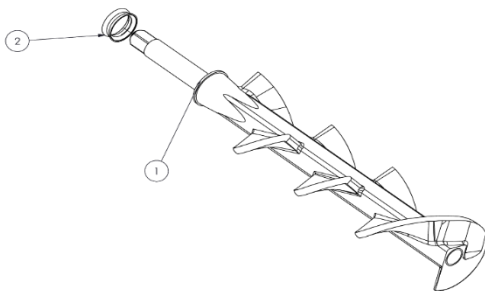
To disassemble the gravity piston proceed as follows:

1. Extract the piston pos.1
2. Loosen the fixed rod pos.2
3. Extract the OR pos.3
4. Wash all the components in the dishwasher or manually
5. Assemble all the components by reversing the disassembly operations.



1.8.9. Auger disassembly (for monobloc model)

1. After removing the nozzle, proceed with removal of the auger.
2. Remove the auger by pulling it gently outwards, taking care not to damage it.



WARNING

Carry out the operation with great care, as possible falling of the auger to the ground could damage it.



3. Remove the gland pos.2 from its seat on the auger and check its state of wear.
4. Wash all parts in water, lubricate the gland with food grease and reassemble all the dismantled parts.

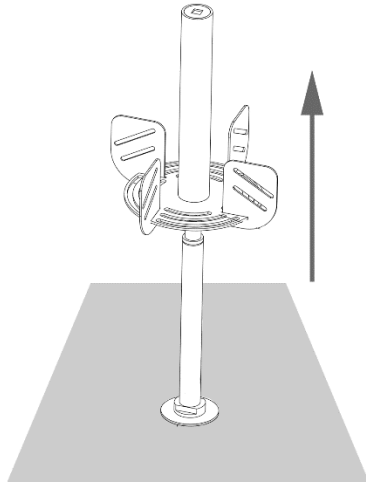
1.8.10. Gland control

When disassembling the gland, check for defects.

If there are no signs of defects, after washing the gland and having greased it adequately, it can be reused.

However, if at the end of the distribution traces of ice cream are found inside the drip tray, it is advisable to replace the gland because it is probably worn and leaking.

1.8.11. Dismantling the emulsifier




ATTENTION

Before disassembling the emulsifier, check that the switch on the back of the machine is "off"

1. Pull the rotary unit upwards
2. Wash the rotary unit in the dishwasher or manually
3. Proceed with reassembly

1.8.12. Sanitisation

1. With the machine stopped, with the dispensing unit closed, fill the two tanks with water and also insert **NON-CORROSIVE** sanitising solution.

2. Place the selector in the "wash cycle" position 

WARNING

Prolonged operation in the "wash cycle" position with the cylinder empty or with water with dissolved sanitising inside causes rapid wear of the stirrer



3. Leave the machine running only for the time necessary for these operations (recommended time 10/15 seconds).
4. Discharge the sanitising solution completely through the ice cream dispensing unit.

Note: it is advisable to rinse with running water before putting the machine into operation definitively.

ATTENTION

Before using the machine again to make ice cream, rinse thoroughly with water only to remove any sanitising residue.





2. GENERAL INFORMATION

2.1. GENERAL INFORMATION

2.1.1. Manufacturer identification data

The machine is equipped with an identification plate showing the manufacturer's data, the type of machine and the identification number assigned at the time of manufacture.

 DRINK SYSTEMS MADE IN ITALY		SPM DRINK SYSTEMS S.p.A. Via Canaro 2/b 41057 Spilamberto (MO) - Italy e-mail: info@spm-ice.it tel / fax: +39 059 789811 / +39 059 781761	
MATRICOLA / SERIAL NUMBER	180214KGC053M001		
ALIMENTAZIONE / VOLTAGE [V/ph/Hz]	220 - 240 / 1 / 50		
Pn [kW]	2,5		
I _{max} [A]	15,5		
GAS [gas / g]	R404A / 900		
MODELLO / MODEL	CAPRI PLUS 109 M W		
			

G

C

A

D

E

F

B

A = serial number B = machine model C = supply voltage
 D = amperage E = type and quantity of gas F = frequency G = power

2.1.2. Information on maintenance assistance

Routine maintenance operations are illustrated in the "Maintenance" section of this instruction manual; any other operation that requires radical interventions to be carried out on the machine must be agreed with the manufacturer who will agree on the possibility of its own direct intervention on site.

2.1.3. Information for the user relationship

- The manufacturer of the machine described in this manual is available for any clarification and information that may be required by the user regarding operation or any improvements to be made to the machine.
- The interlocutor concerned for any consultancy will be the distributor possibly present in the country of the user or the manufacturer if there is no right to make any changes.
- The descriptions and illustrations contained in this manual are not binding.
- All reproduction rights of this manual are reserved to the manufacturer.

2.2. MACHINE INFORMATION

2.2.1. General information

The manufacturer recommends always using in the production of ice cream a mixture of primary quality and choice, to satisfy your customers, even the most demanding ones. Any savings made in the mixture used at the expense of quality will undoubtedly result in a loss far greater than what was saved.

Given the above, the following recommendations are made:

- Make the mixture yourself with natural products of impeccable quality or obtain mixes from professional and trustworthy companies.
- Strictly follow the mixture preparation instructions that are provided to you by the supplier.
- Do not modify recipes by adding, for example, a greater quantity of water or sugar.
- Taste the ice cream yourself and put it on sale only if you are fully satisfied.
- Instruct your staff to always keep the machine clean.
- For any repairs that may become necessary, always contact the Manufacturer assistance centres present nationally.

2.2.2. Technical features

All the machines in the range are listed below

STANDARD SPECIFICATIONS	CAPRI PLUS 114	CAPRI PLUS 118
Capacità vasca - Tank capacity (l) <i>netto per modello con pompa - net for pump model</i>	12 8	13 11
Capacità cilindro - Cylinder volume (l)	1,95	1,95
Telaio - Frame	Completamente smontabile <i>Disassemblable</i>	Completamente smontabile <i>Disassemblable</i>
Condensazione - Condensation	Aria - Air	Aria - Air
Sistema di produzione - Production system	Pompa o gravità - <i>Pump or gravity</i>	Pompa o gravità - <i>Pump or gravity</i>
Sistema di controllo e funzionamento <i>Control System</i>	Elettromeccanico o Elettronico con touch screen <i>Electromechanical or Electronical with touch screen</i>	Elettromeccanico o Elettronico con touch screen <i>Electromechanical or Electronical with touch screen</i>
Produzione oraria coni da 75 gr <i>75 gr cones hourly production</i>	280 pz versione a pompa <i>280 pcs pump version</i> 230 pz versione a gravità <i>230 pcs gravity version</i>	280 pz versione a pompa <i>280 pcs pump version</i> 240 pz versione a gravità <i>240 pcs gravity version</i>
Dimensioni (LxPxA) - Dimensions (WxDxH) (cm)	469 x 704 x 791	465 x 706 x 850
Peso - Weight (kg)	da 107 a 120 - <i>from 107 to 120</i>	da 127 a 140 - <i>from 127 to 140</i>
Imballo (LxPxA) - Packaging (WxDxH) (cm)	530 x 800 x 1010	530 x 800 x 1090
Peso Imballo - Packaging Weight (kg)	da 117 a 130 - <i>from 117 to 130</i>	da 137 a 150 - <i>from 137 to 150</i>
Potenza Nominale - Rated Output Pn* [kW]	380/415 V 3PH = 2,0 220/240 V 1PH = 2,5	380/415 V 3PH = 2,0 220/240 V 1PH = 2,5
Corrente Massima Assorbita - Maximum Absorbed Power I* [A]	380/415 V 3PH = 7,5 220/240 V 1PH = 18,00	380/415 V 3PH = 7,5 220/240 V 1PH = 18,00
Gas refrigerante - Refrigerating gas	R 452 a	R 452 a
Cilindro di mantecazione - Freezing cylinder	Possibilità di settaggio del livello di consistenza del prodotto <i>Different settings of product consistency level</i>	Possibilità di settaggio del livello di consistenza del prodotto <i>Different settings of product consistency level</i>
Risparmio energetico - Energy saving	Con regolazione dei tempi di produzione / <i>By production time regulation</i>	Con regolazione dei tempi di produzione / <i>By production time regulation</i>

STANDARD SPECIFICATIONS	POMPA - PUMP	GRAVITÀ - GRAVITY
Capacità vasca - Tank capacity (l)	2 x 8	2 x 12
Capacità cilindro - Cylinder volume (l)	2 x 1,95	2 x 1,95
Telaio - Frame	Completamente smontabile Disassemblable	Completamente smontabile Disassemblable
Condensazione - Condensation	Aria - Air	Aria - Air
Sistema di produzione - Production system	Pompa - Pump	Gravità - Gravity
Sistema di controllo e funzionamento Control System	Elettromeccanico o Elettronico con touch screen Electromechanical or Electronical with touch screen	Elettromeccanico o Elettronico con touch screen Electromechanical or Electronical with touch screen
Produzione oraria coni da 75 gr 75 gr cones hourly production	280 pz - 280 pcs	240 pz - 240 pcs
Dimensioni (LxPxX) Dimensions (WxDxH) (cm)	570 x 755 x 931	570 x 755 x 931
Peso - Weight (kg)	da 177 a 201 - from 177 to 201	da 177 a 201 - from 177 to 201
Imballo (LxPxX) Packaging (WxDxH) (cm)	630 x 860 x 1180	630 x 860 x 1180
Peso Imballo Packaging Weight (kg)	da 192 a 217 - from 192 to 217	da 192 a 217 - from 192 to 217
Potenza Nominale - Rated Output Pn* [kW]	380/415 V 3PH = 3,6 220/240 V 1PH = 4,4	380/415 V 3PH = 3,6 220/240 V 1PH = 4,4
Corrente Massima Assorbita - Maximum Absorbed Power I* [A]	380/415 V 3PH = 13,50 220/240 V 1PH = 31,00	380/415 V 3PH = 13,50 220/240 V 1PH = 31,00
Gas refrigerante - Refrigerating gas	R 452 a	R 452 a
Cilindro di mantecazione - Freezing cylinder	Possibilità di settaggio del livello di consistenza del prodotto Different settings of product consistency level	Possibilità di settaggio del livello di consistenza del prodotto Different settings of product consistency level
Risparmio energetico - Energy saving	Con regolazione dei tempi di produzione By production time regulation	Con regolazione dei tempi di produzione By production time regulation
Colori standard - Standard Colors	Nero o bianco - Black or white	Nero o bianco - Black or white

STANDARD SPECIFICATIONS	POMPA - PUMP	GRAVITÀ - GRAVITY
Capacità vasca - Tank capacity (l)	11	13
Capacità cilindro - Cylinder volume (l)	1,95	1,95
Telaio - Frame	Completamente smontabile Disassemblable	Completamente smontabile Disassemblable
Condensazione - Condensation	Aria - Air	Aria - Air
Sistema di produzione - Production system	Pompa - Pump	Gravità - Gravity
Sistema di controllo e funzionamento Control System	Elettromeccanico o Elettronico con touch screen Electromechanical or Electronical with touch screen	Elettromeccanico o Elettronico con touch screen Electromechanical or Electronical with touch screen
Produzione oraria coni da 75 gr 75 gr cones hourly production	370 pz - 370 pcs	310 pz - 310 pcs
Dimensioni (LxPxA) - Dimensions (WxDxH) (cm)	469 x 704 x 1534	469 x 704 x 1534
Peso - Weight (kg)	da 146 a 160 - from 146 to 160	da 146 a 160 - from 146 to 160
Imballo (LxPxA) - Packaging (WxDxH) (cm)	530 x 800 x 1760	530 x 800 x 1760
Peso Imballo - Packaging Weight (kg)	da 160 a 173 - from 160 to 173	da 160 a 173 - from 160 to 173
Potenza Nominale - Rated Output Pn* [kW]	380/415 V 3PH = 2,1 220/240 V 1PH = 2,6	380/415 V 3PH = 2,1 220/240 V 1PH = 2,6
Corrente Massima Assorbita - Maximum Absorbed Power I* [A]	380/415 V 3PH = 7,5 220/240 V 1PH = 18,00	380/415 V 3PH = 7,5 220/240 V 1PH = 18,00
Gas refrigerante - Refrigerating gas	R 452 a	R 452 a
Colori standard - Standard Colors	Nero o bianco - Black or white	Nero o bianco - Black or white
Cilindro di mantecazione - Freezing cylinder	Possibilità di settaggio del livello di consistenza del prodotto Different settings of product consistency level	Possibilità di settaggio del livello di consistenza del prodotto Different settings of product consistency level
Risparmio energetico - Energy saving	Con regolazione dei tempi di produzione / By production time regulation	Con regolazione dei tempi di produzione / By production time regulation

STANDARD SPECIFICATIONS	POMPA - PUMP	GRAVITÀ - GRAVITY
Capacità vasca - Tank capacity (l)	2 x 11	2 x 13
Capacità cilindro - Cylinder volume (l)	2 x 1,95	2 x 1,95
Telaio - Frame	Completamente smontabile Disassemblable	Completamente smontabile Disassemblable
Condensazione - Condensation	Aria - Air	Aria - Air
Sistema di produzione - Production system	Pompa - Pump	Gravità - Gravity
Sistema di controllo e funzionamento Control System	Elettromeccanico o Elettronico con touch screen Electromechanical or Electronical with touch screen	Elettromeccanico o Elettronico con touch screen Electromechanical or Electronical with touch screen
Produzione oraria coni da 75 gr 75 gr cones hourly production	650 pz - 650 pcs	560 pz - 560 pcs
Dimensioni (LxPxA) Dimensions (WxDxH) (cm)	558 x 706 x 1534	558 x 706 x 1534
Peso - Weight (kg)	da 196 a 221 - from 196 to 221	da 196 a 221 - from 196 to 221
Imballo (LxPxA) Packaging (WxDxH) (cm)	800 x 910 x 1760	800 x 910 x 1760
Peso Imballo Packaging Weight (kg)	da 216 a 241- from 216 to 241	da 216 a 241- from 216 to 241
Potenza Nominale - Rated Output Pn* [kW]	380/415 V 3PH = 3,8 220/240 V 1PH = 4,5	380/415 V 3PH = 3,8 220/240 V 1PH = 4,5
Corrente Massima Assorbita - Maximum Absorbed Power I* [A]	380/415 V 3PH = 14,00 220/240 V 1PH = 32,00	380/415 V 3PH = 14,00 220/240 V 1PH = 32,00
Gas refrigerante - Refrigerating gas	R 452 a	R 452 a
Cilindro di mantecazione - Freezing cylinder	Possibilità di settaggio del livello di consistenza del prodotto Different settings of product consistency level	Possibilità di settaggio del livello di consistenza del prodotto Different settings of product consistency level
Risparmio energetico - Energy saving	Con regolazione dei tempi di produzione By production time regulation	Con regolazione dei tempi di produzione By production time regulation
Colori standard - Standard Colors	Nero o bianco - Black or white	Nero o bianco - Black or white

2.3. OPERATING CONDITIONS

The machines must be used only for the production of ice cream, in accordance with what is indicated in the paragraph 2.2.2 "General information", within the functional limits shown below.

Power supply voltage: $\pm 10\%$
Min. air temperature: 10°C
Max. air temperature: 43°C
Min. water temperature: 10°C
Max. water temperature: 30°C
Minimum water pressure: 100 kPa (1bar)
Max. water pressure: 800 kPa (8bar)
Relative max air humidity: 85%

- The machine is not intended for uses that do not conform to the original construction ones.

2.4. NOISE LEVEL

The equivalent A-weighted continuous acoustic pressure level in the workplace is less than 70 dB(A), both for water-cooled and air-cooled machines.

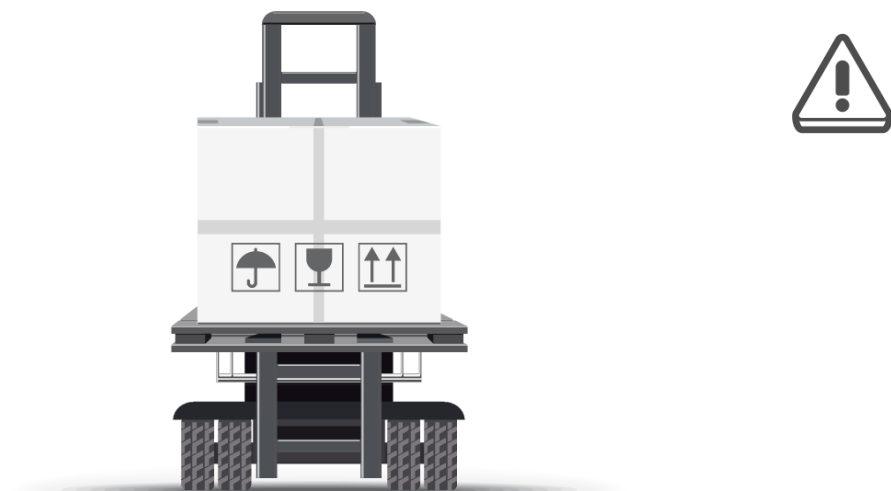
3. RECEIVING, HANDLING, OPENING OF PACKAGING

3.1. RECEIVING

- Before opening the packaging, check that there are no breakages due to impacts suffered during transportation.
- If there is a damage to the packaging that suggests damage to the contents, immediately notify the insurance company, leaving everything as found.

3.1.1. Lifting of packaged machine

Lifting of the packaging must be carried out by completely inserting the forks of the lifter in the space between the feet of the pallet, distributing the weight of the machine in order to keep the centre of gravity of the packaging balanced.



3.2. OPENING THE PACKAGING

If the packaging is made of wood, the walls are nailed to each other and the machine is fixed by means of two tie rods that connect the bottom of the machine frame to the wooden base of the packaging.



The wooden protective packaging is opened using tools suitable for the purpose; it is advisable to cover the exposed parts, hands, with protective gloves as it is possible for wooden splinters to break away from the packaging.

- Remove the nails, starting from the top, until the machine, still attached to the pallet, (packing platform) is left uncovered.
- Remove the protective sheet with which the machine is wrapped.
- Visually check that the machine has not been damaged during transportation.

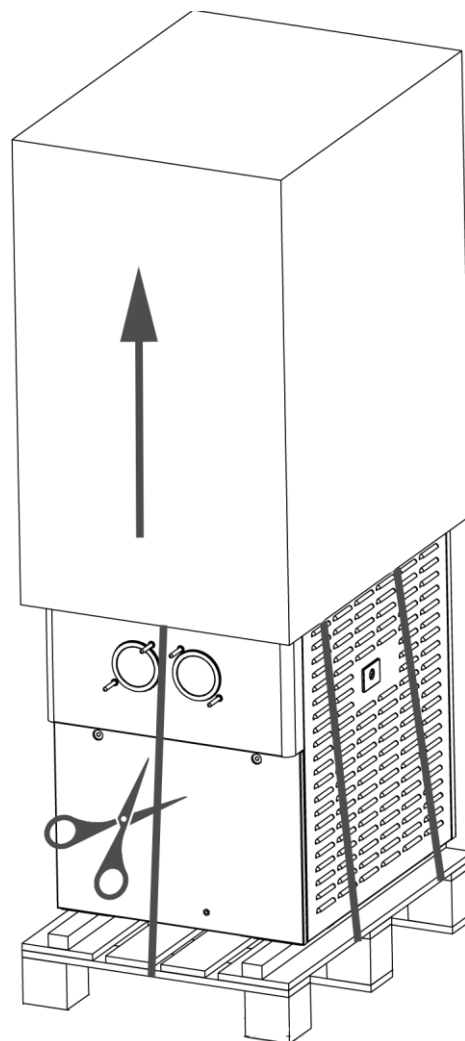
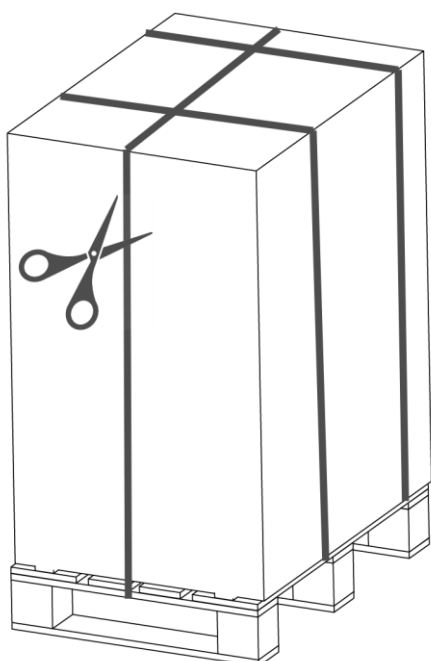


The cardboard packaging is externally closed by steel straps.

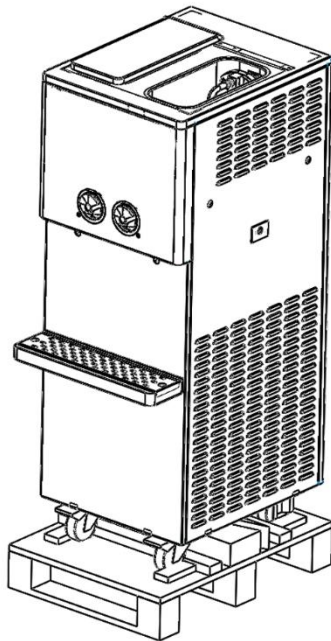
The packaging is opened by cutting the straps with cutters.

It is advisable to carry out the operation very carefully as there is a danger of injury when the straps are being cut if they are not held back forcefully during the operation.

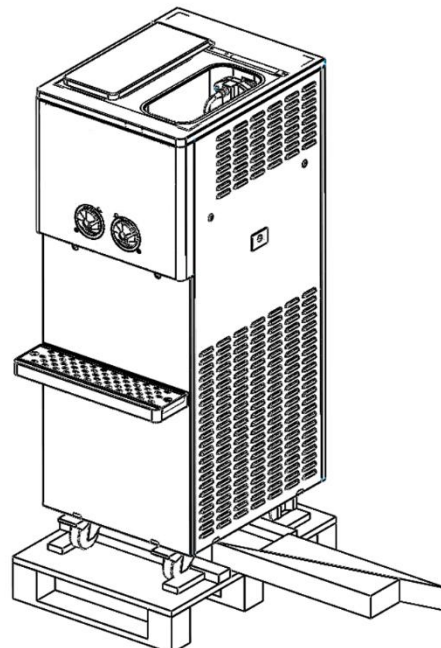
For counter models (CAPRI109 CAPRI114 PORTOFINO209 PORTOFINO214 AMALFI211)



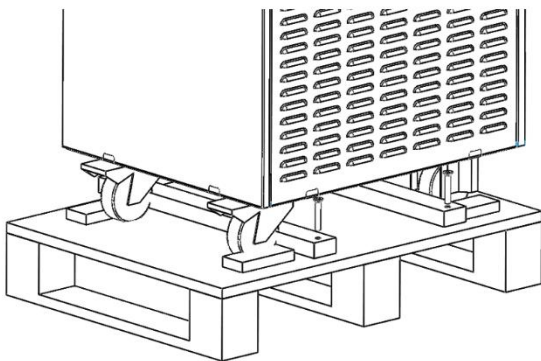
For the floor-mounted models (ROMA218, FIRENZE118)



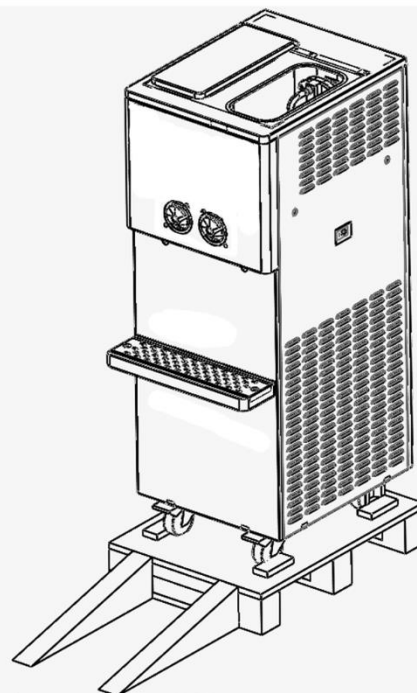
Step1 : Togliere lo scatolo
Step1 : Remove the carton
Step1 : Enlevez le carton



Step2 : Togliere gli scivoli posizionati tra la macchina e la pedana
Step2 : Remove the small wood ramps placed between the machine and the pallet
Step2 : Enlevez les petites rampes en bois placées entre la machine et l'estrade

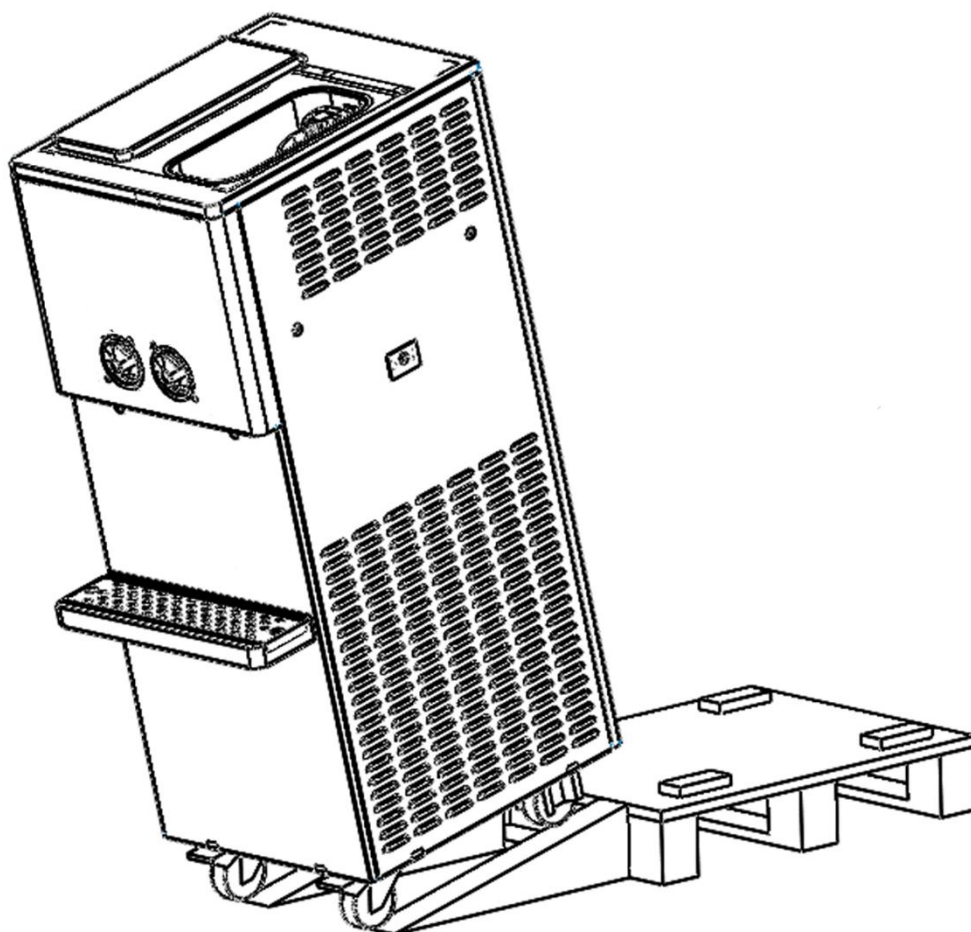


Step3 : Svitare le viti avvitate sui fermi in legno
Step3 : Unscrew the screws scewed on the wooden fasteners
Step3 : Dévissez les vis vissées sur les arrêts en bois



Step4 : Posizionare gli scivoli sul lato corto della pedana
Step4 : Place the small wood ramps on the short side of the pallet
Step4 : Placez les petites rampes en bois sur le côté court de l'estrade

Step5 : Far scivolare la macchina dagli scivoli
Step5 : Make the machine slide on the small wood ramps
Step5 : Laissez glisser la machine des petites rampes en bois



ATTENTION

Inside the packaging is the instruction manual: before operating on the machine it is necessary to read it carefully

3.3. DISPOSAL OF PACKAGING MATERIALS

On opening the crate, carefully separate the different types of material (cardboard, plastic, wood, etc.) and deliver them to a local industrial waste contractor so that such material may be disposed of in full compliance with local standards and regulations in force.

3.4. WEEE (waste electrical and electronic equipment)

In compliance with the European Directive 2002/96/EC, also known as WEEE, the presence of the symbol to the side on the product or on the packaging indicates that the product itself must not be disposed of according to the normal flow of solid urban waste. Instead, it is the user's responsibility to properly dispose of the product at special collection points for the recycling of unused electrical and electronic equipment. The separate collection of such waste enables optimisation of the recovery and recycling of reusable materials, while reducing the risks related to human health and environmental impact.

For further information on correct disposal of the product, contact the local authority or the retailer from whom the product was purchased.

4. INSTALLATION

Before proceeding with installation of the machine, carefully consult the installation sheets annexed to this manual (chapter 8 "ANNEXES").

4.1. CONNECTING TO THE MAINS SUPPLY

4.1.1. ELECTRIC/HYDRAULIC

Before connecting the machine to the mains, check that the power supply voltage corresponds to that indicated on the identification plate.

Interpose between the machine and the network a differential circuit breaker for sectioning that is correctly sized to the required absorption power and with contact opening of at least 3 mm.

The machine is supplied with a power cable and plug relative to the machine model.



IEC 60309 3P+N+T 16 A FOR 346/415 V



IEC 60309 2P+T 32 A FOR 220/250 V



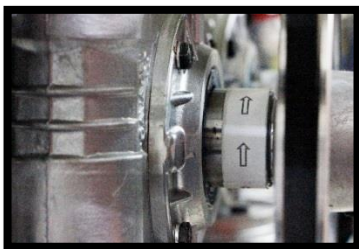
4.1.2. MAIN SWITCH

After inserting the plug into the socket, turn on the main switch on the back of the machine.



4.1.3. REVERSE DIRECTION OF ROTATION

If the direction of rotation of the motors for the three-phase machines is different from the rotation shown on the motor (for gravity machine) or the shaft turns clockwise (for pump machine)



swap the position of the grey wire for that of the brown wire of the electric plug.



4.2. AIR-COOLED

Machines with air condenser must be installed respecting a specific minimum distance for the model included in the installation sheet of the corresponding machine.



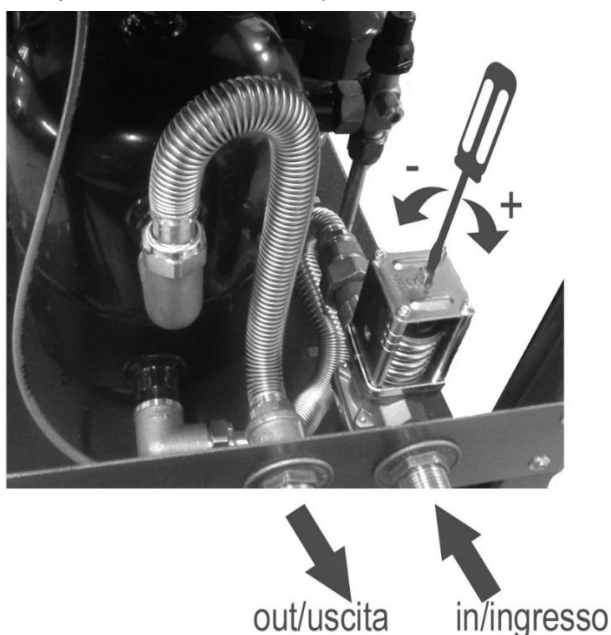
NOTE

Poor ventilation of the machine can compromise its functioning and production capacity

4.3. WATER-COOLED

In order to function, the machine with water condenser must be connected to running water or to a cooling tower. The water inlet must have a pressure of at least 1 Bar and a flow rate at least equal to the expected hourly consumption.

Connect the inlet pipe, identified by the "Water inlet" plate to the water mains, interposing a tap, and the outlet pipe, marked by the "Water Outlet" plate, to a drain, interposing a tap (the connections are indicated in the installation sheet of the specific machine model).



4.3.1. Pressure switch valve adjustment

IMPORTANT

If necessary, recalibrate the pressure switch valve. This operation must only be carried out by qualified personnel.

The valve must be adjusted ensuring that no water flows out when the machine is stopped and that lukewarm water comes out when the machine is in production.



NOTE

The water consumption increases if the temperature of the water entering the machine is higher than 20°



ATTENTION

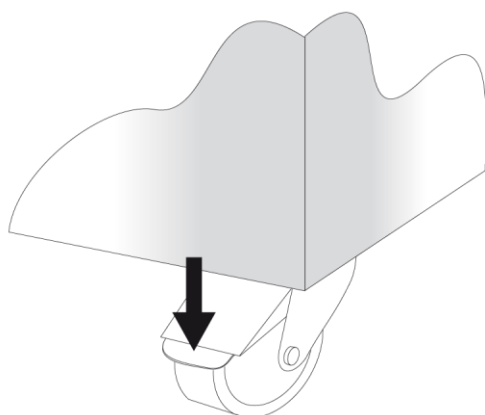
Do not leave the machine in environments with temperatures lower than 0°C without having emptied the condenser circuit.



4.4. POSITIONING THE MACHINE

The machine (only for the Roma and Firenze model) is equipped with wheels for easy positioning; mechanical locks are provided which, once engaged, prevent movement of the machine and ensure its position is maintained.

Place the machine on a horizontal and solid surface making sure that the body of the appliance is well ventilated (ANNEXES chapter 8), install the appliance in a dry environment and avoid installing it near sources of heat.



4.5. CLEANING

Clean the machine from the dust and protective material it was covered with at the time of shipment. Use only water, with the possible addition of a mild soap-based detergent, and a soft cloth.

ATTENTION

Do not use solvents or alcohol or detergents that could damage the components of the machine or contaminate the functional production parts.



4.6. MACHINE TESTING

The machine undergoes post-production testing at the manufacturer premises; the required operational and production functions are checked and verified.

Testing of the machine by the end user must be carried out by qualified technical personnel or by an authorized technician.

After positioning, and having correctly made the connections to the power supply networks, carry out the operations required for the functional verification and operational testing of the machine.



5. USER INSTRUCTIONS

5.1. MACHINE SAFETY WARNINGS

When using the machine, be aware that the moving mechanical parts (rotary), the high voltage electrical parts, any high temperature parts, etc. can cause serious damage to persons and property.

Safety officers must ensure that:

- Any improper use or manoeuvre is avoided
- The safety devices must not be removed or tampered with
- Maintenance work is carried out regularly
- Only original spare parts are used, above all for the components that perform safety functions (e.g. microswitches of the protections, stop buttons, differential switches, etc.)

In order to achieve what is mentioned above, the following are necessary:

- Make sure that this manual with all information and details relating to the use, maintenance, etc. of the machine is always made available to the operator/s assigned to its operation and running.
- This documentation was carefully read and the provisions are subsequently implemented.
- Electrical equipment is operated and used only by specifically trained personnel.

5.2. COMMANDS

The digital machine is equipped with a Touch Screen operator panel that starts the ignition procedure when the main switch of the machine is activated.

Press anywhere on the panel to switch to the Home screen.



5.2.1. Home screen and key function



OFF: stops the machine.



PRODUCTION: Starts the production of ice cream.



NIGHT MODE: places the machine in standby mode. The machine cannot produce ice cream and only reaches the maintenance temperature inside the tanks and cylinders. It is advisable to leave the machine on standby overnight in order to achieve energy savings and to preserve the mixture.



WASH CYCLE: sets the machine in washing mode. During this operation, the pump and the stirrer are activated while the refrigerant circuits remain stationary, allowing the detergent to clean the machine. It is advisable to carry out a first automatic washing and a second one after removing the pump.



MENU: access to the machine parameterisation menu



INFO: access to the information on ice cream production



ECO: activation of the ECO function



PRODUCTION PARAMETERS: setting of the consistency of the ice cream and of the tank temperature



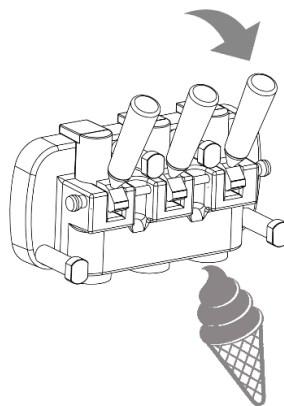
TANK TEMPERATURE: displays the temperature inside the tanks.

TIMEOUT CONSISTENZA SX LUNEDI 23-10 -2017

INFORMATION: displays the current date and any error messages.

5.3. ICE CREAM DISPENSER

To dispense the product, simply place a cup or cone under the dispensing nozzle and slowly lower the relative distribution lever. As soon as the product starts to come out, the cup or cone must be moved in a circular direction to give the ice cream a conical shape. Once a sufficient quantity of product has been dispensed, close the distribution lever and move the cup or cone quickly downwards to finish the pointed portion.

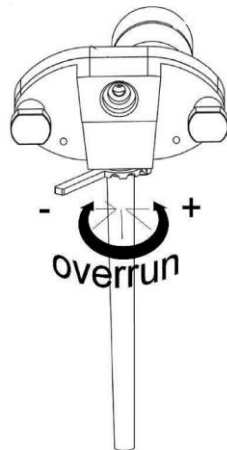


5.4. PUMP MACHINE

The pump is used, by changing the position of the lever, to vary the proportion between the air and the mixture sent to the batch freezing cylinders; therefore within certain limits it is used to regulate the increase in volume most suitable for the type of mixture in use.

Place the lever in the central position.

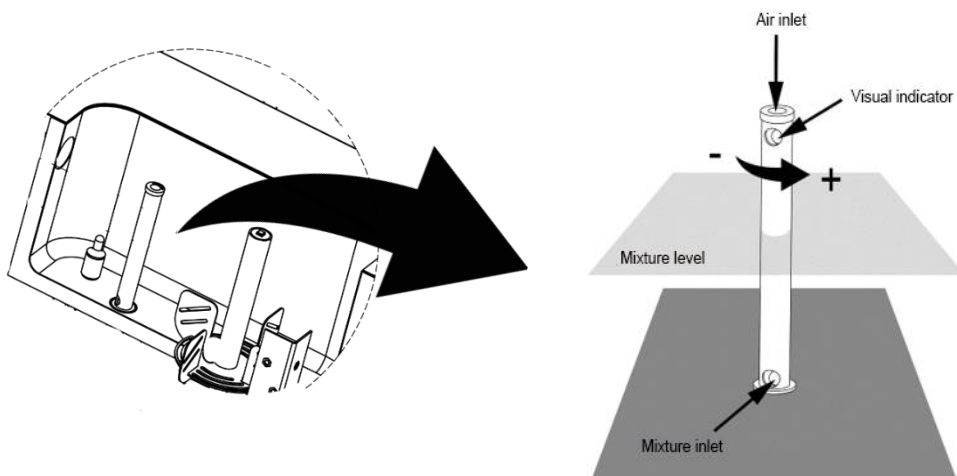
If after removing a certain number of cones, the ice cream is too heavy and wet, move the lever one notch at a time to the right. If, instead, ice cream mixed with air bubbles comes out of the dispensing nozzle, turn the lever one notch at a time to the left.



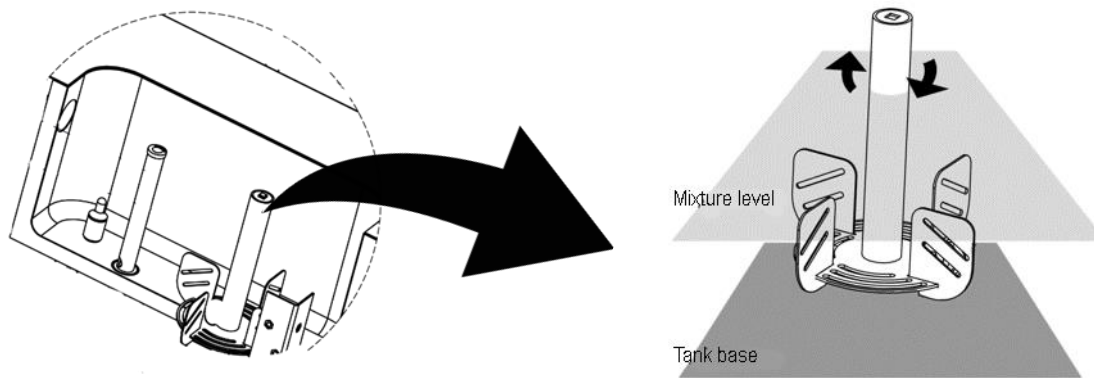
5.5. GRAVITY MACHINE

Instructions for maintaining and obtaining good machine operation over time.

1. Always keep the mix level in the tank high (at least above half). The mixture in the tank is stored at a temperature of +4°C, both for production and preservation purposes.
2. During the day, mix the mixture periodically with a spatula in the tank, to avoid separation of the same, especially after lengthy periods of storage and avoid thickening along the walls of the tank (this operation is not necessary for machines with an emulsifier in the tank).
3. Always use a fluid and lump-free mixture. A very dense mixture with large lumps could clog the feed preventing loading of the batch freezing cylinder
4. Keep the lower feed hole in a position to allow a good mixture fall from the tank to the cylinder. By turning the internal regulator and looking at the visual indicator, it is possible to adjust the percentage of air inside the batch freezing cylinder
5. The level of the mixture in the tank must never exceed the visual indicator.



5.6. TANK EMULSIFIER (OPTIONAL)



Use of the emulsifier depends on the characteristics of the mixture. In the types of mixtures with a low quantity of fat it guarantees the homogeneity of the mixture and prevents the formation of frost on the walls of the holding tank.

WARNING

The emulsifier must turn clockwise observing the holding tank from above

NOTE:

Operation of the emulsifier can be activated and deactivated via the switch on the back of the machine

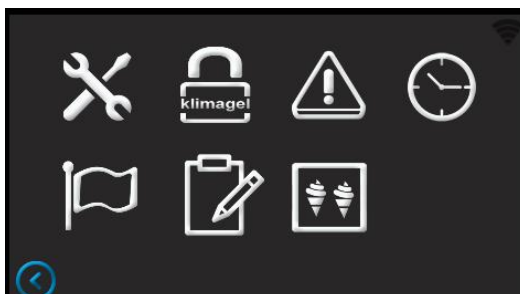


NOTE:

Depending on the mixture, the operation of the emulsifier can be configured via the Touch Screen panel.

5.6.1. Change the operating parameter of the emulsifier

- 1) Press the MENU key



- 2) Press the PARAMETERS key



- 3) Press the LEFT PAR. key



- 4) Position the cursor on the desired parameter (*Tank stirrer ON time or Tank stirrer OFF time*)

Valore consistenza dx	0000 -
Valore Max consistenza dx	0000 -
Valore attuale consistenza dx	0000 -
Ritardo stop compressore	0000 s
Tempo ON agitatori vasche	0000 s
Tempo OFF agitatori vasche	0000 s

- 5) Change the value using the keypad and press Enter

- 6) Exit the settings by pressing the BACK key



5.7. STARTING THE MACHINE

After installing the machine in accordance with the instructions in the INSTALLATION chapter and after having carefully washed and sanitised the machine, proceed as follows.

5.7.1. Starting the pump machine

Tighten the tank fitting on the bottom of the tank with the delivery pipe inserted and insert the pump unit in the shaft, not connecting the delivery pipe

Tank and cylinder loading

- Pour the contents of the mixture into the tank (a product temperature of 4-5°C is recommended); the level of the mixture must not reach the pump




- Activate "WASH CYCLE" and check the pump syphoning



IMPORTANT




If the pump does NOT syphon the liquid mixture, check that the lid has been closed firmly and if the pump continues NOT to syphon, wet the gears inside with a spatula.



-
- When the pump starts syphoning select , connect the delivery pipe and select "WASH CYCLE"



filling the batch freezing cylinder

- Open the lever of the dispensing unit to less than half and let out air mixed with the mixture in such a way as to minimise the formation of ice cream with air bubbles inside
- Close the lever of the dispensing unit and select "PRODUCTION" 
- During the batch freezing phase, a cone will progressively colour 
- When the cone is completely blue , the ice cream has reached the desired consistency and is ready to be dispensed

IMPORTANT

To obtain a more homogeneous delivery of the product from the dispenser, it is advisable to pour approximately two litres of mixture directly into the cylinder through the tank connection without the delivery pipe and then to connect the delivery pipe to the tank connection and continue with the standard procedure







5.7.2. Starting the gravity machine

Remove the gravity piston from the bottom of the tank and immerse it in a sanitising solution.

Tank and cylinder loading

- Pour the contents of the mixture into the tank (a product temperature of 4-5°C is recommended); the level of the mixture must not reach the visual indicator of the gravity piston



- Activate "WASH CYCLE" 
- Open the lever of the dispensing unit to less than half and let out air mixed with the mixture in such a way as to minimise the formation of ice cream with air bubbles inside
- Close the lever of the dispensing unit and select "PRODUCTION" 
- During the batch freezing phase, a cone will progressively colour 
- When the cone is completely blue , the ice cream has reached the desired consistency and is ready to be dispensed

5.8. PRODUCTION

Distribute the soft ice cream without exceeding the production rate of the machine as indicated in the technical characteristics of the machine; not exceeding this rate and being sure to supply the machine with fresh products, the sale will never be interrupted even during peak hours.



During the closing intervals, put the machine in "NIGHT MODE". This results in a considerable saving of electricity as the compressor only works for the time strictly necessary to keep the product at the correct temperature. When the premises reopen, place the machine in "PRODUCTION" and in a few minutes the ice cream will return to the correct consistency to resume the sale.


Daily, or after a few days, taking into account the bacteriological qualities of the mixture and the sanitary provisions of your country, it is essential to proceed with "CLEANING and SANITISATION" of the machine.

If the machine has stopped for a long time due to a power cut, it is essential to check the temperature of the product before starting the sale again; if the temperature has exceeded + 6°C it is necessary to empty, wash and sanitise the machine then to refill it with fresh product at +4°C.




5.8.1. Product consistency

The consistency of the dispensed ice cream can be modified to obtain an optimal result.

5.8.2. Changing the consistency

To change the consistency it is necessary to select the "PRODUCTION PARAMETERS"  key after which the following screen will be displayed.



Pressing the consistency key  will display the screen that is used to change this value using the  and  buttons.



The consistency adjustment can also be made while the machine is in PRODUCTION. The current consistency value can be viewed (in the example screen the number 0).

Exit the screen using the LEFT ARROW key .

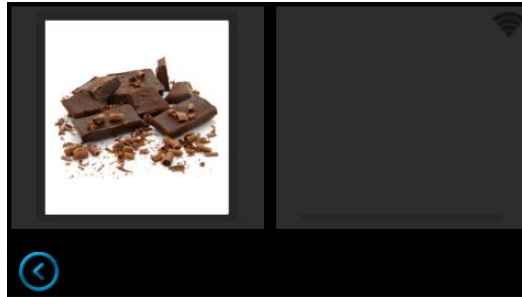
5.8.3. Default flavour selection

A consistency value can be stored in the machine for the various products used.

- 1) Press the MENU key



- 2) Press the ICE CREAM FLAVOUR SELECTION button
- 3) Press on the side for which a predefined flavour is to be selected.



- 4) Navigate through the available flavours using the UP ARROW and DOWN ARROW keys.



- 5) Select the desired taste (the flavour chosen is highlighted by a light blue frame).



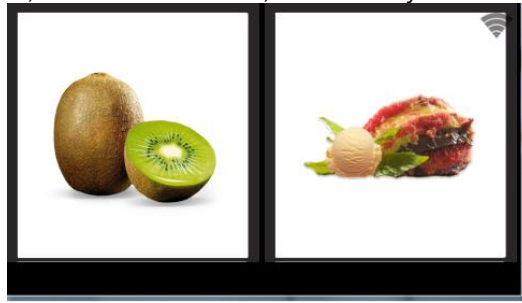
- 6) Return to the Home screen using the LEFT ARROW key



- 7) The consistency value can be changed by pressing the "PRODUCTION PARAMETERS" key on the Home screen; the modified value will be automatically saved as a default value for the chosen flavour.




When the machine is in production, after a certain time, the Standby Screen will be displayed.






The flavours in progress are displayed in the Standby screen. To return to the Home screen, press anywhere on the screen.

5.9. TANK MAINTENANCE

The holding tanks can be configured at the desired temperature.

To change the temperature of the tank, it is necessary to select the "PRODUCTION PARAMETERS" key  and the following screen will be displayed.



Pressing the tank temperature key  T° VASCA the screen that allows changing of this value using the  and  buttons will be displayed.




It is possible to display the current temperature value (in the example screen the number 0.0°C).

Exit the screen using the LEFT ARROW key .

5.10. ECO FUNCTION


The ECO function saves electricity when the machine is in production but when the influx of customers is low; it is in fact used to increase the pause time that elapses between one batch freezing phase and the next.

To activate/deactivate this function, simply press the ECO key  on the Home screen. The ECO function is automatically deactivated when ice cream is dispensed.


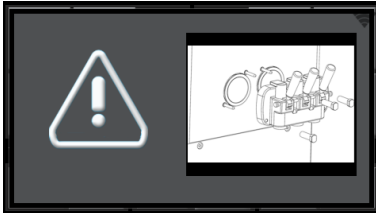
5.11. ALARMS AND ALARM LOGS

All the anomalies detected by the machine are highlighted in the Home screen as in the following figure.



To reset the alarm, simply press the RESET button .

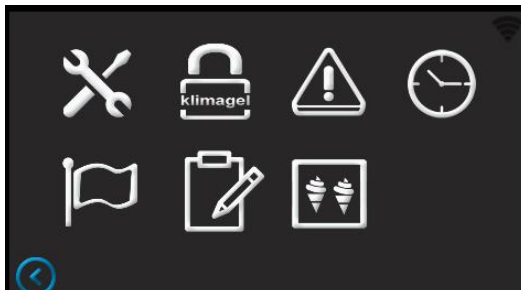
Below is a list of the alarms that could occur during machine operation.

ALARM	CAUSE	MACHINE BEHAVIOUR	SOLUTION
BATCH FREEZER TIMEOUT	the machine has remained in WASH CYCLE mode or in PRODUCTION mode for more than 20 minutes without dispensing ice cream	the alarm is displayed and the machine stops	reset the alarm. If the problem persists, contact technical support.
HIGH CONSISTENCY VALUE	check that the cylinder is not frozen and that the pump is syphoning product	the alarm is displayed and the machine stops	reset the alarm and wait for the cylinder to thaw. Set the correct consistency
COMPRESSOR THERMAL SWITCH	abnormal compressor behaviour detected	the alarm is displayed and the machine stops	reset the alarm. If the problem persists contact technical support.
TANK MINIMUM LEVEL	the product in the tank is about to run out	the tank symbol starts to flash  . After a certain time the alarm is displayed and the machine stops	reset the alarm and add the mixture to the tank
INSERT DISPENSING UNIT	dispensing unit not inserted	the following screen is displayed 	insert and tighten the dispensing unit correctly

All the alarms (except the minimum tank level) that occur during operation of the machine are recorded.

To view the alarm log, proceed as follows:

- 1) Press the MENU key



- 2) Press the ALARM LOG key



On Time	Ack Time	Sta	Message
17:44:25 23-10-17		!	MICRO PANNELLO OFF
17:44:25 23-10-17		!	TERMICO COMPRESSORE MANTEC
17:47:37 23-10-17		!	MICRO PANNELLO OFF
17:47:40 23-10-17		!	MICRO PANNELLO OFF
17:48:00 23-10-17		!	MICRO PANNELLO OFF
17:49:05 23-10-17		!	TIMEOUT MANTECATORE DX
17:49:05 23-10-17		!	VALORE ALTO CONSISTENZA SX
		!	TIMEOUT MANTECATORE DX



- 3) Exit the screen using the LEFT ARROW key



The alarm log can be cleared using the CLEAR button

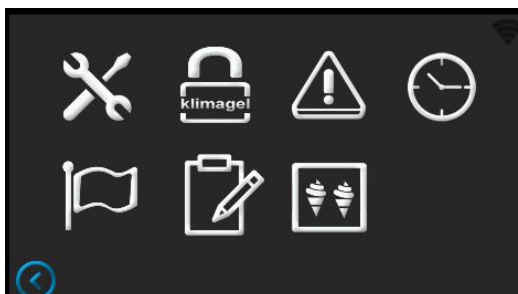


5.12. GENERAL SETTINGS

5.12.1. Date and time

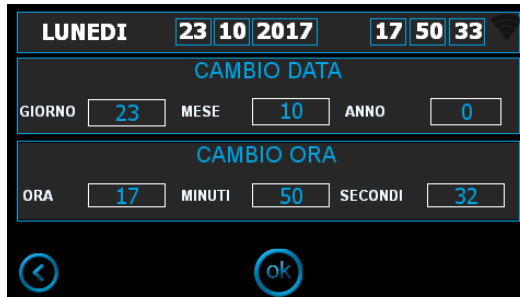
To change the date and time, proceed as follows:



- 4) Press the MENU key



- 5) Press the CHANGE DATE/TIME key




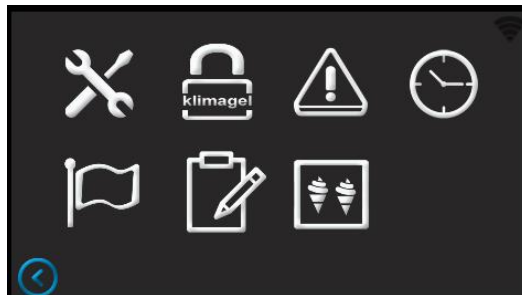


- 6) Place the cursor on the item to be modified (Day, Month, Year, Hour, Minutes or Seconds)
- 7) Change the value using the keypad and press Enter
- 8) Press the OK key  to make the changes effective
- 9) Exit the settings by pressing the BACK key 

5.12.2. Language

To change the language proceed as follows:


- 1) Press the MENU key 



- 2) Press the SET LANGUAGE key 

- 3) Select the desired language



- 4) Exit the settings by pressing the BACK key 

6. CONTROL DEVICES

The safety systems on the two machines are:

THERMAL PROTECTIONS

OVERHEATING OF THE COMPRESSOR AND MOTORS ARE DETECTED; reaching the maximum calibration values causes the machine to stop, which goes to "STOP". Before restoring operation, the cause of the intervention must be checked.

The thermal protections can be reset AUTOMATICALLY



PRESSURE SWITCH

It is included to protect the cooling system and causes the compressor to stop to cool the circuit, in case of insufficient water in the circuit itself (water condensation) or insufficient air circulation in the condenser (air condensation). Reset is automatic.

FUSES

They protect the electrical circuit of the controls from overloads.

If they intervene, before replacing them, check and eliminate the causes of the fault.

DISPENSER SAFETY SENSOR

It is designed to protect the operator; if the dispenser is removed from the machine, the sensor disables the motors.

NOTE:

the identification of the values and characteristics of the fuses, refer to the electrical diagram of the machine



7. MAINTENANCE

7.1. TYPE OF INTERVENTION

Any maintenance operation that requires opening of the protective panels must be carried out with the machine stopped and disconnected from the relative power supply socket!

It is forbidden to clean and lubricate moving parts!

Repairs on the electrical and refrigeration systems must be carried out by specialist technical personnel!

The operations necessary for correct functioning of the machine in production mean that most ordinary maintenance interventions are integrated within the production cycle.

Maintenance interventions such as cleaning of the parts in contact with the product, replacing the gland and disassembling the stirrer unit, must normally be performed at the end of each shift, thus simplifying what may be the required maintenance operations.

Below is a list of the normal maintenance operations to be performed:

- Cleaning and replacing the gland

Cleaning should be performed at the end of each shift, however, replacement should take place after a visual inspection and upon detection of product leaks inside the collection container.

- Cleaning the stirrer unit

It should be performed at the end of each shift

- Cleaning the scraping blocks

It should be performed at the end of each shift

- Cleaning of the metal sheets

It must be performed daily using neutral soaps and being careful not to bring detergents into contact with the inside of the stirrer unit.

- Cleaning and sanitisation

It must be carried out at the end of each day according to the procedures indicated in section 6 of this manual.

ATTENTION

To clean the machine and its parts never use abrasive sponges that could scratch the surfaces.

7.2. AIR COOLING

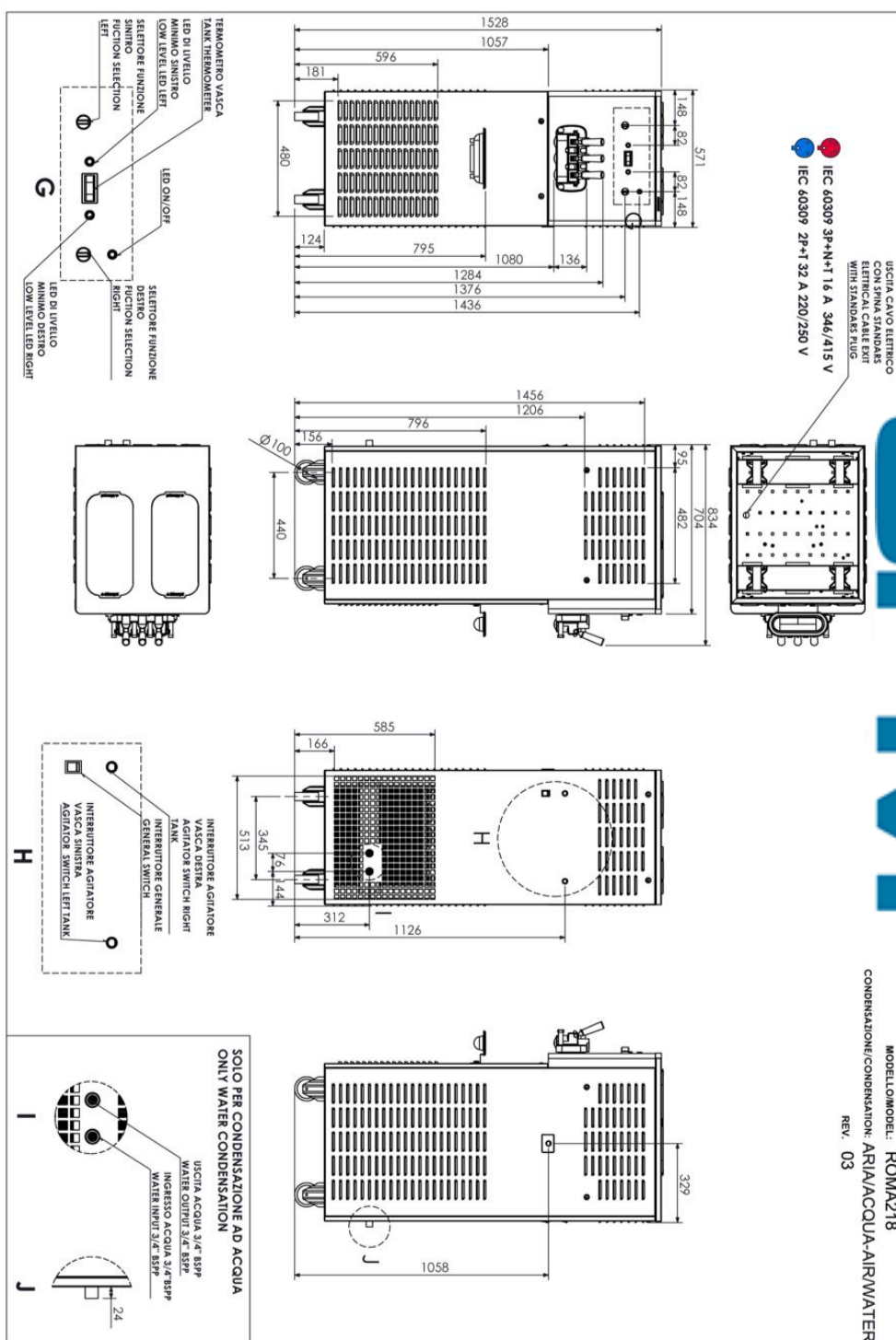
Periodically clean the condenser by removing dust, paper and anything else that prevents the passage of air. For cleaning use a brush with long bristles or compressed air.

7.3. WATER COOLING

For machines equipped with water cooling, at the end of the season, in order to avoid problems in the case of storage in environments where the temperature may drop below 0°, it is necessary to remove the water from the condensation circuit.

8. ANNEXES

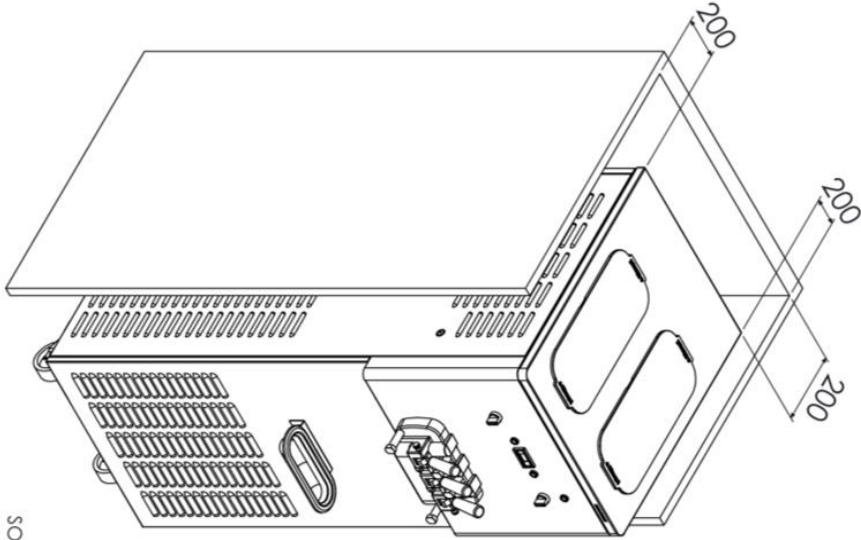
8.1. INSTALLATION INSTRUCTIONS SHEET ROMA218



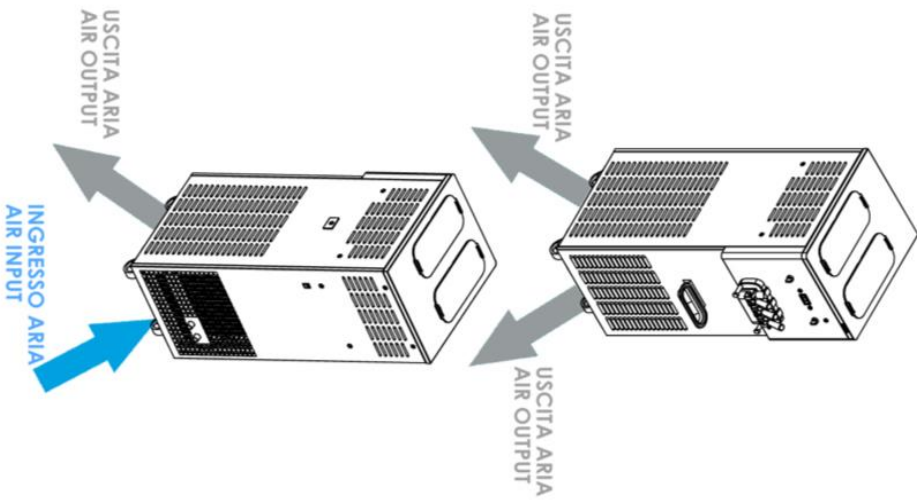
MISURE MINIME DAI MURI
MINIMUM WALL DISTANCE

SPM

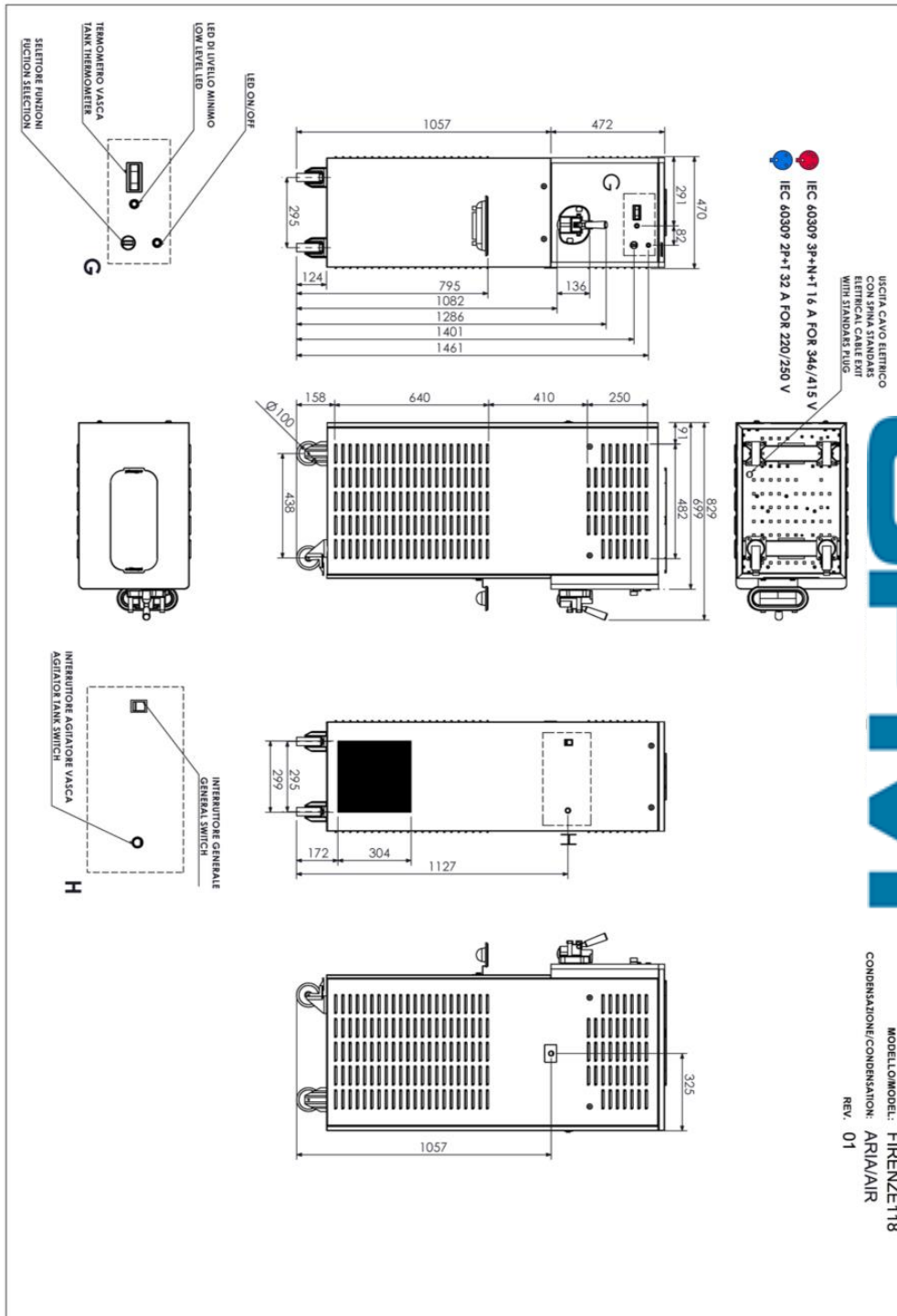
MODELLO/MODEL: ROMA218
CONDENSAZIONE/CONDENSATION: ARIA/ACQUA-AIR/WATER
REV. 03



SOLO PER CONDENSAZIONE AD ARIA
ONLY AIR CONDENSATION



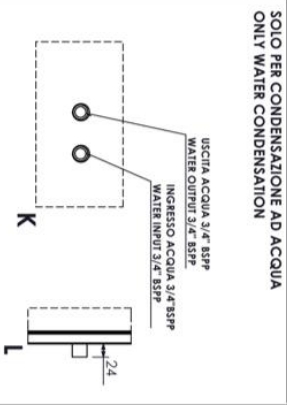
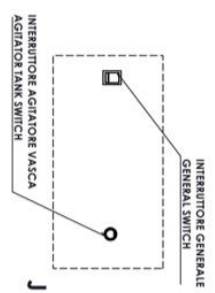
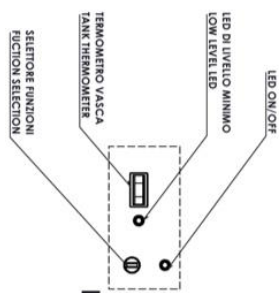
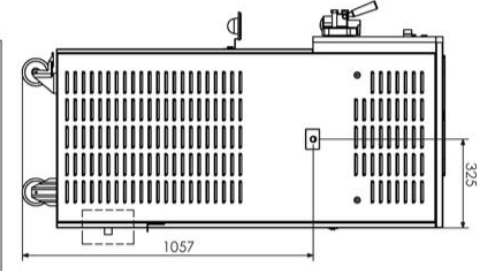
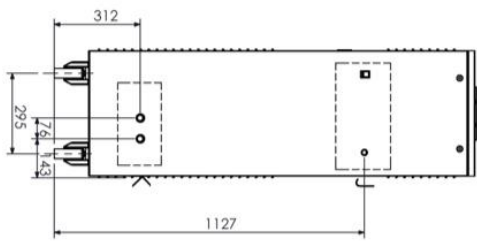
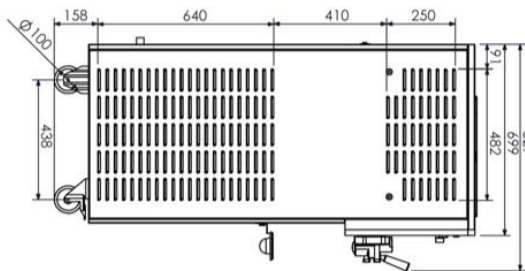
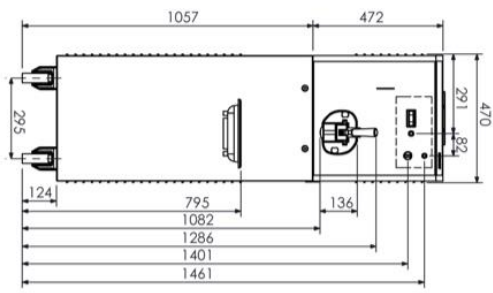
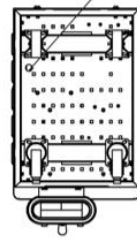
8.2. INSTALLATION INSTRUCTIONS SHEET FIRENZE118



SPM

USCITA CAVO ELETTRICO
CON SPINA STANDARD
ELETTRICAL CABLE EXIT
WITH STANDARD PLUG

IEC 60309 3P+N+1 16 A FOR 346/415 V
IEC 60309 2P+T 32 A FOR 220/230 V

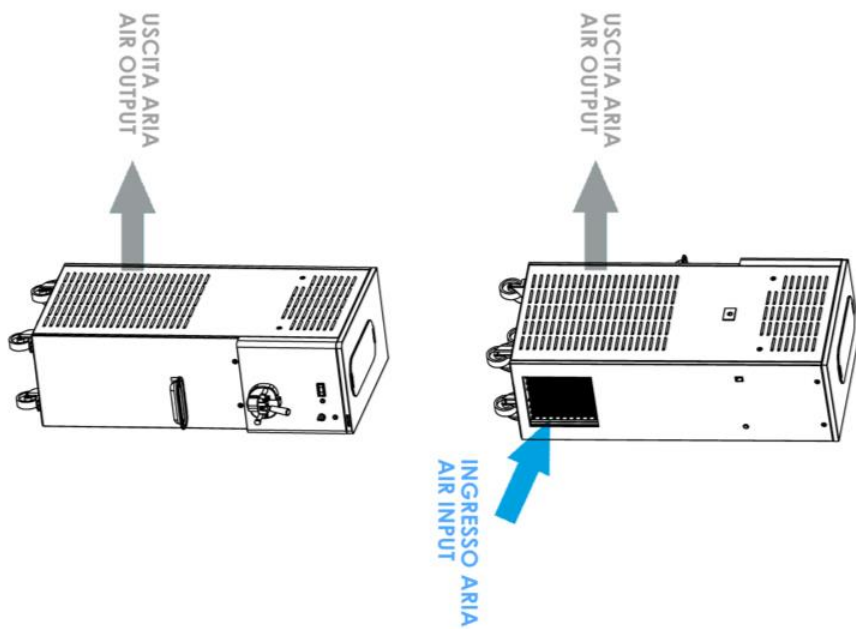
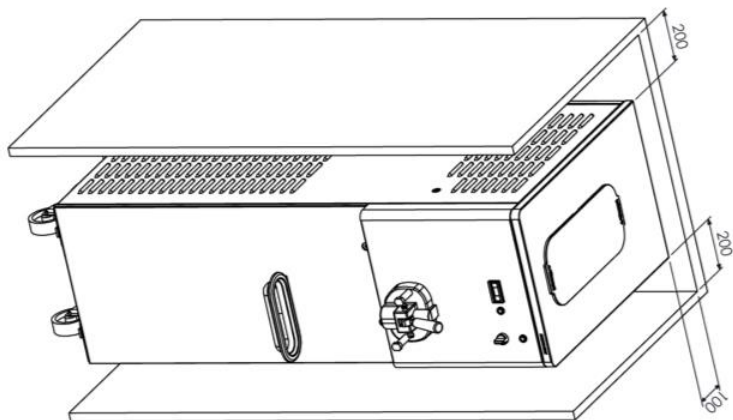


MODELLO/MODEL: FIRENZE 118
CONDENSAZIONE/CONDENSATION: ACQUA/WATER
REV. 01

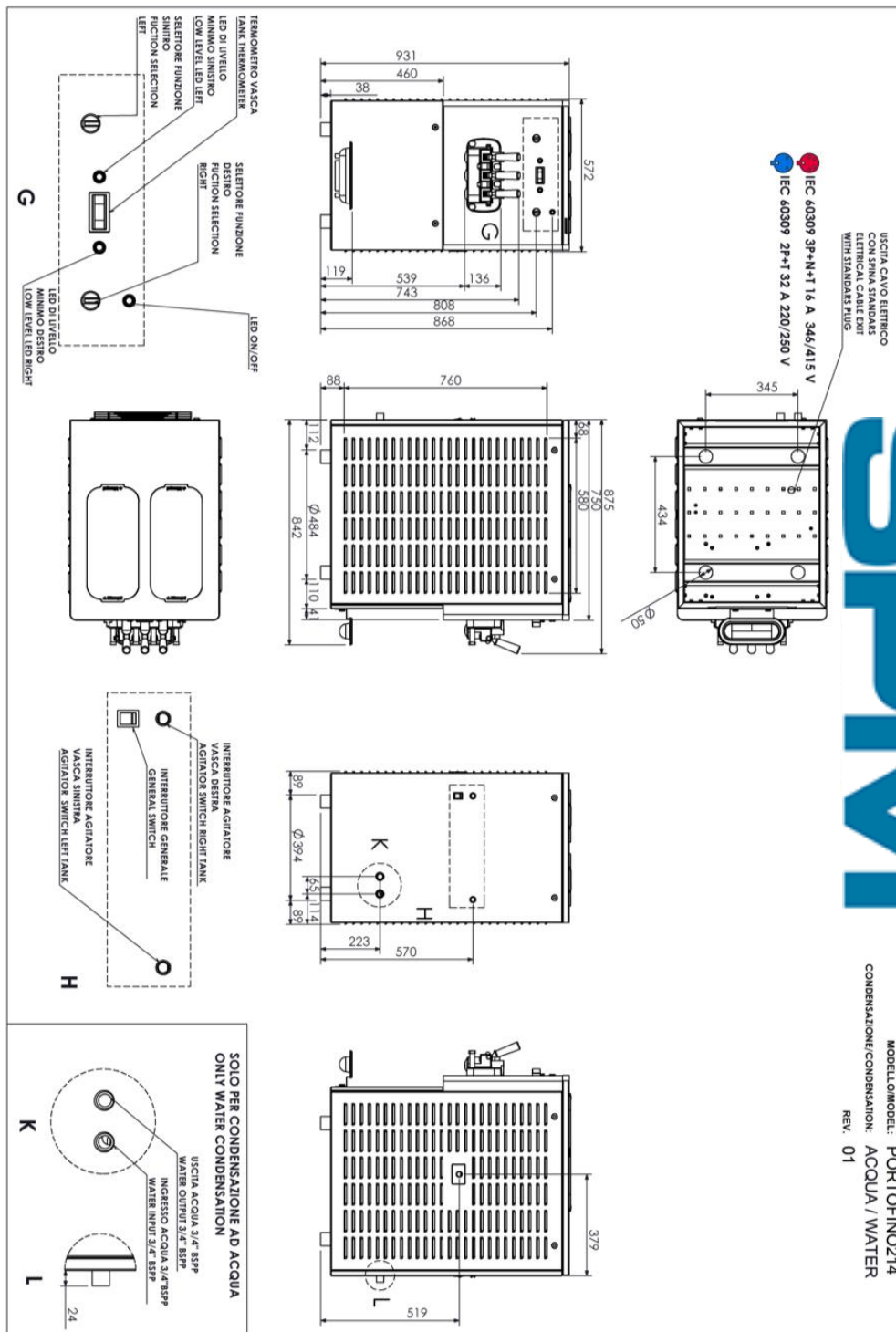
SPM

MODELLO/MODEL: FIRENZE118
CONDENSATIONE/CONDENSATION: ARIA/AIR
REV. 01

MISURE MINIME DAI MURI
MINIMUM WALL DISTANCE



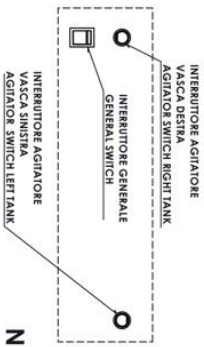
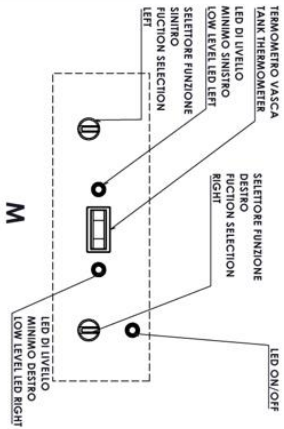
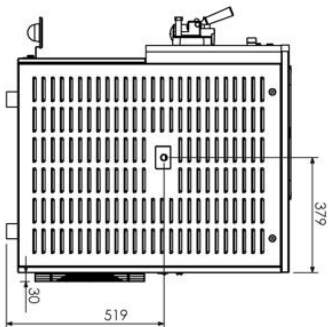
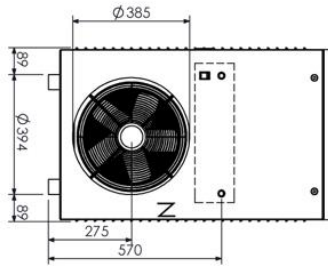
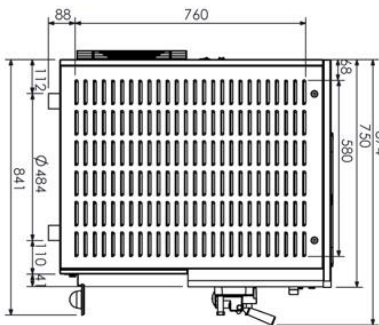
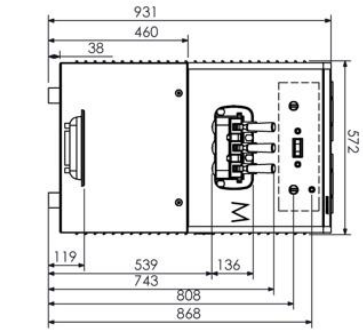
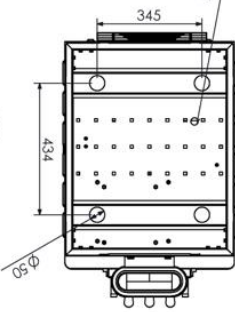
8.3. INSTALLATION INSTRUCTIONS SHEET PORTOFINO214





USCITA CAVO ELETTRICO
CON SPINA STANDARD
ELECTRICAL CABLE EXIT
WITH STANDARD PLUG

IEC 60309 3P+N+T 16 A FOR 346/415 V
IEC 60309 2P+T 32 A FOR 220/250 V



MODELLO/MODEL: PORTOFINO214

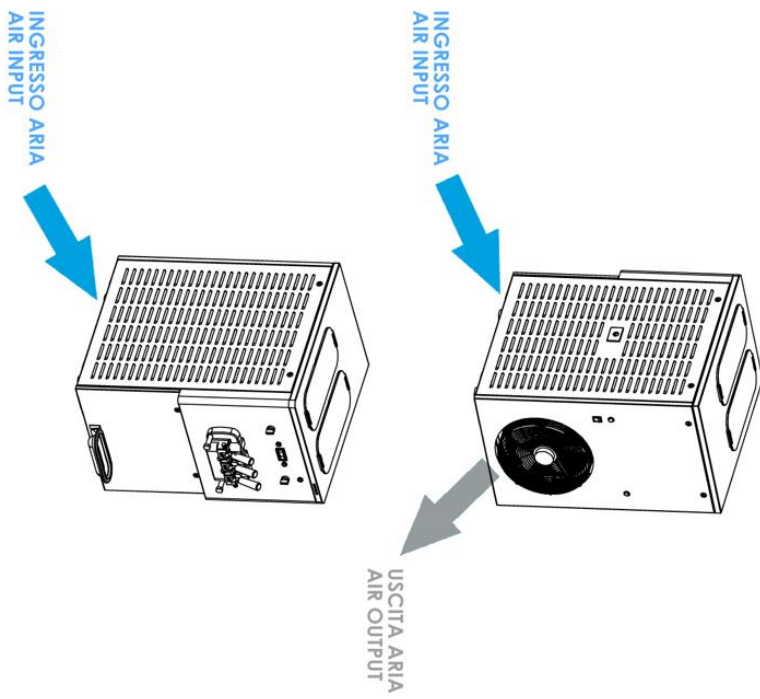
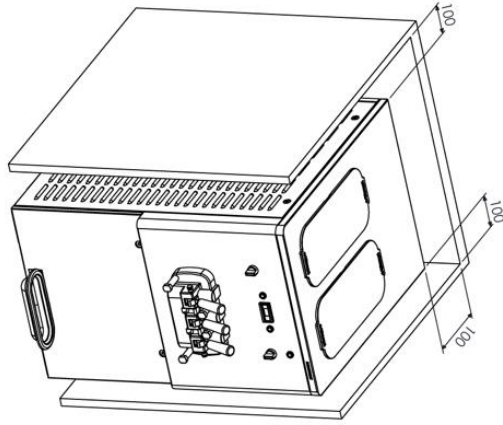
CONDENSAZIONE/CONDENSATION: ARIA/AIR

REV. 01

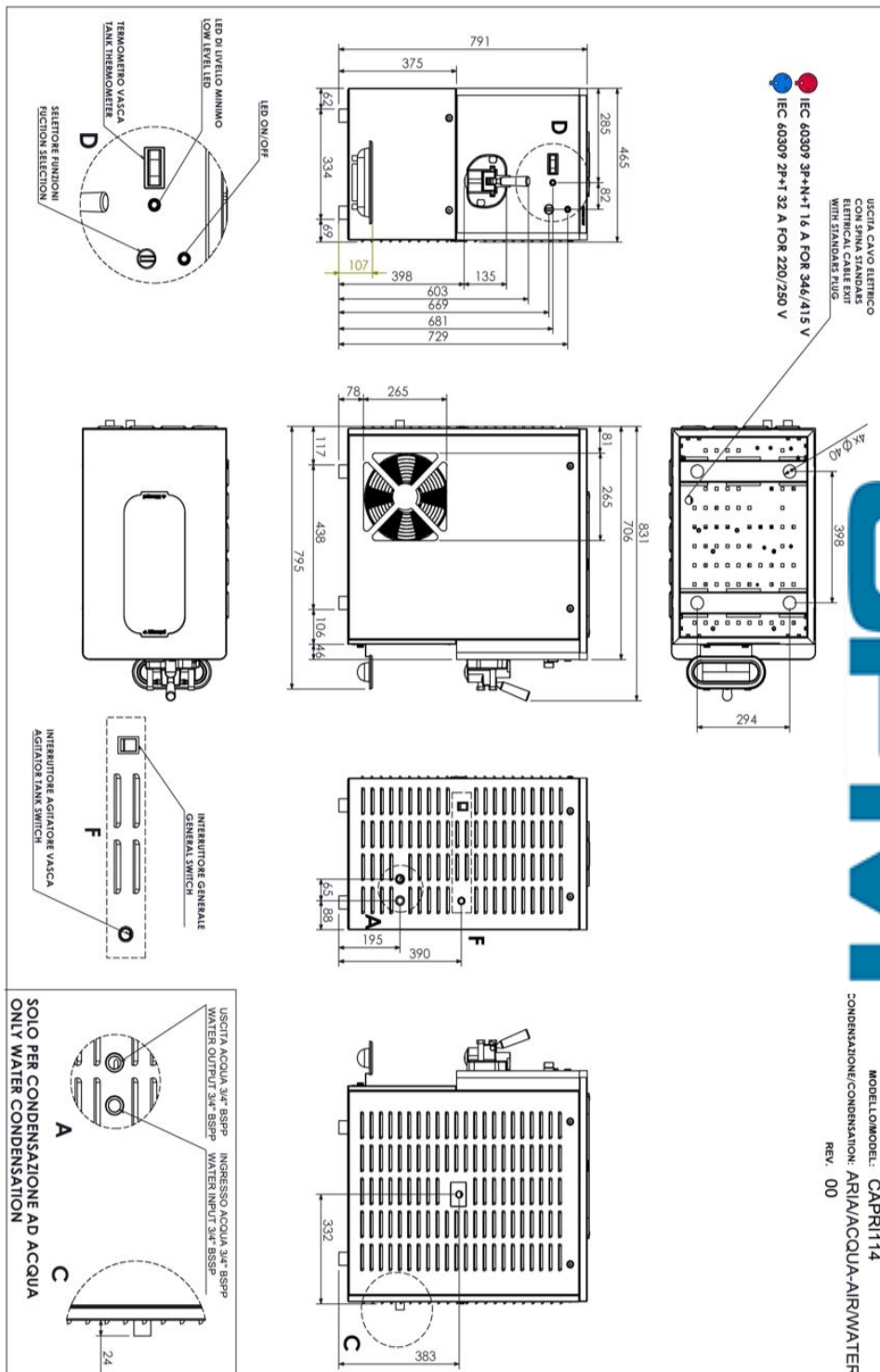
SPM

MODELLO/MODEL: PORTOFINO214
CONDENSAZIONE/CONDENSATION: ARIA/AIR
REV. 01

MISURE MINIME DAI MURI
MINIMUM WALL DISTANCE

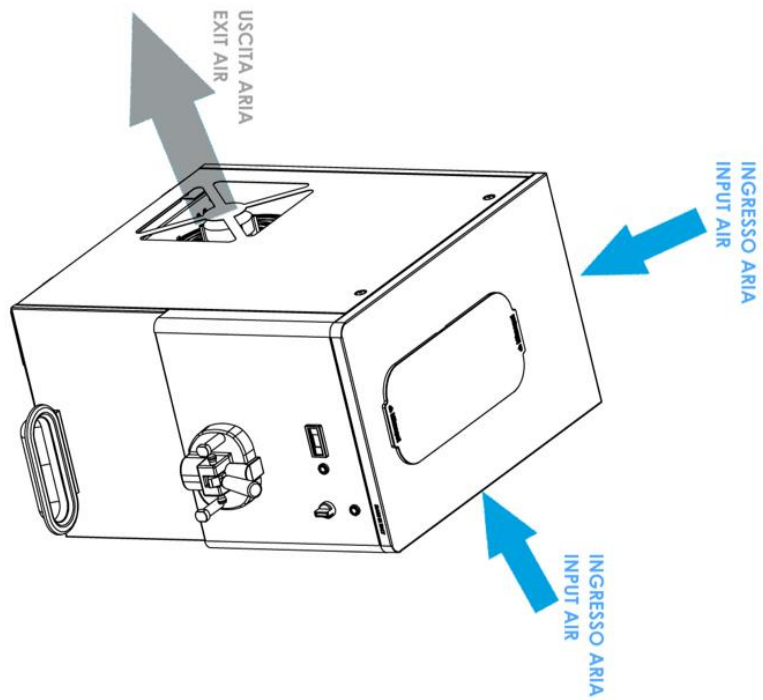
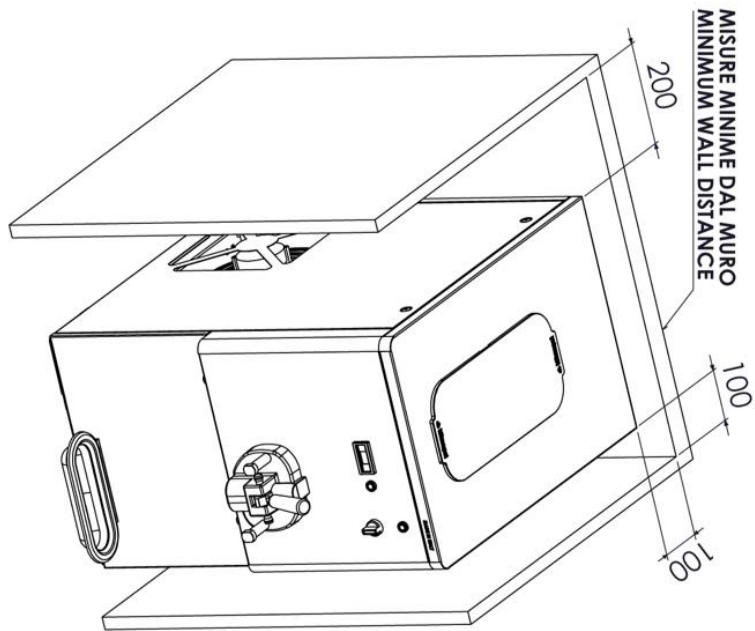


8.4. INSTALLATION INSTRUCTIONS SHEET CAPRI114/118



SPM

MODELLO/MODEL: CAPP114
CONDENSAZIONE/CONDENSATION: ARI/ACQUA-AIR/WATER
REV. 00

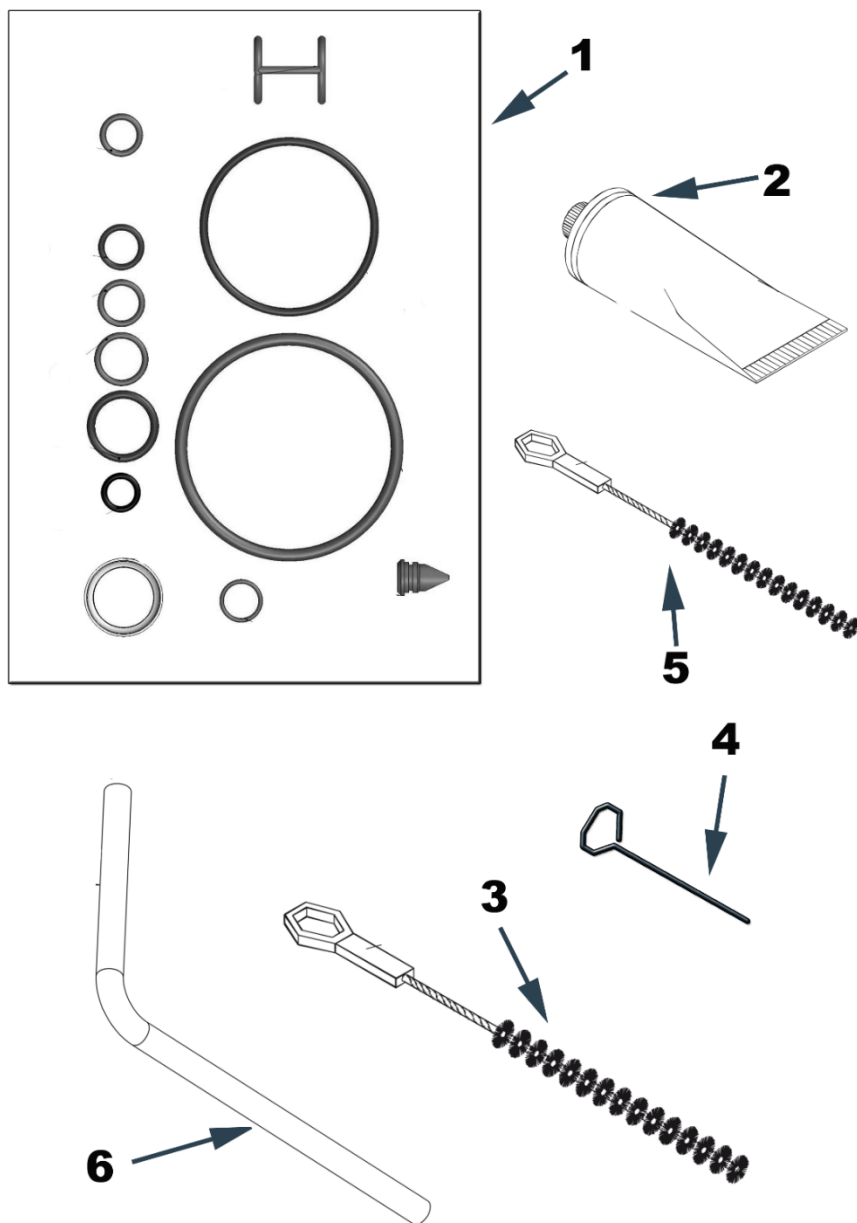


SOLO PER CONDENSAZIONE AD ARIA
ONLY AIR CONDENSATION

8.5. SPARE PARTS KIT

DESCRIPTION

- 1.BAG SEALS KIT (varies depending on the machine model)
- 2.FOOD-GRADE GREASE
- 3.PIPE CLEANER BRUSH Ø 2
- 4.EXTRACTOR
- 5.PIPE CLEANER BRUSH Ø 1
- 6.DELIVERY PIPE (varies depending on the machine model)



8.6. FAQ

PROBLEM	POSSIBLE CAUSES	SOLUTION
PUMP DOESN'T SYPHON PRODUCT	IF THE MACHINE IS THREE-PHASE, THE PUMP SHAFT TURNS CLOCKWISE	INVERT THE TWO PHASES (BROWN WIRES)
	THE SEALS ARE DAMAGED	REPLACE THE SEALS
	THE GEARS ARE JAMMED	REMOVE THE GEARS AND SUITABLY WASH THE PUMP
	THE SHAFT DOES NOT TURN	CONTACT TECHNICAL ASSISTANCE
THE CYLINDER ICES UP	THE PUMP DOES NOT SUCTION PRODUCT	CHECK THAT THE PUMP WORKS CORRECTLY
	THE ICE CREAM BASE HAS INSUFFICIENT SUGARS AND FATS	CHANGE THE MACHINE CONSISTENCY PARAMETERS
PRODUCT IS LEAKING OUT OF THE SUPPLY UNIT	THE KNOBS ARE NOT CORRECTLY TIGHTENED	MANUALLY TIGHTEN THE KNOBS USING A CLOTH
	THE PISTON SEALS ARE DAMAGED	REPLACE THE SEALS
PRODUCT IS LEAKING OUT OF THE SIDE CONTAINER	THE GLAND IS NOT FITTED OR IS DAMAGED	ASSEMBLE THE GLAND AND CHECK PERIODICALLY ITS STATE OF WEAR
EXCESSIVE FORMATION OF FOAM IN THE TANK	INCORRECT INSTALLATION OF TANK COMPONENTS	FIRMLY TIGHTEN THE WHITE KNOB ON THE TANK BOTTOM AND CHECK THAT THE SOFT PUMP-KNOB CONNECTION PIPE HAS BEEN WELL INSERTED INTO THE BOTTOM
THE COMPRESSOR STARTS AND SHUTS DOWN AFTER A FEW SECONDS	IF THE MACHINE IS WATER COOLED WATER DOES NOT CIRCULATE	OPEN THE WATER INLET TAP AND CHECK IF THE PIPE IS COMPRESSED OR BENT
	IF THE MACHINE IS AIR COOLED CONDENSATION TOO HIGH	VERIFY THAT THE AIR INTAKE AREAS AROUND THE MACHINE ARE UNOBSTRUCTED

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4003 Collins Lane, Louisville, KY 40245 USA
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Fax: 502.425.4664

Web: www.grindmaster.com/service

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