

New Basic



Instructions for use and routine maintenance

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Warning



Read this instruction manual before operating the machine.

General information

This manual provides you with all the information for proper use and maintenance of the machine. Please, carefully follow the instructions given. The manufacturer is not liable for any damage to people or goods, or to the machine itself, if the machine is used differently from what described in this manual. This manual shall be available to the user/technician for correct use of the machine. Information provided in this manual does not replace regulations on safety at work in force. Therefore, the user should comply with the regulations in force in the country where the machine is installed, besides following common sense rules. Do not use the product if you notice and defect or wear that may compromise the original safety standards. The user or the maintenance technician must report any fault to the supplier. The machine is meant for specific applications. Do not modify it and/or use it for applications other than the specified ones. Instructions, drawings, tables and all the contents of this document are confidential technical documentation and exclusive property of the manufacturer: no information may be released to third parties without written permission by the manufacturer. Descriptions and images in this document are only meant as indications and practical examples. They may be modified at any time and without prior notice. If further technical and functional details are needed, please contact the supplier.



Warning

Please, read the information contained in this booklet since they will provide you with useful instructions for safe installation, use and maintenance. Carefully read the sections “General information”, “Foreseen Operation Conditions”, “Incorrect Use”, “Forbidden Use”. This booklet is an integral part of the product. As specified by Directive 98/37EC, it shall be given to the users of the misting unit, in order to meet the obligations on training/information of the personnel using the machine. The manufacturer is not liable for any damage to people or goods, or to the machine itself, if the latter is used differently from what described in this manual. Keep this booklet in a safe place and make it available for future reference. Make sure it corresponds to the unit you have purchased, by checking the data on the machine identification plate. At delivery, check for any possible damages due to transportation. Complaints can be accepted only if reported by registered letter with return receipt within 8 days from product delivery date.

General information: Natural Cool

The misting unit cools the temperature through a physics process called “Adiabatic process” or “Thermal Dynamics”.

Water needs energy to evaporate, that is to pass from liquid to gaseous state. 1 g/0,03 oz of water needs 600 calories to evaporate. This energy is taken from the same room temperature where the water is nebulized, thanks to the high-pressure generated by the unit.

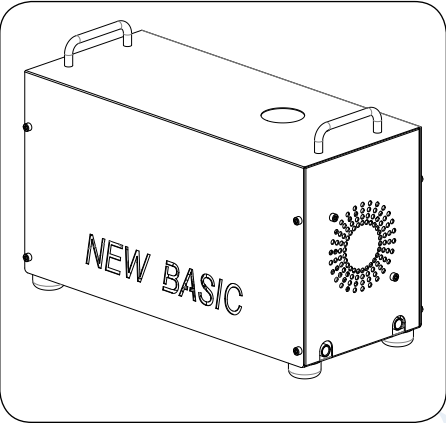
Because of their diameter of only 5 micron / 0,1969 mil, water particles evaporate almost immediately if the air condition is suitable. A suitable condition requires high temperatures and relative humidity not exceeding 90%. General efficiency of the system depends on temperature and relative humidity: between 30°C and 45°C – 86 °F and 115 °F with relative humidity below 40%, the naturalcool systems finds its best operating condition and achieves excellent results in heat reduction. Between 40°C and 80°C -104°F and 176 °F the results are still good, but above 80% of relative humidity they are marginal. The advantages offered by these products are best exploited in shaded or covered areas (verandas, gazebos, large umbrellas, marquees and the like). The misting unit, properly installed and set, allows reducing the heat by 4°C to 13°C – 39,2 °F to 55,4 °F. By combining the misting unit with special diffusers, such as wall or floor fans and special nozzles, it is possible to cool many different places and environments, both indoor and outdoor. Industrial buildings and areas, warehouses, vegetable and chilled food cabinets, farm businesses: these are only a few fields of application where you can have cool at low costs. Proper installation and adjustment of the system guarantee the best results in terms of performance and costs.

Machine description

The misting unit consists of an electric pump assembly, equipped with electrical and hydraulic safety systems. The on/off and pressure controls are located on the same unit. The machine mechanics is based on a ceramic-coated piston system, operated by an axial cam controlling the water flow at a pressure between 70 and 105 bar (100-1522 psi), allowing a water flow between 0.3 and 16.0 l/min (0,07 to 4,22 gal./min). Moreover, a patented by-pass system allows containing water flow backs without causing the water to overheat and thus avoiding incorrect evaporation. This system allows containing any pressure rise due to negligence that may compromise machine operation, thus considerably increasing its standard service life.

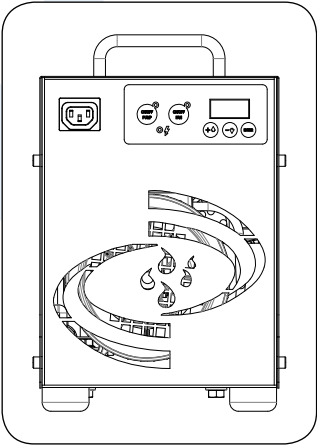
A pressure level out of the range mentioned above may seriously compromise the correct operation of the machine. The depressurization solenoid valve allows discharging excessive pressure, thus assuring the non-drip functionality and long efficiency of the seals. We suggest using High-Pressure lines, namely hoses and pipes with seal capacity 2 or 3 times higher than normal working pressure. This allows preventing water hammerings that may compromise the system seal. In case of special applications or use with particularly high pressure, please contact the manufacturer who will advise you on project feasibility, to avoid useless expenses or possible damages to components.

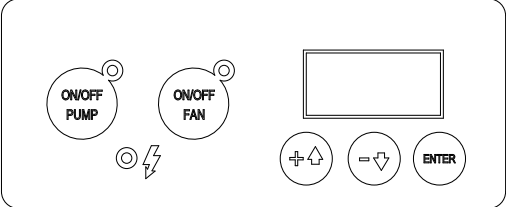
Package content



- 1 Misting Unit
- 2 User manual

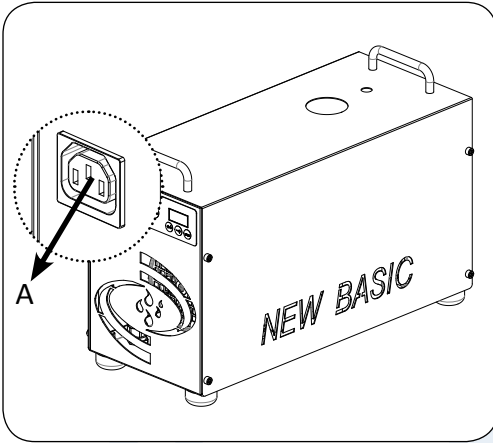
Machine description - control panel



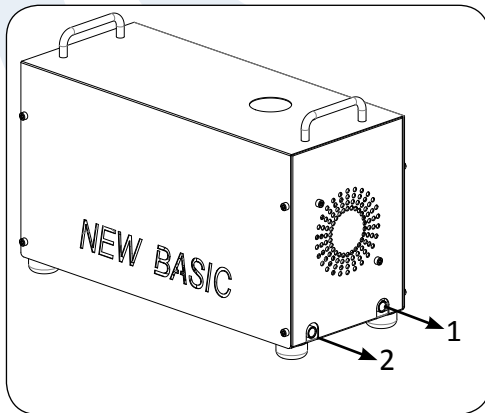


Machine description – electrical connections

A Electrical fan connection

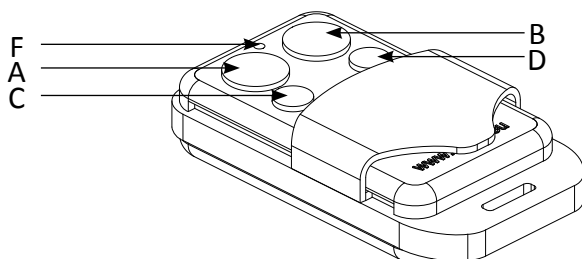


Machine description – water connections



- 1 Water Inlet (2-4 bar / 30 – 60 psi)
Sect. 3/4"
- 2 High-Pressure Water Outlet (70 – 105 bar / 1000 – 1500 psi)

Machine description – radio remote control

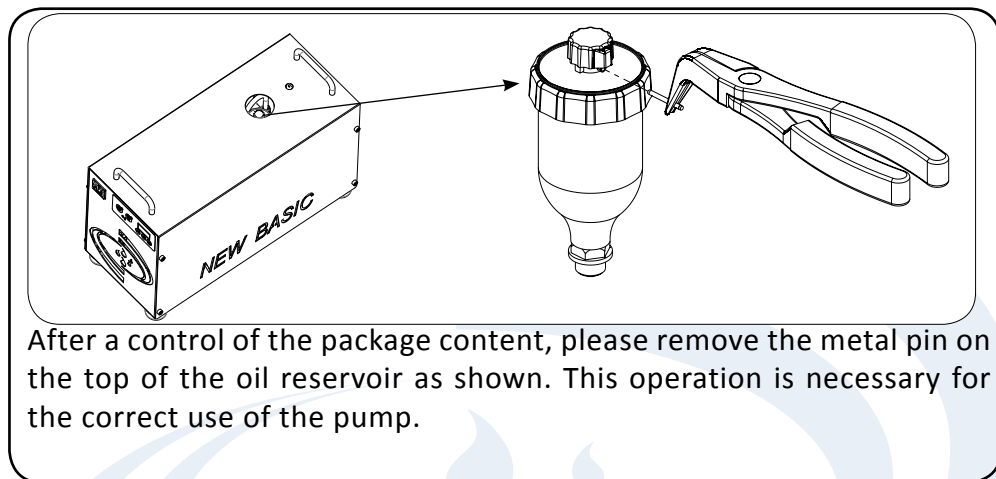


A practical remote control allows a short distance activation of the unit. Its function is limited to start-up and temporary stand-by. On the remote control there are four buttons ("A", "B", "C" and "D", as shown in the figure) and a confirming light ("F" as shown in the figure). In order to switch on or put the unit into sleep mode press button "A" or button "C", whereas button "B" and button "D" can only be used for the functioning of the fan units, if connected and authorized.

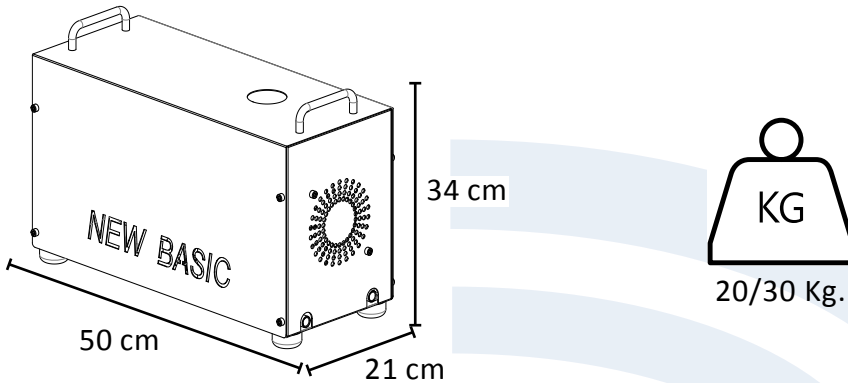
By pressing the buttons, the light will start flashing in order to give a confirming impulse. In the absence of flashing replace the remote control batteries.

For proper use the unit has to be switched off by the central button in the case of longer breaks.

First operation



Weight and dimensions

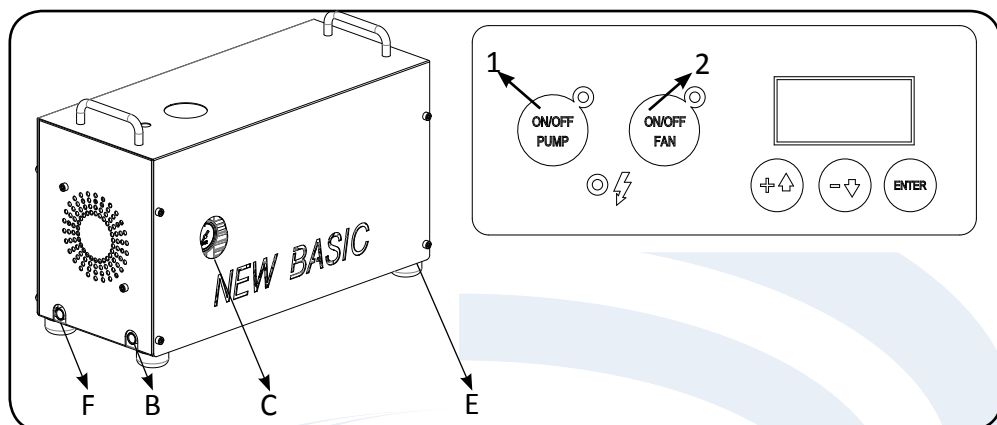


Transfer, packing and transportation

In case of first installation or misting unit's transfer please wear always working gloves and any other protective wearing to avoid any incidents or injuries. During transportation or transfer operations, the unit is placed on a pallet. Thus packed, the machine can be lifted by a lift truck with at least 100 Kg load capacity. If you need to transfer the machine but you do not have the original package, the unit should be correctly re-packaged and fastened to the means of transportation, in order to avoid impacts that may damage its external casing and compromise its functionality. In order to correctly restore machine operation after it has been transferred, changed of place or stored, the unit must be placed horizontally to avoid incorrect distribution of the lubricant, as this may cause faulty operation. Following this operation, disconnect the electrical supply and disassemble the machine. When putting the machine in its package, take care that its external parts and the external connections do not get damaged.



Installation position and start-up



1. Place the misting unit away from the wall (50 cm/20 in) in a safe, accessible and dry place, out of the reach of unauthorized people. The place should be ventilated and protected against weather conditions and the control unit must not be placed under the sun. Room temperature must not be above 40°C / 104 °F. Also remember that dust compromises seal efficiency and increases clogging frequency of the micrometric nozzles.
2. Connect the supply hose from water network to water inlet connection (B). The use of a filter before making this connection is strongly recommended. If necessary install a softener or a reverse osmosis system. In the case of a filter installed we advise replace the filter cartridge every three months. Dirty or very hard water could need to be replaced more frequently.
3. Connect the high-pressure water outlet (F) to the high-pressure hose previously installed by a qualified technician.
4. Electrical supply (E): connect the unit to the electric panel equipped with a dedicated residual current device. Never operate the misting unit if the cables are damaged, incorrectly connected or if their section is unsuitable. If using power extension cables, keep to the following instructions: if the length of the power extension cable is between 1 and 25 m (3 ft and 80 ft), cable section should be 2.5 mm². (0,0039

sq in); if length is between 25 and 50 m (80 ft and 160 ft), cable section should be 4 mm² (0,0062 sq in). Never use power extension cables longer than 50 m (160 ft). Warning: section is 4 mm² (0,0062 sq in) and 6 mm² (0,0093 sq in) respectively for three-phase machines.

5. Check that the water pressure from the water network is between 2 and 5 bar (30 – 70 psi), then open the tap for machine supply.
6. If installed, leave the end of drain vent valve open, then power on the unit through switch (1) and let the water flow, thus expelling the air bubbles trapped in the misting line and in the pump. This operation requires 6-8 minutes. For further information about the best configuration of the misting line via electronic panel, please read the relevant instructions for use later on this guide.
7. After release the air, close the vent valve and check if the pressure gauge (C) is showing a pressure of 70 bar (1000 psi), taking into consideration that pressure is stable after 15-20 minutes. If the indicator is visibly unstable, some air is still present in the system. Open again the end of line vent valve for a few seconds to expel the air, then close it again.
8. Within 5 minutes, the high-pressure line will start nebulizing water through the nozzles. If this does not happen, switch the system off following the instructions given and contact your supplier or the manufacturer.
9. Check proper seal/engagement of the nozzles. If pressure is considerably lower than 70 bar (1000 psi), this may be due either to poor water supply, leaking at the nozzles or end of line, or to the use of a number of nozzles greater than what foreseen in the original design. In such cases, contact your supplier.
10. In case of leaks from one or more nozzles, power off the system before disassembling them. After powering off, open the faulty nozzles and check for any foreign bodies, taking care not to lose the non-drip pin installed inside.
11. It is possible to activate only the fans by pressing the button (2) on the control panel.

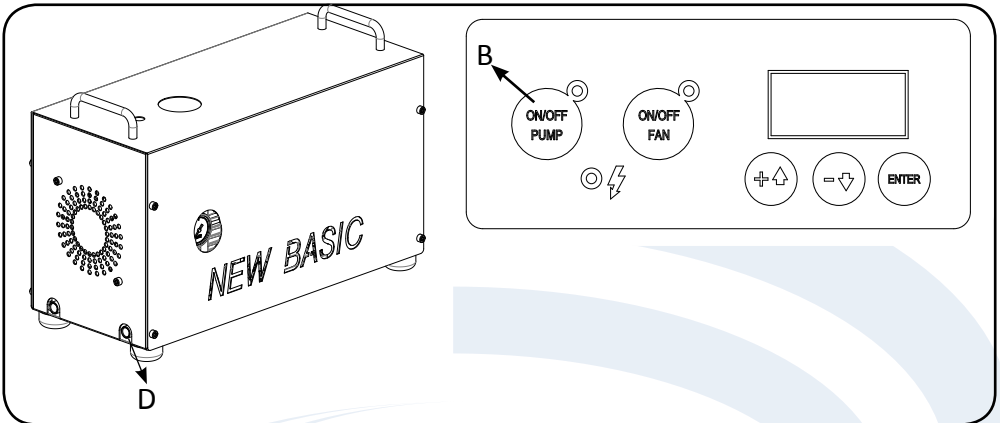
12. The management control panel includes a number of safety settings for the misting line. We therefore recommend reading the relevant instructions for use later on this guide.

Warning



In case of lack of water supply, the machine is powered off automatically to avoid damages to the misting unit. In case of a current hogging due to a sudden voltage drop, use of an extension cable with a too small section (min. 2.5mm² / 0.0038 sq in) or work under the sun, the unit could automatically stop to protect the coil windings. In case, please contact the maintenance service or the supplier to replace the fuse inside of the electronic box. For this reason, we suggest checking that the electrical network is not affected by frequent and considerable voltage variations. If that were under the rated voltage of the electrical network for a long time, the control unit could be damaged.

Switching off and storing



1. Close the water network tap to stop water supply. Warning: if you are using softener or an inverse osmosis system, switch off those devices too. Follow the instructions provided in the relevant manuals. Let the unit drain the water left in the system.
2. The unit switches off automatically when the water is completely drained. After that, use the machine main switch (B) to power off the misting unit.
3. When switching off the misting pump to clean the external filter or to recover the machine, detach the hydraulic hose which is connected to the input connector (D).
4. To store the machine, put it in a safe and dry place, out of the reach of unauthorized people. The storage place should be protected against weather conditions. If necessary, cover the unit for more protection.
5. When starting up the unit for the first time after a storage period, contact your supplier or a qualified technician. The scheduled routine maintenance allows including the annual storing and start-up operations as optional extra services.
6. During storage, the high-pressure lines and the filters must be completely drained in order to avoid incrustations or bacteria deposits. It is also advisable to disassemble, wash and store the micrometric nozzles. At next start-up, the lines should be washed by letting some

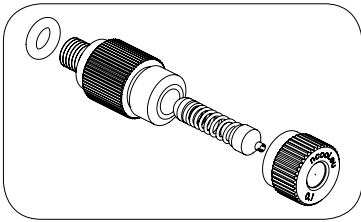
water flow before bringing the system to high-pressure.

Repairing the unit



No final user is allowed to carry out repairing operations on the Unit, otherwise the warranty shall immediately become null and void. In case a repair is needed, contact your supplier only, or ask for the intervention of a qualified technician authorized by the producer.

Routine maintenance - micrometric ceramic nozzles



The only operation allowed on the misting line is cleaning the misting nozzles. If water nebulization is not uniform, the nozzle needs cleaning. Disassemble it, taking care not to lose the non-drip pin, then remove any foreign bodies by using compressed air. In case

of scale deposits, immerse the nozzle in a container filled with a descaling solution for at least 5 hours, then rinse it with water, dry it and store it for future use. Use cotton buds to remove any dust from the inside. In case of prolonged downtime of more than 30 days, remove the nozzles and drain the line. If room temperature is below 5°C, remove the misting nozzles from the line. If the internal non-drip pin is lost or damaged, this could result in small dripping when switching off the system, or bad nebulization. The fineness of nebulization is given by the pressure (70 bar min) and the condition of the nozzle. Replace the nozzle if the nebulization is excessive or dampens, even if room temperature is above 28°C.

Routine maintenance - oil change

Every 500 Hours please call a maintenance service in order to change the oil.

Warning



Always disconnect the electrical supply before servicing or checking the machine.

Troubleshooting – causes and solutions

Symptom	Cause	Solution
The lines under pressure visibly vibrate:	<ol style="list-style-type: none"> 1. Dirty water filters 2. One or more nozzles clogged 3. Air in the pipes 	<ol style="list-style-type: none"> 1. Clean or replace the filters 2. Disassemble and clean the nozzles 3. Open the end of line valve to expel the air from the pipe
The misting unit is pumping but no water comes out of the high-pressure line.	<ol style="list-style-type: none"> 1. Air in the water circuit 2. End of line open or leakage in the circuit 3. Tampering with the flow adjustment knob or the by-pass in the machine head 4. Several nozzles clogged 	<ol style="list-style-type: none"> 1. Expel the air from the line 2. Find and repair the leakage 3. Ask for the intervention of the supplier or authorized technician 4. Switch off the misting unit, clean or replace clogged nozzles
The misting unit does not activate when the start button is pressed	<ol style="list-style-type: none"> 1. No electrical supply 2. The residual current device has triggered 3. Incorrect electrical connections or cables of unsuitable size 4. No water (green indicator light on) 	<ol style="list-style-type: none"> 1. Check the electrical connection 2. Lift the switch and start the unit 3. Check cable diameter, extension cable length and electrical connections 4. Open the water network tap. Check if the filter is clean and if water flows freely through it. Make sure the water flow is correct

Lucky2 - General information

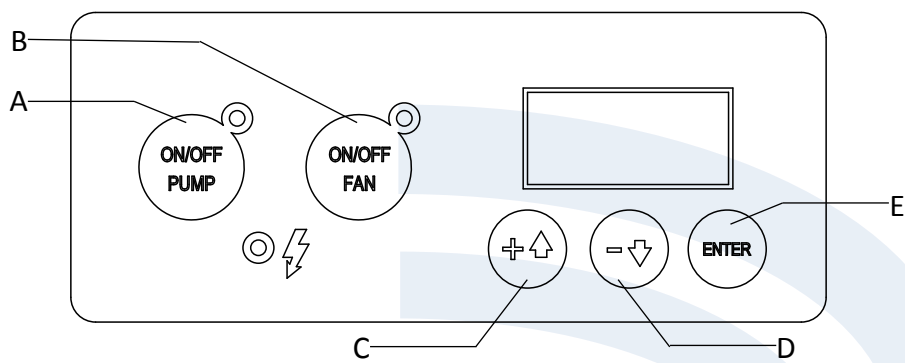
The programmable electronic device provided with Lucky2 technology is a component used for several configurations and products by the manufacturing company.

In this section of the manual we illustrate the use of the electronic device Lucky2 and explain how to fully exploit its technology through a number of operating modes: we recommend you follow the explanations and, where applicable, to carry out the tests you may find useful in the order in which they are proposed in this manual.

Any setting of the control unit through the electronic device Lucky2 becomes active by the next start-up of the unit.

Never leave the misting unit or the multifunction display Lucky2 under direct sunlight.

Lucky2 - Meaning of buttons



A	Pump on/off /Alarms Reset
B	Fan on/off
C	Change Menu/shift between options and value change (+1)
D	Change Menu/ shift between options and value change (-1)
E	Confirm set value

Warning



The function keys C-D-E have different functions and modes. Their function varies according to what is displayed on the screen.

Lucky2 - Available programs

The electronic device Lucky2 consists of:

1. 5 programs for the management of the nebulization.
2. 3 settings pages.
3. 3 information pages.

This guide will provide, in the next pages, a description for each program, specific settings and details about information pages.

Lucky2 - Shift and program selection

In order to display the different programs use button C (forward) and D (backward).

For each of the 5 programs a letter or a number with an inverse contrast will appear, as first symbol at the top right of the display. This character indicates unambiguously the respective program.

To select the desired program go to the main screen and press button E (enter); each time you press the button, the display will show the letter mentioned above by activating, in fact, the respective program.

Lucky2 - Shift and options page selection



Every page can contain different changeable options. To enter the “change setting” function press button E (enter). To move between changeable settings press button E (enter) again. The box which contains the value will start flashing, so it means you can modify the value by pressing button C (+) and D (-). To confirm the value you have chosen press button E. The box will stop flashing and will show the set value and the active value at that moment.

Warning



The indications mentioned above provide a detailed description about how to select the program and the single option for each of them. It is assumed that this information is clear and acquired, so it will be only indicated to which program and to which option page you have to go without explaining what operations to per-

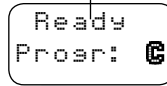
form. We will use the following icons in order to identify the item which can only be consulted and the changeable one

	<i>Content only to be consulted</i>
	<i>Changeable content</i>

Lucky2 - Dashboard program



Pump status



Setted program



Detailed description

Here you can modify and set the instantly selected program by pressing button E (enter). The possible values are:

- C. "Custom" program, where the user can set, as its own choice, the pause-work time of the misting pump.
- 1. Program "1", where the misting pump will function on continuous basis without any temporization.
- 2. Program "2", where the unit in every cycle will function for 15 seconds and will stop for 10 seconds pause.
- 3. Program "3", where the unit in every cycle will function for 20 seconds and will stop for 15 seconds pause.
- 4. Program "4", where the unit in every cycle will function for 30 seconds and will stop for a 20 seconds pause.

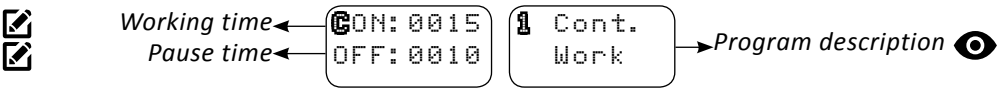
Instead at the top of the display a short description of the misting pump status at that moment is shown.

Warning



Data shown could be different from what is displayed on the screen you have since it could show other language descriptions or values with a different standard of measurement

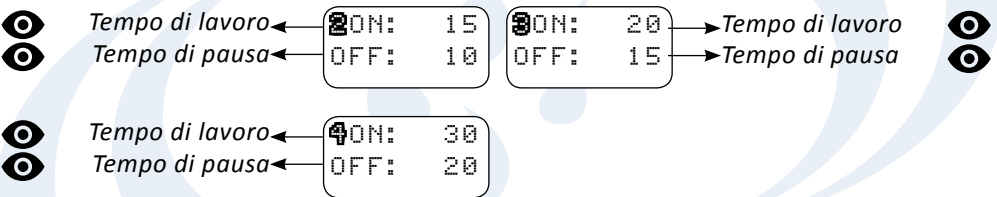
Lucky2 – Program “1” and Program “C”



Detailed description

Program “C” allows setting pause and work time customized by the user. Whereas program 1 allows setting the misting pump to operate in continuous mode without any temporization.

Lucky2 – Program “2”, Program “3” and “4”



Detailed description

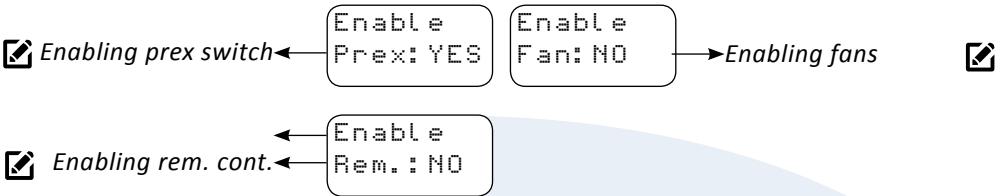
Program “2”, “3” and “4” allow setting a predefined temporization which cannot be modified during nebulization time.

Warning



Data shown could be different from what is displayed in your screen since it could show other language descriptions or values with a different standard of measurement

Lucky2 - Settings



Detailed description

The programmable electronic card Lucky2 allows setting the activation voltage on fans hold and remote contact. The pressure switch is used for the verification of input water pressure; if enabled, in the case of lack of water the programmable electronic card Lucky2 signals an alarm on the unit.

To use fans through unit’s board socket, it is necessary to enable its functioning. If there are no fans, please set to “NO”.

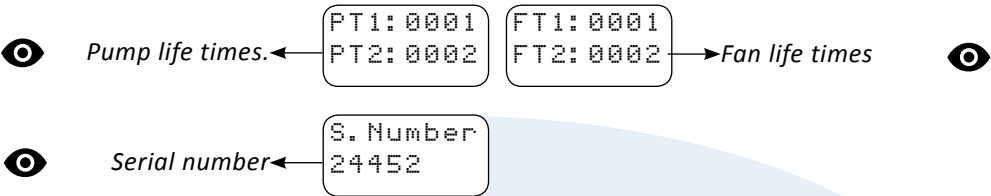
Enabling remote contact allows the remote control of the misting pump and allows the unit only operating when the contact is sent to the unit itself. In order to make this connection, apart from a single setting, you must act directly on the machine’s control cabinet and only a technician recognized by the manufacturer is authorized for such operation.

Warning



Data shown could be different from what is displayed in your screen since it could show other language descriptions or values with a different standard of measurement

Lucky2 - Additional information



Detailed description

In these screens, which can only be of advisory character, you can see the partial times since the last maintenance and the total times in working hours of the misting pump and the fans. Lastly, it is shown the serial number of the misting unit controlled by the programmable electronic card Lucky2.

Warning



Data shown could be different from what is displayed in your screen since it could show other language descriptions or values with a different standard of measurement

Foreseen operation conditions

The machine has been designed and manufactured to be used both indoor and outdoor, in parks, industrial buildings, farm businesses and the like. If the machine is installed indoor, check that the area is not dusty and that is properly ventilated in order to allow correct cooling. Therefore, the ideal installation place for the machine is in ventilated areas protected against weather conditions, at a temperature above 27-28°C with relative humidity below 80%. If you use the system both for Summer cooling and Winter humidification, it is advisable to adjust the water flow. For the humidifier function, use the cyclic timer to decrease the nebulization according to a time unit, so that the operation in a minute is limited to 5, 10 or 15 seconds, according to the humidity level to be reached. In summer, you will just need to set the continuous operation again. To perform this operation, contact the manufacturer authorized technician.

Improper use – forbidden use

1. It is absolutely forbidden to carry out checks or maintenance operations when the machine is running or the power supply is on. **ALWAYS DISCONNECT THE POWER SUPPLY!**
2. Do not expose the machine to low temperatures: ice formation may cause serious damages to the high-pressure pump.
3. Always wear protection equipment when servicing the machine.
4. When using the misting unit to nebulizer liquids other than water, make sure that they can be completely nebulized and that they do not contain any substance that might harm people in the area. Moreover, make sure **NOT** to nebulizer substances containing alcohol, oil or particles greater than 5 micron, in order to avoid deteriorating or clogging the micrometric nozzles and the mechanical components of the unit. The manufacturing company is no way liable and does not grant the warranty for any damage to people or goods due to incorrect use of the unit, namely when it is used to nebulizer in the air substances that are not allowed by the law in force or by the manufacturer.

Warning



DO NOT REMOVE THE LABELS FROM THE MACHINE. IF THEY ARE DETERIORATED, ASK THE SUPPLIER FOR NEW ONES. THE MANUFACTURER AND THE SUPPLIER ARE NOT LIABLE FOR BREAKAGES OR ACCIDENTS DUE TO NON COMPLIANCE WITH THE WARNINGS ABOVE. WARRANTY WILL BE CONSIDERED NULL AND VOID IF THE ABOVE-MENTIONED WARNINGS ARE NOT FOLLOWED.

Warranty terms and conditions

Validity

This product is covered by a twenty-four (24) months warranty, starting from the purchase and/or test date. This warranty protects the user against manufacturing or material defects. In case the machine is used for professional applications, this warranty covers a period of twelve (12) months (ex C.L. no°422 art.1 par. B).

Warranty Conditions

1. The in-warranty repair is accepted only if the product is accompanied by the purchase receipt and the test report issued by the supplier.
2. Manufacturing company duty is limited to the repair and, at its own discretion, the replacement of the whole product or of single faulty components.
3. The suppliers and the technicians allowed to carry out in-warranty repairs are only those expressly authorized by the manufacturer
4. This product or its materials are not considered as faulty in case the customer needs to adapt the machine to technical or national safety regulations other than those in force in the country originally foreseen for the product. No refund shall be granted for damages arising from the above-mentioned modifications, or other changes not connected to the original design of the product, carried out by the customer/user or by unauthorized people.
5. The warranty does not apply to:
 - a. Periodical checks, maintenance operations, replacement of components subject to wear;
 - b. Transport, transfer or installation of the product;
 - c. Damages caused by fire, water, natural events, war and riots, incorrect power supply, insufficient ventilation of the installation place, and any other cause not connected the manufacturer;
 - d. Incorrect use, operating errors and wrong or unwary installation;
 - e. Damages to the product due to non original manufacturer spare parts use;

- f. Damages to the product or insufficient performance due to incorrect installation after purchase;
 - g. Every damage to the product due to negligence.
6. This Warranty is valid for every person formally having the propriety of the product during the above-mentioned period.
7. This Warranty does not affect the rights of the customer as prescribed by the law in force in the country, nor the rights of the customer towards the retailer arising from the contract of sale.



Declaration of conformity

I, the undersigned, acting legal representative of the company

Declare that the following appliances:

NEW BASIC

Comply with the current laws in force, which implement the following directives and also declare that all the following regulations and/or technical specifications have been applied:

2004/108/CE EMC

EN 61000-3-2/A2:2009

EN 61000-3-3:2008

EN 55014-1/A1:2009

EN 55014-2/A2:2008

2006/42/CE Machinery

EN 60335-1:2010

EN 60335-2-79:2009

EN 62233:2008

EN ISO 12100-1/A1:2009

EN ISO 13857:2008



Note

Handwriting practice lines with a large, faint, stylized background logo consisting of a swirl and water droplets.

