

# INSTRUCTIONS MANUAL



Sold separated

## **HOW TO USE THIS MANUAL CORRECTLY**

### **DESCRIPTION OF THE CONTENT**

This manual has been created to provide the installation technician with information for the machine's correct installation and effective maintenance.

The document also contains a section that describes the cause of potential incidents as well as detailed information for resolving them.

This manual should be stored in a safe place so it may be used to resolve matters related to the machine's operation throughout its service life.

### **RECEPTION AND INSTALLATION**

The installation technician who handles the reception and installation may refer to the first part of this document for important information on how to properly connect the machine to the mains, water mains and drainage, as well as the conditioning factors and limitations. This manual also contains comprehensive information about installing multiple stacked devices.

### **OPERATION**

This document has been prepared so anyone may easily understand the machine's operating principles and quickly view each status. The manual also serves as a valuable guide about the menus and explains in detail each of the messages that appear on the display in a technical annex located at the end.

### **SPECIFICATIONS AND ADJUSTMENTS**

The manual's user can consult technical information regarding the machine's parameters, production ranges, pressostat adjustments, electrical or water consumption, and refrigerant charges.

### **MAINTENANCE AND CLEANING**

In order for this document to serve as a comprehensive guide for the installer, a section has been included with periodic maintenance and cleaning instructions as well as a detailed explanation of how to clean each element. It is essential to refer to this manual in order to guarantee the machine's optimal service life.

### **INCIDENT RESOLUTION**

The document includes a technical support table to help users resolve common issues. It serves as a guide for diagnosing issues and provides the most probable solutions.

### **QUALITY PARAMETERS AND CUSTOMER SERVICE**

This machine has been manufactured according to rigorous quality standards. If any incidents arise, please contact the company that installed the machine or the Customer Service department of the manufacturer:

P.I. Sector 13. Avda. dels Hostalers, 2  
46394 Ribarroja del Turia. Valencia. Spain

0034961667639/ Hours: 8:00 a.m. to 7:00 p.m.

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**WIRING DIAGRAMS: AT THE END OF THE MANUAL**

# 1. INTRODUCTION

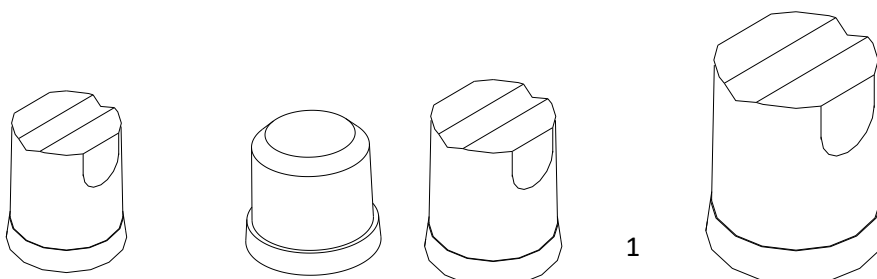
## 1.1 WARNINGS

- This device must be installed by a specialist technician.
- Any modification necessary to the electrical installation for the perfect connection of the machine must be carried out exclusively by professionally qualified and authorised staff.
- To guarantee the efficient and correct operation of this device, it is essential to follow the manufacturer's instructions, particularly with regard to maintenance and cleaning operations, which in most cases should be carried out by qualified staff.
- Actions by unqualified persons, apart from being dangerous, can cause serious faults. In case of a fault, contact the distributor who sold it to you. We recommend that you always demand original spare parts.
- Any use of the ice-cube-maker other than for producing ice, using drinking water, is considered inappropriate.
- Modifying or attempting to modify this device, apart from voiding the warranty, is extremely dangerous.
- The machine should not be used in the open air or exposed to the rain. Connect to the drinking water mains.
- The machine should be connected using the cable supplied. It is not designed to be connected to a fixed pipe.
- Always disconnect the machine from the mains before carrying out any cleaning or maintenance work.
- The electrical base must be in an accessible place.
- We recommend the use of filtration in case of low water quality.
- Carry out unloading and recovery of materials or waste according to your national regulations on the matter.
- This device can be used by children older than 8 years and persons with impaired physical, sensory or mental capacities, or who lack experience or knowledge, if they have had supervision or instruction in the use of the device from a person responsible for their safety. Children should be supervised to ensure that they do not play with the device. Children cannot do the cleaning and maintenance of the device without supervision.
- Do not store explosive substances such as cans of aerosol with flammable propellant in this device.

## 1.2 DESCRIPTION

The most important features are:

- Modular machine.
- Display with LDC screen of 16x2 characters.
- Cleaning system included in the electronic programmer.
- AISI 304 stainless steel chassis
- Anti-jamming injectors installed in 3 **rotating** collectors.
- Pumps without seals (2)
- High/low pressure safety gauge.
- Tropical-temperature machine. Ready to work up to 43°C.
- TRANSPARENT CUBES with mostly mains water.



## 2. RECEPTION OF THE MACHINE

Inspect the exterior of the packaging. If it is broken or damaged, complain to the haulier.

To check whether the machine is damaged, UNPACK IT IN THE PRESENCE OF THE HAULIER and make a record on the reception document, or on a separate document, of any damage that the machine may have suffered. Since 1 May 1998, it has complied with European regulations on the management of Packaging and Packaging Waste.

Always record the machine and model number. This number is marked in three places:

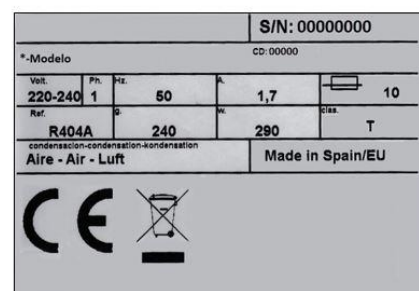


### Packaging

There is an external label with the factory number.

### Exterior of the machine

On the back, on a label that is identical to the front.



### Name plate

Check that the installation kit is complete inside the machine. It consists of:  $\frac{3}{4}$  gas connection, two filter joints, anchor bolts and the manual.

**CAUTION: THE PACKAGING ITEMS (PLASTIC BAGS, CARDBOARD BOXES AND WOODEN PALLETS) MUST NOT BE LEFT WITHIN REACH OF CHILDREN AS THEY ARE A POTENTIAL SOURCE OF DANGER**

## 3. INSTALLATION

### 3.1 CONDITIONS OF THE LOCATION

The machines are designed to function in an ambient temperature of between 5°C and 43°C, and with water input temperatures of between 5°C and 35°C.

Below these minimum temperatures, there may be difficulty in removing the cubes. Above the maximum, the life of the compressor is shortened and production is considerably reduced.

### 3.2 WATER AND DRAINAGE CONNECTION

Bear in mind the following preliminary considerations on water quality:

Water quality has a significant influence on the quality, hardness and taste of the ice, and on the life of the condenser in water-condensed machines.

**a) Water impurities:** larger impurities are retained by the filters which come with each machine. The filters must

be cleaned according to the purity of the water. For small impurities, we recommend the installation of a 5 micron filter.

**b) Hard water:** the ice will be less compact and the cubes may stick to each other. Some cubes may appear with white marks. Inside the machine, lime deposits will form, which may interfere with its proper functioning. Water condensate may obstruct the condenser or reduce its performance. To avoid incrustations it is advisable to install a water filtering system. We recommend the use of a polyphosphate filter.

**c) Highly-chlorinated water:** the ice may taste of bleach (chlorine). In order to eliminate this taste, you can install an activated carbon filter.

Bear in mind that you may receive water which is simultaneously affected by these three problems.

**d) High purity water:** production may be reduced by up to 10%.

### 3.3 CONNECTION TO THE WATER MAINS

Use the flexible connection (length 1.3 m.) with the two filter joints supplied with the machine. We do not advise the use of double outlet taps with two stopcocks as they may close the rear one by mistake, leaving the machine without water. Water pressure must be between 1 Bar and 6 Bar. If the pressure exceeds these values, install the necessary corrective components.

It is important that the water line does not pass close to sources of heat, and that the flexible hose or the filter does not receive hot air from the machine. Otherwise this would cause production to decrease as the water would be heated.

### 3.4 CONNECTION TO THE DRAIN

The drain must be below the machine, by at least 150 mm.

In order to prevent bad smells, install a siphon. The drainage pipe should ideally have an internal diameter of 60 mm. and a minimum slope of 3 cm per metre.

### 3.5 ELECTRICAL CONNECTION

The machine is supplied with a 1.5 metre cable. If the power cable is damaged, it must be replaced with a special cable or set supplied by the manufacturer or the after-sales service.

The machine should be positioned in such a way that a minimum space is left between the back of the machine and the wall so the plug on the end of the cable can be plugged in comfortably and without any risk.

Supply a suitable socket.

It is a good idea to install a switch and suitable fuses. The voltage and intensity are marked on the name plate and in the technical pages of this manual. Voltage variations of more than 10% above that indicated on the plate may cause breakdowns or prevent the machine starting.

The line to the socket must have a minimum cross-section of 2.5 mm<sup>2</sup>.

Check that the mains voltage and that indicated on the name plate are the same.

**IMPORTANT:** Ensure that there is a proper earth connection when connecting the machine. Consult the current legislation or the regulations of the country where it is installed.

The electronic board has a button battery to maintain the time. In the installation, please remove the plastic protecting the battery (board in the upper side, behind the display, remove two screws under the upper air grille, to access the electric box).

### 3.6 STACKING KIT

In case of stacking 2 machines, a stacking kit is supplied, made up of the following parts:

Reference	Description	Units	Comments
<b>8141</b>	STACKING OUTLET	1	Outlet assembly (Detail B)
<b>8823</b>	ASSEMBLY OF STACKING RAMP-PLATE	1	Ice cube ramp assembly 3x1 mm <sup>2</sup> interconnecting hose for machines
<b>8824</b>	STACKING RAMP TEMPLATE	1	Ice cube ramp assembly 3x1 mm <sup>2</sup> interconnecting hose for machines
<b>8145</b>	STACKING WIRING KIT	1	Ice cube ramp assembly 3x1 mm <sup>2</sup> interconnecting hose for machines
<b>2452</b>	DIN 127 M-8 ZINC GROVER WASHER	4	Stacking of machines (Detail A)
<b>2515</b>	DIN 9021 M-8X23 ZINC WASHER	4	Stacking of machines (Detail A)
<b>8142</b>	STACKING SPACER	4	Stacking of machines (Detail A)
<b>285</b>	DIN 934 M-8 ZINC NUT	4	Stacking of machines (Detail A)
<b>722</b>	DIN 912 M-8X50 ZINC SCREW	4	Stacking of machines (Detail A)
<b>244</b>	DIN 7981 2.9X9.5 STAINLESS STEEL SCREW	2	Outlet assembly (Detail B)
<b>302</b>	4X10 STAINLESS STEEL RIVET	3	Stacking of machines (Detail A)

To stack two machines, you need to make some modifications to the electrical connections of the machine. Carry out the stacking before making the electrical installation. In addition, the stock thermostat connections have to be changed in both machines.

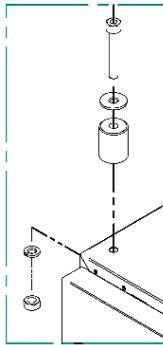
NOTE: Use a drill no longer than 20 mm to avoid damaging the bin.



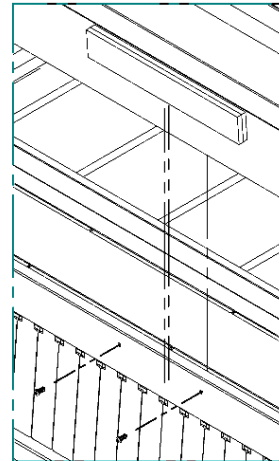
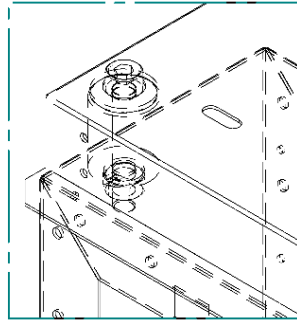
### 3.6.1 MACHINE STACKING

To carry out the stacking, remove the top panel of the machine that is going to be placed below and the front panel as shown in the illustration.

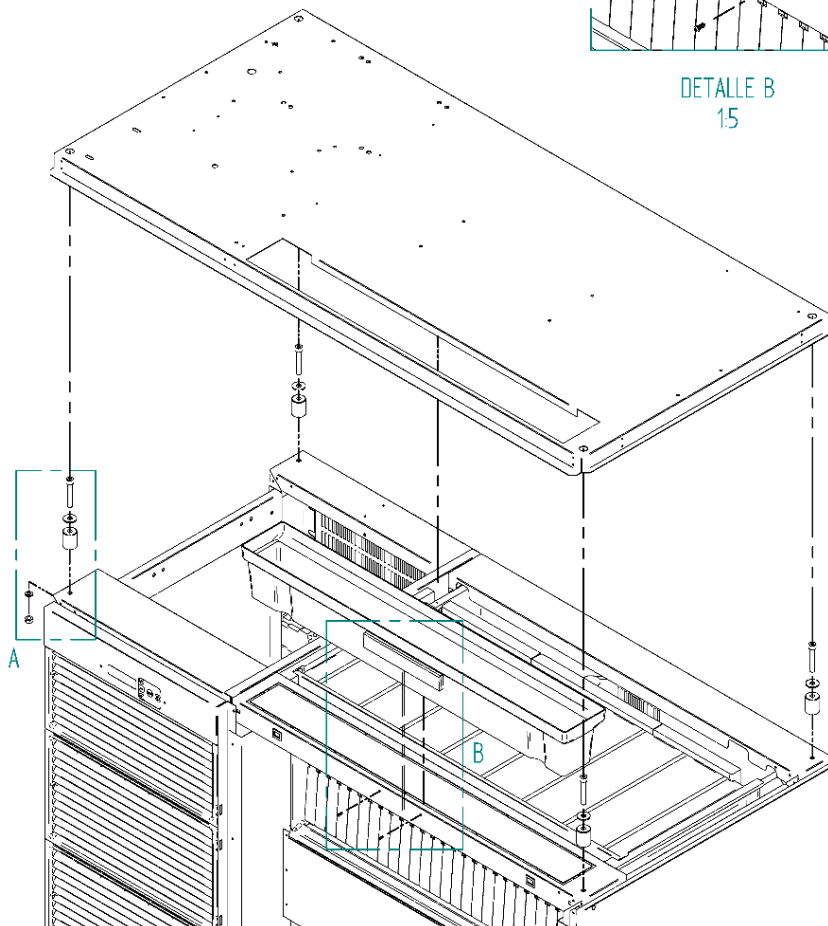
Once the top and front panels are removed, install the kit as shown in details A and B. To install the outlet, remove the plate that covers the ice outlet (remove fasteners and file the perimeter).



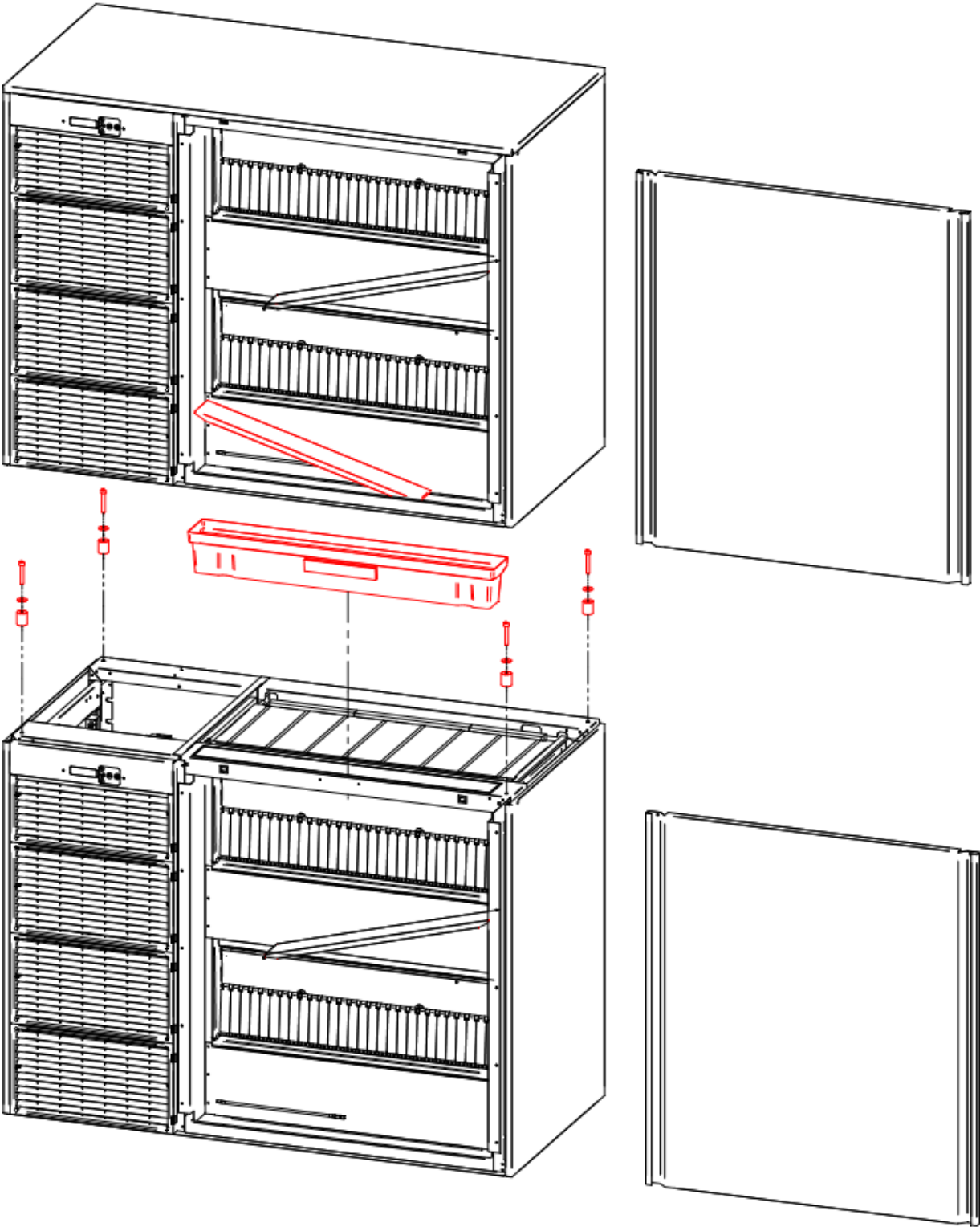
DETALLE A  
1:5



DETALLE B  
1:5

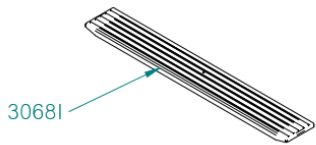
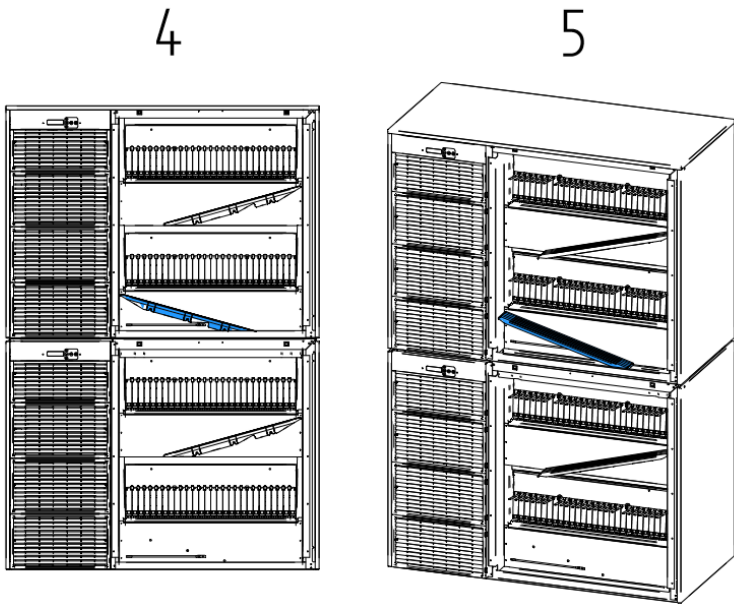
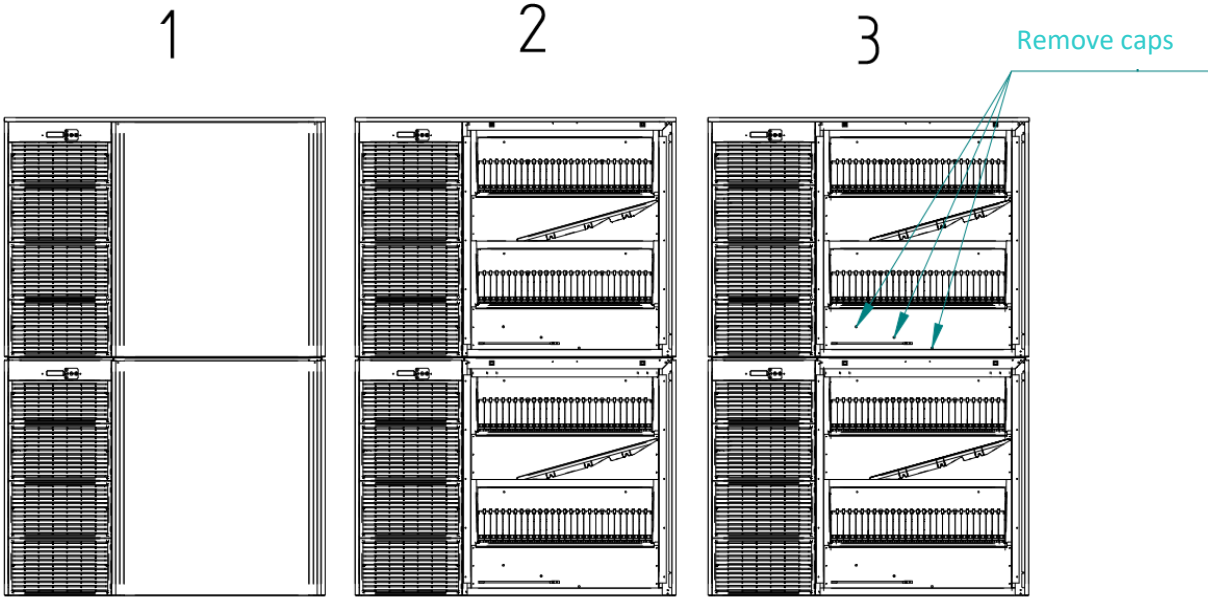


MACHINE STACKING: DIAGRAM



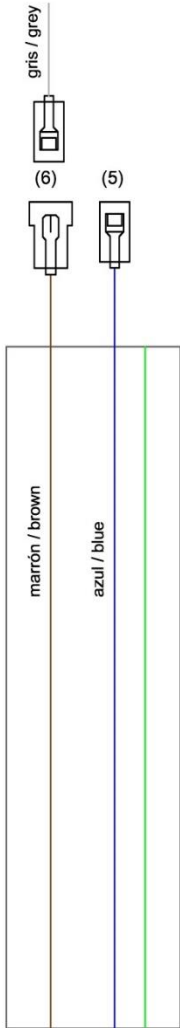
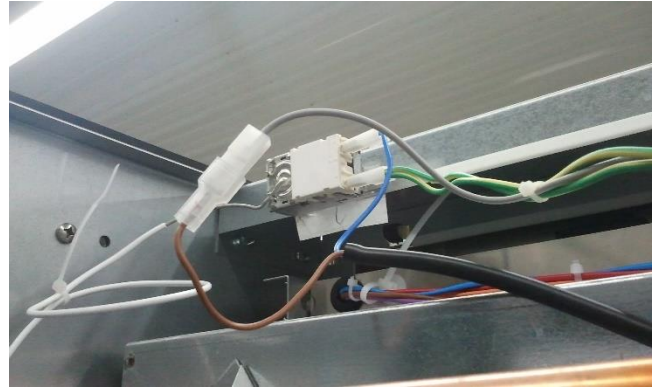
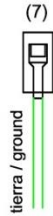
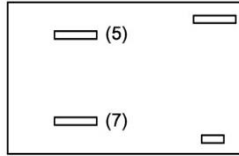
The steps to **assemble the ramps** are shown below:

- 1. The two machines should already be stacked.
- 2. Remove both front covers.
- 3. Remove the three plastic caps from the riveted nuts to be able to screw.
- 4. Place the ramp 30681 and screw it, as shown in the image.
- 5. Final position of the ramps.

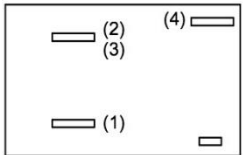
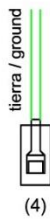
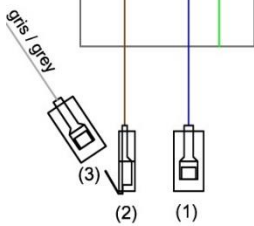


### 3.7 THERMOSTAT CONNECTIONS

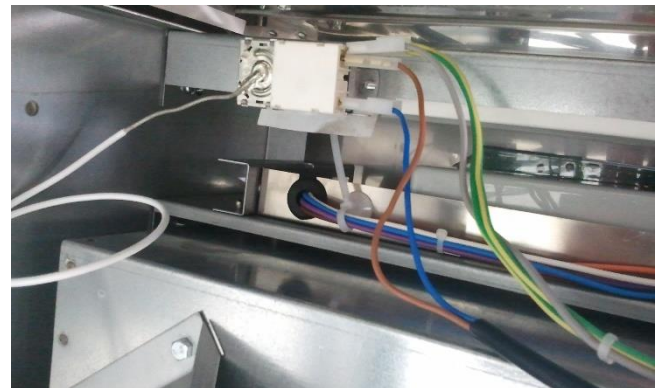
Termostato stock - máquina superior  
Bin thermostat - top machine



Machine stacking kit



Termostato stock - máquina inferior  
Bin thermostat - bottom machine



### 3.8 REMOTE CONDENSER UNIT

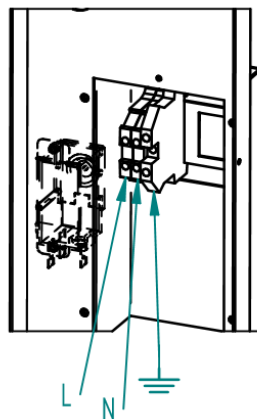
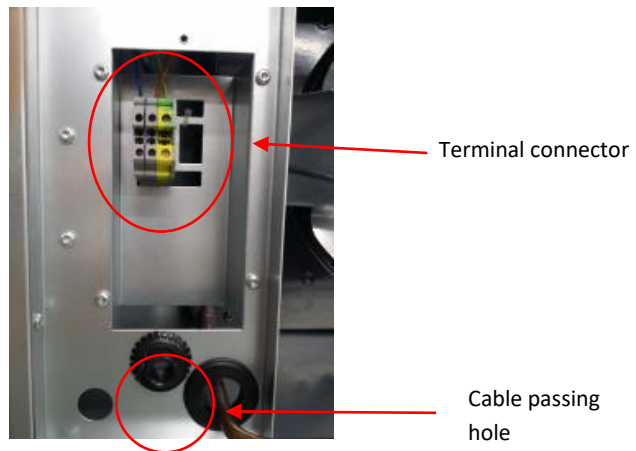
If you have purchased a machine with a remote condenser, follow the instructions for its installation.

#### STEP 1: PLACING BOTH UNITS (REMOTE CONDENSER AND SPLIT MACHINE) IN ITS LOCATION

#### CHECKING THE PROPER CONNECTIONS FOR EACH UNIT:

##### REMOTE CONDENSER:

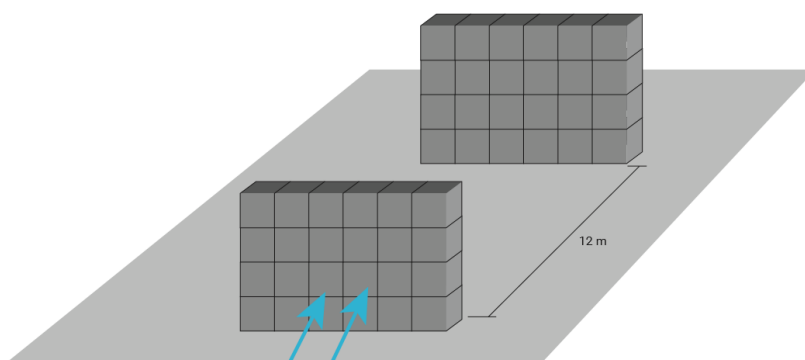
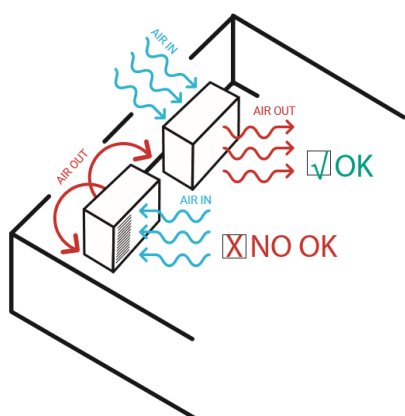
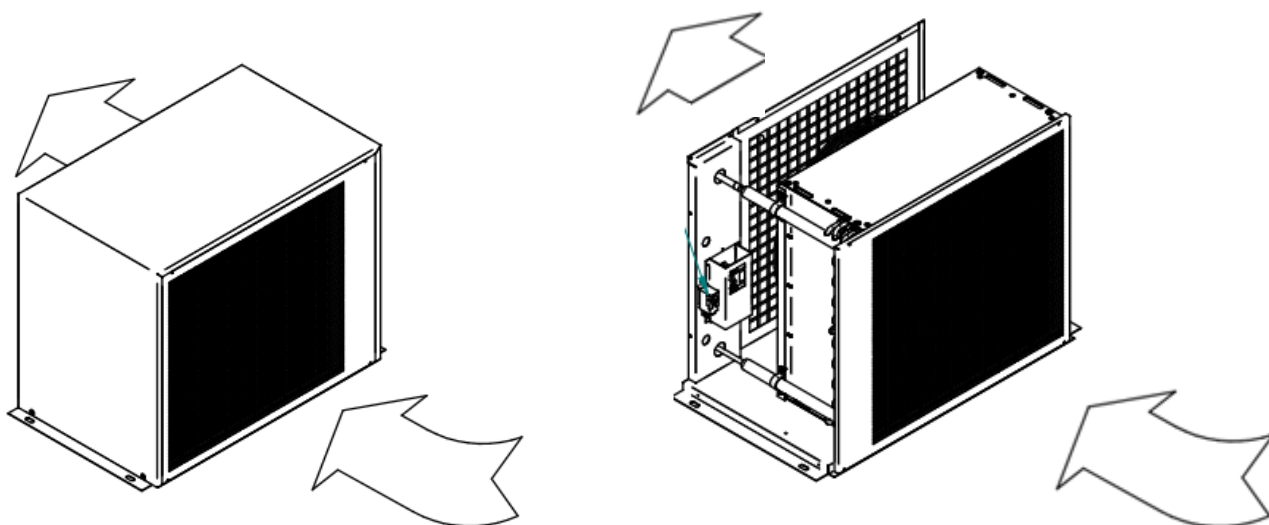
- The condenser includes the condenser pressure switch
- It needs an electrical supply (check label with power supply specifications). It comes without an electrical cable. Connect to the power supply directly (it does not need communication with the split unit).
- To connect, remove the rear cover, using a Torx screwdriver. The electrical cable must go through the hole next to the piping hole. Use a 3x1.5 mm<sup>2</sup> electrical cable.



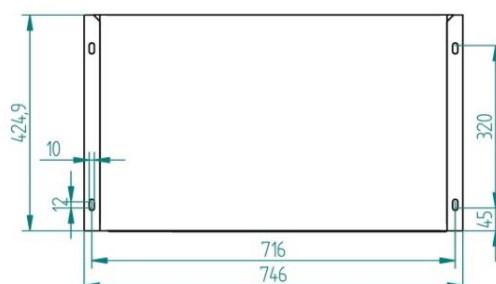
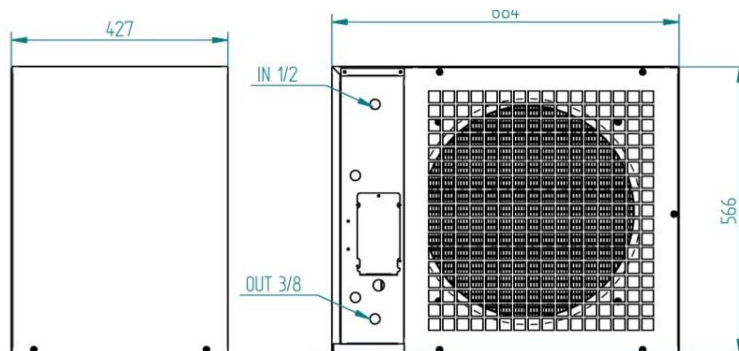
*Terminal connector to supply electrical power to the remote condenser, located behind the metallic cover.*

- Level the unit correctly.
- Locate the remote condenser unit under a shadow. We advise to place it under a roof, whenever possible.
- The remote condenser unit works between 0°C (32°F) and 43°C (109.4°F) air temperature.

- Check the air direction through the remote condenser, always install the unit with the air direction out to the ambient when installed in a wall, to avoid condensed air returning to the condenser.
- If more than one unit is going to be installed, please located them to avoid the condensed air going from one unit to the other.



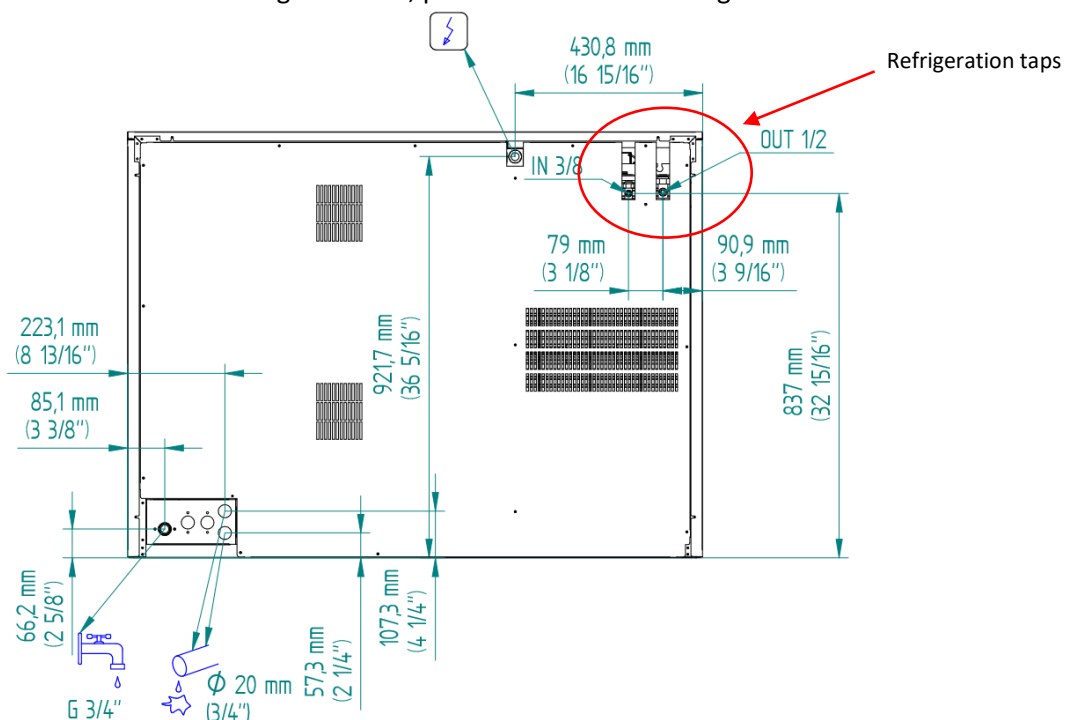
Main wind direction





## INTERNAL UNIT:

- It needs an electrical supply (check label with power supply specifications). The unit comes with an electric cable, and no plug.
- Water supply: it needs a water tap nearby. The unit comes with a water hose, 3/4" GAS connection, and two net filters.
- Drain pipe: The unit has two drain pipes. A drainage is need it. The drain pipes must be straight, no siphons allowed, to let the water drain directly.
- Level the unit correctly.
- Always check the ice exit, to allow the ice cubes fall free.
- In case of stacking two units, please follow the stacking manual.



## STEP 2: REFRIGERATION CONNECTION BETWEEN BOTH UNITS

**REMOTE CONDENSER:** Remove the rear cover if need it.

### REMOTE CONDENSER PIPING CONNECTION

Gas pipe: up inlet 1/2"

Liquid pipe: down outlet 3/8"

- The remote condenser is sent from factory pressurized. To ensure there is no damage from the transport, please check that is still pressurized, before cutting the pipes to start the connection.
- Always connect the remote condenser to the refrigeration pipes by welding. The remote condenser comes with the inlet gas pipe closed, and the outlet liquid pipe with a gas intake. Cut both pipes to weld.

- Do the refrigeration installation between the remote condenser and the split unit. Check always that each tube is in the correct position, and the pipes are not together (to avoid heat exchange between pipes. We advise to insulate the liquid line.
- Try to do a clean installation, as straight forward as possible.
- The liquid line must always go from the outlet remote condenser (liquid, lower pipe) to the split unit liquid inlet (3/8" tap), and the gas inlet from the remote condenser (upper pipe) to the gas outlet in the split unit (1/2" tap).
- If the remote condenser is lower than the split unit, it is necessary to install a siphon in the liquid line, near the remote condenser, to avoid the oil staying at the condenser.
- Do not install the remote condenser lower than 3 meters from the split unit.
- If the remote condenser higher or equal to the split unit, a siphon must be installed in the gas line, one every 4 vertical meters and one every 8 horizontal meters.

**SPLIT UNIT:** It is connected by a gas tap 3/8" and a liquid gas tap 1/2", using the nut that comes with the tap.

#### STEP 3: INSTALLATION LEAKING TEST AND VACUUM

- Once the refrigeration pipes are weld and connected, a leaking test must be done to check that the line has no leakage in the nuts or the welding.
  - After checking for leakages, a correct vacuum must be done. We advise to keep vacuum for around 4 hours.
- ATTENTION:** Do not open the gas taps from the split before doing the vacuum, as the unit comes with refrigerant.

#### STEP 4: OPEN GAS AND LIQUID TAPS

- Once that everything is correctly installed and there are no leakages, and the vacuum has been done properly, open the split unit, that comes with a refrigerant charge for 5 meters of distance between the remote condenser and the split unit. Open slowly the liquid gas tap (3/8") and then the gas tap (1/2").





STEP 5: ONLY FOR GREATER DISTANCES THAN 5 METERS BETWEEN UNITS

- If the distance between the remote condenser and the split is greater than 5 meters, it is necessary to add some refrigerant. Add 40 grams per extra meter, up to 15 meters maximum.

STEP 6: START UP

- Now the split unit can be turn on to try it, and modified the control parameters if need it (electronic board). Instruccions in the user manual.

**NOTE:** It is better to use the ambient probe from the split unit to obtain the temperature of the air getting inside the remote condenser (in the air intake of the condenser). To do so, enlarge the probe cable and put the probe in the condenser.

## 4. START UP

### 4.1 PRIOR CHECK

- Is the machine level?
- Are the voltage and frequency as indicated on the plate?
- Are the drains connected and do they work?
- Is it connected to cold water?
- \*\* If the machine is air condensed, are the air circulation and the temperature of the premises right?

	MAXIMUM	MINIMUM
AMBIENT TEMP.	43°C	5°C
WATER	35°C	5°C

- Is the water pressure correct?

MINIMUM	1 Bar / 0.1 MPa
MAXIMUM	6 Bar / 0.6 MPa

**NOTE:** If the incoming water pressure is greater than 6 Bar, install a pressure reducer.

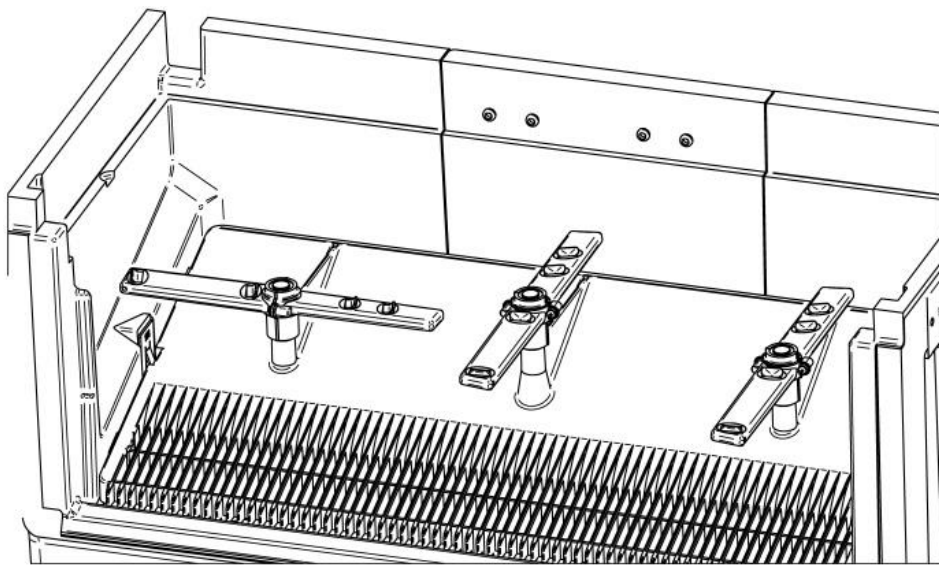
**CAUTION: CHECK THAT THE VOLTAGE AND FREQUENCY OF THE MAINS ARE THE SAME AS THOSE INDICATED ON THE NAME PLATE.**

### 4.2 START UP

After following the installation instructions (ventilation, conditions of the premises, temperatures, water quality, etc.), proceed as follows:

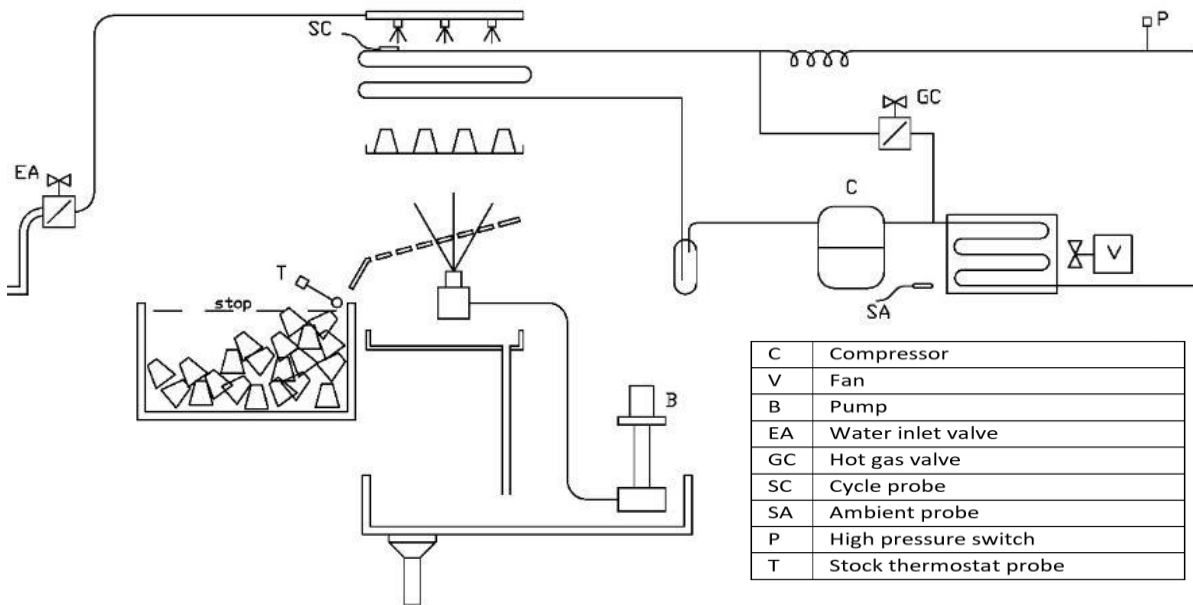
1. Open the tap to let water flow. Check that there are no leaks.
2. Connect the machine to the mains with its corresponding protection.
3. Activate the button on the display installed on the front of the machine.
4. Check that there is no part which is rubbing or vibrating.
5. Check that the curtain can move freely.
6. Check that the injectors send the water to the evaporator in the correct direction.
7. Check that the collectors turn freely on their axles.
8. Once 10 minutes have passed, check that the water container has no leaks through the maximum level overflow channel.

**Note:** The electronic plate has a battery to keep the date and time. The battery is protected with a plastic to prevent their consumption. The first time using the unit, remove the plastic (opening the upper compartment, display area, access to the electronic board box and inside is the battery with plastic).



## 5. OPERATION

### 5.1 OPERATING PRINCIPLE



1. When the start button is pressed, the machine begins with a starting timed period, during which the water inlet electro-valve (**EA**) is opened.
2. After this timed start, the working cycle begins:
3. It starts with the detachment operation.
4. When the detachment time begins, the hot gas electro-valves (**GC**) and the water inlet electro-valves (**EA**) remain open, and the compressor and fan start up. The water pump runs for 30 seconds to help detachment.
5. When detachment is complete, ice-making begins.
6. The compressor (**C**) and the fan (**V**) continue to work, the pump (**B**) starts and the hot gas valves (**GC**) and water inlet valves (**EA**) close.
7. From this moment on, the evaporator begins to cool during the production time.
8. Once the production time has finished, the detachment process will begin again.

9. Each entire cycle is considered to begin when the production time starts and ends when the detachment time has finished, at which point a new production cycle begins.

\*The hot gas electro-valve GC has to open during 5 seconds before the compressor starts. The remaining components are stopped, including the compressor.

\*Expansion controlled by expansion valve.

## 5.2 DISPLAY

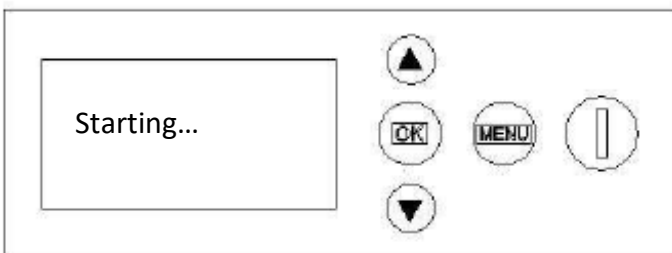
### 5.2.1 MACHINE OPERATING STATES

#### Machine off

The time is shown on the display when the machine is off (no light). When the machine is disconnected from the power supply the time is lost. When reconnected it starts at 00:00, flashing to indicate that the time is not set.

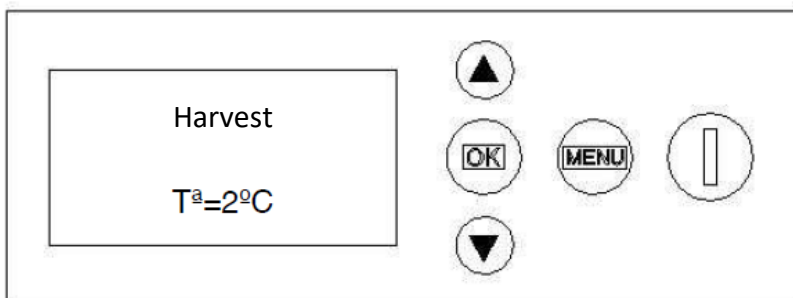
#### Start

When the machine is working during the start time, the display will appear as follows:



#### Detachment

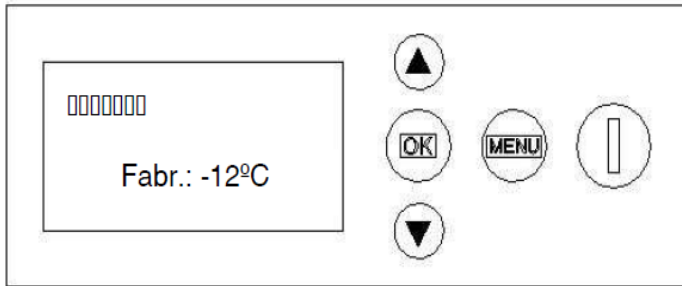
When the machine is working during the detachment time, the display will appear as follows:



At the bottom of the screen it will show the temperature indicated by the SC cycle probe.

## Production

When the machine is working during the production time, the display will appear as follows:



When the detachment has finished the screen will show a progress bar with the time remaining until the end of the cycle.

It will also show the following text at the bottom of the screen: "Fabr.: -12°C", with the temperature indicated by the SC cycle probe.

As the production time is " $tf=tfv+tff$ " and at the start it is not known how long the " $tfv$ " will last, since it depends on the " $Tfc$ ", take as a reference: cooling time " $tfv$ " of the last cycle + set production time " $tff$ ".

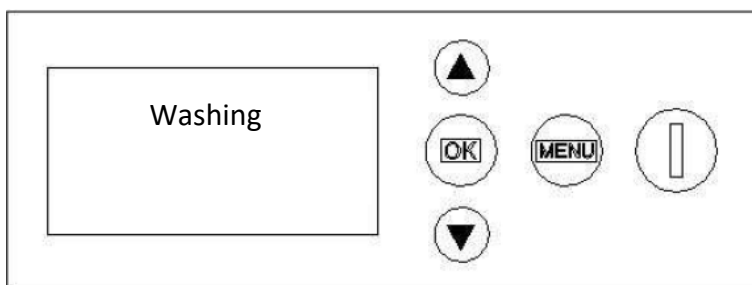
If the  $tfv$  of the last cycle is not known, use a time of 25 minutes (total production time  $tf=tfv+tff$ ) for the calculation (for example, in the first cycle of the machine).

Once the cycle has started and, as soon as point 4 on the graph is reached, you will know exactly the time remaining until the end of the cycle, because " $tf$ " will be defined at that time. Therefore, at this point, the bar will be recalculated so that it reaches the end just as the cycle has finished.

## Cleaning

Only the water pump works. It can be accessed with the machine off, pressing simultaneously the "OK" and power "I" buttons for 3 seconds.

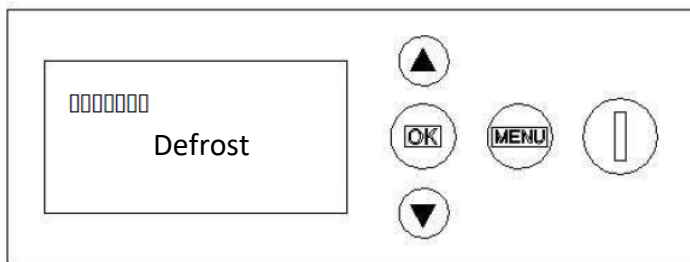
The display will show:



To end the cleaning cycle, press the power button "I" and the machine will turn off.

## **Defrost**






After reaching the “tMmax” and the pump is operating, the screen will display the message “Defrost” and will show the progress bar for the set defrost pump time “tBdesescarche”.



### **5.2.3 MENUS**

The parameters of the machine can be adjusted, as required, on the display menu. The machine has 3 menus:

**Main menu:** this menu is accessed by pressing the "Menu" button while the machine is Off.



- “Time setting” time setting. Locate on the menu, press the buttons   to make the correct adjustment. After selecting the time, press “OK” and set the minutes. By pressing “OK” again, the time will be set and you will return to the menu.
- “Programmer” programmer. This option allows you to programme the start and stop time of the machine. Look for the “Programmer” option in the menu. By pressing the button  the “Activate” option will appear. After selecting the “Activate” option, the fields to complete, “Start” and “End”, will appear on the screen.
- “Language” language. After locating the menu with the buttons   select the language and press “OK”.
- “Exit” exit.

**Information menu:** you can access this menu at any time while the machine is working or with the machine off by pressing the “MENU” button for 3 seconds: This menu provides access to:

- Ambient probe temperature “Amb.T”
- Cycle probe temperature “Cyc.T”
- Last cycle production time “Freez.t”
- Last cycle complete time “Cyc.t”
- Instant production time of current cycle “Cur.F.t”
- Remaining production time of current cycle “rem.F.t”
- Instant detachment time of current cycle “cur.H.t”
- Remaining detachment time of current cycle “rem.F.t”

- Status of inputs "On/off" "I1234"
- Status of outputs "On/off" "O1234"
- Cycle counter
- Exit



**Configuration menu:** you can access it by pressing   simultaneously for 3 seconds. You can access it at any moment of operation or with the machine switched off.

- Set production time "Freezing Time"
- Setpoint production temperature "Freezing Temp"
- Set detachment temperature "Harvest time"
- Setpoint detachment temperature "Harvest Temp"
- Water inlet time "water time"
- Pump time during initial detachment "in.pump harv.t."
- Pump time during final detachment "fin.pump harv.t."
- Balance time (hot gas) during start-up "balancing time"
- Start time "start t."
- Minimum downtime due to full stock "min stock t"
- Minimum downtime due to safety switch "min.security t"
- Maximum variable detachment time "max. harvest t"
- Maximum variable production time "max. Freez. t"
- Minimum variable production time "min. Freez. t."
- Maximum machine time "max. machine t"
- Defrost pump time "defrost pump t"
- By default "standard values"
- Exit

### 5.3 PARAMETERISATION

Parameter	Description	Electronic board factory settings	Minimum value	Maximum value	23/30 cc	65/68 cc	36/40 cc	48/52 cc
start t	Initial start time of machine after disconnection (open water inlet)	02'00''	00'00''	02'00''	02'00''			
balancing time	Hot gas valve opening time for balancing pressures before activating the compressor during start-up. DO NOT CHANGE	00'05''	00'00''	01'00''	00'05''			
Harvest Temp	Setpoint detachment temp.	0 °C	-50°C	+20°C	0°C			
Harvest time	Detachment time after obtaining "Harvest Temp.".	02'00''	00'00''	05'00''	00'50''	02'00''	01'00''	02'00''
Freezing Temp	Production setpoint temp.	-10°C	-50°C	+20°C	-10°C			
Freezing Time	Production time after obtaining "Harvest Temp.".	22'00''	00'00''	60'00''	12'00''	22'00''	14'00''	20'00''
water time	Water time after obtaining "Harvest Temp.".	02'00''	00'00''	10'00''	00'40''	01'50''	00'50''	01'50''
min stock t	Minimum machine downtime due to full stock. DO NOT CHANGE	02'00''	00'00''	10'00''	02'00''			
min.security t	Minimum machine downtime due to safety switch. DO NOT CHANGE	60'00''	00'00''	99'00''	60'00''			
max. harvest t	Maximum detachment time to raise an alarm if the temperature does not exceed "Harvest Temp." DO NOT CHANGE	05'00''	00'00''	30'00''	05'00''			
max. Freez. t	Maximum production time to raise an alarm if the temperature is not less than "Freezing Temp". DO NOT CHANGE	60'00''	00'00''	99'00''	60'00''			
min. Freez. t	Minimum production time to raise an alarm if the temperature is less than "Freezing Temp". DO NOT CHANGE	02'00''	00'00''	10'00''	02'00''			
in.pump harv.t.	Pump activation time after start of detachment.	00'30''	00'00''	02'00''	00'30''	00'40''	00'30''	00'40''
fin.pump harv.t	Pump activation time before end of detachment.	00'00''	00'00''	05'00''	00'00''			
max. machine	Activates the defrost. Maximum cont. operation time of the machine without disconnections or downtime.	00h00'	00h00'	96h0'	00h00'			
defrost pump t	Active pump time for defrost.	30'00''	07'00''	60'00''	30'00''			



## 6. SPECIFICATIONS

### 6.1 PRODUCTION TABLE

25gr

AIR °C	WATER °C			
	10	15	21	30
10	361	349	334	319
20	356	345	328	312
32	340	326	312	296
43	261	242	231	204

25gr

AIR °C	WATER °C			
	10	15	21	30
10	397	389	378	350
20	390	381	373	345
32	365	356	349	315
43	315	303	294	260

25gr

AIR °C	WATER °C			
	10	15	21	30
10	371	365	360	353
20	365	361	352	343
32	339	330	318	310
43	275	260	250	235

25gr

AIR °C	WATER °C			
	10	15	21	30
10	378	375	350	322
20	375	373	345	320
32	350	340	310	290
43	330	320	285	260

36gr

PRODUCTION TABLE 220/50 AIR				
	WATER °C			
AIR °C	10	15	21	30
10	387	375	359	342
20	382	370	352	335
32	365	350	335	318
43	280	260	248	219

36gr

PRODUCTION TABLE 220/50 WATER				
	WATER °C			
AIR °C	10	15	21	30
10	383	371	355	339
20	378	366	349	332
32	361	347	332	315
43	277	257	246	217

36gr

PRODUCTION TABLE 400/50 AIR				
	WATER °C			
AIR °C	10	15	21	30
10	430	420	390	350
20	418	409	373	345
32	395	384	345	315
43	350	340	300	260

36gr

PRODUCTION TABLE 220/50 WATER				
	WATER °C			
AIR °C	10	15	21	30
10	430	415	400	350
20	420	405	380	338
32	400	380	360	315
43	380	360	334	290

36gr

PRODUCTION TABLE 400/50 REMOTA AIR				
	WATER °C			
AIR °C	10	15	21	30
10	406	403	376	346
20	403	400	370	344
32	376	365	333	311
43	354	344	306	279

51gr

PRODUCTION TABLE 220/50 AIR				
	WATER °C			
AIR °C	10	15	21	30
10	378	367	351	334
20	374	362	344	328
32	357	342	328	311
43	274	254	243	214

51gr

PRODUCTION TABLE 220/50 WATER				
	WATER °C			
AIR °C	10	15	21	30
10	378	366	350	334
20	373	361	343	327
32	356	341	327	310
43	273	254	242	214

62gr

PRODUCTION TABLE 220/50 AIR				
	WATER °C			
AIR °C	10	15	21	30
10	369	358	342	326
20	364	353	336	319
32	348	334	319	303
43	267	248	236	209

62gr

PRODUCTION TABLE 220/50 WATER				
AIR °C	WATER °C			
	10	15	21	30
10	368	357	341	325
20	363	352	335	319
32	347	333	319	302
43	266	247	236	208

62gr

PRODUCTION TABLE 400/50 AIR				
AIR °C	WATER °C			
	10	15	21	30
10	405	391	385	360
20	400	391	380	355
32	387	378	370	342
43	330	320	307	280

62gr

PRODUCTION TABLE 400/50 WATER				
AIR °C	WATER °C			
	10	15	21	30
10	405	394	385	360
20	400	391	380	355
32	390	382	373	345
43	350	330	315	300

62gr

PRODUCTION TABLE 400/50 REMOTA AIR				
AIR °C	WATER °C			
	10	15	21	30
10	387	384	358	330
20	384	382	353	328
32	358	348	317	297
43	338	328	292	266

Data obtained with amb. temp.=20°C, water inlet temp.=15°C and water quality=500ppm

Maximum consumption obtained at ambient temperature = 43°C, according to UNE standards for climate classification Class T (TROPICAL).

The ice production will vary with the water quality, decreasing with water quality below or above 500 ppm.

## 6.2 POWER CONSUMPTION, WATER CONSUMPTION AND REFRIGERANT CHARGE

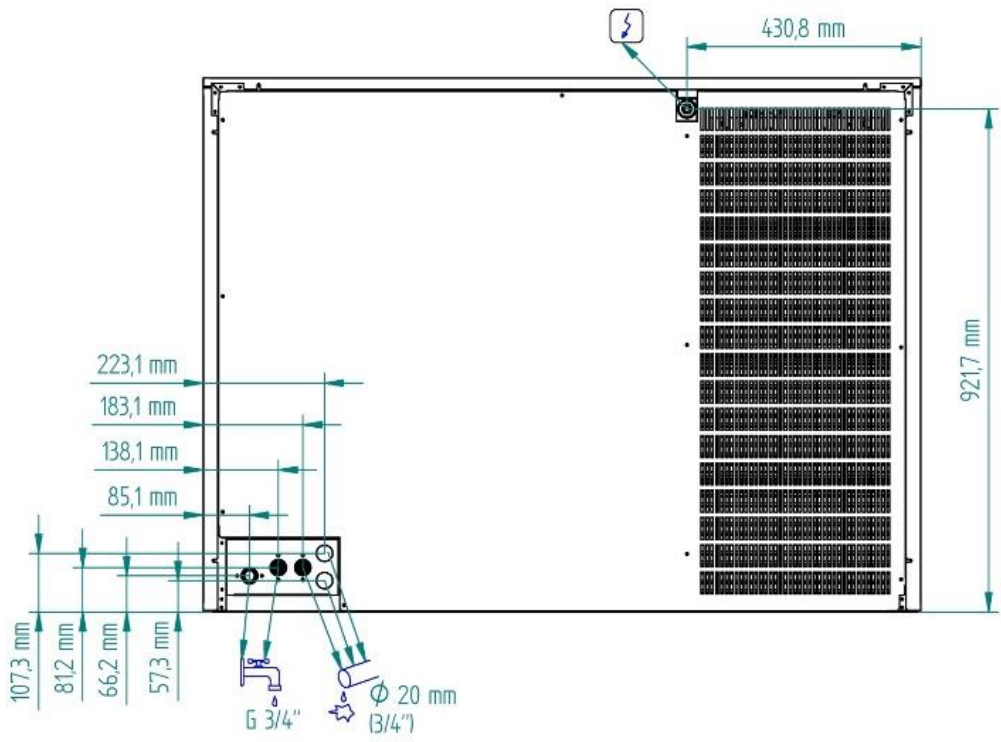
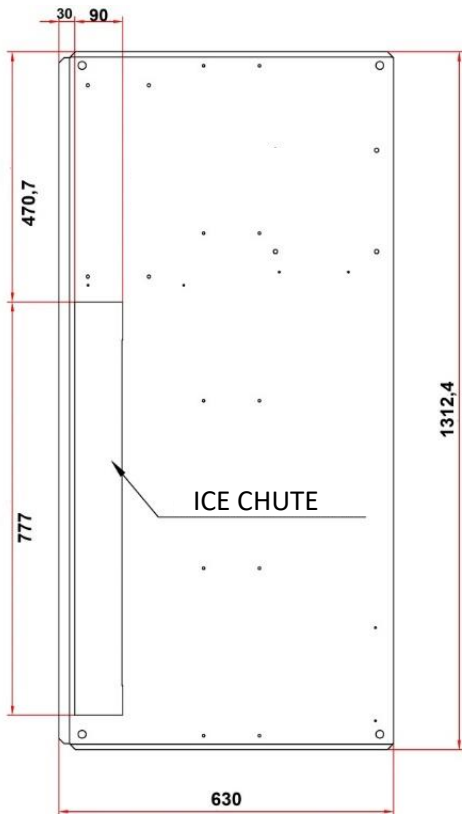
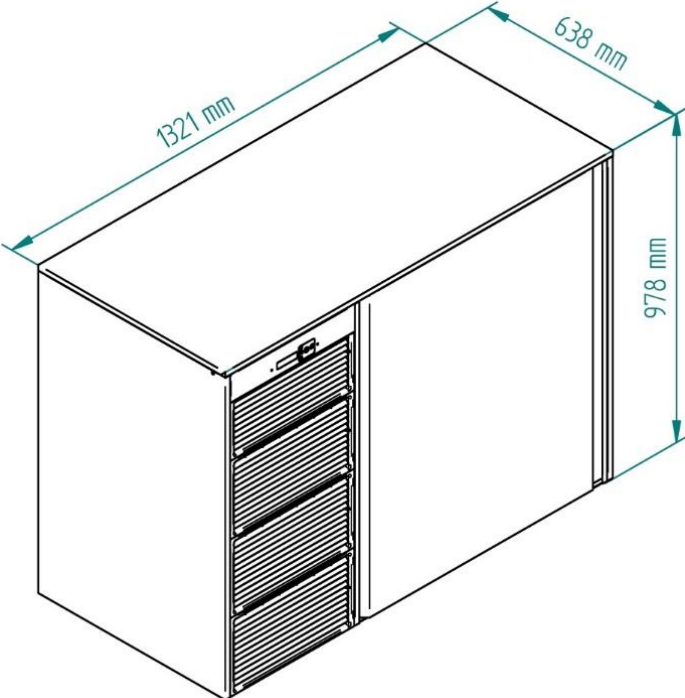
MODEL	COMPRESSOR POWER HP	ABS POWER W	TOTAL INTENSITY (A)
400 A (380 / 50-60Hz) III	5	3500	6.5
400 REMOTE	5	3500	6.5
400 A (230 / 60Hz) III	5	3500	10.7

MODEL	TOTAL CONSUMPTION L/H
400 A	27
400 W	217

## 6.3 WEIGHTS & DIMENSIONS

MODEL	NET WEIGHT	GROSS WEIGHT	MACHINE DIMENSIONS	PACKAGING DIMENSIONS
400	165 (A) 166 (W)	191	1321x638x978	1410x740x1115
400A remota	158	178	1321x638x978	1410x740x1115

### 6.4 WATER AND DRAINAGE CONNECTIONS



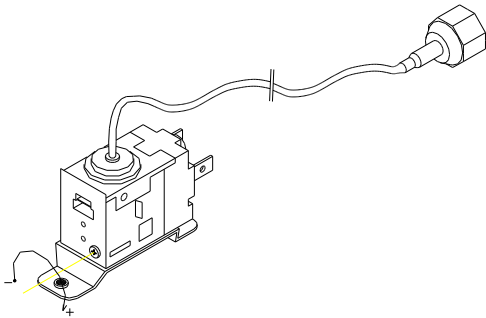
## 7. REGULATIONS

### 7.1 CONDENSER WATER VALVE PRESSURE SWITCH (WATER CONDENSATION)

- The pressure switch controls high pressure by opening and closing the condenser water valve. The differential is fixed at 1 bar (14 psi).
- The closed pressure should be 15 bar (214 psi), equivalent to an output temperature of the condensation water of 38° C. Below this pressure, there may be difficulties in detaching the cubes.
- Above this pressure, the life of the compressor is shortened and ice production decreases.
- Pressure is increased by turning the adjusting screw clockwise. One turn is approximately equivalent to 1.5 Bar.

### 7.2 FAN PRESSURE SWITCH (AIR-CONDENSED MACHINES)

- The pressure switch controls the pressure through stopping and starting the fan. The differential is fixed at 1 bar (14 psi).
- The stopping pressure should be 15 bar (214 psi). Below this pressure, there may be difficulty in removing the cubes.
- Above this pressure, the life of the compressor is shortened and ice production decreases.
- Pressure is increased by turning the adjusting screw clockwise. One turn is approximately equivalent to 1.5 Bar.



### 7.3 SAFETY PRESSURE SWITCH

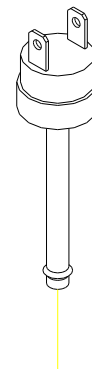
The safety pressure switch has the function of ensuring safety from excessive discharge pressure, which may be due to:

A dirty condenser, poor air circulation or very high room temperature (air condensation).

Lack of water or very high water temperature (water condensation).

The high pressure parameters are fixed

- Disconnection: 30 Bar.
- Connection: 22 Bar.



## 8. MAINTENANCE AND CLEANING INSTRUCTIONS AND PROCEDURES

**CAUTION: MAINTENANCE AND CLEANING OPERATIONS, AND ANY MALFUNCTIONS CAUSED BY THEIR OMISSION, ARE NOT INCLUDED IN THE WARRANTY.**

The machine will only continue to produce good-quality ice free of malfunctions if maintenance is properly performed.

Maintenance and cleaning intervals depend on the conditions of the premises where the machine is installed and the water quality.

Checking and cleaning should be carried out at least every six months.

In very dusty places, it may be necessary to clean the condenser in air-condensed machines every month.

**MAINTENANCE TABLE**

ACTION	MONTHLY	QUARTERLY	BIANNUAL	ANNUAL	BIENNIAL	T UNIT
Air condenser cleaning						30 minutes
Water condenser cleaning						90 minutes
Injector cleaning						30 minutes
Production water circuit cleaning						45 minutes
Sanitary cleaning						30 minutes
Water filter cleaning/replacement						30 minutes
Exterior cleaning						

	Essential
	Depending on the conditions of the premises
	Depending on the conditions and water quality.
	To be performed by the user

**CAUTION: FOR ALL CLEANING AND MAINTENANCE OPERATIONS, DISCONNECT THE MACHINE FROM THE POWER SUPPLY.**



## 8.1 WATER CONDENSER

- 1) Disconnect the machine.
- 2) Disconnect the water inlet or close the tap.
- 3) Disconnect the water inlet and outlet from the condenser.
- 4) Prepare a 50% solution of phosphoric acid and distilled or demineralised water (or a suitable product to clean the water condenser circuit).
- 5) Make it circulate through the condenser. (The mixture is more effective when hot - between 35° and 40° C-)

**Do not use hydrochloric acid.**



## 8.2 AIR CONDENSER

- 1) Disconnect the machine.
- 2) Disconnect the water inlet or close the tap.
- 3) Clean with the help of a vacuum cleaner, non-metallic brush or low-pressure air.


## 8.3 EVAPORATOR / WATER CONTAINER

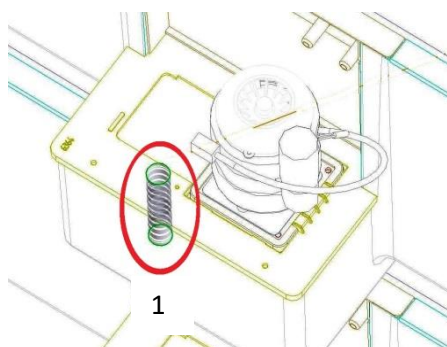
### 8.3.1 CLEANING INSTRUCTIONS

1. We recommend using the cleaning product Calklin. Prepare a solution with 50% phosphoric acid and distilled water. **Do not use hydrochloric acid.** Remove the rear panel to access the production containers. Remove the cover attached to the pump to access the interior of the container where you should pour the previously prepared mixture. The mixture is more effective if the water is between 35°C and 40°C.

2. Washing cycle: Press the button  and the power button  for 3 seconds. The pumps will recirculate the mixture through the evaporators and containers. The compressor and other components will remain disconnected during this cycle.

3. Let the solution act for 10 minutes.

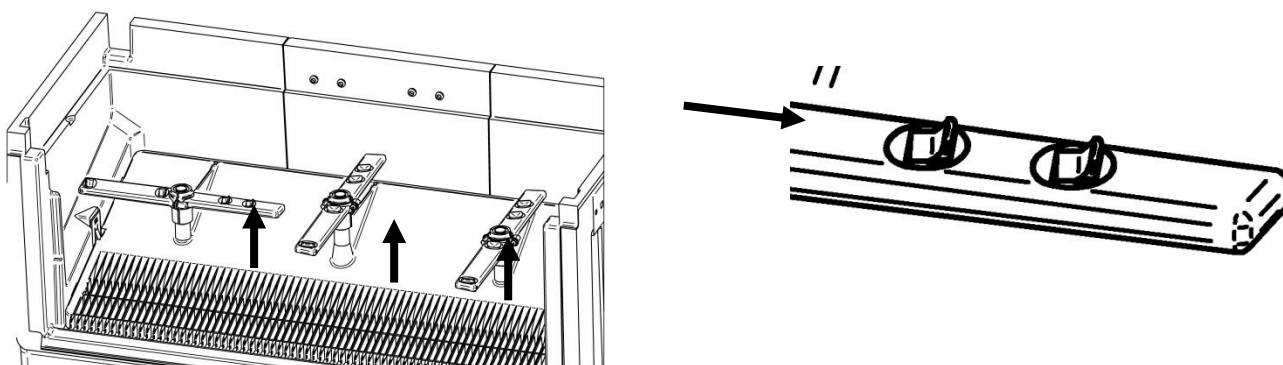
4. After 10 minutes, halt the washing cycle pressing the power button  and the machine will stop.



5. Remove the overflows installed inside the containers by the back of the machine. (See illustration: 1)
6. Once the containers are emptied, put the overflows back in.
7. If the containers and evaporators are completely clean, you should run two washing cycles with water only to eliminate any remains of dirt left by the previous cycle.  
**CAUTION: \*\* DISCARD THE ICE PRODUCED IN THIS FIRST CYCLE.**
8. Clean and assemble all the components, check that the grille is clean and that the cubes slide well. Check that no slat is jammed in the curtain.
9. Check and/or change the water inlet filters.
10. Check that the injectors are in position. When necessary, disassemble, clean and put them in the correct position.

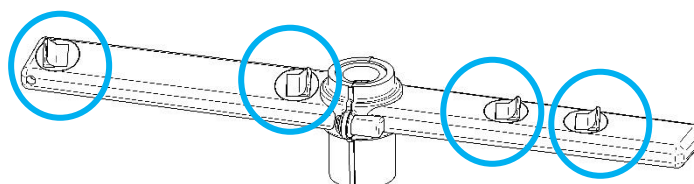
#### 8.4 COLLECTOR AND INJECTORS

1. Remove the curtain. 2. Remove the collectors from their axles by pulling gently upwards.



2. Remove the expulsion grille for fallen ice. (Clean it just like the curtain.)
3. Disassemble the injectors and clean them.
4. Disassemble and clean the main filter of the water pump. (It is pressure-assembled.)
5. Install filter, injectors and collectors.

**CAUTION: IT IS VERY IMPORTANT WHEN YOU RE-INSTALL THE COLLECTOR THAT THE INJECTORS ARE PUT BACK IN THE SAME POSITION.**



6. Assemble the ice cube expulsion grille.

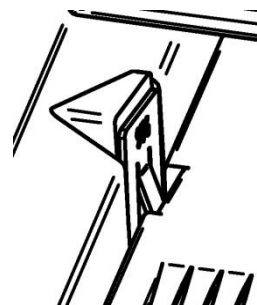


**(CAUTION: IT MUST BE FIRMLY SECURED TO THE SIDE ANCHORS).**

7. Clean the curtain with phosphoric acid and rinse.

8. Install the curtain. Make sure that all the slats move freely.

9. Turn the machine on and discard the first batch of ice.



## 8.5 CLEANING THE INLET FILTERS

They tend to become obstructed during the first few days that the machine is operating, particularly in newly plumbed facilities. Release the hose and clean them under the water tap.

## 8.6 CONTROL OF WATER LEAKS

Whenever you open up the machine, check all the water connections, the condition of the washers and hoses to avoid leaks and to prevent breakages and flooding.

## 9. CONSIDERATIONS REGARDING USE OF THE R404A REFRIGERANT

- R404A is a mixture of 3 gases in liquid phase. When it evaporates, the 3 gases separate.
- Reloading and purging must be carried out with the liquid part.
- When a compressor is replaced, clean the installation, carry out a sweep with dried nitrogen, change the dehydrator for one that is suitable for 404 and which also has an anti-acid capacity.
- If you need to replace oil in the circuit, use oils specifically for 404 (POE). In case of any doubt, always consult the equipment manufacturer.
- In case of any leaks in the areas of the circuit where R404 is in gas form, and if the amount to be refilled is greater than 10% of the total load, recover all the gas from the installation for disposal with the authorised waste manager and proceed to reload (always liquid).
- If filled in the low pressure circuit, wait to connect the compressor for at least 1 hour, so as to allow the liquid to become gas.

## 10. ALARMS

### 10.1 FULL STOCK

When the stock thermostat contact is open (stock full of ice), after checking it once the detachment has finished, the machine will stop while indicating **“Full stock”**.

## **10.2 CYCLE PROBE**

Indicates the temperature of the cycle probe on the screen. If it is defective, the machine will stop and indicate "Cycle probe".

## **10.3 AIR TEMPERATURE PROBE**

If, for any reason, the probe is defective, instead of indicating the temperature, it will indicate "\_\_\_\_\_". This alarm will not affect the operation of the machine, as this function is purely for information purposes.

## **10.4 HIGH PRESSURE**

This alarm will appear when the pressure in the machine reaches 30 Bar. The switching may be manual or automatic as regulated by the electronic plate.

- If dip-switch 2 is in the ON position, the switching will be automatic. The minimum downtime for safety is 60 minutes and the "temporizing" alarm will appear on the display.
- If dip-switch 2 is in the OFF position, the switching will be manual and "Pressure" will appear on the display.

## **10.5 LONG PRE-HEATING**

If the detachment time is longer than the time defined, the "long harv.time" alarm will appear on the display.

## **10.6 LONG PRE-COOLING**

If the production time is longer than the time defined, the machine will stop working while showing the "long freez.time" alarm on the display.

## **10.7 SHORT PRE-COOLING**

If the production time is shorter than the minimum variable production time, the machine will start detaching. If this continues, the error will be shown on the "short freez.time" display.

## 11. TABLE OF INCIDENTS

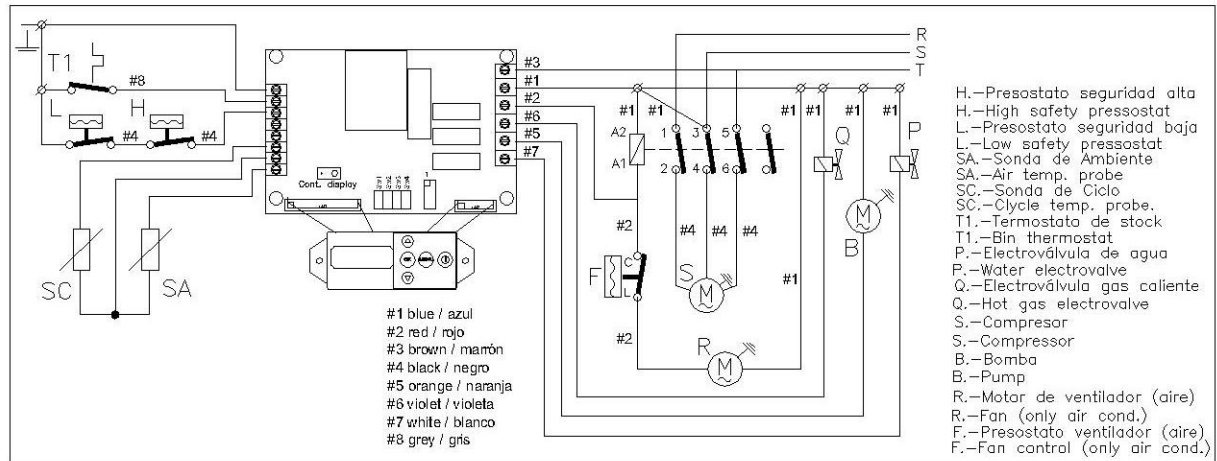
PROBLEM	PROBABLE CAUSE	SOLUTION
<b>1- No electrical component is working.</b>	The machine is unplugged.	Plug the machine in.
	The electrical connection is defective or in poor condition.	Check connections and connection cable.
	High temperature alarm.	Check whether the fan works and whether the condenser is clean. Check the condensation pressure switch.
	Wrong settings for the shutdown thermostat or it is defective. (Full stock.)	Check and adjust the settings or replace the defective stock thermostat.
<b>2- All the electrical components work. The compressor does not start.</b>	Electronic control. Check that power reaches the compressor.	Replace the electronic plate if no power reaches the compressor.
	Defective compressor.	Replace the compressor.
<b>3 - Everything seems to work, but no ice is produced in the evaporator.</b>	Malfunctioning pump.	Replace the pump.
	No water enters the container.	Check the water inlet valve.
	The water container runs out of water.	Check the water-inlet electro valve and replace if necessary. Check the water level tube.
	Ineffective refrigeration system. (Dirty condenser, malfunctioning or wrong settings for the condensation water inlet valve or pressure switch, or lack of refrigerant.)	Replace the dehydrator, create a vacuum and load.

<b>4- Ice cubes are produced but do not detach</b>	Defective or badly connected hot gas valve.	Check and replace if necessary.
	Low water pressure.	Increase the pressure. (The problem can sometimes be solved by removing the flow meter from the water inlet valve).
	Fan or condensation pressure switch too low or malfunctioning.	Adjust settings or replace.
	Water pressure switch valve too open or defective. (machines that are water-condensed with that valve)	Adjust, repair or replace.
	Room or water temperature below 7°C.	Increase detachment time.
	Insufficient detachment time.	Increase detachment time.
	Production time is too long. The cubes have rough edges outside the mould.	Change production time.
	Dirty water inlet filters.	Clean filters.
<b>5- Low ice production.</b>	Dirty condenser, obstructed air flow or flow of hot air from another machine.	Clean condenser, remove the air flow obstruction or change the location of the machine.
	Dirty condenser, wrong condensation pressure switch settings.	Clean condenser or adjust the pressure switch settings.
	Defective hot gas valve, always allows some hot gas to leak (the tube temperature is indicative).	Replace the hot gas valve.
	The settings for the pressure switch of the fan or of the condensation water inlet valve are too low or defective.	Adjust settings or replace.
	Water inlet valve will not close (drips).	Check and replace if necessary.
	Ineffective compressor.	Change the compressor.

<b>6- Empty cubes with uneven edges and too white.</b>	Water loss in container. The pump loses prime.	Repair water loss.
	Obstructed injectors.	Clean injectors.
	The curtain slats don't close properly, and water is lost.	Adjust the curtain slats or clean the axle (it may contain lime that won't allow the slats to turn smoothly).
<b>7-The machine won't stop even full of cubes.</b>	Stock thermostat incorrectly adjusted or defective.	Adjust to the factory setting marked with a red point over the thermostat label. Change it if is defective.

## 12. TECHNICAL ANNEX

### 12.1 ELECTRONIC CONTROLLER



### 12.2 DESCRIPTION OF OUTPUTS

Symbol	Description	Relay
C	Fan and compressor supply.	10 A
B	Drive pump supply.	5 A
EA	Water inlet electro valve supply during detachment.	5 A
GC	Hot gas electro valve supply during detachment.	5 A



### 12.3 DESCRIPTION OF INPUTS

Symbol	Description
SC	Cycle probe. – temperature -50/+80 °C
SA	Ambient probe. – temperature -50/+80 °C
P	Safety pressure switch. ON/OFF / NC contact / I min 25 mA
T	Stock thermostat. ON/OFF / NC contact / I min 25 mA
I	Flooding. Electrode conductivity.
EL	Free input ON/OFF / I min 25 mA

### 12.4 DIP SWITCH

Symbol	Description
1	Setting of the time alarms (long pre-heating, long and short pre-cooling).
2	Pressure switch re-setting.
3	Automatic start due to power cut.

### 12.5 BUTTONS

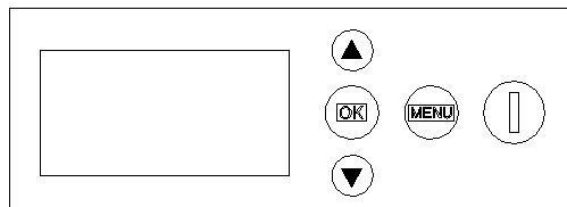
#### ON-OFF

- Power on: lights up the screen and starts at point 0.
- Power off: It turns off the machine at any time. It turns off the display light and leaves the time showing. All relays off.

**UP/DOWN:** Move between menu options. Increase or decrease programmer values.

**OK:** Confirm menu options or programmer values.

**MENU:** To enter the main menu. To exit one level when navigating the menus.



## USER INTERFACE

### **12.6 Main menu**

12.6.1 Time setting

12.6.2 Programmer

12.6.3 Language

Spanish

English

French

Italian

12.6.4 Exit

### **12.7 Information menu**

12.7.1 Ambient probe Temp. / Cycle probe Temp.

12.7.2 Last cycle production time / Last cycle complete time.

12.7.3 Instant time of current cycle / Remaining time of cycle

12.7.4 Current cycle: drainage

12.7.5 Inputs and outputs status

12.7.6 Complete cycle counter

12.7.7 Exit

### **12.8 Configuration menu**

12.8.1 Set production time

12.8.2 Setpoint production time

12.8.3 Set detachment time

12.8.4 Setpoint detachment temperature

12.8.5 Water inlet time

12.8.6 Pump time during initial detachment

12.8.7 Pump time during final detachment

12.8.8 Balance time (hot gas) during start-up

12.8.9 Start time

12.8.10 Minimum downtime due to full stock

12.8.11 Minimum safety switch downtime.

12.8.12 Maximum variable detachment time

12.8.13 Maximum variable production time

12.8.14 Minimum variable production time

12.8.15 Maximum machine time

12.8.16 Defrost pump time

12.8.17 By default

12.8.20 Exit

## 12.6 MAIN MENU

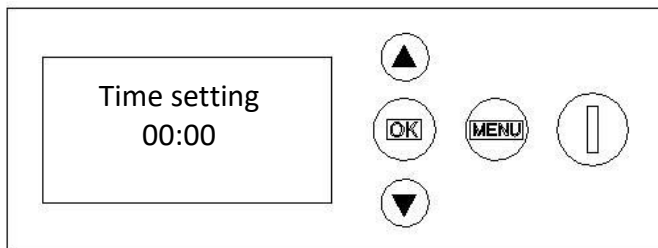
It can only be accessed when the machine is “OFF”. To access the main menu press the “MENU” button once.

Once in the main menu the following options will appear: “Time setting” “Programmer”, “Language” and “Exit”. If you press the “MENU” button again when in the main menu you will leave this menu.

### 12.6.1 TIME SETTING

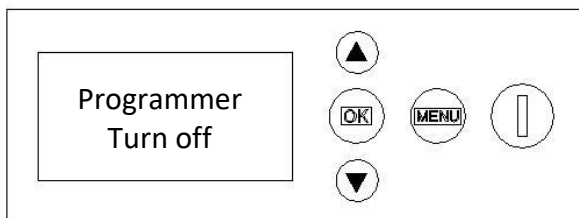
The time will be shown as “hh:mm”. To set the time, search on the menu for the option “Time setting” and press “OK”. Here the time can be increased or decreased using the arrow buttons, 24h format.

Once the time is set, press “OK” again; it will be stored and the minutes can be changed. Change the minutes using the up and down arrows and press “OK” again to store them and automatically return to the main menu.



### 12.6.2 PROGRAMMER

This option allows the user to programme a start and stop time for the machine. To programme the machine select the option on the main menu. It will show a screen to turn on and off the programmer.

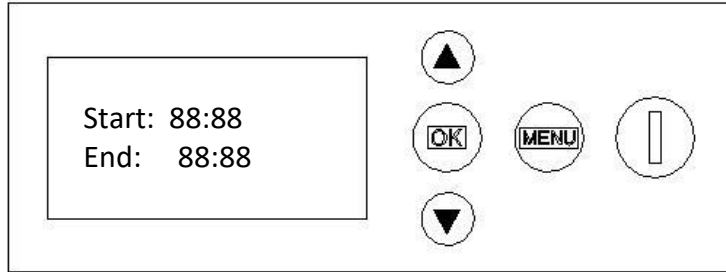


By pressing the down arrow the option “Activate” will appear. If the “Activate” option is chosen, a new screen to set the hour will be shown in “hh:mm” format to start the machine (the last time programmed will appear by default).

After entering the minutes, you will automatically enter the end time by pressing “OK”. When you select the minutes of the end time by pressing “OK”, you will return to the main menu.

If the start time is before the actual time, the programmer will begin the next day.

Once the programmer is on, it will continue every day.



After returning to the main menu, to show the programmer being on, the screen will show a special character that can be chosen. This special character will be present whenever the programmer is activated, with the machine either off or on (during production, detachment and alarms).

Once the activation time arrives, the machine will start (point 0 on the illustration), and when the end time arrives, it has two options:

1. If it is detaching, it will turn off after finishing this.
2. If it is in the production process, the cycle will end, i.e., it will turn off after detachment has finished.

To deactivate the programmer select the option “Deactivate”. The programmer can be turned off at any time, turning off the machine to enter the menu. If power is lost, the programmer will turn off as the time will be reset to zero.

With the programmer activated, two options are available:

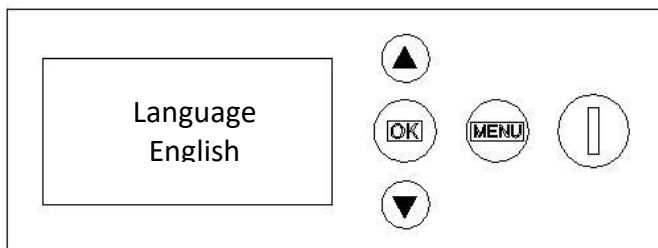
1. If the machine has not started and is turned off, you can turn it on with the power button and work with it, so:
  - If it is left on, the programmer will turn it off once the programmed hour arrives.
  - If the machine is turned off before the start time, the programmer will turn it on once the start time arrives.
2. If the machine is already on and working, it can be turned off with the power button, so:
  - If it is off before the switch-off time, the programmer won't use the programmed switch-off time.
  - If the machine is started again, the programmer will turn it off when the programmed time arrives.

### 12.6.3 LANGUAGE

The language of all the texts shown on the display can be changed with this option. Select the language you want and press “OK” to save. This option will be saved even if the machine is turned off.

Languages available:

- Spanish (by default)
- English
- French
- Italian



### 12.6.4 EXIT

Press the exit option to return to the main screen.

### 12.7 INFORMATION MENU

It can be accessed at any time with the machine either on or off.

Enter by pressing the “MENU” key for 3 seconds.

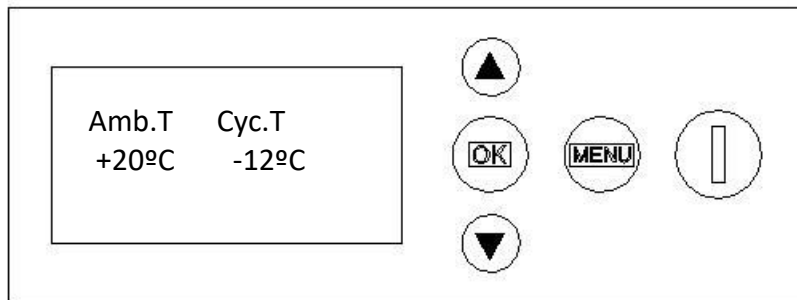
Once in the menu by pressing the “Up/Down” button you can see the different parameters available.

#### 12.7.1 AMBIENT PROBE TEMP. / CYCLE PROBE TEMP.

Ambient probe “Amb.T”: it only works as a thermometer, without affecting the working cycle of the machine. It will show the instant temperature on the display. If the probe is defective, the following will be indicated: “error” instead of the °C value. As its installation is optional, if it is not installed, the display will show some dashes “\_\_\_\_\_”.

Cycle probe “Cyc.T”: it will show the instant cycle probe temperature on the display. If the probe is defective the machine will stop and the display will show: “Cycle probe”.

Both temperatures appear on the same screen.



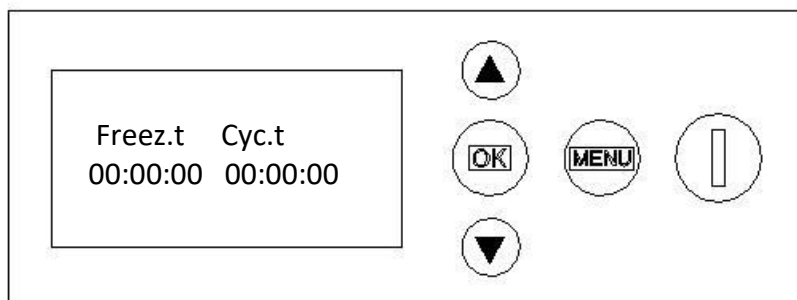
### 12.7.2 LAST CYCLE PRODUCTION TIME / LAST CYCLE COMPLETE TIME

This menu will show information on the last cycle processed "Freez.t".

The last cycle production time will be shown on the screen in "h:mm:ss"

The last cycle complete time will also be shown on the screen in "h:mm:ss"

Both times on the same screen.



### 12.7.3 INSTANT TIME OF CURRENT CYCLE / REMAINING TIME OF CURRENT CYCLE

This menu will show information on the current cycle in process "cur.F.t". The cycle is equal to the production time plus the detachment time.

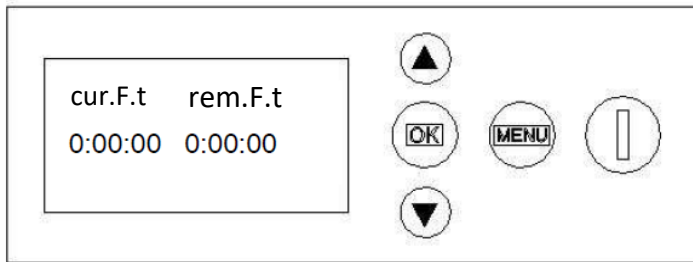
Therefore, there are two situations: production and detachment. In each of them the display will change and show the relevant information in the following way:

Current cycle: production (interval 3-5). Instant production time of current cycle / Remaining production time of current cycle "rem.H.t".

The screen will show a timer with the current cycle production time as "h:mm:ss".

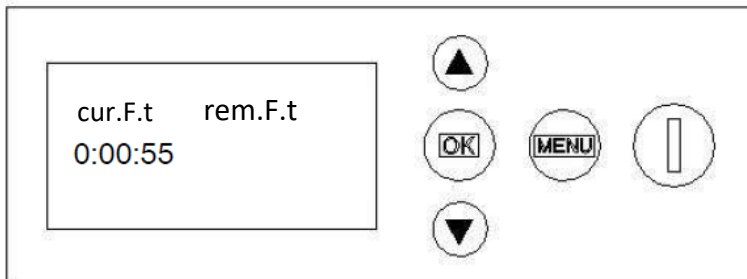
A timer with the remaining production time of the current cycle "rem.H.t" will be shown on the screen as "h:mm:ss".

Both times on the same screen.



When the cycle is during the variable production time or cooling time, the remaining production time is not known, since the setpoint production temperature has not yet been reached.

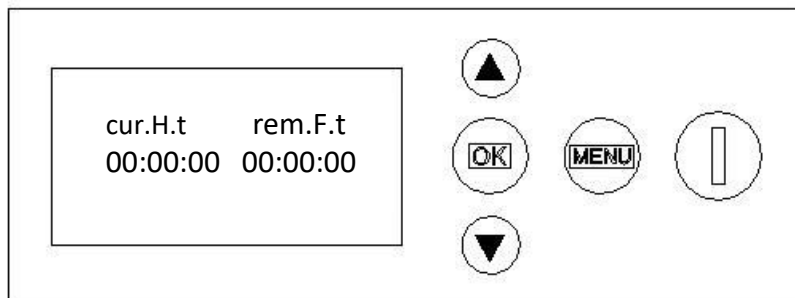
In this case the screen will not show the timer with the remaining production time "t.F.rest".



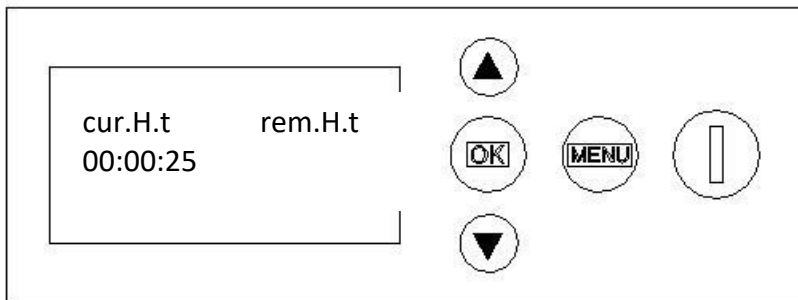
#### 12.7.4 CURRENT CYCLE: DETACHMENT INSTANT DETACHMENT TIME OF CURRENT CYCLE / REMAINING DETACHMENT TIME OF CURRENT CYCLE

A timer with the actual detachment time of the current cycle "cur.H.t" will also appear on the screen as "h:mm:ss". A timer with the remaining detachment time of the current cycle "rem.F.t" will also appear on the screen as "h:mm:ss".

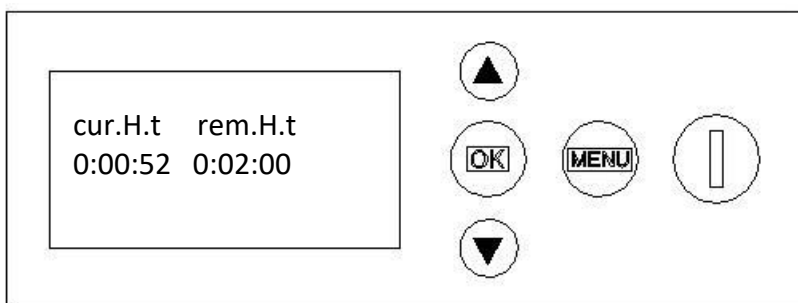
Both times on the same screen.



When the cycle is during the variable detachment time or heating time, the remaining detachment time is not known, since the setpoint detachment temperature has not yet been reached. In this case the screen will not show the timer with the remaining detachment time.

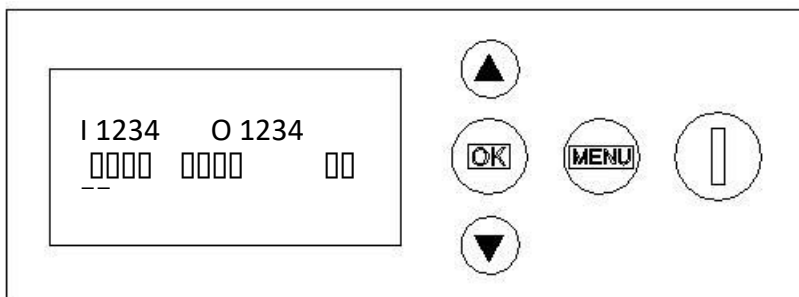


When the machine reaches the setpoint detachment temperature, it will also show on screen the timer with the remaining time.



### 12.17.5 INPUTS/OUTPUTS STATUS

It will show information on active inputs and outputs. "I 1 2 3 4" or "O 1 2 3 4" will appear on the top screen. The character will be completed with a full box on the lower screen if the output/input is activated, and not be completed (empty box) if it is not activated.



The inputs/outputs are listed with a number, and the assignment table is:

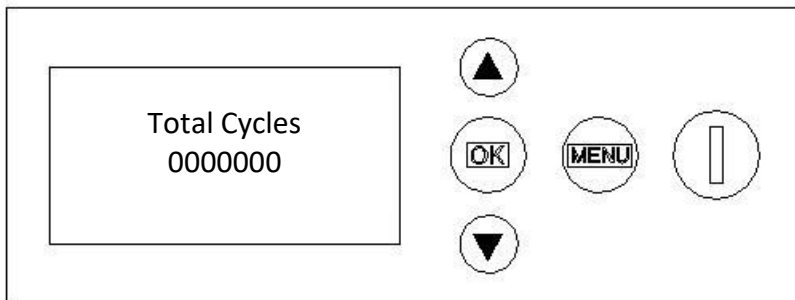
Inputs	
Stock thermostat	1
Pressure switch	2
Flooding	3



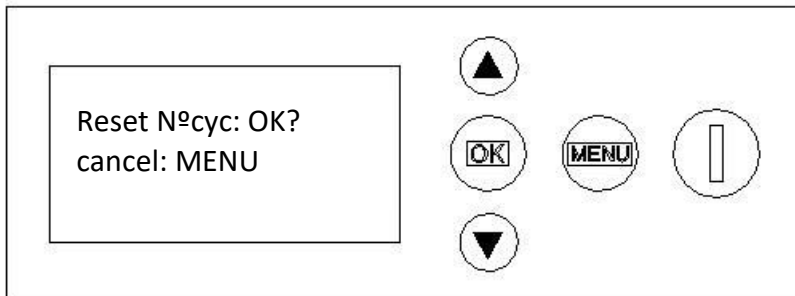
Free input	4
<b>Outputs</b>	
Compressor / Fan	1
Pump	2
Hot gas electr valve	3
Water inlet electro valve	4

### 12.7.6 COMPLETE CYCLE COUNTER

A counter will appear on the screen showing the total complete cycles the machine has completed. One cycle will be counted for each complete cycle time.



By pressing the "OK" button for 3 seconds you can reset to 0, and the screen will show:



If you press "OK" the counter resets to zero and you will return to the Total Cycles screen with zero cycles.

If you press "MENU", the reset is cancelled and the screen will show the total cycle number it had before. The value will remain stored even if the machine is disconnected from the mains.

### 12.7.8 EXIT

Use this option to return to the main menu.

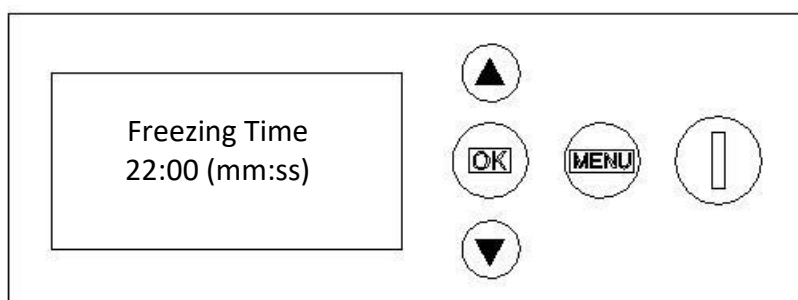
## 12.8 CONFIGURATION MENU

Access is provided by simultaneously pressing “Up/Down” for 3 seconds. It can be accessed at any time with the machine on or with the machine off. It allows you to change the working parameters of the machine. Once in the menu, press the “Up/Down” button to view the different parameters available.

### 12.8.1 SET PRODUCTION TIME

The production time can be changed using the arrow buttons and is measured in minutes and seconds with a resolution of 1 second.

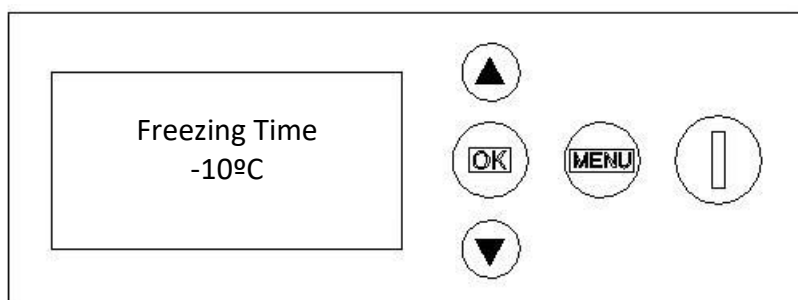
The value can be changed with “Up/Down”. By pressing “OK”, you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.2 SETPOINT PRODUCTION TEMPERATURE

This parameter allows you to change the setpoint production temperature of the machine. By pressing the arrows you can increase or decrease  $\pm 1^{\circ}\text{C}$  with each keystroke. Measured in degrees centigrade with a  $1^{\circ}\text{C}$  resolution.

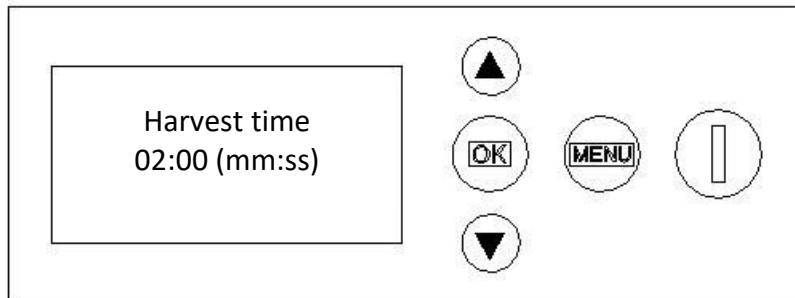
The value can be changed with “Up/Down”. By pressing “OK”, you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.3 SET DETACHMENT TIME

The detachment time can be modified using the arrow buttons and is measured in minutes and seconds with a resolution of 1 second.

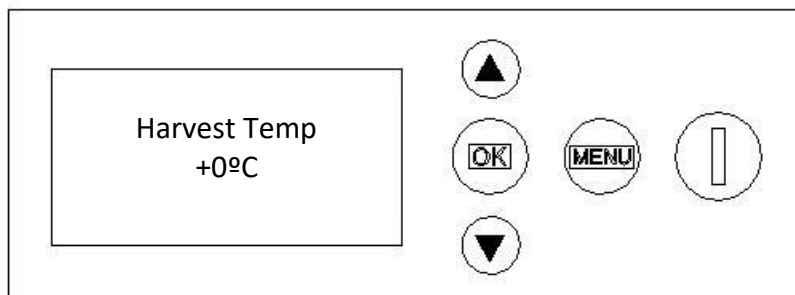
The value can be changed with “Up/Down”. By pressing “OK”, you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.4 SETPOINT DETACHMENT TEMPERATURE

This parameter allows you to change the setpoint detachment temperature of the machine. By pressing the arrows you can increase or decrease  $\pm 1^{\circ}\text{C}$  with each keystroke. Measured in degrees centigrade with a  $1^{\circ}\text{C}$  resolution.

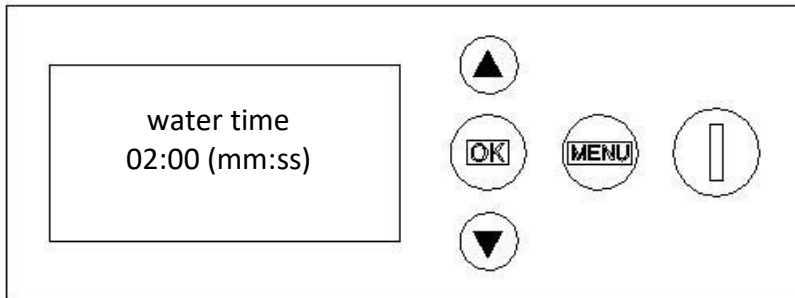
The value can be changed with “Up/Down”. By pressing “OK”, you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.5 WATER INLET TIME

The water inlet time occurs during the set detachment time. It can be modified using the arrow buttons and is measured in minutes and seconds with a resolution of 1 second.

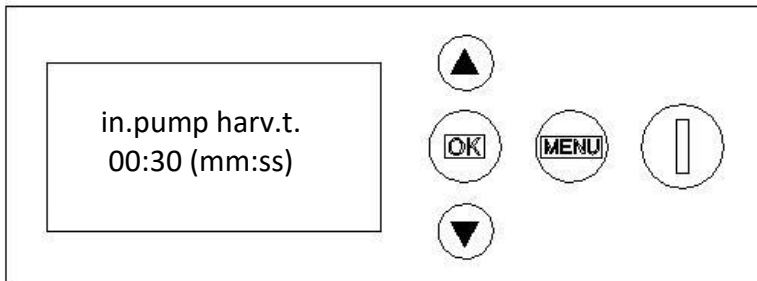
The value can be changed with “Up/Down”. By pressing “OK”, you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.6 PUMP TIME DURING INITIAL DETACHMENT

The pump time during initial detachment occurs at the start of each variable detachment time. It is measured in minutes and seconds with a resolution of 1 second.

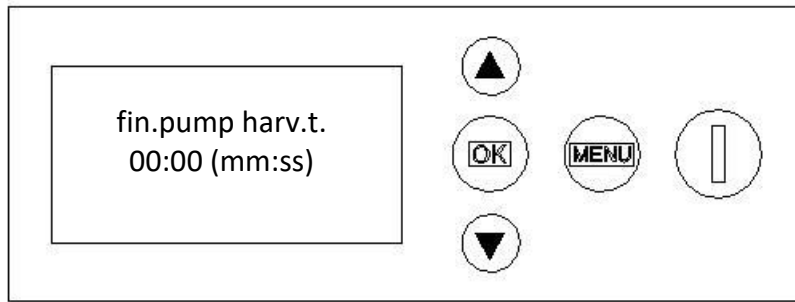
The value can be changed with “Up/Down”. By pressing “OK”, you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.7 PUMP TIME DURING FINAL DETACHMENT

The pump time during final detachment starts before each set detachment time ends.

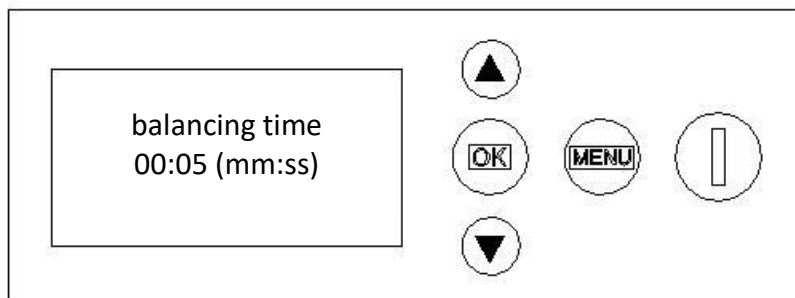
The value can be changed with “Up/Down”. By pressing “OK”, you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.8 BALANCE TIME (HOT GAS) DURING START-UP

The hot gas electro valve has to open during 5 seconds before the compressor starts. DO NOT CHANGE

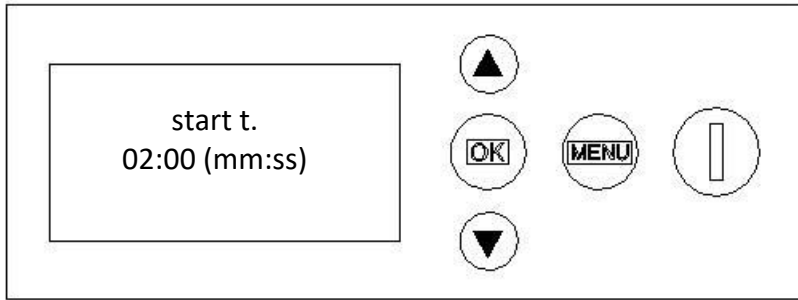
The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.9 START TIME

The start time marks the time when the machine starts up. Both the hot gas and water electro valves connect. It is measured in minutes and seconds with a resolution of 1 second.

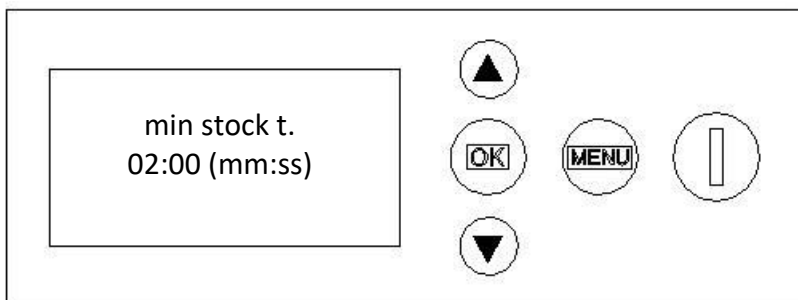
The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.10 MINIMUM DOWNTIME DUE TO FULL STOCK

The minimum downtime due to full stock will be 2 minutes by default. It is measured in minutes and seconds with a resolution of 1 second.

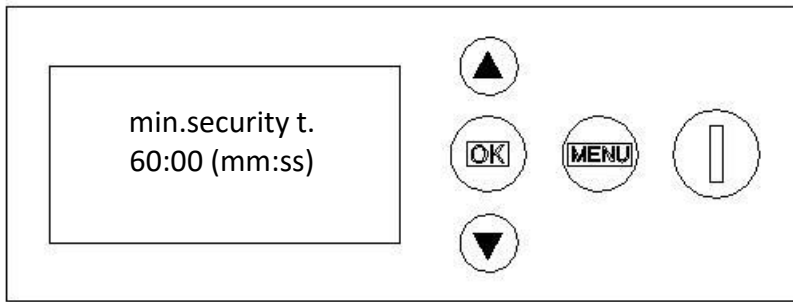
The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.11 MINIMUM SAFETY SWITCH DOWNTIME

The minimum safety switch downtime will be 60 minutes by default. It is measured in minutes and seconds with a resolution of 1 second.

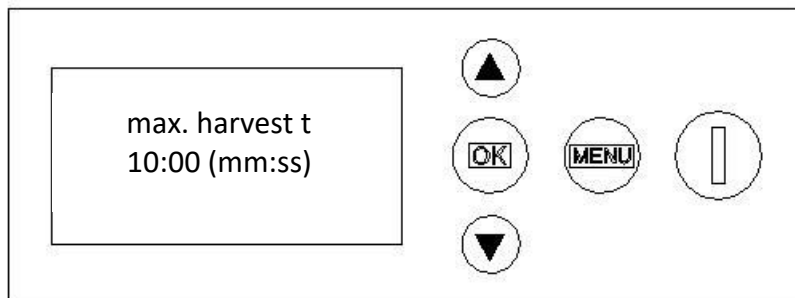
The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.12 MAXIMUM VARIABLE DETACHMENT TIME

The maximum variable detachment time will measure the maximum time the machine has to wait to produce an alert without reaching the setpoint detachment temperature. It is measured in minutes and seconds with a resolution of 1 second.

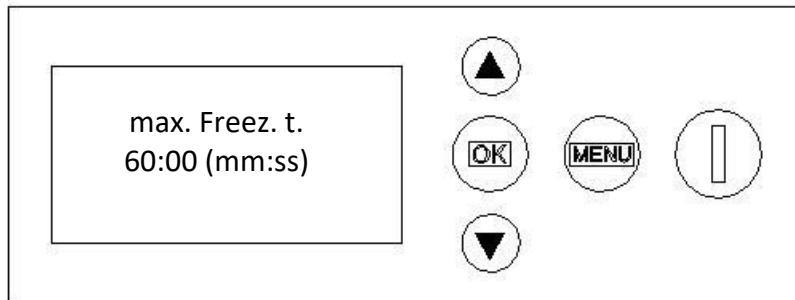
The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



### 12.8.13 MAXIMUM VARIABLE PRODUCTION TIME

The maximum variable production time will measure the maximum time the machine has to wait to produce an alert without reaching the setpoint production temperature. It is measured in minutes and seconds with a resolution of 1 second.

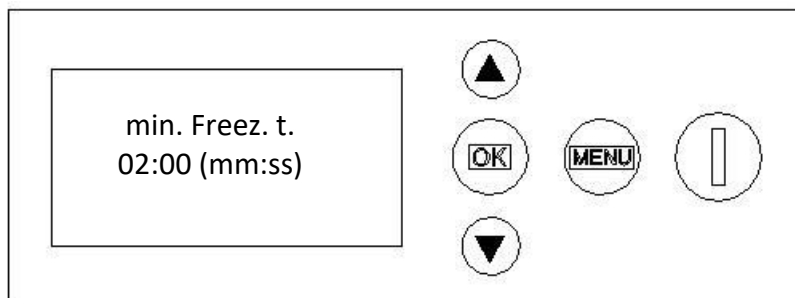
The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



#### 12.8.14 MINIMUM VARIABLE PRODUCTION TIME

The minimum variable production time will measure the minimum time the machine has to wait to start production. It is measured in minutes and seconds with a resolution of 1 second.

The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.



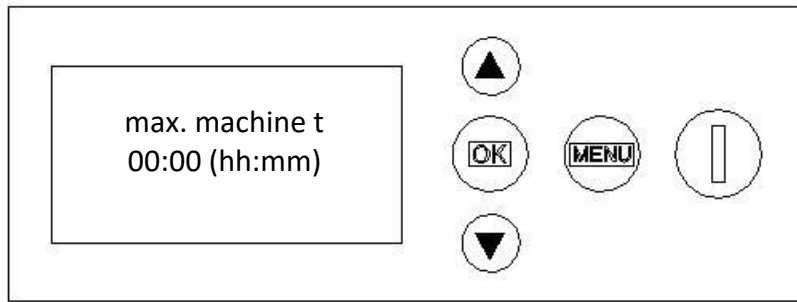
#### 12.8.15 MAXIMUM MACHINE TIME

The maximum machine time measures the maximum continuous operation time of the machine without stops. It is measured in hours and minutes with a resolution of 1 minute. It allows to defrost the machine with a given time.

The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.

**ATTENTION: FOR INDUSTRIAL USE OF THE MACHINE, IT IS RECOMMENDED TO CHANGE THE MAXIMUM MACHINE TIME TO 20 MINUTES EVERY 2 DAYS.**

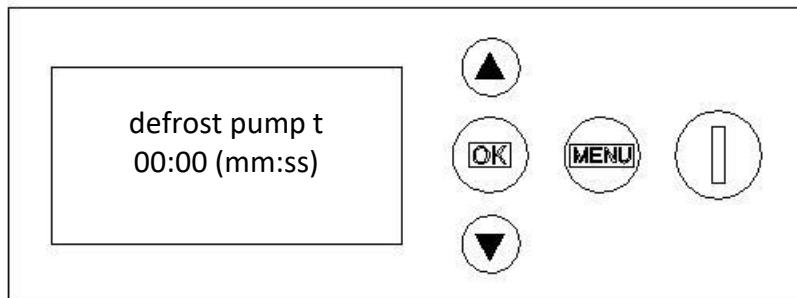




### 12.8.16 DEFROST PUMP TIME

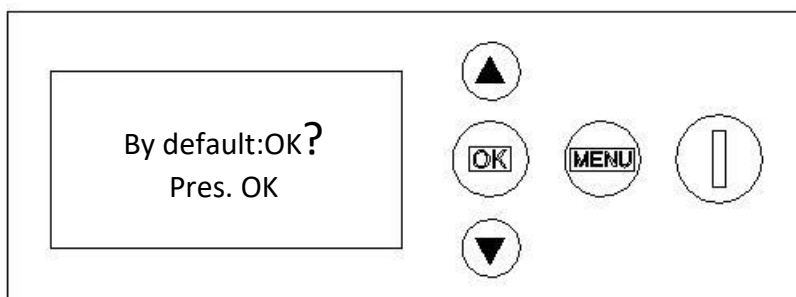
The defrost pump time starts when the maximum machine time has finished. It is measured in minutes and seconds with a resolution of 1 second.

The value can be changed with "Up/Down". By pressing "OK", you can store this parameter and go to the next one. The value will remain stored even if the machine is disconnected from the mains.

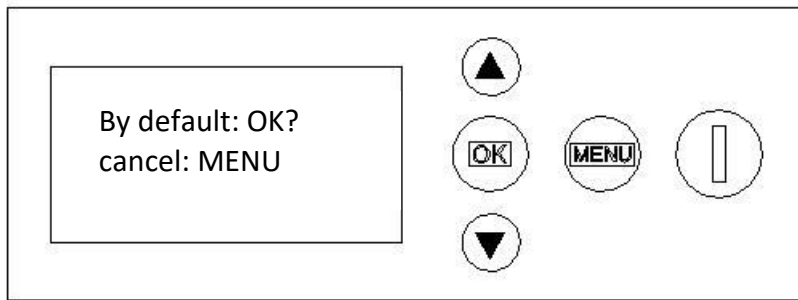


### 12.8.17 BY DEFAULT

With this option you can restore the default factory settings of the machine.



By pressing the "OK" button, the display will show:



If you press “OK”, all the values will have the default settings and you will go back to the configuration menu. If you press “MENU”, you will leave this option without making any change and return to the configuration menu.

#### **12.8.20 EXIT**

Select this option to leave the Configuration Menu and return to the main screen.

**INDEX**

1. 400 A 230 V/ 60 Hz/ III-----1

2. 400 A 380 V/ 50 -60 Hz/ III-----2

3. 400 A 380 V/ 50 -60 Hz/ III STACKED -----3

4. 400 A REMOTE 380 V/ 50 -60 Hz/III-----4

3. 400 A 380 V/ 50 -60 Hz/ III STACKED REMOTE -----5

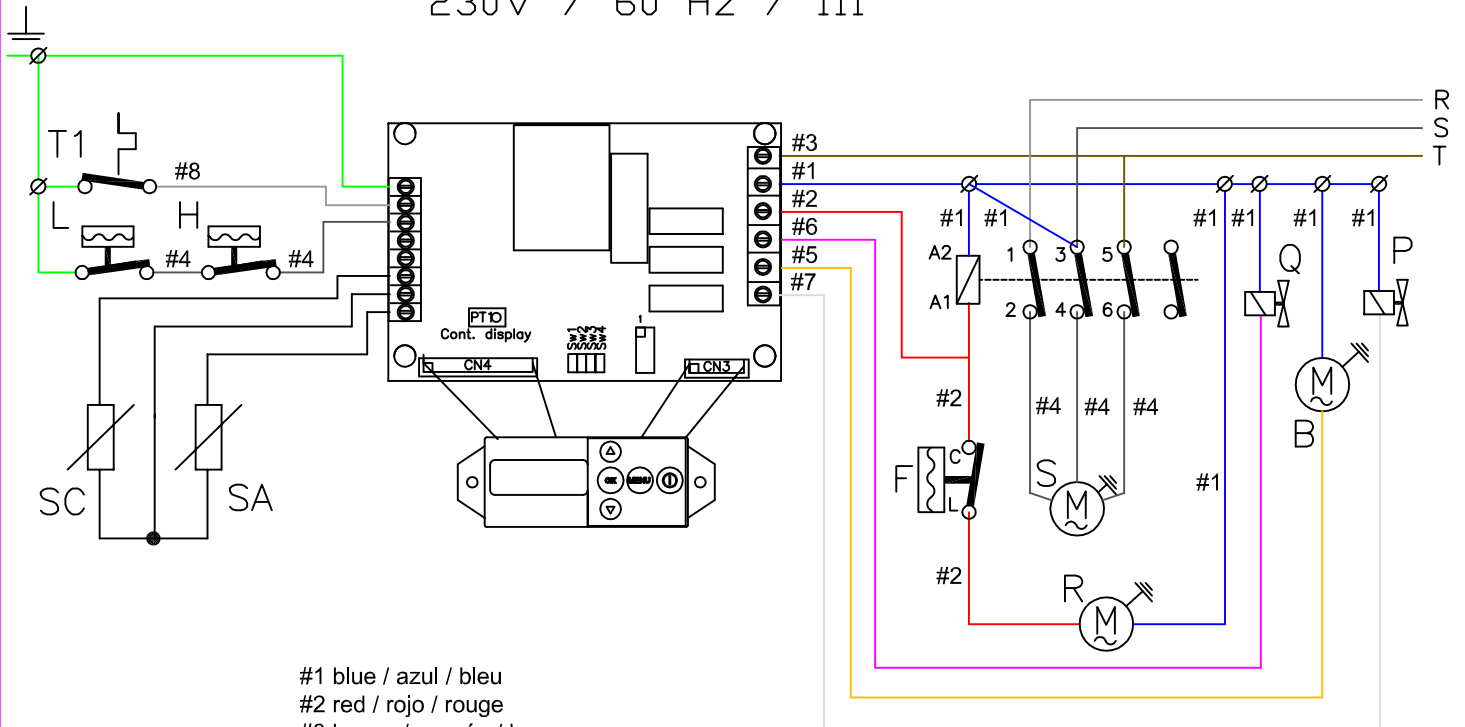
1. 400 A 220 V/ 50-60 Hz/ I-----6

7. 400 MODIFICATION FROM 380 V (III) TO 220 -----7

8. 400 REMOTE / 220 V/ 60 Hz/ III -----8

# 400 A ESQUEMA ELECTRICO / WIRING DIAGRAM

230V / 60 Hz / III



- #1 blue / azul / bleu
- #2 red / rojo / rouge
- #3 brown / marrón / brown
- #4 black / negro / noir
- #5 orange / naranja / orange
- #6 violet / violeta / violet
- #7 white / blanco / blanc
- #8 grey / gris / gris

H.—Presostato de seguridad de alta  
 L.—Presostato de seguridad de baja  
 SA.—Sonda de Ambiente  
 SC.—Sonda de Ciclo  
 T1.—Termostato de stock

P.—Electroválvula de agua  
 Q.—Electroválvula de gas caliente  
 S.—Compresor  
 B.—Bomba  
 R.—Motor de ventilador (solo cond. aire)  
 F.—Presostato ventilador (solo cond. aire)

H.—High pressure switch  
 L.—Low pressure switch  
 SA.—Air temp. probe  
 SC.—Cycle temp. probe.  
 T1.—Bin thermostat

P.—Water electrovalve  
 Q.—Hot gas electrovalve  
 S.—Compressor  
 B.—Pump  
 R.—Fan (only air cond.)  
 F.—Fan control (only air cond.)

H.—Pressostat de haute  
 L.—Pressostat de basse  
 SA.—Sonde de temp. ambiente  
 SC.—Sonde de cycle  
 T1.—Thermostat de stock

P.—Électrovanne d'eau  
 Q.—Électrovanne de gaz chaud  
 S.—Compresseur  
 B.—Ppompe à eau  
 R.—Ventilateur (seulement c. air)  
 F.—Contrôle du ventilateur (seulement cond. air)

## DIP-SWITCH

SW1— ON alarmas de tiempo habilitadas (\*)  
 OFF alarmas de tiempo deshabilitadas  
 SW2— ON rearme automático presostato  
 OFF rearme manual presostato (\*)  
 SW3— ON rearme automático por corte de luz  
 OFF rearme manual por corte de luz (\*)

(\*) ajuste de fábrica.

## DIP-SWITCH

SW1— ON tiemeout alarms ON (\*)  
 OFF timeout alarms OFF  
 SW2— ON automatic switch on pressostat  
 OFF manual switch on pressostat (\*)  
 SW3— ON automatic switch on if the power cuts out  
 OFF manual switch on if the power cuts out (\*)

(\*) default settings.

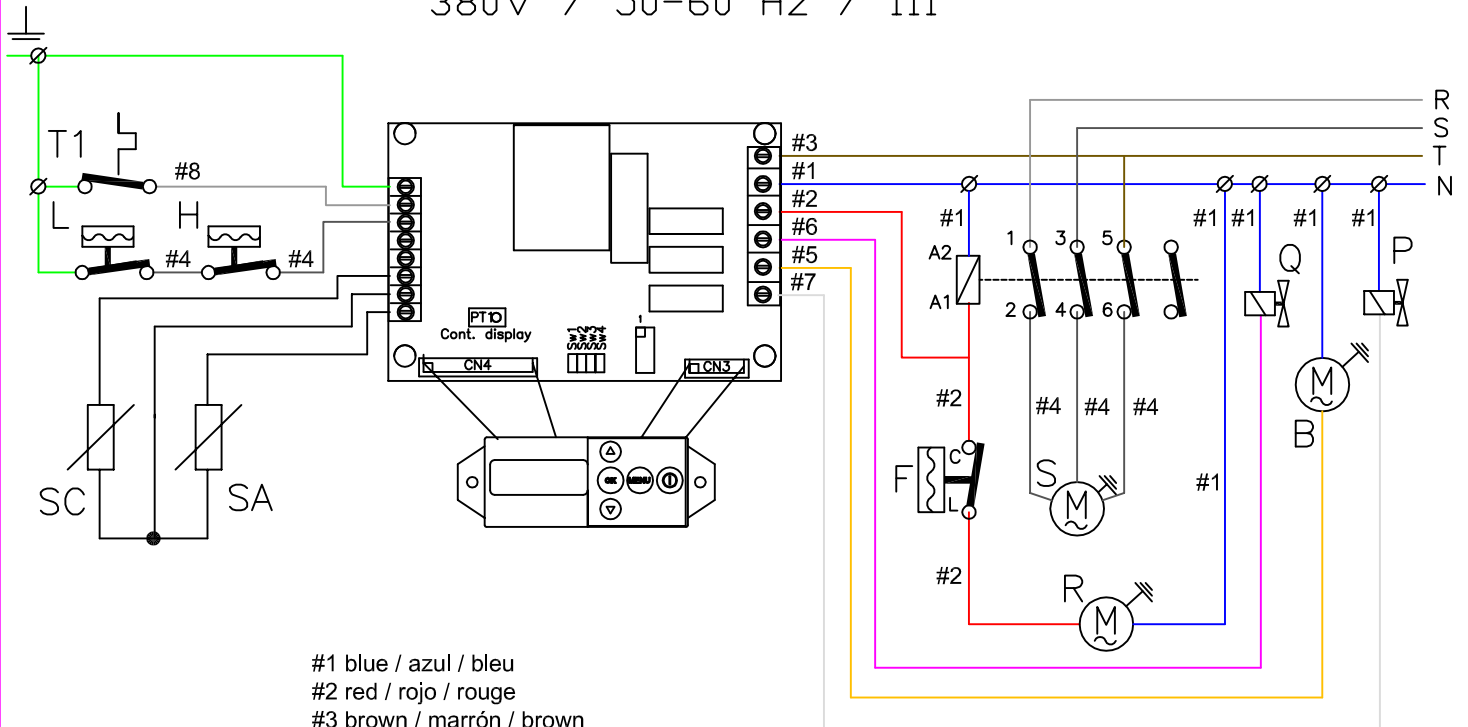
## DIP-SWITCH

SW1— ON alarmes de temps activée (\*)  
 OFF alarmes de temps désactivée  
 SW2— ON pressostat à réarmement automatique  
 OFF pressostat à réarmement manuel (\*)  
 SW3— ON réarmement automatique par coupure d'alimentation  
 OFF réarmement manuel par coupure d'alimentation (\*)

(\*) réglage d'usine.

# 400 A ESQUEMA ELECTRICO / WIRING DIAGRAM

380V / 50-60 Hz / III



- #1 blue / azul / bleu
- #2 red / rojo / rouge
- #3 brown / marrón / brown
- #4 black / negro / noir
- #5 orange / naranja / orange
- #6 violet / violeta / violet
- #7 white / blanco / blanc
- #8 grey / gris / gris

H.—Presostato de seguridad de alta  
 L.—Presostato de seguridad de baja  
 SA.—Sonda de Ambiente  
 SC.—Sonda de Ciclo  
 T1.—Termostato de stock  
 P.—Electroválvula de agua  
 Q.—Electroválvula de gas caliente  
 S.—Compresor  
 B.—Bomba  
 R.—Motor de ventilador (solo cond. aire)  
 F.—Presostato ventilador (solo cond. aire)

H.—High pressure switch  
 L.—Low pressure switch  
 SA.—Air temp. probe  
 SC.—Cycle temp. probe.  
 T1.—Bin thermostat  
 P.—Water electrovalve  
 Q.—Hot gas electrovalve  
 S.—Compressor  
 B.—Pump  
 R.—Fan (only air cond.)  
 F.—Fan control (only air cond.)

H.—Pressostat de haute  
 L.—Pressostat de basse  
 SA.—Sonde de temp. ambiante  
 SC.—Sonde de cycle  
 T1.—Thermostat de stock  
 P.—Électrovanne d'eau  
 Q.—Électrovanne de gaz chaud  
 S.—Compresseur  
 B.—Ppompe à eau  
 R.—Ventilateur (seulement c. air)  
 F.—Contrôle du ventilateur (seulement cond. air)

## DIP-SWITCH

SW1— ON alarmas de tiempo habilitadas (\*)  
 OFF alarmas de tiempo deshabilitadas  
 SW2— ON rearme automático presostato  
 OFF rearme manual presostato (\*)  
 SW3— ON rearme automático por corte de luz  
 OFF rearme manual por corte de luz (\*)

(\*) ajuste de fábrica.

## DIP-SWITCH

SW1— ON tiemout alarms ON (\*)  
 OFF timeout alarms OFF  
 SW2— ON automatic switch on pressostat  
 OFF manual switch on pressostat (\*)  
 SW3— ON automatic switch on if the power cuts out  
 OFF manual switch on if the power cuts out (\*)

(\*) default settings.

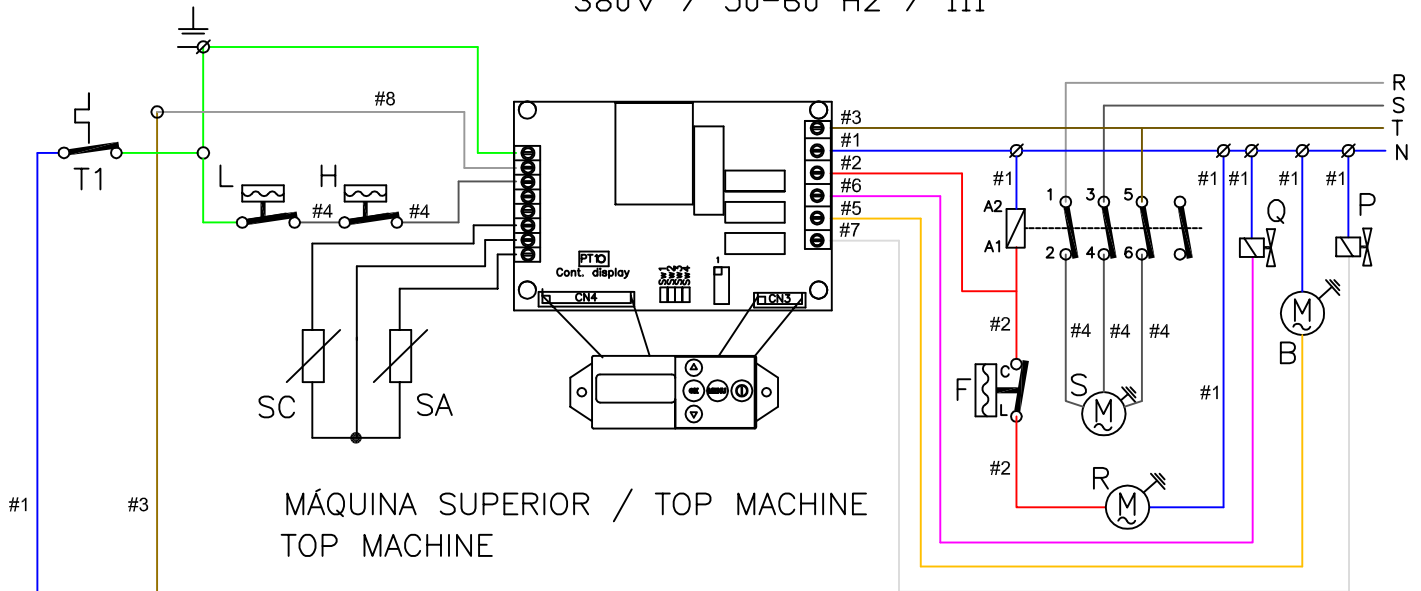
## DIP-SWITCH

SW1— ON alarmes de temps activée (\*)  
 OFF alarmes de temps désactivée  
 SW2— ON pressostat à réarmement automatique  
 OFF pressostat à réarmement manuel (\*)  
 SW3— ON réarmement automatique par coupure d'alimentation  
 OFF réarmement manuel par coupure d'alimentation (\*)

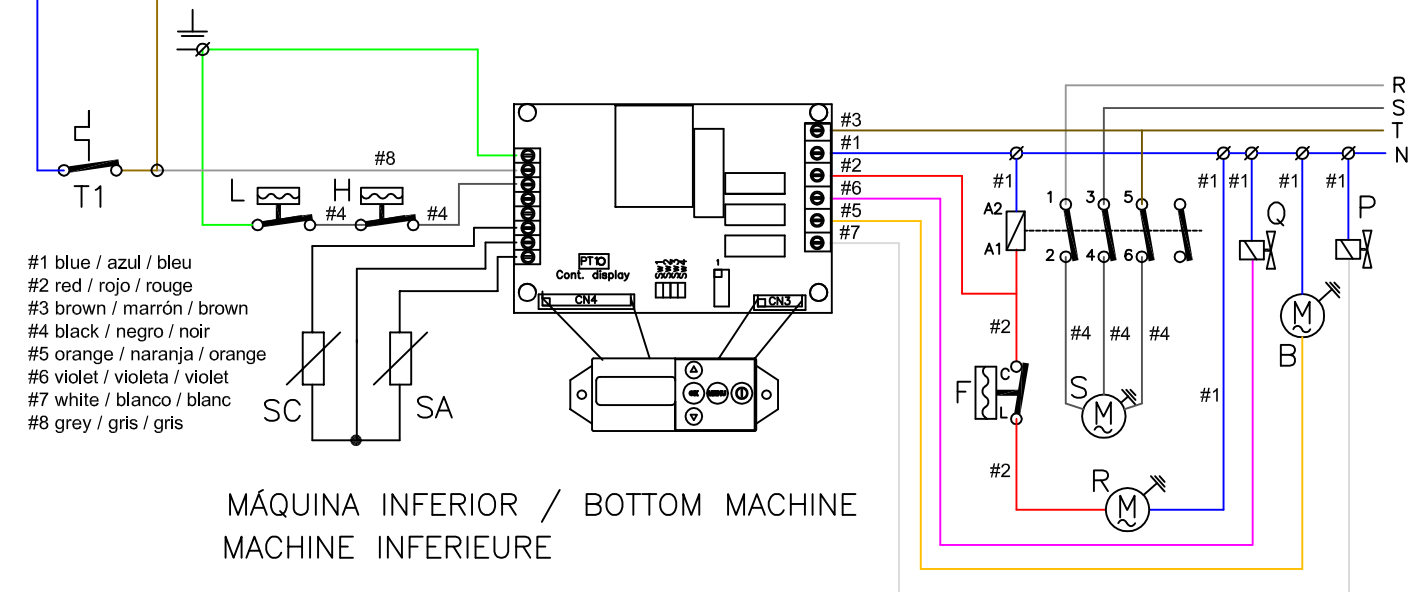
(\*) réglage d'usine.

# 400 A ESQUEMA ELECTRICO APILADO / STACKED WIRING DIAGRAM

380V / 50-60 Hz / III



MÁQUINA SUPERIOR / TOP MACHINE  
TOP MACHINE



MÁQUINA INFERIOR / BOTTOM MACHINE  
MACHINE INFERIEURE

- #1 blue / azul / bleu
- #2 red / rojo / rouge
- #3 brown / marrón / brown
- #4 black / negro / noir
- #5 orange / naranja / orange
- #6 violet / violeta / violet
- #7 white / blanco / blanc
- #8 grey / gris / gris

- H.-Presostato de seguridad de alta
- L.-Presostato de seguridad de baja
- SA.-Sonda de Ambiente
- SC.-Sonda de Ciclo
- T1.-Termostato de stock
- P.-Electroválvula de agua
- Q.-Electroválvula de gas caliente
- S.-Compresor
- B.-Bomba
- R.-Motor de ventilador (solo cond. aire)
- F.-Presostato ventilador (solo cond. aire)

- H.-High pressure switch
- L.-Low pressure switch
- SA.-Air temp. probe
- SC.-Cycle temp. probe.
- T1.-Bin thermostat
- P.-Water electrovalve
- Q.-Hot gas electrovalve
- S.-Compressor
- B.-Pump
- R.-Fan (only air cond.)
- F.-Fan control (only air cond.)

- H.-Pressostat de haute
- L.-Pressostat de basse
- SA.-Sonde de temp. ambiente
- SC.-Sonde de cycle
- T1.-Thermostat de stock
- P.-Électrovanne d'eau
- Q.-Électrovanne de gaz chaud
- S.-Compresseur
- B.-Ppompe à eau
- R.-Ventilateur (seulement c. air)
- F.-Contrôle du ventilateur (seulement cond. air)

## DIP-SWITCH

- SW1- ON alarmas de tiempo habilitadas (\*)
- OFF alarmas de tiempo deshabilitadas
- SW2- ON rearme automático presostato
- OFF rearme manual presostato (\*)
- SW3- ON rearme automático por corte de luz
- OFF rearme manual por corte de luz (\*)

(\*) ajuste de fábrica.

## DIP-SWITCH

- SW1- ON tiemeout alarms ON (\*)
- OFF timeout alarms OFF
- SW2- ON automatic switch on pressostat
- OFF manual switch on pressostat (\*)
- SW3- ON automatic switch on if the power cuts out
- OFF manual switch on if the power cuts out (\*)

(\*) default settings.

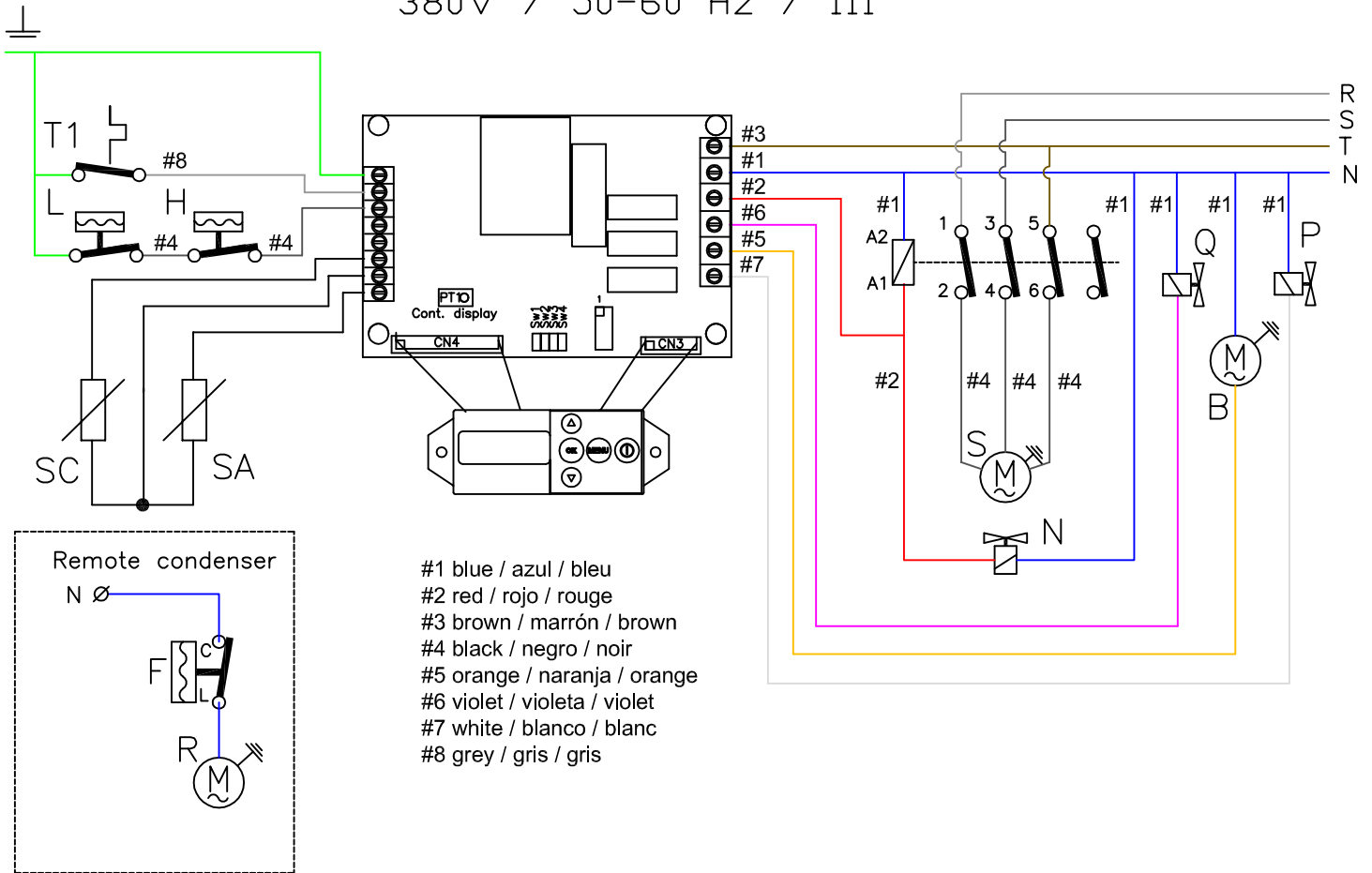
## DIP-SWITCH

- SW1- ON alarmes de temps activée (\*)
- OFF alarmes de temps désactivée
- SW2- ON pressostat à réarmement automatique
- OFF pressostat à réarmement manuel (\*)
- SW3- ON réarmement automatique par coupure d'alimentation
- OFF réarmement manuel par coupure d'alimentation (\*)

(\*) réglage d'usine.

# 400 A (REMOTE) ESQUEMA ELECTRICO / WIRING DIAGRAM

380V / 50-60 Hz / III



H.—Presostato de seguridad de alta  
 L.—Presostato de seguridad de baja  
 SA.—Sonda de Ambiente  
 SC.—Sonda de Ciclo  
 T1.—Termostato de stock  
 P.—Electroválvula de agua  
 Q.—Electroválvula de gas caliente  
 S.—Compresor  
 B.—Bomba  
 R.—Motor de ventilador (solo cond. aire)  
 F.—Presostato ventilador (solo cond. aire)

H.—High pressure switch  
 L.—Low pressure switch  
 SA.—Air temp. probe  
 SC.—Cycle temp. probe.  
 T1.—Bin thermostat  
 P.—Water electrovalve  
 Q.—Hot gas electrovalve  
 S.—Compressor  
 B.—Pump  
 R.—Fan (only air cond.)  
 F.—Fan control (only air cond.)

H.—Pressostat de haute  
 L.—Pressostat de basse  
 SA.—Sonde de temp. ambiante  
 SC.—Sonde de cycle  
 T1.—Thermostat de stock  
 P.—Électrovanne d'eau  
 Q.—Électrovanne de gaz chaud  
 S.—Compresseur  
 B.—Ppompe à eau  
 R.—Ventilateur (seulement c. air)  
 F.—Contrôle du ventilateur (seulement cond. air)

## DIP-SWITCH

SW1— ON alarmas de tiempo habilitadas (\*)  
 OFF alarmas de tiempo deshabilitadas  
 SW2— ON rearme automático presostato  
 OFF rearme manual presostato (\*)  
 SW3— ON rearme automático por corte de luz  
 OFF rearme manual por corte de luz (\*)  
 (\*) ajuste de fábrica.

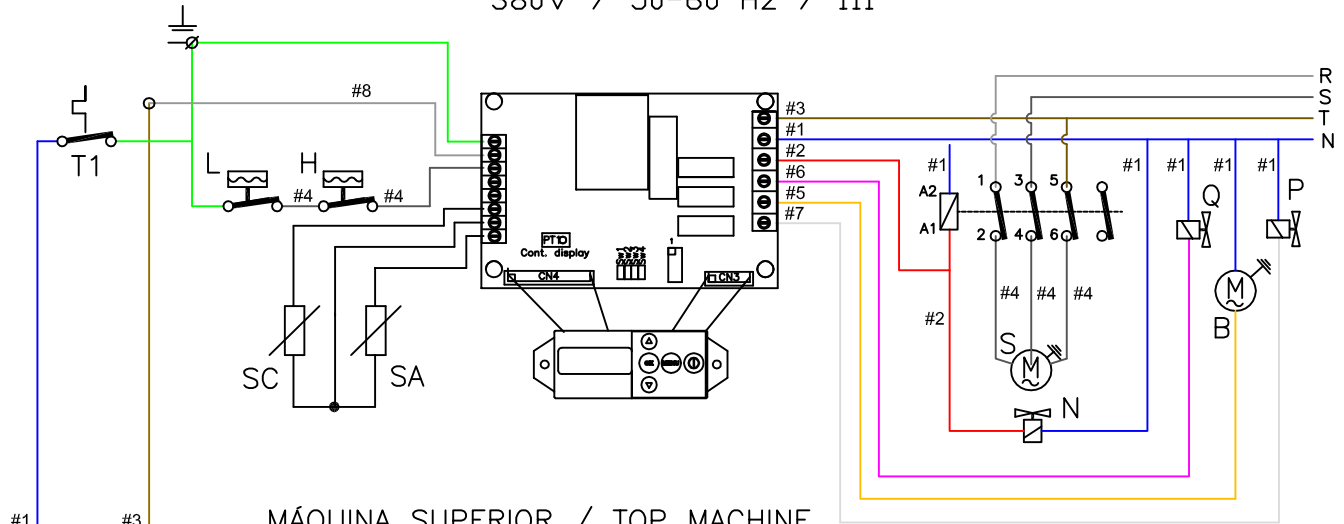
## DIP-SWITCH

SW1— ON tiemeout alarms ON (\*)  
 OFF timeout alarms OFF  
 SW2— ON automatic switch on pressostat  
 OFF manual switch on pressostat (\*)  
 SW3— ON automatic switch on if the power cuts out  
 OFF manual switch on if the power cuts out (\*)  
 (\*) default settings.

## DIP-SWITCH

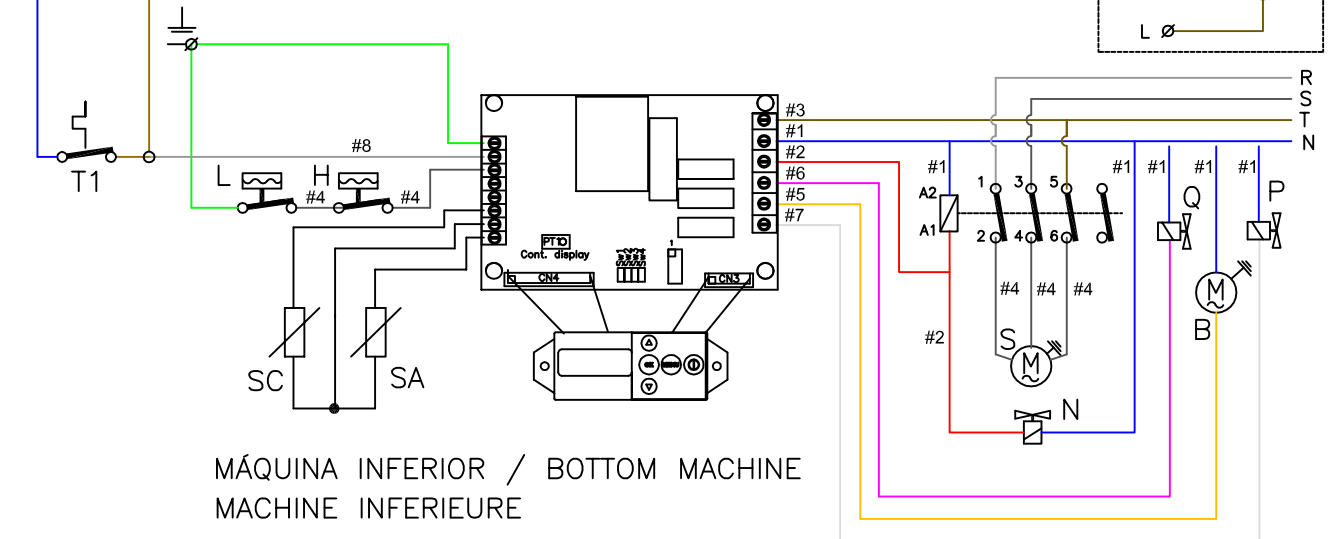
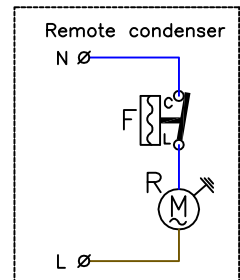
SW1— ON alarmes de temps activée (\*)  
 OFF alarmes de temps désactivée  
 SW2— ON pressostat à réarmement automatique  
 OFF pressostat à réarmement manuel (\*)  
 SW3— ON réarmement automatique par coupure d'alimentation  
 OFF réarmement manuel par coupure d'alimentation (\*)  
 (\*) réglage d'usine.

400 A ESQUEMA ELECTRICO APILADO REMOTA / REMOTE STACKED WIRING DIAGRAM  
380V / 50-60 Hz / III



MÁQUINA SUPERIOR / TOP MACHINE

- #1 blue / azul / bleu
- #2 red / rojo / rouge
- #3 brown / marrón / brown
- #4 black / negro / noir
- #5 orange / naranja / orange
- #6 violet / violeta / violet
- #7 white / blanco / blanc
- #8 grey / gris / gris

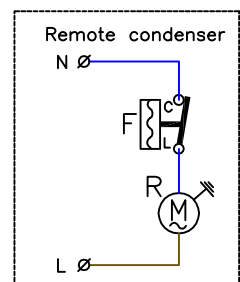


MÁQUINA INFERIOR / BOTTOM MACHINE  
MACHINE INFÉRIEURE

- H.-Presostato de seguridad de alta
- L.-Presostato de seguridad de baja
- SA.-Sonda de Ambiente
- SC.-Sonda de Ciclo
- T1.-Termostato de stock
- P.-Electroválvula de agua
- Q.-Electroválvula de gas caliente
- S.-Compresor
- B.-Bomba
- R.-Motor de ventilador (solo cond. aire)
- F.-Presostato ventilador (solo cond. aire)

- H.-High pressure switch
- L.-Low pressure switch
- SA.-Air temp. probe
- SC.-Cycle temp. probe.
- T1.-Bin thermostat
- P.-Water electrovalve
- Q.-Hot gas electrovalve
- S.-Compressor
- B.-Pump
- R.-Fan (only air cond.)
- F.-Fan control (only air cond.)

- H.-Pressostat de haute
- L.-Pressostat de basse
- SA.-Sonde de temp. ambiante
- SC.-Sonde de cycle
- T1.-Thermostat de stock
- P.-Électrovanne d'eau
- Q.-Électrovanne de gaz chaude
- S.-Compresseur
- B.-Ppompe à eau
- R.-Ventilateur (seulement c. air)
- F.-Contrôle du ventilateur (seulement cond. air)



DIP-SWITCH

- SW1- ON alarmas de tiempo habilitadas (\*)
- OFF alarmas de tiempo deshabilitadas
- SW2- ON rearme automático presostato
- OFF rearme manual presostato (\*)
- SW3- ON rearme automático por corte de luz
- OFF rearme manual por corte de luz (\*)

(\*) ajuste de fábrica.

DIP-SWITCH

- SW1- ON tiemeout alarms ON (\*)
- OFF timeout alarms OFF
- SW2- ON automatic switch on pressostat
- OFF manual switch on pressostat (\*)
- SW3- ON automatic switch on if the power cuts out
- OFF manual switch on if the power cuts out (\*)

(\*) default settings.

DIP-SWITCH

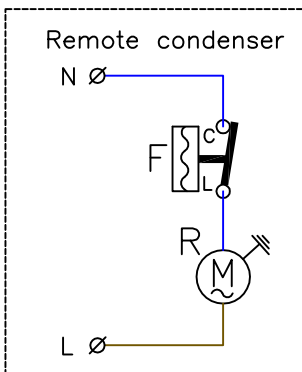
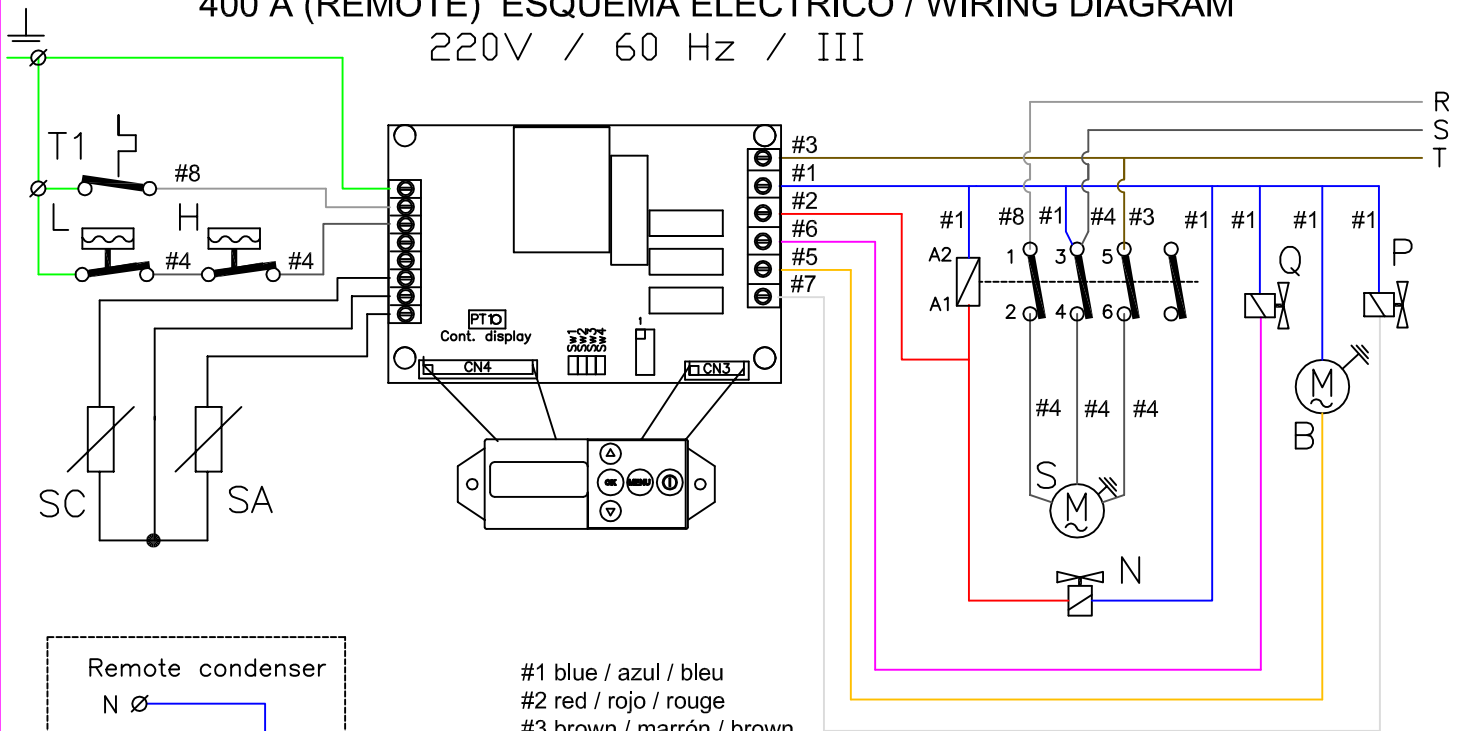
- SW1- ON alarmes de temps activée (\*)
- OFF alarmes de temps désactivée
- SW2- ON pressostat à réarmement automatique
- OFF pressostat à réarmement manuel (\*)
- SW3- ON réarmement automatique par coupure d'alimentation
- OFF réarmement manuel par coupure d'alimentation (\*)

(\*) réglage d'usine.



# 400 A (REMOTE) ESQUEMA ELECTRICO / WIRING DIAGRAM

220V / 60 Hz / III



- #1 blue / azul / bleu
- #2 red / rojo / rouge
- #3 brown / marrón / brown
- #4 black / negro / noir
- #5 orange / naranja / orange
- #6 violet / violeta / violet
- #7 white / blanco / blanc
- #8 grey / gris / gris

H.—Presostato de seguridad de alta

L.—Presostato de seguridad de baja

SA.—Sonda de Ambiente

SC.—Sonda de Ciclo

T1.—Termostato de stock

P.—Electroválvula de agua

Q.—Electroválvula de gas caliente

S.—Compresor

B.—Bomba

R.—Motor de ventilador (solo cond. aire)

F.—Presostato ventilador (solo cond. aire)

H.—High pressure switch

L.—Low pressure switch

SA.—Air temp. probe

SC.—Cycle temp. probe.

T1.—Bin thermostat

P.—Water electrovalve

Q.—Hot gas electrovalve

S.—Compressor

B.—Pump

R.—Fan (only air cond.)

F.—Fan control (only air cond.)

H.—Pressostat de haute

L.—Pressostat de basse

SA.—Sonde de temp. ambiente

SC.—Sonde de cycle

T1.—Thermostat de stock

P.—Électrovanne d'eau

Q.—Électrovanne de gaz chaud

S.—Compresseur

B.—Ppompe à eau

R.—Ventilateur (seulement c. air)

F.—Contrôle du ventilateur (seulement cond. air)

## DIP-SWITCH

SW1— ON alarmas de tiempo habilitadas (\*)

OFF alarmas de tiempo deshabilitadas

SW2— ON rearme automático presostato

OFF rearme manual presostato (\*)

SW3— ON rearme automático por corte de luz

OFF rearme manual por corte de luz (\*)

(\*) ajuste de fábrica.

## DIP-SWITCH

SW1— ON tiemeout alarms ON (\*)

OFF timeout alarms OFF

SW2— ON automatic switch on pressostat

OFF manual switch on pressostat (\*)

SW3— ON automatic switch on if the power cuts out

OFF manual switch on if the power cuts out (\*)

(\*) default settings.

## DIP-SWITCH

SW1— ON alarmes de temps activée (\*)

OFF alarmes de temps désactivée

SW2— ON pressostat à réarmement automatique

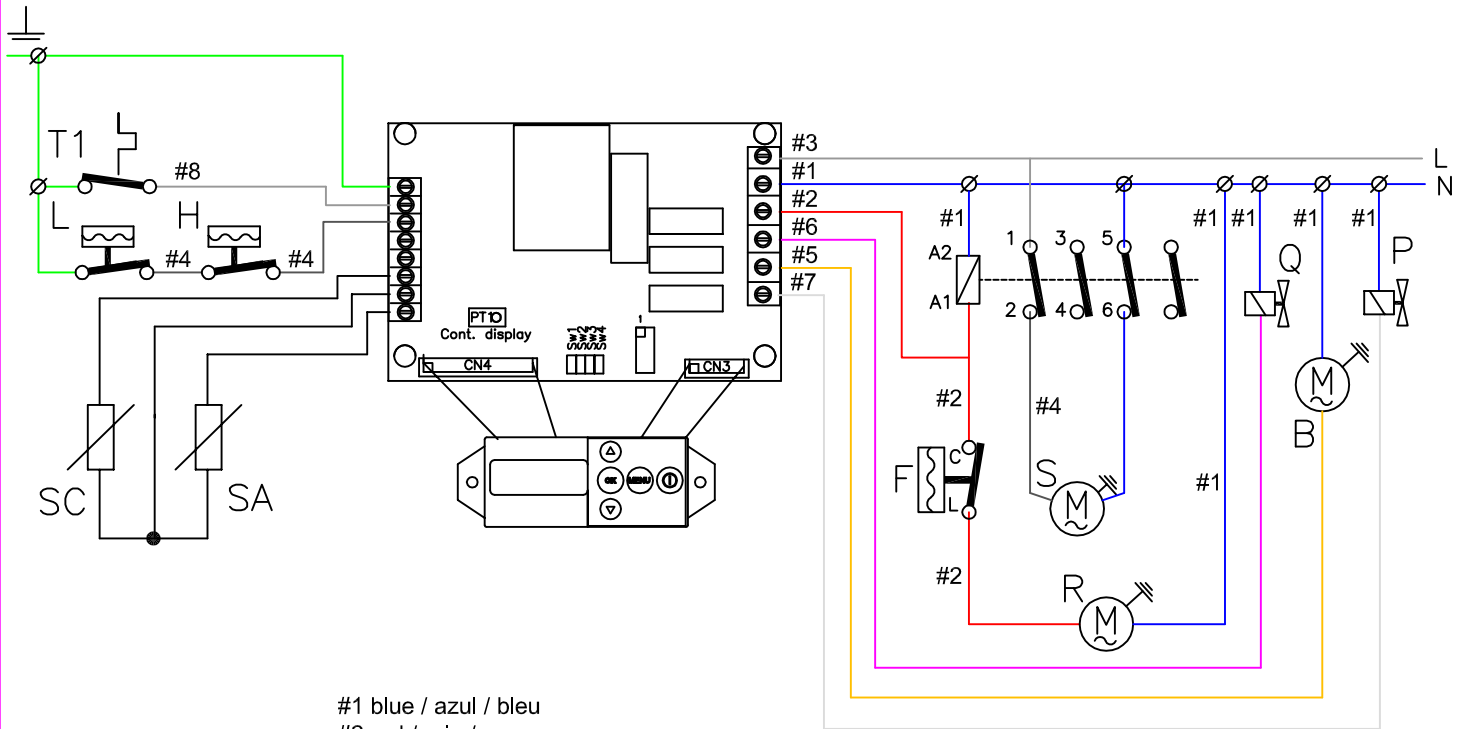
OFF pressostat à réarmement manuel (\*)

SW3— ON réarmement automatique par coupure d'alimentation

OFF réarmement manuel par coupure d'alimentation (\*)

(\*) réglage d'usine.

# 400 A / WIRING MODIFICATION FROM 380V (III) TO 220V (I)



- #1 blue / azul / bleu
- #2 red / rojo / rouge
- #3 brown / marrón / brown
- #4 black / negro / noir
- #5 orange / naranja / orange
- #6 violet / violeta / violet
- #7 white / blanco / blanc
- #8 grey / gris / gris

H.—Presostato de seguridad de alta  
 L.—Presostato de seguridad de baja  
 SA.—Sonda de Ambiente  
 SC.—Sonda de Ciclo  
 T1.—Termostato de stock  
 P.—Electroválvula de agua  
 Q.—Electroválvula de gas caliente  
 S.—Compresor  
 B.—Bomba  
 R.—Motor de ventilador (solo cond. aire)  
 F.—Presostato ventilador (solo cond. aire)

H.—High pressure switch  
 L.—Low pressure switch  
 SA.—Air temp. probe  
 SC.—Cycle temp. probe.  
 T1.—Bin thermostat  
 P.—Water electrovalve  
 Q.—Hot gas electrovalve  
 S.—Compressor  
 B.—Pump  
 R.—Fan (only air cond.)  
 F.—Fan control (only air cond.)

H.—Pressostat de haute  
 L.—Pressostat de basse  
 SA.—Sonde de temp. ambiante  
 SC.—Sonde de cycle  
 T1.—Thermostat de stock  
 P.—Électrovanne d'eau  
 Q.—Électrovanne de gaz chaud  
 S.—Compresseur  
 B.—Ppompe à eau  
 R.—Ventilateur (seulement c. air)  
 F.—Contrôle du ventilateur (seulement cond. air)

## DIP-SWITCH

SW1— ON alarmas de tiempo habilitadas (\*)  
 OFF alarmas de tiempo deshabilitadas  
 SW2— ON rearme automático presostato  
 OFF rearme manual presostato (\*)  
 SW3— ON rearme automático por corte de luz  
 OFF rearme manual por corte de luz (\*)  
 (\*) ajuste de fábrica.

## DIP-SWITCH

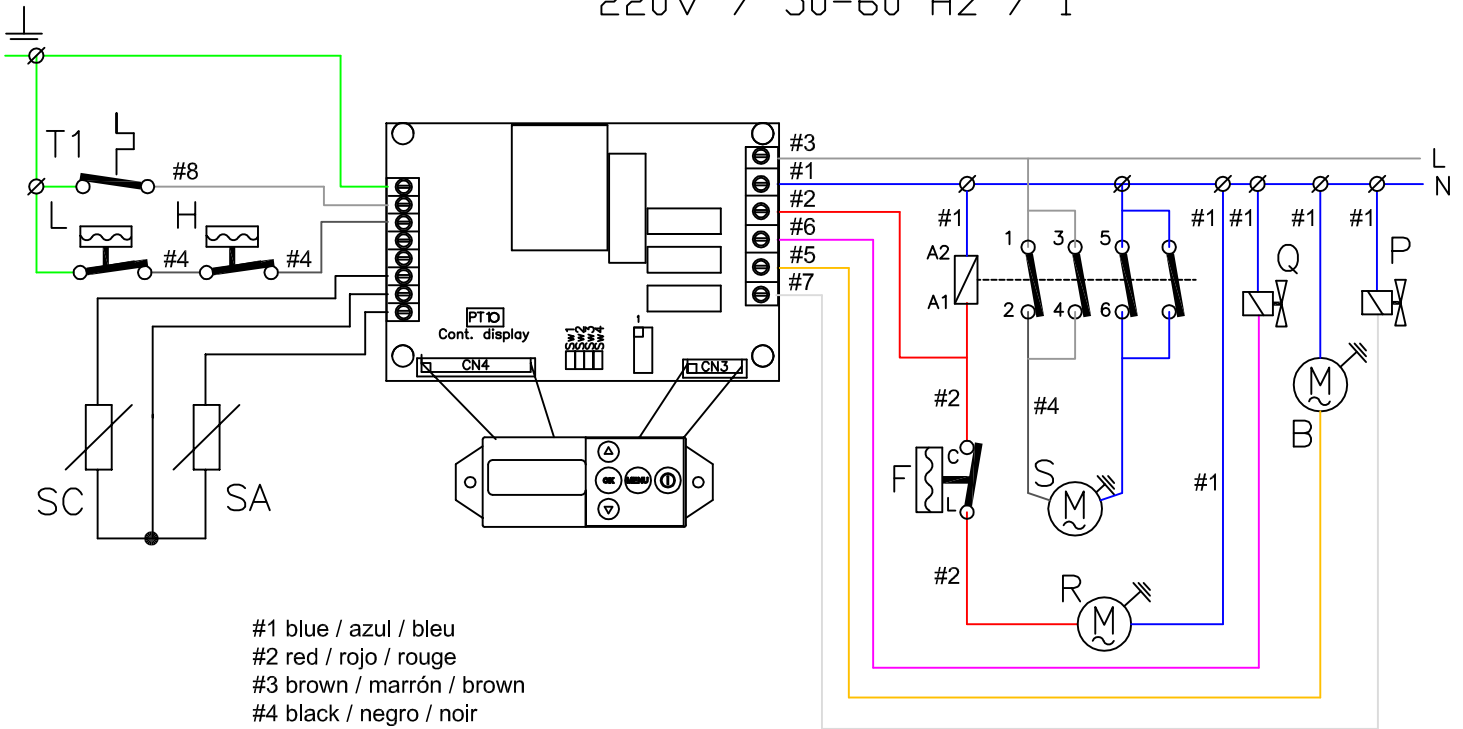
SW1— ON tiemeout alarms ON (\*)  
 OFF timeout alarms OFF  
 SW2— ON automatic switch on pressostat  
 OFF manual switch on pressostat (\*)  
 SW3— ON automatic switch on if the power cuts out  
 OFF manual switch on if the power cuts out (\*)  
 (\*) default settings.

## DIP-SWITCH

SW1— ON alarmes de temps activée (\*)  
 OFF alarmes de temps désactivée  
 SW2— ON pressostat à réarmement automatique  
 OFF pressostat à réarmement manuel (\*)  
 SW3— ON réarmement automatique par coupure d'alimentation  
 OFF réarmement manuel par coupure d'alimentation (\*)  
 (\*) réglage d'usine.

# 400 A ESQUEMA ELECTRICO / WIRING DIAGRAM

220V / 50-60 Hz / I



- #1 blue / azul / bleu
- #2 red / rojo / rouge
- #3 brown / marrón / brown
- #4 black / negro / noir
- #5 orange / naranja / orange
- #6 violet / violeta / violet
- #7 white / blanco / blanc
- #8 grey / gris / gris

H.—Presostato de seguridad de alta  
 L.—Presostato de seguridad de baja  
 SA.—Sonda de Ambiente  
 SC.—Sonda de Ciclo  
 T1.—Termostato de stock  
 P.—Electroválvula de agua  
 Q.—Electroválvula de gas caliente  
 S.—Compresor  
 B.—Bomba  
 R.—Motor de ventilador (solo cond. aire)  
 F.—Presostato ventilador (solo cond. aire)

H.—High pressure switch  
 L.—Low pressure switch  
 SA.—Air temp. probe  
 SC.—Cycle temp. probe.  
 T1.—Bin thermostat  
 P.—Water electrovalve  
 Q.—Hot gas electrovalve  
 S.—Compressor  
 B.—Pump  
 R.—Fan (only air cond.)  
 F.—Fan control (only air cond.)

H.—Pressostat de haute  
 L.—Pressostat de basse  
 SA.—Sonde de temp. ambiante  
 SC.—Sonde de cycle  
 T1.—Thermostat de stock  
 P.—Électrovanne d'eau  
 Q.—Électrovanne de gaz chaud  
 S.—Compresseur  
 B.—Ppompe à eau  
 R.—Ventilateur (seulement c. air)  
 F.—Contrôle du ventilateur (seulement cond. air)

## DIP-SWITCH

SW1— ON alarmas de tiempo habilitadas (\*)  
 OFF alarmas de tiempo deshabilitadas  
 SW2— ON rearme automático presostato  
 OFF rearme manual presostato (\*)  
 SW3— ON rearme automático por corte de luz  
 OFF rearme manual por corte de luz (\*)  
 (\*) ajuste de fábrica.

## DIP-SWITCH

SW1— ON tiemeout alarms ON (\*)  
 OFF timeout alarms OFF  
 SW2— ON automatic switch on pressostat  
 OFF manual switch on pressostat (\*)  
 SW3— ON automatic switch on if the power cuts out  
 OFF manual switch on if the power cuts out (\*)  
 (\*) default settings.

## DIP-SWITCH

SW1— ON alarmes de temps activée (\*)  
 OFF alarmes de temps désactivée  
 SW2— ON pressostat à réarmement automatique  
 OFF pressostat à réarmement manuel (\*)  
 SW3— ON réarmement automatique par coupure d'alimentation  
 OFF réarmement manuel par coupure d'alimentation (\*)  
 (\*) réglage d'usine.

The Company reserves the right to change models and specifications without prior notice.

**Cod. 30243 / 7 -2017**