Service manual

Easy Cooking Pro Station **NTEC3-1P**

[Art. 406352082]

2021-05

LIBERO POINT

Document made by Product Care – Technical Training & Service – Vallenoncello PN/Italy

REVISIONS UPDATE:

EDITION	DESCRIPTION	DATE
1.0	FIRST EDITION OF SERVICE MANUAL	**MAY 2021**

Foreword

 The service manual (here in after Manual) provides the engineer with information necessary for correct and safe care of the machine (here in after “machine“, “appliance“ or “unit”).

The following instructions are intended to maintain the machine performance and to preventing injury to persons and animals and damage to property due to improper operating procedures.

All persons involved in machine transport, installation, commissioning and maintenance, repair and disassembly must refer to the content of this manual before carrying out the various operations. This, in order to avoid wrong and improper actions that could compromise the machine's integrity or endanger people.

If, after reading this manual, there are still doubts regarding machine use, do not hesitate to contact the Manufacturer or the Customer Care to receive prompt and precise assistance for better operation and maximum efficiency of the machine. During all stages of machine assessment, always respect the current regulations on safety, work hygiene and environmental protection. It is the user's responsibility to make sure the machine is started and operated only in optimum conditions of safety for people, animals and property.

IMPORTANT

- The manufacturer declines any liability for operations carried out on the appliance without respecting the instructions given in this manual as well as for operations carried out by the user without respecting the instructions given in the user manual.
- The manufacturer reserves the right to modify the appliances presented in this publication without notice; manufacturer’s relevant technical bulletins should be used as integration(s)/addendum(s).
- No part of this manual may be reproduced without the consent of the manufacturer
- This manual is available in digital format by:
  - contacting the reference customer care; downloading the latest and up to date manual/technical bulletin(s) on the web site: **https://professional.electrolux.com**

The manual must always be part of the documentation available when servicing the machine.

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Edition 1 – 05-2021

LIBERO POINT

MODELS COVERED BY THE SERVICE MANUAL

Refer also to § DATA PLATE (IDENTIFICATION STICKER)

PNC	MODEL	CATEGORY	DESCRIPTION	SOCKETS
351078	E2VVADBQZU	NEUTRAL UNIT	LIBERO POINT MOBILE COUNT-2 1PH UNITS-UK	FOUR 1-PHASE SOCKETS - UK PLUG
351079	E2VVCDBQZU	NEUTRAL UNIT	LIBERO POINT MOBILE COUNT-3 1PH UNITS-UK	FOUR 1-PHASE SOCKETS - UK PLUG
351080	E2VVADBQZA	NEUTRAL UNIT	LIBERO POINT MOBILE COUNTER- 2 1PH UNITS	FOUR 1-PHASE SOCKETS
351081	E2VVBDBQZA	NEUTRAL UNIT	LIBERO POINT MOBILE COUNT-2 3PH UNITS	TWO 1-PHASE & TWO 3-PHASE SOCKETS
351082	E2VVCDBQZA	NEUTRAL UNIT	LIBERO POINT MOBILE COUNTER- 3 1PH UNITS	FOUR 1-PHASE SOCKETS
351083	E2VVDDBQZA	NEUTRAL UNIT	LIBERO POINT MOBILE COUNT-3 3PH UNITS	TWO 1-PHASE & THREE 3-PHASE SOCKETS
351084	E2VVADBRZA	1 REFRIGERATED	LIBERO POINT REF MOB. COUNTER-2 1PH UNITS	FOUR 1-PHASE SOCKETS
351085	E2VVBDBRZA	2 REFRIGERATED	LIBERO POINT REF MOB. COUNT-2 3PH UNITS	TWO 1-PHASE & TWO 3-PHASE SOCKETS
351086	E2VVCDBRZA	2 REFRIGERATED	LIBERO POINT REF MOB. COUNTER-3 1PH UNITS	FOUR 1-PHASE SOCKETS
351087	E2VVDDBRZA	2 REFRIGERATED	LIBERO POINT REF MOB. COUNT-3 3HP UNITS	TWO 1-PHASE & THREE 3-PHASE SOCKETS
351090	E2VVADBRZU	1 REFRIGERATED	LIBERO POINT REF MOB. COUNT-2 1PH UNITS-UK	FOUR 1-PHASE SOCKETS - UK PLUG
351091	E2VVCDBRZU	2 REFRIGERATED	LIBERO POINT REF MOB. COUNT-3 1PH UNITS-UK	FOUR 1-PHASE SOCKETS - UK PLUG
352080	Z2VVADBQZA	NEUTRAL UNIT	LIBERO POINT MOBILE COUNTER- 2 1PH UNITS	FOUR 1-PHASE SOCKETS
352081	Z2VVBDBQZA	NEUTRAL UNIT	LIBERO POINT MOBILE COUNT-2 3PH UNITS	TWO 1-PHASE & THREE 3-PHASE SOCKETS
352082	Z2VVCDBQZA	NEUTRAL UNIT	LIBERO POINT MOBILE COUNTER- 3 1PH UNITS	FOUR 1-PHASE SOCKETS
352083	Z2VVDDBQZA	NEUTRAL UNIT	LIBERO POINT MOBILE COUNT-3 3PH UNITS	TWO 1-PHASE & THREE 3-PHASE SOCKETS
352084	Z2VVADBRZA	1 REFRIGERATED	LIBERO POINT REF MOB. COUNTER-2 1PH UNITS	FOUR 1-PHASE SOCKETS
352085	Z2VVBDBRZA	1 REFRIGERATED	LIBERO POINT REF MOB. COUNT-2 3PH UNITS	TWO 1-PHASE & TWO 3-PHASE SOCKETS
352086	Z2VVCDBRZA	2 REFRIGERATED	LIBERO POINT REF MOB. COUNTER-3 1PH UNITS	FOUR 1-PHASE SOCKETS
352087	Z2VVDDBRZA	2 REFRIGERATED	LIBERO POINT REF MOB. COUNT-3 3HP UNITS	TWO 1-PHASE & THREE 3-PHASE SOCKETS

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1 GENERAL INFORMATION

1.1 GENERAL INFORMATION

To ensure safe use of the machine and a proper understanding of the manual it is necessary to be familiar with the terms and typographical conventions used in the documentation. The following symbols are used in the manual to indicate and identify the various types of hazards:

WARNING
Danger for the health and safety of operators.

WARNING
Danger of electrocution - dangerous voltage.

CAUTION
Risk of damage to the machine or the product.

WARNING
Danger of magnetic fields.

IMPORTANT
Important instructions or information on the product

Read the instructions before using the appliance

Clarifications and explanations

•Only specialised personnel are authorised to operate on the machine.
•This appliance must not be used by minors and adults with limited physical, sensory or mental abilities or without adequate experience and knowledge regarding its use.
–Do not let children play with the appliance.
–Keep all packaging and detergents away from children.
–Cleaning and user maintenance shall not be made by children without supervision.
•Do not store explosive substances, such as pressurized containers with flammable propellant, in this appliance or close to the appliance
•Do not remove, tamper with or make the machine “CE“ marking illegible.
•Refer to the data given on the machine’s data plate “CE“ marking for relations with the Manufacturer (e.g. when ordering spare parts, etc.).
•When scrapping the machine, the “CE“ marking must be destroyed.

1.2 SAFETY INFORMATION/PRECAUTIONS

•Risks mainly of a mechanical, thermal and electrical nature exist in the machine. Where possible the risks have been neutralised:
–directly, by means of adequate design solutions.
–indirectly by using guards, protection and safety devices.
•During maintenance several risks remain, as these could not be eliminated, and must be neutralised by adopting specific measures and precautions.
•Do not carry out any checking, cleaning, repair or maintenance operations on moving parts. Workers must be informed of this prohibition by means of clearly visible signs.
•To guarantee machine efficiency and correct operation, periodical maintenance must be carried out according to the instructions given in this manual.
•Make sure to periodically check correct operation of all the safety devices and the insulation of electrical cables, which must be replaced if damaged.
•Extraordinary machine maintenance operations must only be carried out by specialized Technicians provided with all the appropriate personal protection equipment (safety shoes, gloves, glasses, overalls, etc.), tools, utensils and ancillary means.
•Never operate the machine, removing, modifying or tampering with the guards, protection or safety devices.
•Before carrying out any operation on the machine, always consult the manual which gives the correct procedures and contains important information on safety.

1.2.1 PERSONAL PROTECTION EQUIPMENT

Summary table of the **P**ersonal **P**rotection **E**quipment (PPE) to be used during the various stages of the machine's service life.

Stage	**Protective garments** 	**Safety footwear** 	**Gloves** 	**Glasses** 	**Safety helmet** 
Transport	—	●	○	—	○
Handling	—	●	○	—	—
Unpacking	—	●	●	—	—
Installation	—	●	●[2]	●	—
Normal use	●	●	●[1]	○	—
Adjustments	○	●	○	○	—
Routine cleaning	○	●	●[1 or 2]	○	—
Extraordinary cleaning	○	●	●[1 or 2]	○	—
Maintenance	○	●	○	○	—
Dismantling	○	●	○	○	—
Scrapping	●	●	●	●	—
Key:					
●	**PPE REQUIRED**				
○	**PPE AVAILABLE OR TO BE USED IF NECESSARY**				
—	**PPE NOT REQUIRED**				

1. During these operations, the worn gloves must be heatproof to protect hands from contact with hot food or hot parts of the appliance and/or when removing hot items from it. Failure to use the personal protection equipment by operators, specialized personnel or users can involve exposure to chemical risk and possible damage to health (depending on the model).
2. During these operations, the worn gloves must be cut-resistant. Failure to use the personal protection equipment by operators, specialized personnel or users can involve exposure to damage to health (depending on the model).

1.2.2 GENERAL SAFETY

•The machines are provided with electric and/or mechanical safety devices for protecting workers and the machine itself. Therefore the user must not remove or tamper with such devices. The Manufacturer declines any liability for damage due to tampering or their non-use.
•Never operate the machine, removing, modifying or tampering with the guards, protection or safety devices.
•Do not make any modifications to the parts supplied with the appliance.
•Several illustrations in the manual show the machine, or parts of it, without guards or with guards removed. This is purely for explanatory purposes. Do not use the machine without the guards or with the protection devices deactivated.
•Do not remove, tamper with or make illegible the safety, danger and instruction signs and labels on the machine.
•Air recirculation must take into account the air necessary for combustion, 2 m^3/h/kW of gas power, and also the "well-being" of persons working in the kitchen.
•Inadequate ventilation causes asphyxia. Do not obstruct the ventilation system in the place where this appliance is installed. Do not obstruct the vents or ducts of this or other appliances.
•Place emergency telephone numbers in a visible position.

•The measured sound level emitted “A“ does not exceed 70 dB (“A“).

•Turn the appliance off in case of fault or poor operation.

•Do not use products (even if diluted) containing chlorine (sodium hypochlorite, hydrochloric or muriatic acid, etc.) to clean the appliance or the floor under it.
•Do not use metal tools to clean steel parts (wire brushes or Scotch Brite type scouring pads).
•Do not allow oil or grease to come into contact with plastic parts. Do not allow dirt, fat, food or other residuals to form deposits on the appliance.
•Do not spray water or use steam to clean the equipment.
•Do not store or use gasoline or other flammable vapours, liquids or items in the vicinity of this or any other appliance.
•Do not spray aerosols in the vicinity of this appliance while it is in operation.
•Never check for leaks with an open flame.

1.2.3 RESIDUAL RISKS

•The machine has several risks that were not completely eliminated from a design standpoint or with the installation of adequate protection devices. Nevertheless, through this manual the Manufacturer has taken steps to inform operators of such risks, carefully indicating the personal protection equipment to be used by them. Sufficient spaces are provided for during the machine installation stages in order to limit these risks.
To preserve these conditions, the areas around the machine must always be:
– kept free of obstacles (e.g. ladders, tools, containers, boxes, etc.);
– clean and dry;
– well lit.
For the Customer's complete information, the residual risks remaining on the machine are indicated below: such actions are deemed improper and therefore strictly forbidden.

Residual risk	Description of hazardous situation
Slipping or falling	The operator can slip due to water or dirt on the floor
Burns/abrasions (e.g. heating elements)	The operator deliberately or unintentionally touches some components inside the machine without using protective gloves
Electrocution	Contact with live parts during maintenance operations carried out with the electrical panel powered

Sudden closing of the lid/ door/oven door (if present, depending on the appliance type)	The operator for normal machine use could suddenly and deliberately close the lid/door/oven door (if present, depending on the appliance type)
Tipping of loads	When handling the machine or the packing containing it, using unsuitable lifting systems or accessories or with the load unbalanced

Mechanical safety characteristics, hazards
•The appliance does not have sharp edges or protruding parts. The guards for the moving and live parts are fixed to the cabinet with screws, to prevent accidental access.

Protection devices installed on the machine
•The guards on the machine are:
- fixed guards (e. g. casings, covers, side panels, etc.), fixed to the machine and/or frame with screws or quick-release connectors that can only be removed or opened with tools

Safety signs to be placed near the machine area

Prohibition	Meaning
	do not remove the safety devices
	do not use water to extinguish fires (placed on electrical parts)
	Keep the area around the appliance clear and free from combustible materials. Do not keep flammable materials in the vicinity of the appliance
	Install the appliance in a well-ventilated place to avoid the creation of dangerous mixtures of unburnt gases in the same room

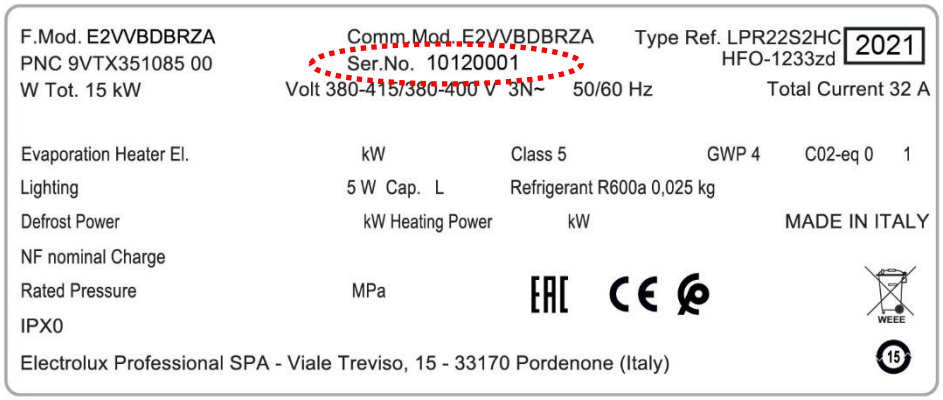
Danger	Meaning
	danger of burns
	danger of electrocution (shown on electrical parts with indication of voltage)
	risk of electromagnetic fields
	Access forbidden to wearers of electrical stimulator (pacemakers)

End of use
When the appliance is no longer to be used, make it unusable by removing the mains power supply wiring.

1.3 DATA PLATE (IDENTIFICATION STICKER)

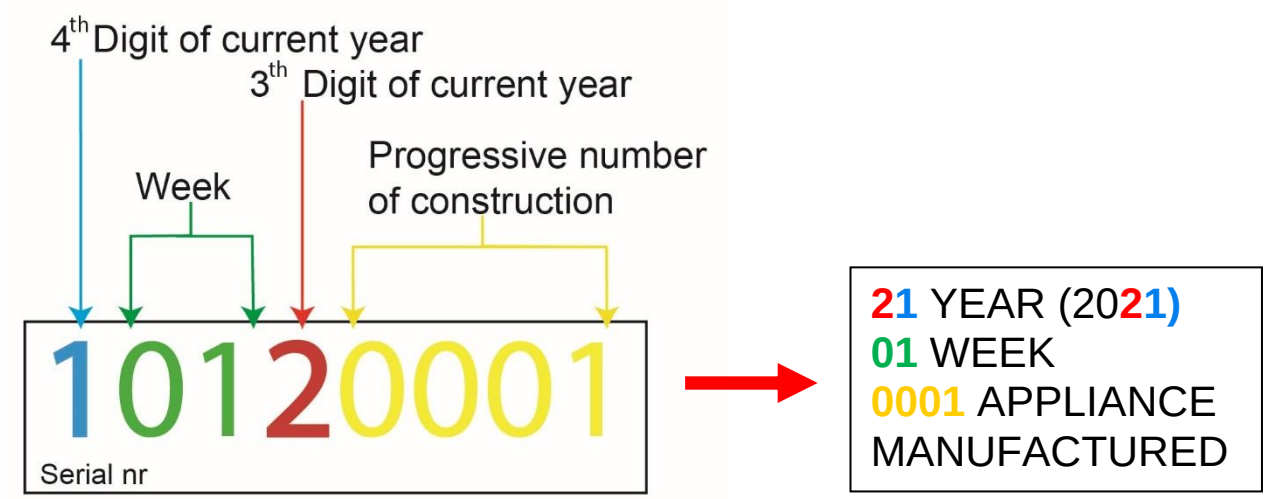
The identification sticker is located on the inside panel.

Example of Data Plate sticker:



SERIAL NUMBER (PRODUCTION DATE) is necessary to find the correct spare part or to ask tech. support.

EXAMPLE: Serial Number 1 01 2 0001



First appliance, made in week 1, of year 2021.

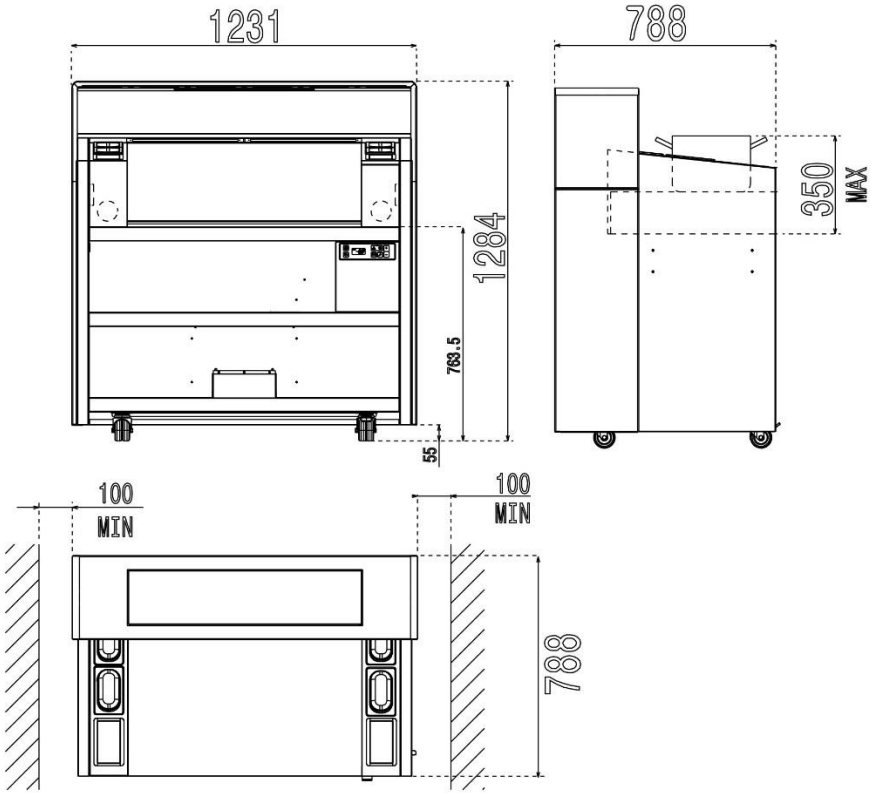
1.4 TECHNICAL DATA

Models		E2VVADBQZA	E2VVBDBQZA	E2VVCDBQZA	E2VVDDBQZA	E2VVADBQZU	E2VVCDBQZU
Power supply voltage	V	380 — 415				380 — 415	
						380 — 400	
Electrical power absorbed	A	32					
Phases	Nr.	3+N					
Frequency	Hz.	50 / 60				50	
						60	
Max heat output	Kw	14.5	12.5	14.5	12.5	14.5	12.5
Type of Plug		4 x SHUKO	4 x ENGLISH	4 x SHUKO	4 x ENGLISH	4 x SHUKO	4 x ENGLISH
Modules	Nr.	2		3		2	

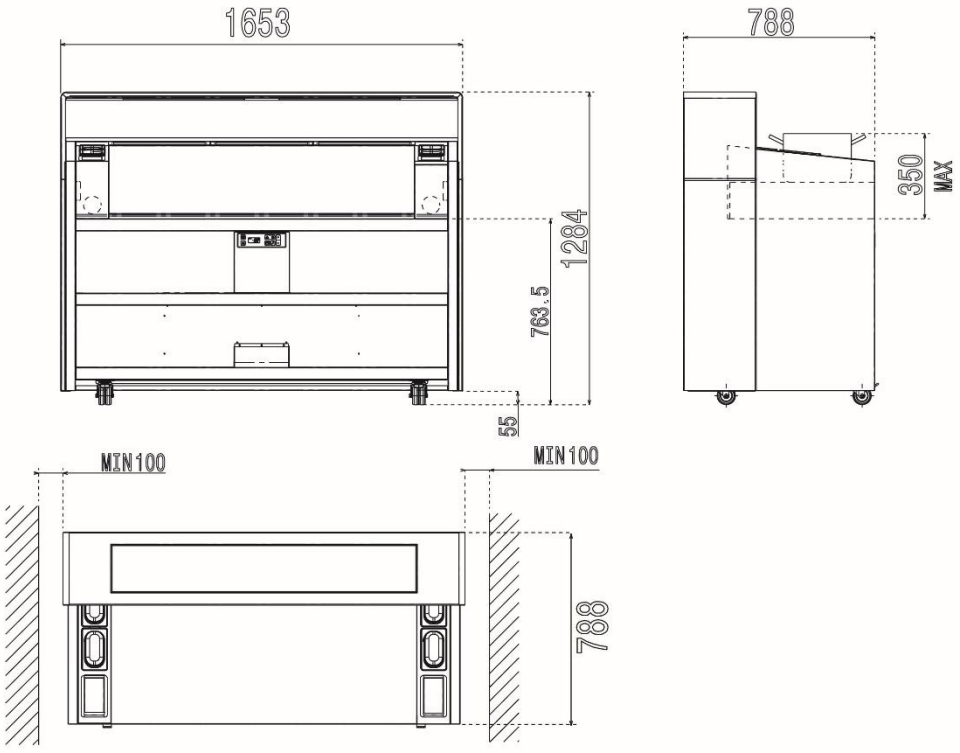
Models		E2VVADBRZA	E2VVBDBRZA	E2VVCDBRZA	E2VVDDBRZA	E2VVADBRZU	E2VVCDBRZU
Power supply voltage	V	380 — 415		380 — 415	380 — 415	380 — 415	380 — 415
		380 — 400			380 — 400		380 — 400
Electrical power absorbed	A	32					
Phases	Nr.	3+N					
Frequency	Hz.	50		50 / 60	50	50 / 60	50
		60			60		60
Max heat output	Kw	14.5	12.5	15	15	20	20
Type of Plug		4 x SHUKO	4 x ENGLISH	2 x SHUKO	2 x SHUKO	2 x SHUKO	2 x SHUKO
Modules	Nr.	3		2		3	

1.5 OVERALL DRAWINGS WITH MEASUREMENTS

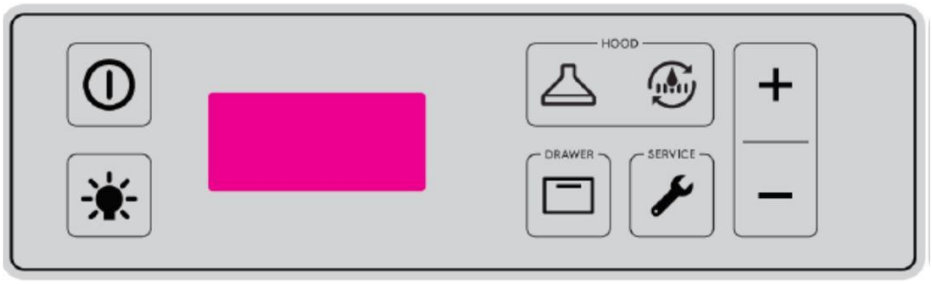
2 zone

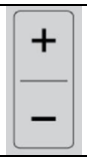


3 zone



1.6 CONTROL PANEL INTERFACE



BUTTON	FUNCTION	EXPLANATORY NOTES
	ON/OFF	By pressing this button, you can turn the appliance ON or OFF
	Hood ventilator	This button allows to change the extraction speed (from 1 to 4); by then pressing button + or − to increase or decrease the level.
	Reset	This button resets the internal counter when regeneration of the filters **"F1"** / **"F2"** is done (see symbols "**14**" on the Display and value showed on the display "**2**" of the Control Panel).
	More & Less	This button increases/ decreases the level (see value showed on the display "**2**" of the Control Panel)
	Light	This button switches the light ON and OFF
	Drawer / Drawers	This button switches the refrigerated drawers ON or OFF and allows to change the temperature level (from 1 to 5); then pressing button "**+**" and "**-**" to increase or decrease the level
	Service	This button allows to access into service mode (only for specialised authorised personnel). Refer to the § SERVICE MENU

1.7 DISPLAY

ICONE	MODE	DESCRIPTION
❄1 COMPRESSOR 1	OFF	Compressor OFF
	FLASH	Start delay of compressor
	ON	Compressor ON
❄2 COMPRESSOR 2	OFF	Compressor OFF
	FLASH	Start delay of compressor
	ON	Compressor ON
D1 DRAWER 1	OFF	Drawer 1 is OFF
	FLASH	Function not present
	ON	Drawer 1 is ON
D2 DRAWER 2	OFF	Drawer 2 is OFF
	FLASH	Function not present
	ON	Drawer 2 is ON
	OFF	Function not present
	FLASH	Function not present
	ON	Function not present
LIGHT	OFF	light (led bar) OFF
	FLASH	Function not present
	ON	Light (led bar) ON
F1 CLEAN FILTER 1	OFF	Filter 1 OK
	FLASH	Filter 1 needs cleaning
	ON	Filter 1 needs replacing
F2 CLEAN FILTER 2	OFF	Filter 2 OK
	FLASH	Filter 2 needs cleaning
	ON	Filter 2 needs replacing
ALLARM	OFF	No alarm present
	FLASH	Function not present
	ON	At least one alarm is present
C °C	OFF	Measure unit is not Celsius
	FLASH	In programming SET/Parameters
	ON	Celsius selected
F °F	OFF	Measure unit is not Fahrenheit
	FLASH	In programming SET/Parameters
	ON	Fahrenheit selected

1.8 DEFINITIONS/GLOSSARY

1PH Single-phase power supply line
3PH 3-phase power supply line
CB / POW Control Board= Power Board, for this appliance it's the thermoregulator.
DZ Double Zone (cooking appliance)
I.R. Infra-Red sensor
I.M Installation manual
FRY TOP Induction Fry Top appliance libero line
GRIDDLE or "Fry top")
HOB Induction Hob cooking appliance libero line
HUI Hob User Interface
HW Hardware
H2H Hood to hood automatic function
LL Libero Line
LP Libero point
MACHINE **or** "appliance" or "unit"
RD Refrigerated drawer
SW Software
U.I User Interface
WOK Induction WOK cooking appliance libero line
§ chapter / paragraph

2 INSTALLATION AND COMMISSIONING

The following chapters are intended only for authorized technicians / engineers

All the non-standard or out-of-standard situations should be reported on the commissioning form and duly documented for future reference.

2.1.1 UNPACKING AND POSITIONING THE EQUIPMENT

WARNING / CAUTION !

Before any operation on the machine read Chapter SAFETY INFORMATION/PRECAUTIONS. We recommend for any phase involving the removal of the packaging to use cut-resistant gloves

2.1.2 ROOM REQUIREMENTS

To guarantee continuous operation, the room temperature range must be between 5°C and 40°C.
Outdoor functioning is strictly allowed only if the machine can be protected against any conditions being out of the above temperature range and against any atmospheric agents.
High room humidity may cause water to condensate on electric components, hence causing short circuit.

2.1.3 LIMITATIONS

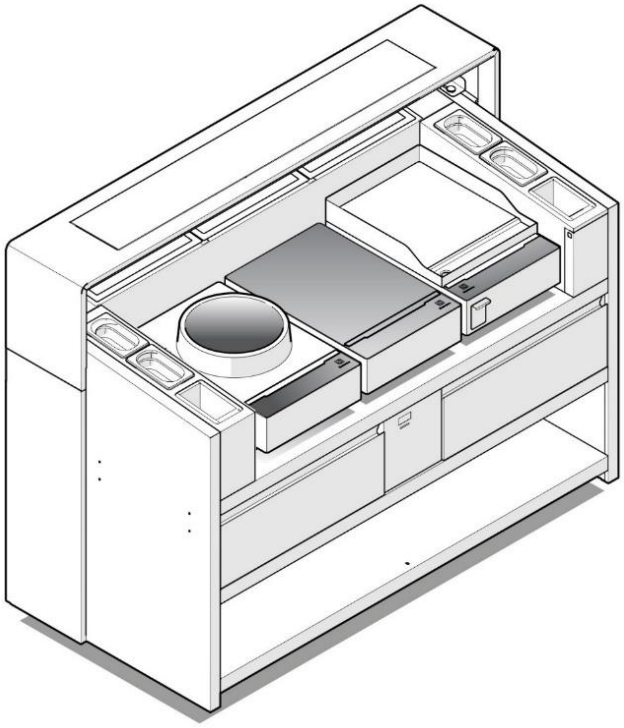
The climatic class given on the data plate refers to the following values:
CLIMATIC CLASS : 5
– 43℃ (IEC/EN 60335-2-89)
– 40℃ room with 40% relative humidity (EN 16825).

2.1.4 POSSIBLE INSTALLATION SOLUTIONS

Hereinafter, the instructions for the main installation possibilities. The different accessories have a dedicated I.M; please refer also to these documents provided with the accessories or available on PRIDE.

2.1.4.1 LIBERO LINE

The Libero Point has been developed to aid as a cooking station for the Libero Line appliances



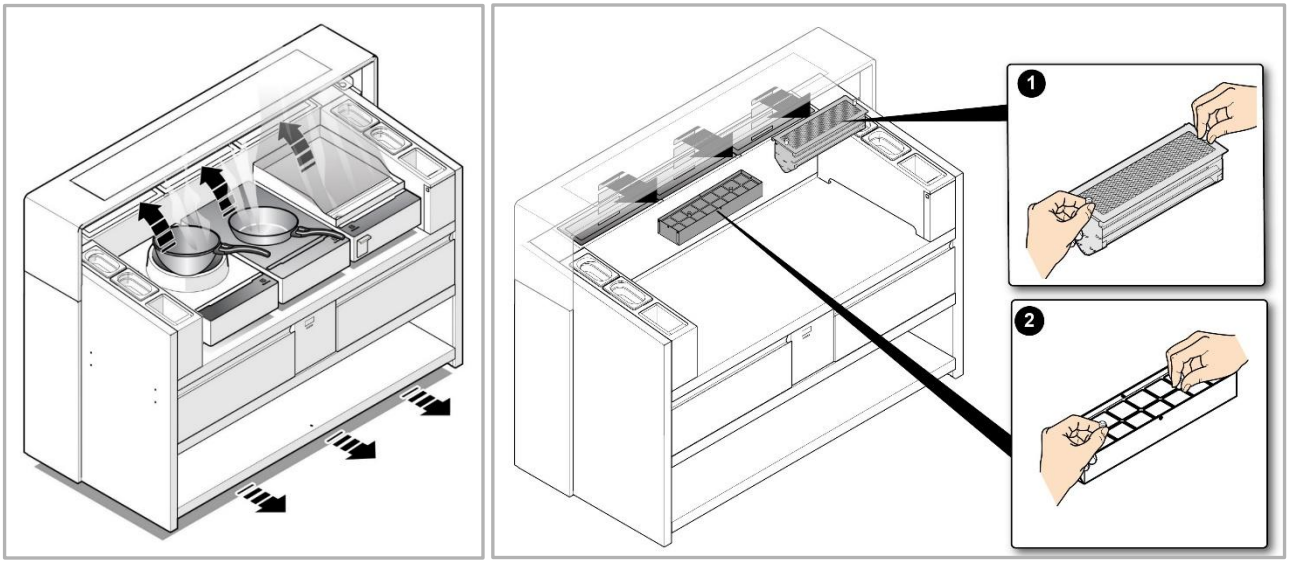
2.1.5 APPLIANCE REQUIREMENTS

2.1.5.1 POWER (VOLTS)

Refer to the volts range data indicated in the tech specs table § TECHNICAL DATA

2.1.5.2 AIR CIRCULATION

When the cooking is in process, the food vapours and odours are extracted by the hood; in the three slots are contain two different type of filters, the first one " 1" will separate the grease from the air flow, the lower second filter is the carbon filter "2", that removes odour from the treated air. The ejected treated air is expelled towards the operator side from under the appliance.



Filter cleaning refer to **§ FILTERS (GREASE & CARBON).**

2.2 ELECTRIC CONNECTION

WARNING !

Take GREAT CARE when connecting / testing anything with live current, if you are unsure what you are doing and how to use your equipment safely, then **DON'T DO IT.**

IMPORTANT !

The connection to the electrical power supply must be in compliance with the current national and local regulations

Before connecting, make sure the voltage and frequency match that given on the data plate. Connect the appliance to the power supply in a permanent way with an H07 RN-F type cable.
Install the power cable in a metal or rigid plastic cable guard pipe without any sharp parts exposed that could damage to the cable (cuts).
Install ahead of the appliance an omni polar switch of suitable capacity with contact opening distance of at least 3 mm. Insert the plug into the building's electrical system, in the immediate vicinity of the appliance.
Appliance max. leakage current is 5 mA.
Install ahead of the appliance a device (interlocked plug, lockable switch or similar devices) lockable in the open position during maintenance. Connect the appliance to an efficient earthing system.
For that purpose, the connection terminal block has a terminal with the symbol for connecting the earth wire.
Include also the appliance into an equipotential system. The equipotential terminal block is located under the appliance and is marked .

CAUTION / IMPORTANT !

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard. The manufacturer declines any liability if the current national and local regulations and possible safety regulations are not respected

2.2.1 HOW TO RECOGNIZE PHASE AND NEUTRAL

WARNING!

Take GREAT CARE when testing anything with live current and always use your personal protective equipment; if you are unsure what you are doing and how to use your equipment safely then **DON'T DO IT**

Normally this job is up to a skilled electric engineer that carries out his work before ours, however; in case of need, some basic tips on how to check the supply wires before our main terminal board.

All Libero point appliance are three phases supplied **(L1+L2+L3)**

Put your meter in AC Volts setting. Connect supply to the main terminal board **MA** but do not turn on the appliance. Connect the meter test leads to the terminal board contacts; the readings should be:

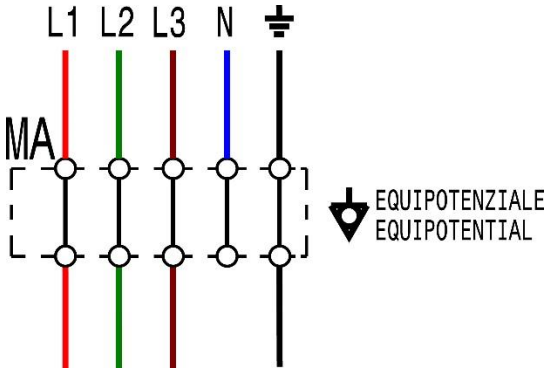
L1 / L2 / L3 + N* (Phase and Neutral) = **230 Volts**
(+/- 6% based on European standards)

L1 / L2 / L3 + ⏚ (Phase and Earth) = **230 Volts**

L1 and/or L2 + L3 (Phase and Phase) = **400 Volts**

N + ⏚ (Neutral and Earth) = **0 Volts**
(or approx. zero V)

The combination and results obtained will permit you to find all wires: PHASE, NEUTRAL and EARTH.



2.2.2 RESIDUAL CURRENT

The contact opening max. distance and leakage current must comply with the local safety regulations.
Many countries use a 30mA, but you must refer to the local regulations!!

2.3 INSTALLATION ACCESSORIES

All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

2.4 FIRST START UP

Once that all the supplies connections have been carried out it's time to start up the appliance.
Remove the entire protective film from all the panelling's and door; the protective film can be easily removed when the appliance has not been heated up. If the appliance is run for a long period without removing the protective film the film could melt and then be difficult to remove / damage the panelling's finishing.
Check that the filters are correctly positioned and in place refer to the images at § FILTERS (GREASE & CARBON)

2.5 COMMISSIONING

Please refer to the Commissioning form; the document is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) In case of any doubt, refer to your local country customer care.

3 USE OF APPLIANCE

3.1 OPERATING INSTRUCTIONS

Please refer to the Installation and Operating Manual of the appliance; the document is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) In case of any doubt, refer to your local country customer care.

3.2 SWITCHING ON / ADJUSTMENTS / OFF

Press the button ⏻ for about two seconds, the buzzer sounds. The machine is now in the extraction phase, the starting speed is always set to 1 (display shows 1).

To change the extraction speed, press the button, then use

button + and − to increase or decrease the extraction speed; there are **4** extraction speeds, in sequence from 1 to 4 and 4 to 1, but not in loop (example: 1–2–3–4–1–2–3–4, and reverse).

During the speed change, the relative level blinks on the display; it can be confirmed pressing button or waiting 5 seconds.
The automatic extraction function is only available in combination with Libero Line cooking units. Refer to the § INFRA RED SENSOR (I.R.) .
The smoke extraction speed can vary autonomously depending on the cooking conditions of the appliances combined with the hood.
When the cooking unit/s is/are switched on, the LED light will immediately turn on.
Depending on the amount of temperature of the cooking surfaces of the libero pro appliances, the hood will automatically vary the extraction level.

NOTE !

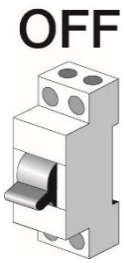
The libero point cannot smell or see the amount of smoke, vapour etc coming out from the cooking food-stuff but it can sense the amount of temperature setted on the appliances so the function works like this : “hot surface” = lots of things cooking = speed up the hood / “cold surface” = little amount of things cooking = speed down the hood.

The extraction of the fumes will continue even after the end of cooking to allow an optimal extraction.
The led light automatically turns off at the end of cooking.

To stop the automatic extraction, manually adjust the hood speed with button and + or - .
To restore automatic extraction, turn the machine off and then turn it back on ⏻ .

3.3 CLEANING

Turn off the appliance after service and let the appliance cool down. Refer to the § PERSONAL PROTECTION EQUIPMENT



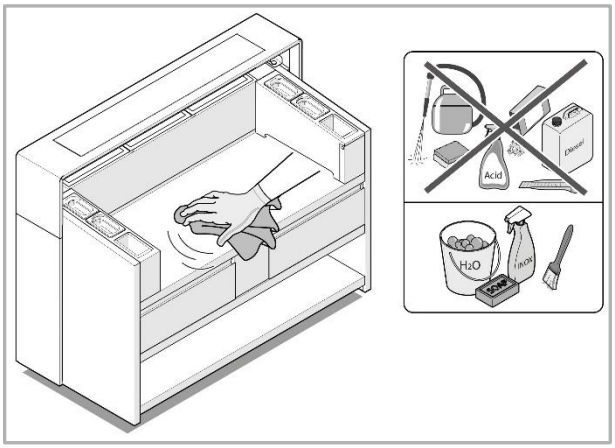
CAUTION!

All operations must be carried out following indications at § PERSONAL PROTECTION EQUIPMENT and/or referring to the safety data sheet of products involved during this phase.

- With of other detergents, follow the instructions contained in the safety data sheet relative to that product.
- do not use abrasive or corrosive detergents as they could damage the surfaces by mechanical aggression (scratches) or chemical aggression (corrosion/stains).

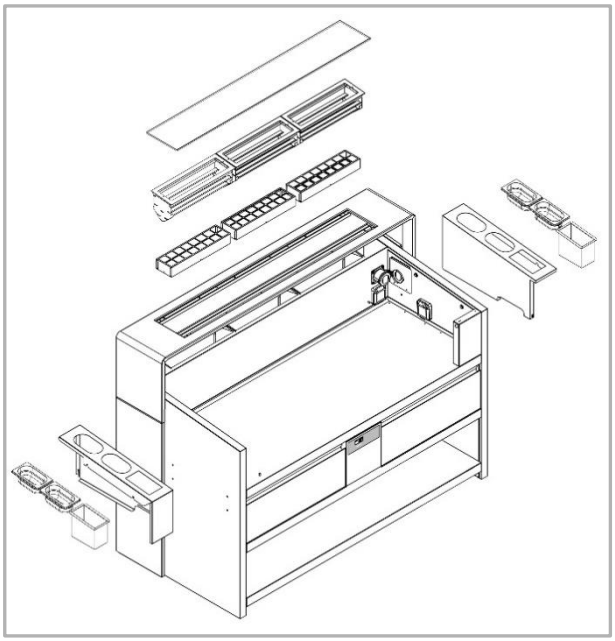
3.3.1 APLIANCE

Clean the appliance, in presence of encrusted dirt or grease use a damp cloth, do not use abrasive or corrosive detergents as they could damage the surfaces by mechanical aggression (scratches) or chemical aggression (corrosion/stains). Rub the cloth/sponge following the grain of the satin finish and rinse often; rubbing in a circular motion combined with the particles of dirt on the cloth/sponge could damage the steel's satin finish.



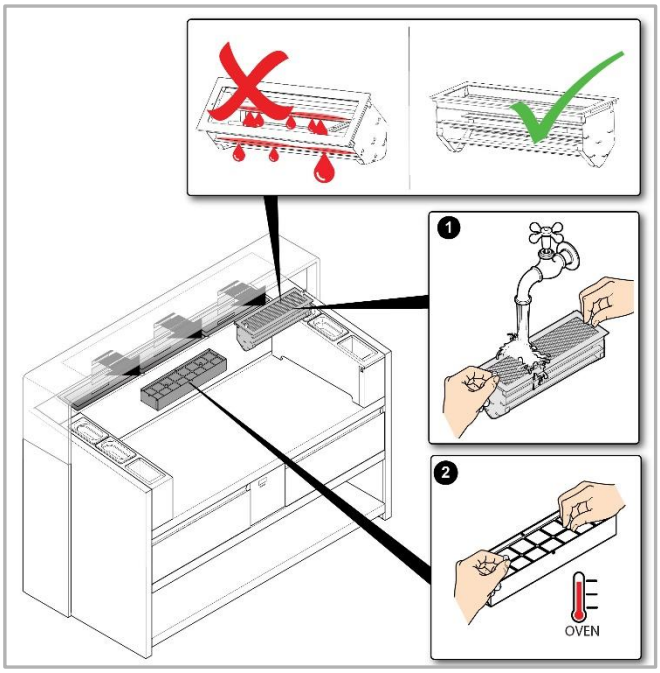
The **Top Glass** can be removed for a thorough cleaning

The **inner panels / GN containers** can be washed separately or inserted into a dish washing machine, dry carefully or leave to dry on a dish rack or towel.



3.3.2 FILTERS (GREASE & CARBON)

In the equipment there are two types of filters, which require cleaning and / or regenerating after a certain number of hours. There is a built-in timer in the thermoregulator that will message a notification on the display when to carry out this operation *.
Further information on how the timer works please refer to §TIMER FILTER CLEANING/REPLACEMENT



3.3.2.1 HOW TO CLEAN THE FILTERS:

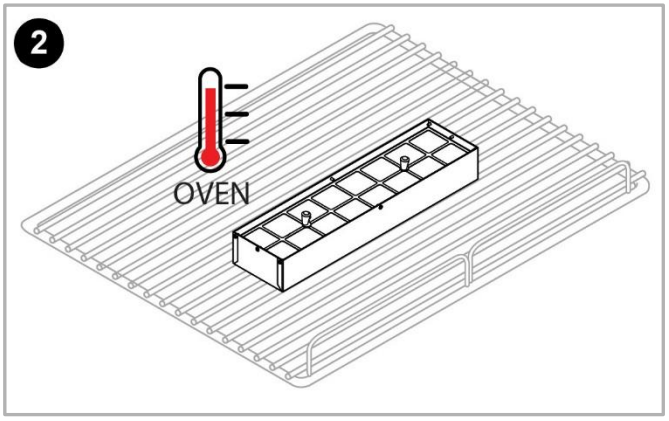
GREASE FILTERS 1 : Lift them out from the appliance, use a dish washer or hand wash with soap and warm water.

NOTE !

Remove the filters keeping them in vertical position carefully avoid tilting them to prevent oil spillage that could drop onto the underlying carbon filters or into the intake ventilation system

* we reccomand to wash the grease filters after every service.

CARBON FILTERS 2 : Under the grease filters are located the carbon filters. These filters do not get " washed " with water like the grease filters!! The Carbon filters are "cleaned" or better to say "regenerated".
The regeneration process is done by placing them into an oven at 100C° for 2 hours.

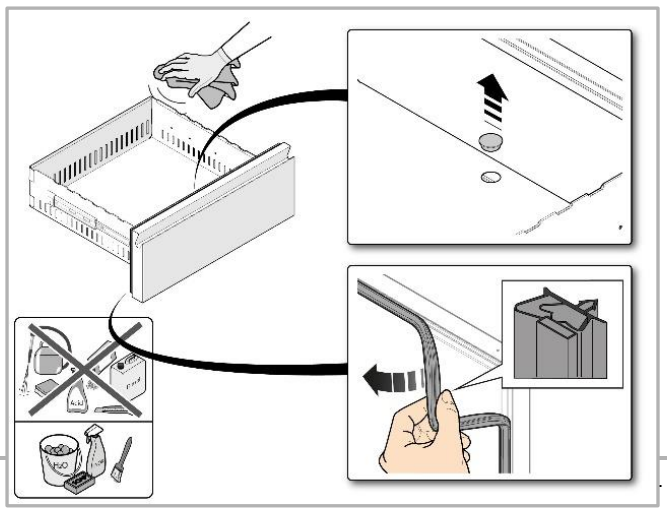


To facilitate the elimination of accumulated oil out from the carbon filters, when carrying out the regeneration (in the hot oven), we suggest to place them onto an oven grid, this will permit the dripping accumulated oil not to accumulate on a flat surface but to drip completely out from the carbon filter.

Further information on how the timer works please refer to §TIMER FILTER CLEANING/REPLACEMENT

3.3.3 REF DRAWER

Clean Refrigerated drawer , in presence of encrusted dirt or grease use a damp cloth, do not use abrasive or corrosive detergents as they could damage the surfaces by mechanical aggression (scratches) or chemical aggression (corrosion/stains). Rub the cloth/sponge following the grain of the satin finish and rinse often; rubbing in a circular motion combined with the particles of dirt on the cloth/sponge could damage the steel's satin finish.



Located in the inner of the drawer is a **plug**, this can be removed in case you need to discharge any accumulated cleaning water.

The **Gasket** is locked in place into a slot; it's a "press in" model, so it can be removed for a better cleaning.

4 DETAILED APPLIANCE AND COMPONENTS FUNCTIONING / DESCRIPTION

The following chapters are intended only for authorized technicians / engineers

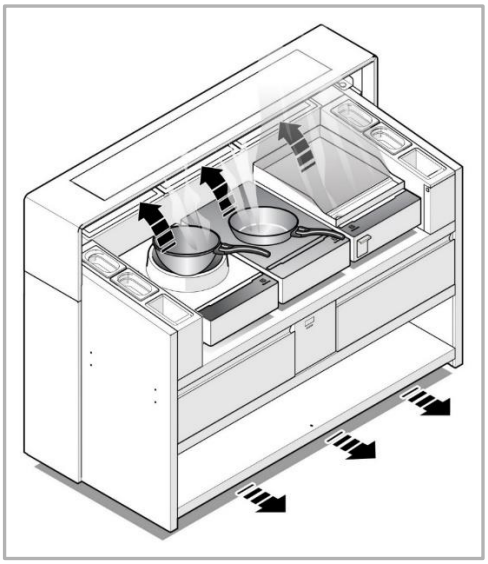
WARNING !

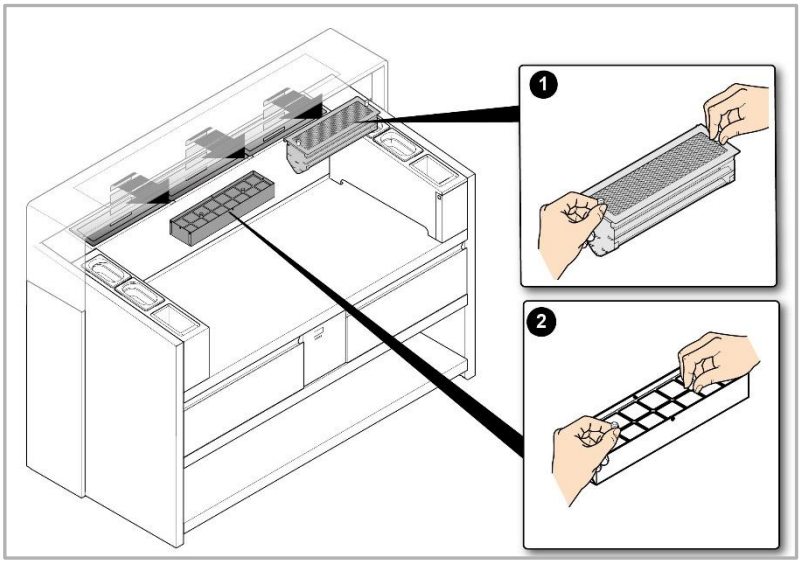
Take GREAT CARE when connecting / testing anything with live current, if you are unsure what you are doing and how to use your equipment safely, then **DON'T DO IT.**

4.1 EQUIPMENT FUNCTIONING

4.1.1 HOOD EXTRACTION

When the cooking is in process, the food vapours and odours are extracted by the hood; in the three slots are contain two different type of filters, the first one will separate the grease from the air flow, the lower second filter is the carbon filter that removes odour from the treated air. The ejected treated air is expelled towards the operator side. Filter cleaning, refer to **§ FILTERS (GREASE & CARBON).**





4.1.1.1 HOB TO HOOD (H2H, SPECIAL FUNCTION)

This special function is only available when the LIBERO APPLIANCES are installed on board a LIBERO POINT. This function is accessible directly on the U.I. of the libero line appliances and does NOT need to be accessed (like service menu or customer menu).

How does this function work: The Libero Line appliances are equipped with an I.R. (infra-red) communication sensor located under the U.I glass; this sensor will communicate and send data to the I.R port located on the right side of the libero point .

The "hob to hood" H2H icon, located on the U.I. of the libero line appliances,  is used in association with two internal functions:

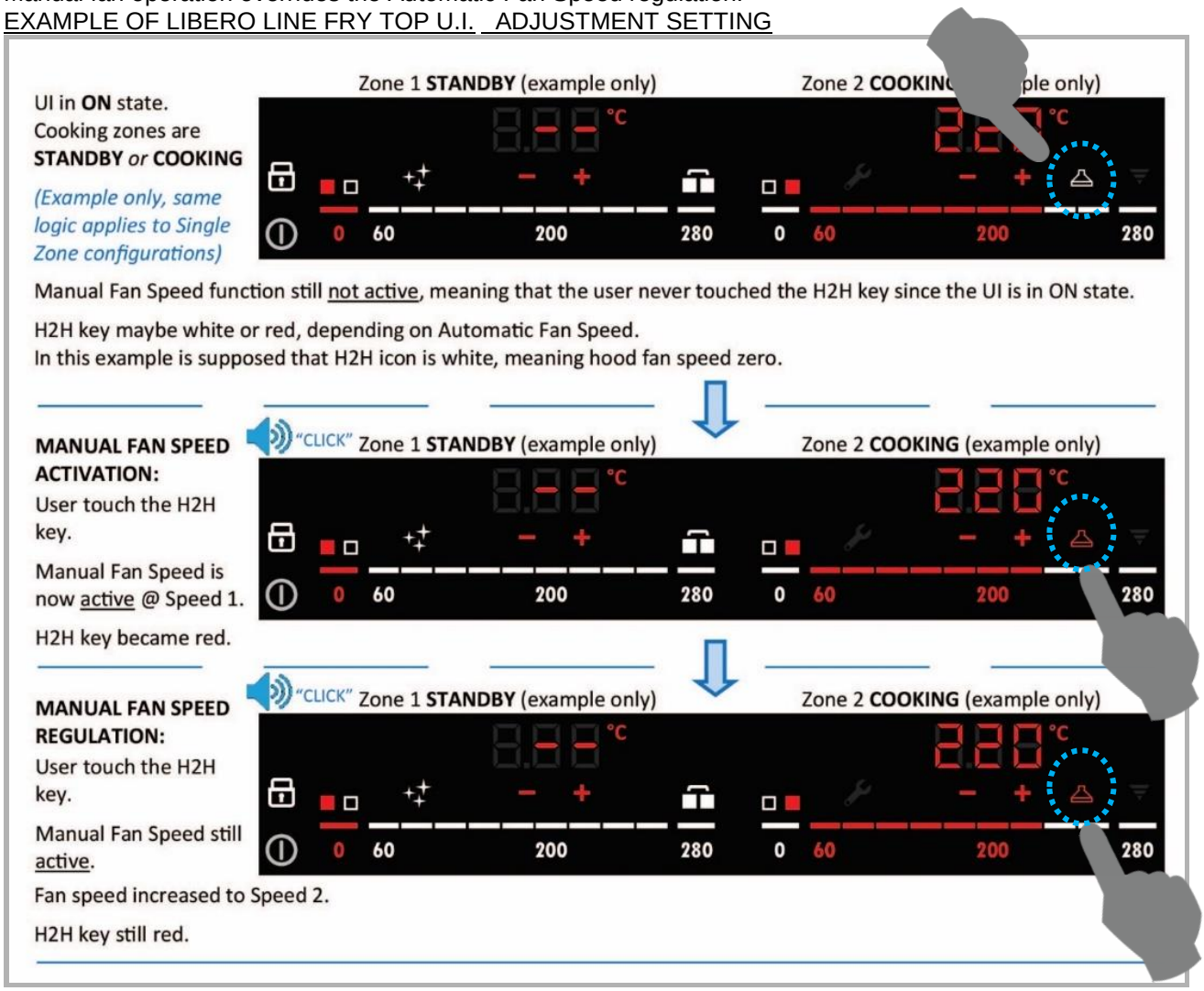
Manual and Automatic "hood" Fan Speed regulation.

Be aware, in below description, that rules for the button and for the icon colour are different, depending to the function currently active.

4.1.1.1.2 MANUAL FAN EXTRACTION SPEED

The conditions are: Libero point turned ON, libero line appliances turned on and in heating mode (pots on top of turned on cooking zones); The manual fan speed function: press the H2H icon, the customer interrupts the automatic fan speed regulation and can decide manually what extraction speed to set on the “hood” of the libero point.
With the Manual Fan Speed, the user has the possibility to select desired hood fan speed from speed zero (meaning fan OFF) to speed 4 (max) by repeatedly pressing the H2H button on the U.I of the appliance.
This function is always available when the UI of the libero line appliance is **ON**, no matter if cooking zones are **IDLE**, **STANDBY** or **COOKING** sub-state.

LIBERO LINE U.I.: When U. I. enters an **ON** state the manual fan speed is not active. Fan speed is initially set to zero and will eventually change depending on Automatic Fan Speed algorithm of the libero point.
Pressing the H2H button the Manual Fan Speed mode is automatically activated. Once manually selected, fan speed is maintained up to when the U. I. turns in **OFF** or **COOLING_DOWN** states.
Manual Fan Speed regulation is not available when the U. I. is **OFF** or **COOLING_DOWN**. H2H button will be inactive.
Manual Fan Speed regulation is not available during cleaning special function. H2H button is inactive and the icon is off. Despite of this, automatic fan speed regulation continues during cleaning.
If the appliance is turned off the Manual Fan Speed setting is lost.
Manual fan operation overrides the Automatic Fan Speed regulation.
EXAMPLE OF LIBERO LINE FRY TOP U.I. _ADJUSTMENT SETTING

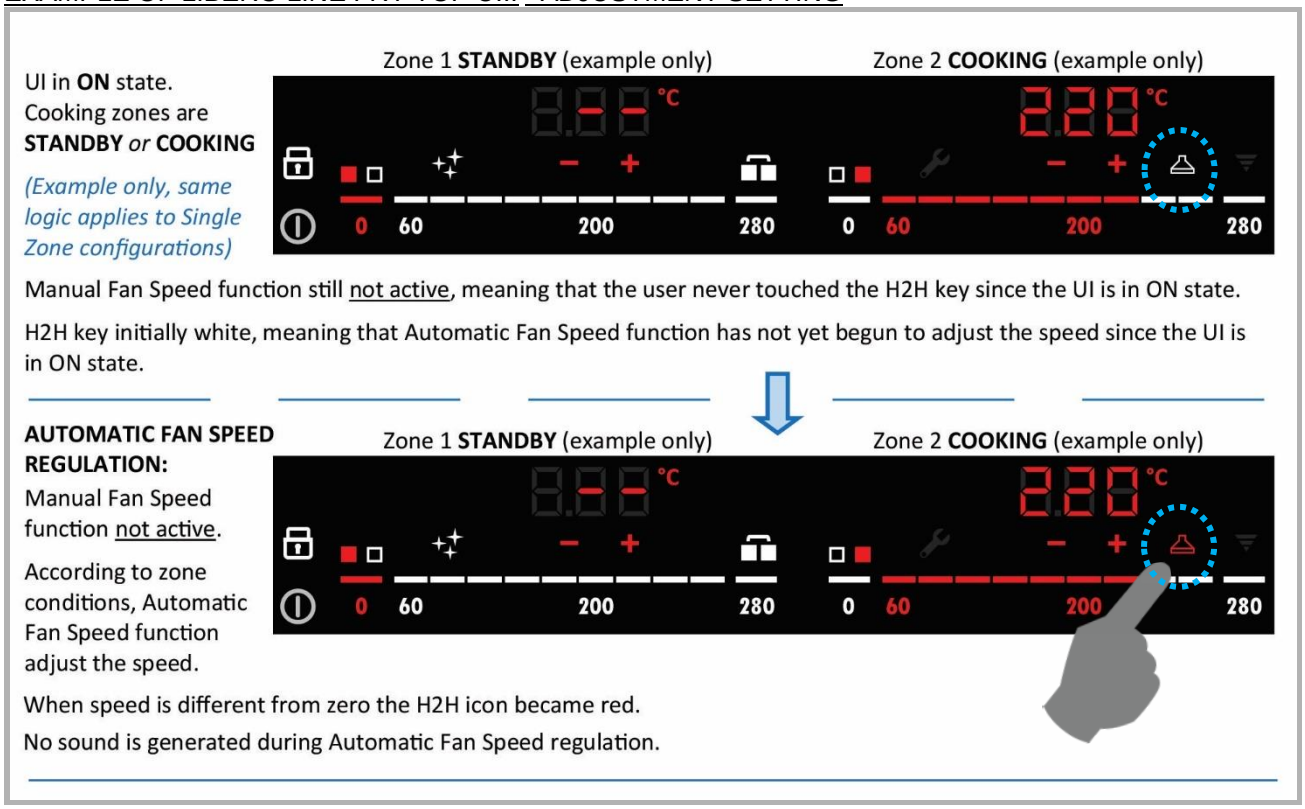


4.1.1.1.3 AUTOMATIC FAN EXTRACTION SPEED

The conditions are: Libero point turned ON, libero line appliances turned on and in heating mode (pots on top of turned on cooking zones); This function automatically regulates the “hood” extraction fan speed according to operating conditions on the cooking zones.
The appliance cannot see how much vapor/smoke we are producing when cooking but it can “see” the temperature of the cooking surfaces (IR communication between LP and LL appliances)… the algorithm works like this “hotter the surfaces= more steam = more hood extraction level”; colder the surfaces= less vapor = less need of hood extraction”.
The automatic fan speed algorithm is operative both in **ON** and **OFF** state when Manual Fan Speed mode is not active.
H2H button is not used for automatic fan speed but just for manual fan speed regulation.
Automatic fan speed signals are sent also during cleaning or even if there is an POW error. Required speed maybe wrong when the error involves a temperature sensor because temperature reading is unreal.

H2H ICON:
Regardless of manual or automatic fan speed mode is active, H2H icon indicates the hood fan speed as follow:
ON state: White when is required speed zero (hood fan off), red when is required hood fan speed different from zero.
OFF state: Off when is required speed zero (hood fan off), red when is required hood fan speed different from zero.
NOTE: During cleaning/regeneration (of the filters) the H2H icon is forced OFF. Despite of this, automatic fan speed regulation continues according to cooking surface temperature.

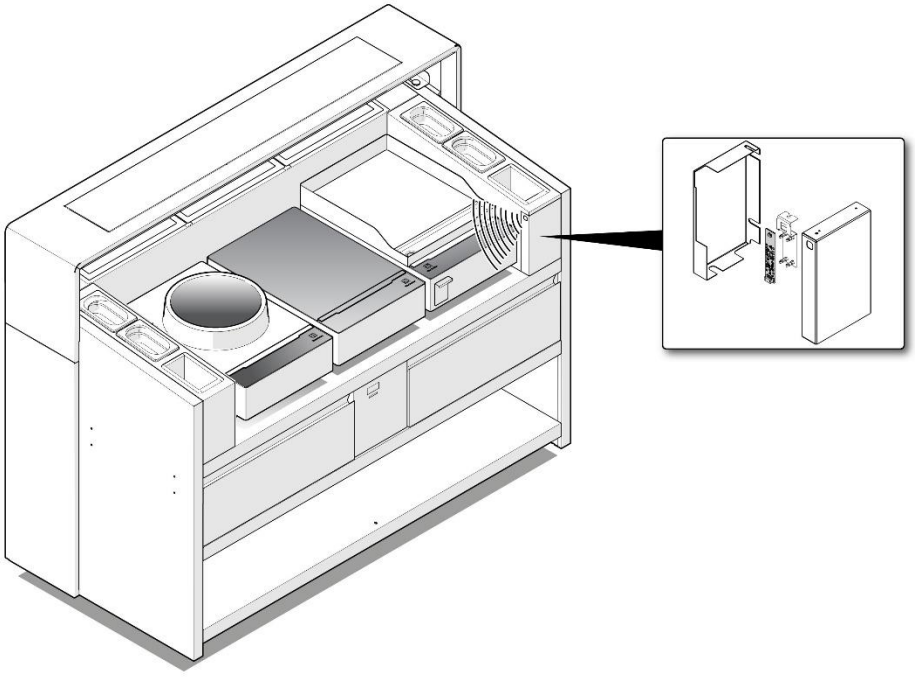
EXAMPLE OF LIBERO LINE FRY TOP U.I. ADJUSTMENT SETTING



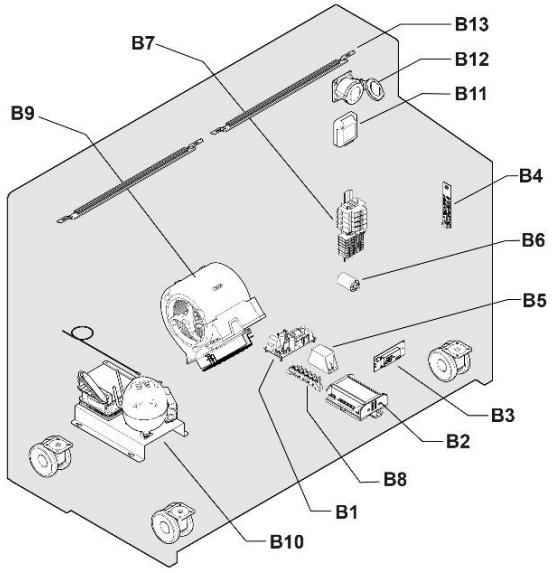
4.1.2 INFRA RED SENSOR (I.R.)

On the right side of the LP appliance is located the Infra-Red (I.R.) sensor.

The I.R sensor will automatically and continuously scan the indicated area and search for libero line appliances. If one (or more) appliances are detected, they will start to communicate and the automatic hood extraction function will activate. Further details at **§** HOB TO HOOD (H2H, SPECIAL FUNCTION)



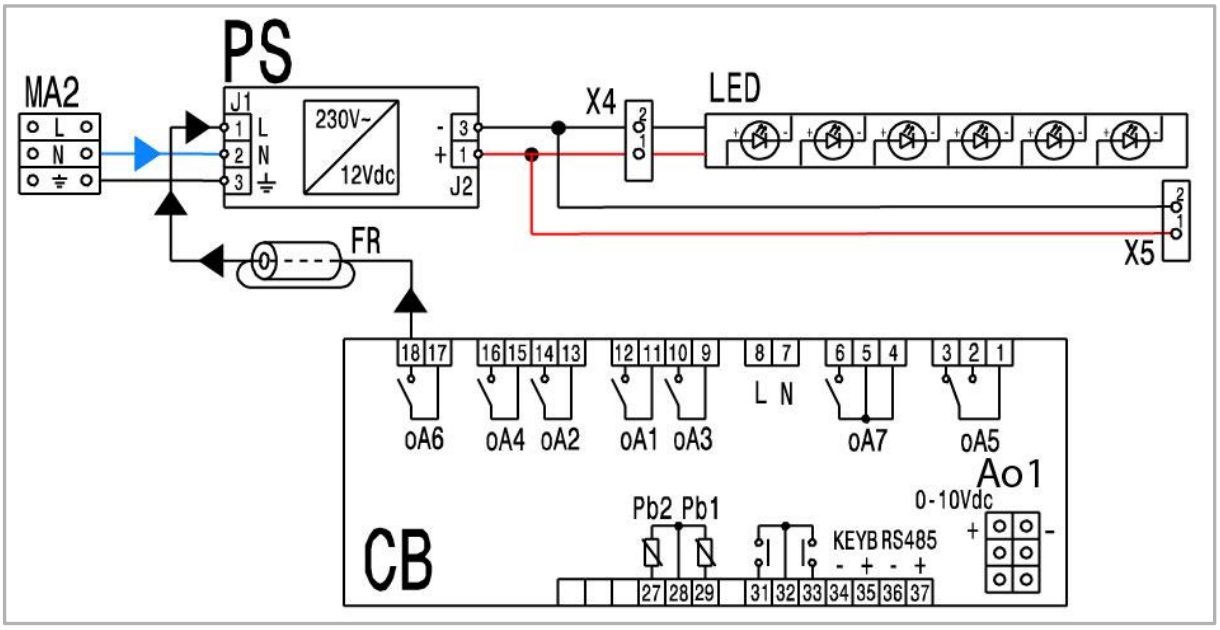
4.2 COMPONENTS TECHNICAL DESCRIPTION/FUNCTIONING



Pos.	Component	§.
B1	VOLTAGE ADAP-TOR, PS	B1, VOLTAGE ADAPTOR, PS
B2	CONTROL BOARD, CB	B2, CONTROL BOARD CB
B3	U.I.	B3, U.I.
B4	I.R	B4, INFRA RED SENSOR
B5	INDUCTANCE, L	B5, INDUCTANCE, L
B6	FERRITE, FR	B6, FERRITE, FR
B7	TERMINAL BLOCK, MA1	B7, TERMINAL BLOCK, MA1
B8	TERMINAL BLOCK, MA2	B8, TERMINAL BLOCK, MA2
B9	MOTORVENTILA-TOR,MV	B9, MOTORVENTILA-TOR,MV
B10	COOLING UNIT, RD	B10, COOLING UNIT, RD
B11	SOKET 1P, SPP1	B11, SOKET 1P, SPP1
B12	SOKET 3P, TPP1	B12, SOKET 3P, TPP1
B13	LED BAR	B13, LED BAR

4.2.1 B1, VOLTAGE ADAPTOR, PS

Neutral is supplied directly from the main terminal block, the phase (L) is supplied from the CB (control board also called POW). The phase L is supplied when the light button is pressed on the U.I.; PS will supply 12V to the led bar/s.

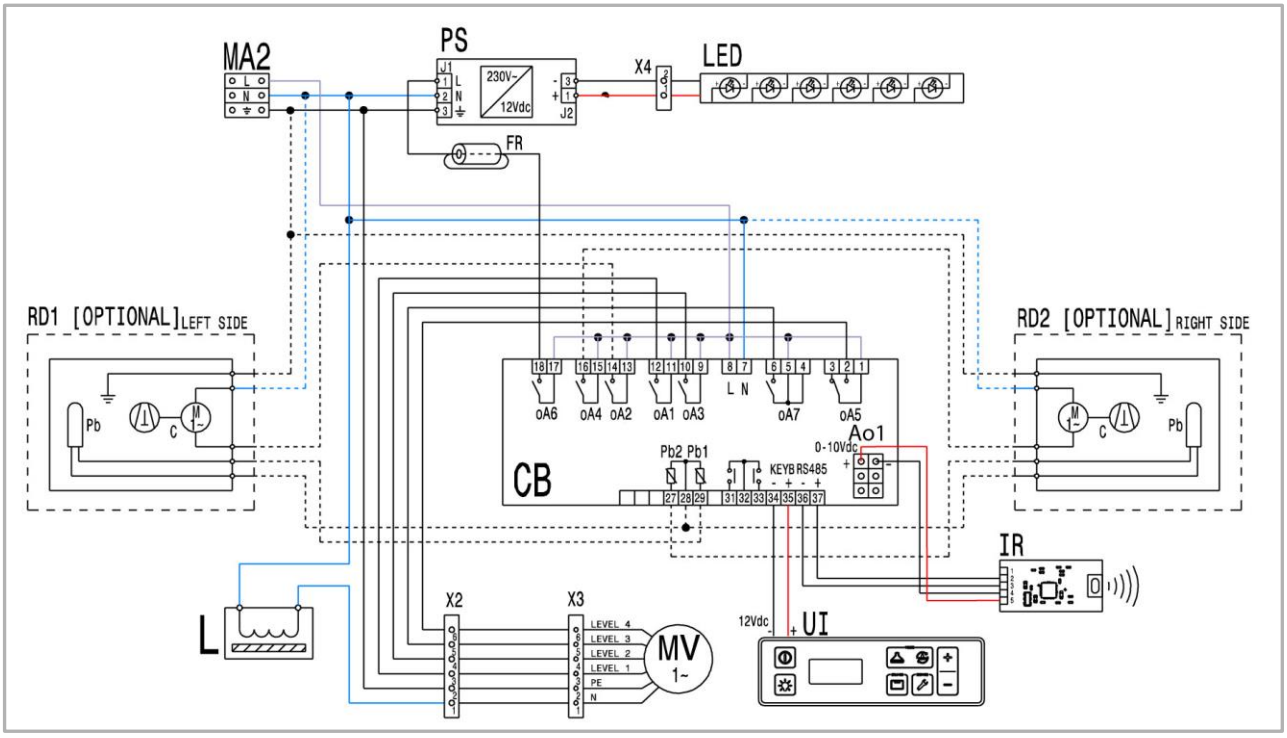


The function of the light button depends on the LPC (Light Push Configuration) parameter. If LPC = NU, the button is not used If LPC = LiG, the button is used to activate the light output.

The Light button is active both in OFF and in keyboard lock.

4.2.2 B2, CONTROL BOARD CB

The supply to CB arrives from the terminal block MA2 into contact 7/8



CB has 7 relay outputs such as:

oA5 = MV speed 1
oA7 = MV speed 2
oA3 = MV speed 3
oA1 = MV speed 4

oA4 = Compressor right side
oA2 = Compressor left side

oA6 = Light LED, the L phase will supply the voltage adaptor PS and power on the led bar

Pb2 & Pb1 are analog inputs for PTC or NTC probes (10K at 25°C) configurable by parameter. The working ranges are: -50°C 150°C for ptc probes -40°C 110°C for NTC probesΩ÷÷

oA1 = On (always power supply for communication IR device 10v)

34/35 are 12Vdc output supply & communication used for the U.I. Refer also to the § B3, U.I.

36/37 are the communication RS485 connectors for the IR device

4.2.2.1 TIMER FILTER CLEANING/REPLACEMENT

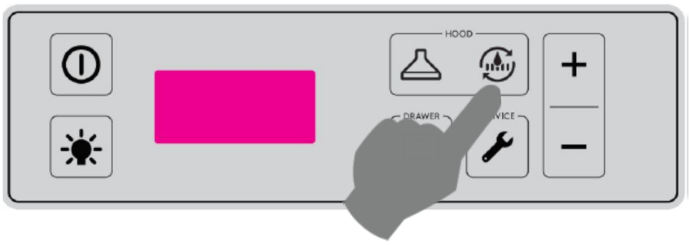
When the internal counter of the thermoregulator reaches the set value, the appliance emits a signal, and the message CLN (**F1** = grease filter) or (**F2** = carbon filter) appears on the display alternating with the indication of the fan speed; the relative filter must be cleaned / regenerated. Press any button to silence the buzzer.

COUNTER TIMER RESETTING:

After the regeneration or change of the filters, the counter timer must be reset.

Press the button for about five seconds; the message CLN or CHG appears on the display;

Keep the button pressed to activate the counter reset procedure of one or both filters, in sequence



The counters can be reset by selecting the respective labels:

"CLn" + flashing **F1** = grease filter icon : filter cleaning counter value (cFP1)
"CHG" + flashing **F1** = grease filter icon : Filter replacement counter value (cFS1)
"CLn" + flashing **F2** = carbon filter icon : filter cleaning counter value (cFP2)
"CHG" + flashing **F2** = carbon filter icon : Filter replacement counter value (cFS2)

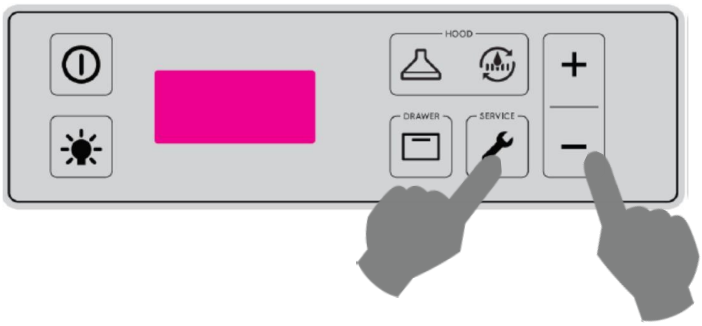
Pressing the RESET button for over 3 seconds while the counter value is displayed, the flashing "**rSt**" (restart), label will appear on the display and indicates that its counter has been reset.

NOTE !

It's possible to reset a specific counter: **example**, if only the **F2** (carbon filter) filter needs to be reset, access the function pressing the button, then press the button + / - to go to the F2 "CLn" filter reset.

4.2.2.2 PROGRAMMING THE PARAMETERS

ACCESS PROCEDURE :



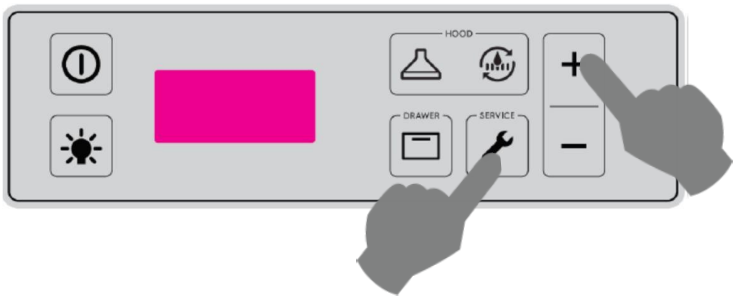
Pressing the SERVICE+DOWN keys for 3 seconds enters the parameters.
The label of the first visible parameter appears. It is possible to scroll through the parameter labels with UP and DOWN.
Enter into the value of each parameter value by pressing SERVICE. The value is editable with button + or - .

SAVING NEW SETTING:

When you make the changes, you can store the new value by :

- pressing SERVICE (the display flashes for 3s and the display switches to the next code)
- waiting for the TIME-OUT to expire from the program (15s).

EXIT FROM THE PARAMETERS :



Exit from the MENU can be obtained:
- pressing the SERVICE and UP keys simultaneously while a label is displayed (not the parameter value)
- waiting TIME-OUT(15 seconds) without pressing any key.

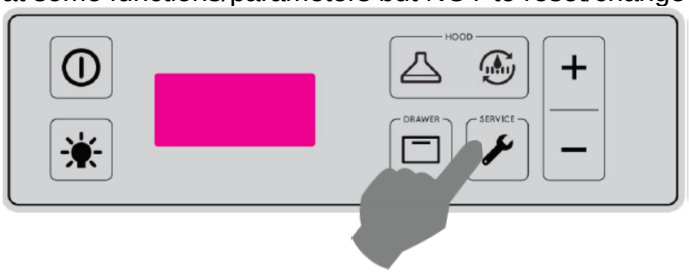
4.2.2.2.1 PARAMETERS

Para-meter	Description	SET VALUE	Min	Max	Value
CF1	Drawer Presence 1	**yes**			
CF2	Drawer Presence 2	**yes**			
St1	Set point temp.1	**14.5**	-55.0	150.0	°C
Hy1	Hysteresis compressor adjustment for St1	**7.5**	0.1	25.5	°C
St2	Set point temp 2	**11.5**	-55.0	150.0	°C
Hy2	Hysteresis compressor adjustment for St2	**7.5**	0.1	25.5	°C
St3	Set point temp.3	**8.5**	-55.0	150.0	°C
Hy3	Hysteresis compressor adjustment for St3	**7.5**	0.1	25.5	°C
St4	Set point temp. 4	**6.0**	-55.0	150.0	°C
Hy4	Hysteresis compressor adjustment for St4	**7.5**	0.1	25.5	°C
St5	Set point temp. 5	**3.5**	-55.0	150.0	°C
Hy5	Hysteresis compressor adjustment for St5	**7.5**	0.1	25.5	°C
LS	Minimum value set point	**-55.0**	-55.0	150.0	°C
US	Max value set point	**150.0**	-55.0	150.0	°C
CF	Temperature unit : Celsius , Fahrenheit	**°C**			
rES	Temperature resolution (for °C) : with decimals	**dEc**			
odS	Activation Delay Power On Output	**0**	0	255	Min
AC1	Compressor delay 1 (drawer 1)	**2**	0	60	Min
AC2	Compressor delay 2 (drawer 2)	**2**	0	60	Min
Con	ON compressor time with failed probe	**15**	0	255	Min
CoF	OFF compressor time with failed probe	**5**	0	255	Min
MFS	Fan speeds	**4**	1	4	
F1P	Grease filter counter for cleaning	**2**	0	500	Tens of hours
F1S	Grease filter counter for replacement	**500**	0	500	Tens of hours
F2P	Carbon filter counter for regeneration	**17**	0	500	Tens of hours
F2S	Carbon filter counter for replacement	**500**	0	500	Tens of hours
Lod	Dispaly apperance	**FAn**			
dLy	Temperature display delay	**02:00**			Min
AP1	Probe selection for drawer 1 temperature alarms	**P1**			
Ar1	Tray 1 temperature alarm set mode: relative / absolute	**AbS**			
AU1	Set for high temperature alarm drawer 1	**110.0**	-50.0	110.0	°C
AL1	Set for low temperature alarm drawer 1	**-50.0**	-50.0	110.0	°C
AH1	Hysteresis for temperature alarms drawer 1	**1.0**	0.1	25.5	°C
Ad1	Delay temperature alarm drawer 1	**0**	0	255	Min
AP2	Probe selection for temperature alarms drawer 2	**P2**			
Ar2	Setting mode for temperature alarms drawer 2: relative / absolute	**AbS**			
AU2	Set for high temperature alarm drawer 2	**110.0**	-50.0	110.0	°C
AL2	Set for low temperature alarm drawer 2	**-50.0**	-50.0	110.0	°C
AH2	Hysteresis for temperature alarms drawer 2	**1.0**	0.1	25.5	°C
Ad2	Delay temperature alarm drawer 2	**0**	0	255	Min
dAo	Temperature alarm exclusion at power-on	**02:00**			Hours
bLL	Compressor stop due to low temperature alarm	**yes**			
oA1	Configuration output relay 1	**FAN1**			
oA2	Configuration output relay 2	**CP1**			
oA3	Configuration output relay 3	**FAN2**			
oA4	Configuration output relay 4	**CP2**			

Para-meter	Description	SET VALUE	Min	Max	Value
oA5	Configuration output relay 5	**FAN4**			
oA6	Configuration output relay 6	**LIG**			
oA7	Configuration output relay 7	**FAN3**			
oA8	Configuration output relay 7 (analog in digital)	**On**			
AOP	Alarm output polarity	**CL**			
P1C	Configuration probe P1	**ntc**			
OF1	Calibration probe P1	**10.0**	-12.0	12.0	°C
P2C	Configuration probe P2	**ntc**			
OF2	Calibration probe P2	**10.0**	-12.0	12.0	°C
bEn	Buzzer enabling	**yes**			
Adr	Serial address	**1**	1	247	
MEn	Command enabling MODBUS	**1**	0	1	
rEL	Firmware release (not adjustable)				
rb	Firmware sub-release				
Ptb	Identification EEPROM	**1**	0	65535	

4.2.2.3 SERVICE MENU

The service menu is only active when the appliance is turned ON. This menu permits you only to LOOK at some functions/parameters but NOT to reset/change them.



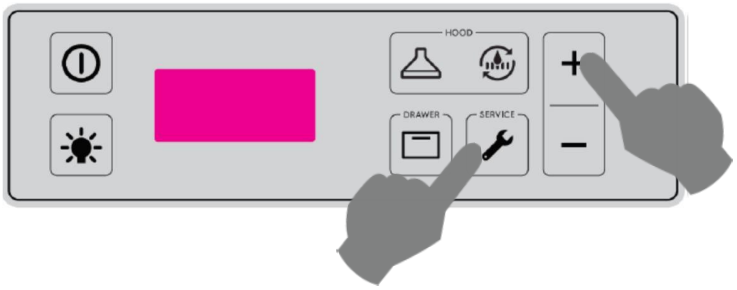
PROCEDURE: When you press the service button , you can immediately access the menu; the display shows the first label "dP1" and the "° C" or "° F" icon starts flashing to indicate access to the MENU. By pressing the SERVICE key, the value of the selected variable is displayed. Press “SERVICE” to view the next label. With UP and DOWN you can quickly scroll through the list of menu items.

Label	Description Label	Value	Description
dP1	P1 probe display		temperature display of probe P1 "° C" or "° F"
dP2	P2 probe display		temperature display of probe P2 "° C" or "° F"
F1P_	Hour counter for filter (grease) for cleaning	**Tens of Hours ***	the value of FP1 indicates the number of hours of use of the filter of the fans of drawer 1, to control the CLEANING of the grease filters
F1S_	Hour counter for filter (grease) for re-placement	**Tens of Hours ***	the value of FS1 indicates the number of hours of use of the filter of the fans of drawer 1, for checking the REPLACEMENT of the grease filters
F2P_	Hour counter for filter (carbon) for re-generation	**Tens of Hours ***	the value of FP2 indicates the number of hours of use of the filter of the fans of drawer 2, to control the CLEANING of the carbon filter.
F2S_	Hour counter for filter (carbon) for re-placement	**Tens of Hours ***	the value of FS2 indicates the number of hours of use of the filter of the fans of drawer 2, to check the REPLACEMENT of the car-bon filter.
SC1	Display of regulation set (SET + ES) 1st Zone		displays the temperature set point value (St1, St2, St3, St4, St5) corresponding to the selected set point (L0 = nu / L1 = St1 / L2 = St2 / L3 = St3 / L4 = St4 / L5 = St5). Represents one of the 5 pre-defined thermosetting set points for drawer 1.
SC2	Display of regulation set (SET + ES) 2nd zone		displays the temperature set point value (St1, St2, St3, St4, St5) corresponding to the selected set point (L0 = nu / L1 = St1 / L2 = St2 / L3 = St3 / L4 = St4 / L5 = St5). Represents one of the 5 pre-defined thermosetting set points for drawer 2

Tens of Hours *: if value is 1 = corresponds to TEN HOURS

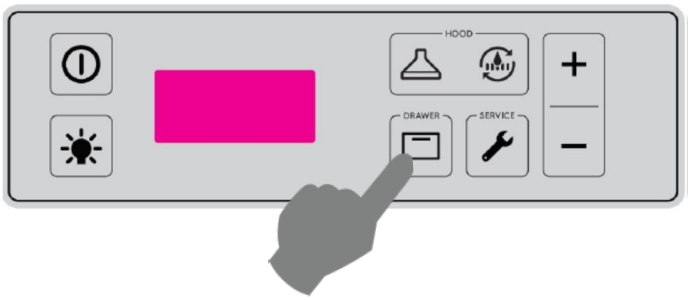
Label	Description Label	Value	Description
in1	Status display of 1st digital input		the value indicates the logic state of the 1st digital input (OFF, On) "In2": the value indicates the logic state of the 2nd digital input (OFF, On)
in2	Status display of the 2nd digital input		the value indicates the logic state of the 1st digital input (OFF, On) "In2": the value indicates the logic state of the 2nd digital input (OFF, On)
ou1	Status display of 1st digital output (relay)		output relay OFF, On
ou2	Status display of 2nd digital output (relay)		output relay OFF, On
ou3	Status display of 3rdst digital output (relay)		output relay OFF, On
ou4	Status display of 4th digital output (relay)		output relay OFF, On
ou5	Status display of 5th digital output (relay)		output relay OFF, On
ou6	Status display of 6th digital output (relay)		output relay OFF, On
ou7	Status display of 7th digital output (relay)		output relay OFF, On
ou8	Status display of 8th digital output (relay / analogic)		output relay OFF, On

EXIT FROM THE SERVICE MENU:



Exit from the MENU can be obtained:
- pressing the SERVICE and UP keys simultaneously while a label is displayed
- waiting TIME-OUT(90 seconds) without pressing any key..

4.2.2.4 DRAWER TEMPERATURE SETTING (LEVEL)



This function is active only if the device is in ON. When you press the button, you can immediately access the selection menu of the set point list of the two drawers. The sequence of the various phases is given below:

-the D1 icon (Drawer 1) is activated and the currently selected cold level is displayed. using the up and down buttons you select the desired level and pressing the drawer button or after 5 seconds the selected value is stored.
-then you turn off the D1 icon and turn on the D2 icon (Drawer 2) and carry out same adjustment.

	Liv 1	Liv2	Liv3	Liv 4	Liv5
Medium temp drawer (ambient 43C°)	10C°	8C°	6C°	4C°	2C°
cut out compressor	14,5C°	11,5C°	8,5C°	6C°	3,5C°

4.2.2.5 FUNCTIONING WITH NO PROBE

In case of failure of the thermostat probe, the compressor output is managed in time by providing a cyclical on/off according to the times programmed by the Con and CoF parameters (in minutes). If either of these two parameters is set to zero, their time will not be taken into account and no compressor output switch will occur. During timed compressor adjustment, the anti-switching time is irrelevant to the ON and OFF compressor times.

4.2.2.6 ALARMS

LABEL	DESCRIPTION	DISPLAY MODE
PoF	U.I buttons Locked	Flashing (3s)
Pon	U.I buttons UN-Locked	Flashing (3s)
P1	Alarm probe 1	Flashing
P2	Alarm probe 2	Alarm value / and temperature
HA1	High temperature alarm on Compartment 1 (drawer)	Alarm value / and temperature
LA1	Low temperature alarm on compartment 1 (drawer)	Alarm value / and temperature
HA2	High temperature alarm on compartment 2 (drawer)	Alarm value / and temperature
LA2	allarme di bassa temperatura su Vano 2 (drawer)	Alarm value / and temperature
EE	Eeprom, data loss	Alarm value / and temperature
CLn	Clean filter 1 /or 2	Alarm value / and temperature
CHG	Replace filter 1 /or 2	Alarm value / and temperature

• The P1 ÷ P2 alarms are activated approximately 2 seconds after the failure of the respective probe; they automatically reset after another 2 seconds from the moment the probe starts working normally again.
• The alarms HA1, LA1, HA2 and LA2 reset automatically as soon as the probe temperature returns to normal and at the start of a defrost
• The alarms: EA and dA reset as soon as the external digital input is deactivated.
EE Alarm can be reset from the U.I buttons.

The activation of any alarm will output:
• the activation of the buzzer
• the visualization on the display of the relative label (flashing)

Example of alarm displaying:

t° probe	**Allarm_1**	**t° probe**	**Allarm_2**	**t° probe**	**Allarm_3**	**t° probe**	**Allarm_1**	**t° probe**	**Allarm_2**
2 seconds	2 seconds	2 seconds	2 seconds	2 seconds	2 seconds	2 seconds	2 seconds	2 seconds	2 seconds

4.2.2.6.1 MANUAL SILENCING OF ALARMS

All the alarms: EE, P1 ÷ P2, LA1, HA1, LA2, HA2, EA, dA.
With one or more active alarms, pressing any key causes:
• silencing of the buzzer
• the deactivation of the alarm relay if present and if the parameter tbA = [y]
• the display of the rSt message flashing for about 3 seconds until the alarm condition disappears
• the related alarm label (flashing and rotating with other alarms) will be shown on the display
• the alarm relay will still remain active if parameter tbA = [n] or disabled if tba = [y].

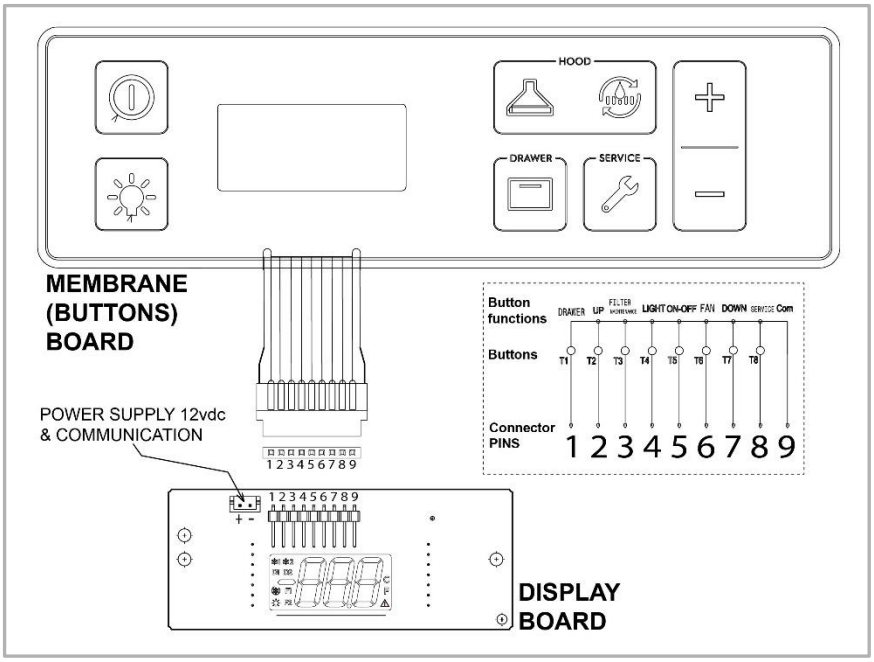
4.2.2.7 CONNECTIVITY

Not implemented at this moment

4.2.2.8 SOFTWARE UPDATE

Not possible

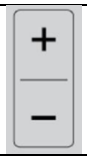
4.2.3 B3, U.I.



The U.I is formed by two small boards:
- membrane (buttons)
- display

These two boars communicate together trough a nine pin communication flat cable.

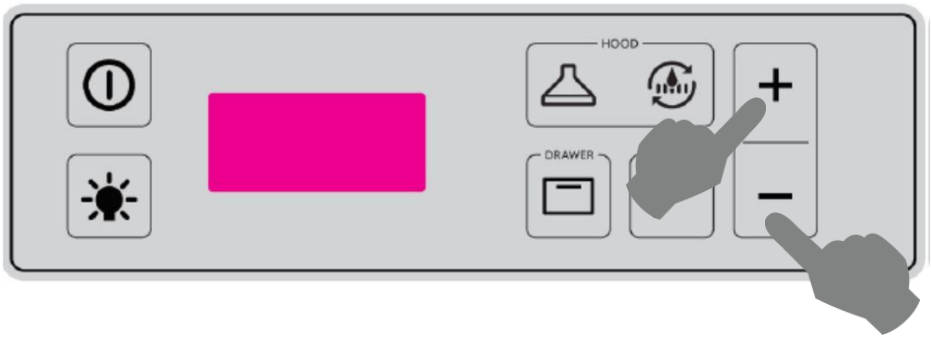
All the comunication data (for ex. when a button is pressed) will be sent back to the CB via the only power & comunication 12Vdc cable.

BUTTON	FUNCTION	EXPLANATORY NOTES
	ON/OFF	By pressing this button, you can turn the appliance ON or OFF
	Hood ventilator	This button allows to change the extraction speed (from 1 to 4); by then pressing button + or − to increase or decrease the level.
	Reset	This button resets the internal counter when regeneration of the filters **"F1"** / **"F2"** is carried out
	More & Less	This button increases/ decreases the level
	Light	These button switches the light ON and OFF
	Drawer / Drawers	This button switches the refrigerated drawers ON or OFF and allows to change the temperature level (from 1 to 5); then pressing button "**+**" and "**-**" to increase or decrease the level
	Service	This button allows to access into service mode (only for specialised authorised personnel)

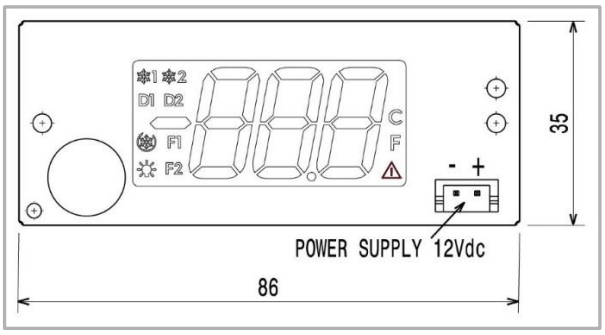
4.2.3.1 KEYPAD LOCK

UP + DOWN

If you press the buttons together for more than 3 seconds, the keypad is locked or unlocked. The display shows the “Pon” (protection ON) label flashing for 3 seconds if the keyboard is unlocked, while the “PoF” (protection OFF) label is displayed if it is locked.



4.2.3.2 DISPLAY OF U.I



The Display is part of the U.I , it communicates to the membrane board, refer also to the § B3, U.I.

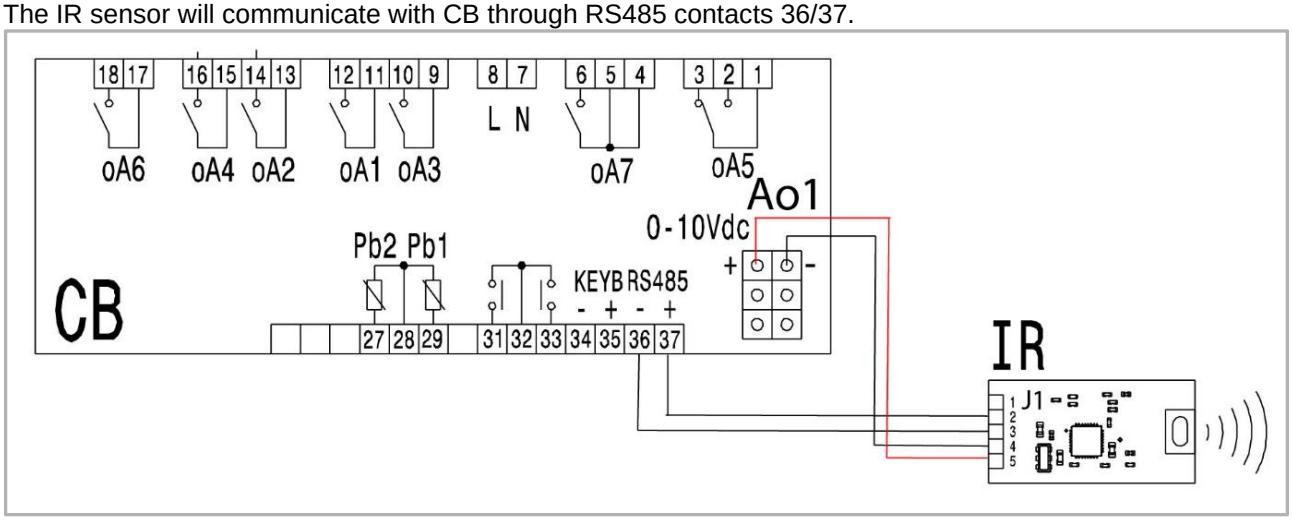
All the comunication data (for ex. when a button is pressed) will be sent from the membrane to the display and then back to the CB via the only power supply & comunication 12Vdc cable.

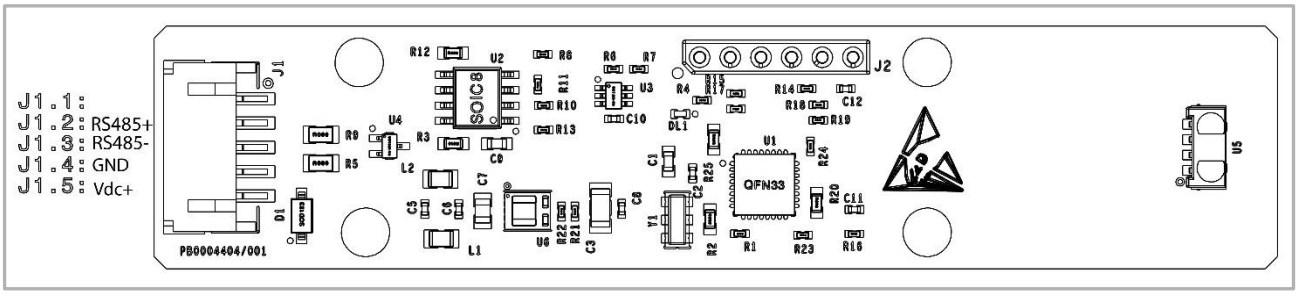
ICONE	MODE	DESCRIPTION
COMPRESSOR 1	OFF	Compressor OFF
	FLASH	Start delay of compressor
	ON	Compressor ON
COMPRESSOR 2	OFF	Compressor OFF
	FLASH	Start delay of compressor
	ON	Compressor ON
DRAWER 1	OFF	Drawer 1 is OFF
	FLASH	Function not present
	ON	Drawer 1 is ON
DRAWER 2	OFF	Drawer 2 is OFF
	FLASH	Function not present
	ON	Drawer 2 is ON
	OFF	**Function not present**
	FLASH	**Function not present**
	ON	**Function not present**
LIGHT	OFF	light (led bar) OFF
	FLASH	Function not present
	ON	Light (led bar) ON
CLEAN FILTER 1	OFF	Filter 1 OK
	FLASH	Filter 1 needs cleaning
	ON	Filter 1 needs replacing

F2 CLEAN FILTER 2	**OFF**	Filter 2 OK
	FLASH	Filter 2 needs cleaning
	ON	Filter 2 needs replacing
ALLARM	**OFF**	No alarm present
	FLASH	Function not present
	ON	At least one alarm is present
C °C	**OFF**	Measure unit is not Celsius
	FLASH	In programming SET/Parame-ters
	ON	Celsius selected
F °F	**OFF**	Measure unit is not Fahrenheit
	FLASH	In programming SET/Parame-ters
	ON	Fahrenheit selected

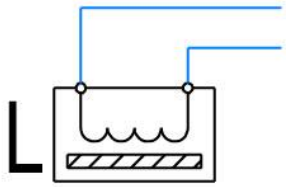
4.2.4 B4, INFRA RED SENSOR

CB supplies 10V to the **IR** board. Ao1 terminal is always supplied.
The IR sensor will communicate with CB through RS485 contacts 36/37.



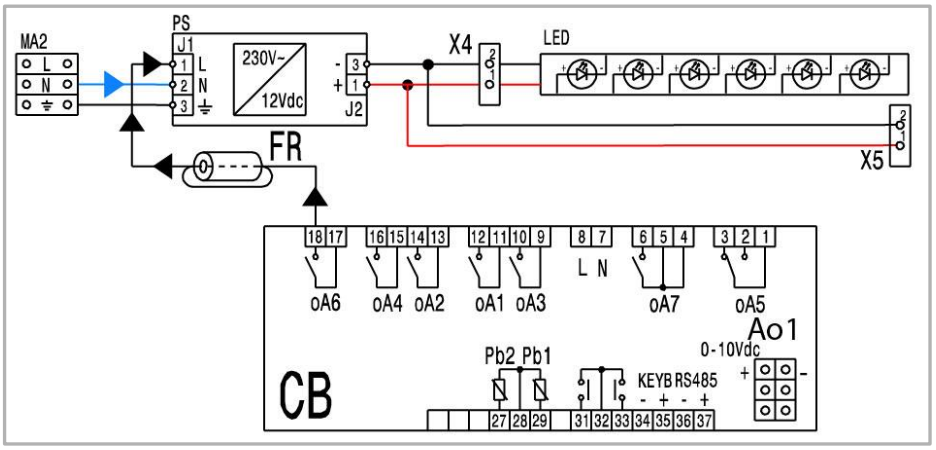


4.2.5 B5, INDUCTANCE, L



The **inductance "L"** is placed before the MV (motorventilator); it will slow down the rate of current rise. It works by creating a magnetic field which opposes the welding current in the short circuit thereby slowing the rate of rise. If the inductance is increased it will cause an increase in arc time and reduction in the dip frequency, this will help reduce spatter.

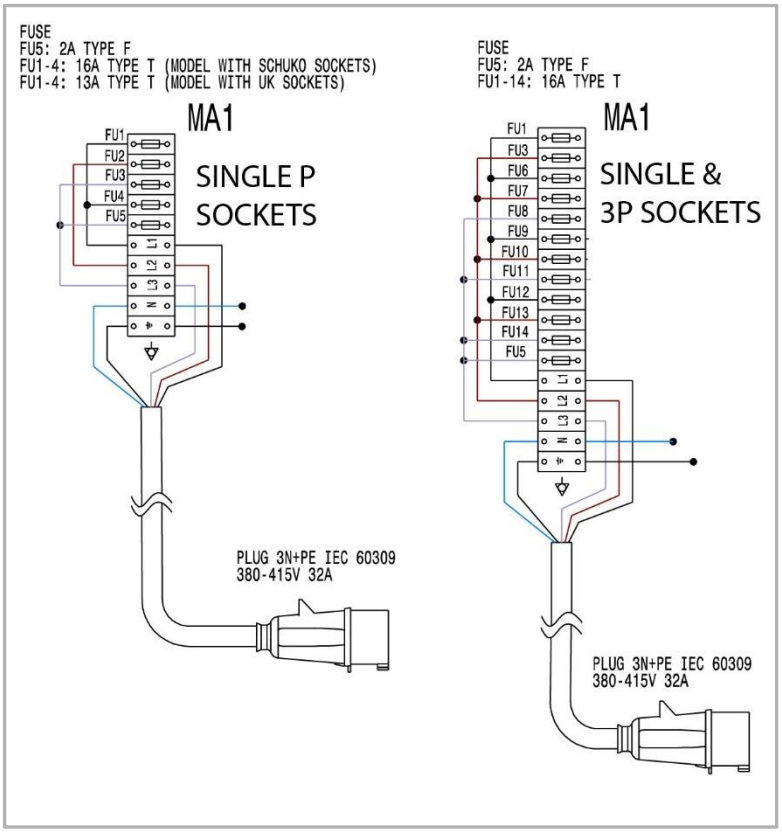
4.2.6 B6, FERRITE, FR

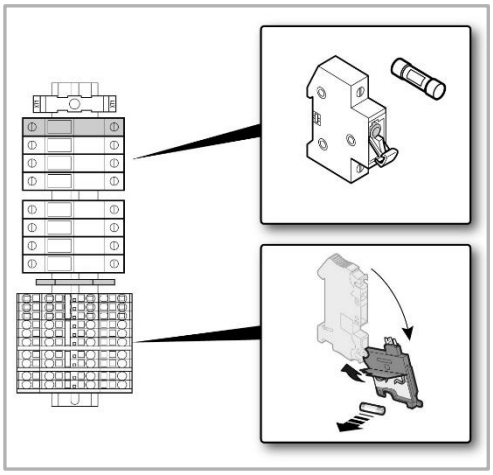


The **Ferrite "FR"** bead is a passive device that filters high frequency noise energy over a broad frequency range. It becomes resistive over its intended frequency range and dissipates the noise energy in the form of heat.

4.2.7 B7, TERMINAL BLOCK, MA1

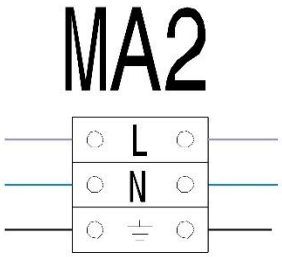
Fuses are built in the terminal blocks.





4.2.8 B8, TERMINAL BLOCK, MA2

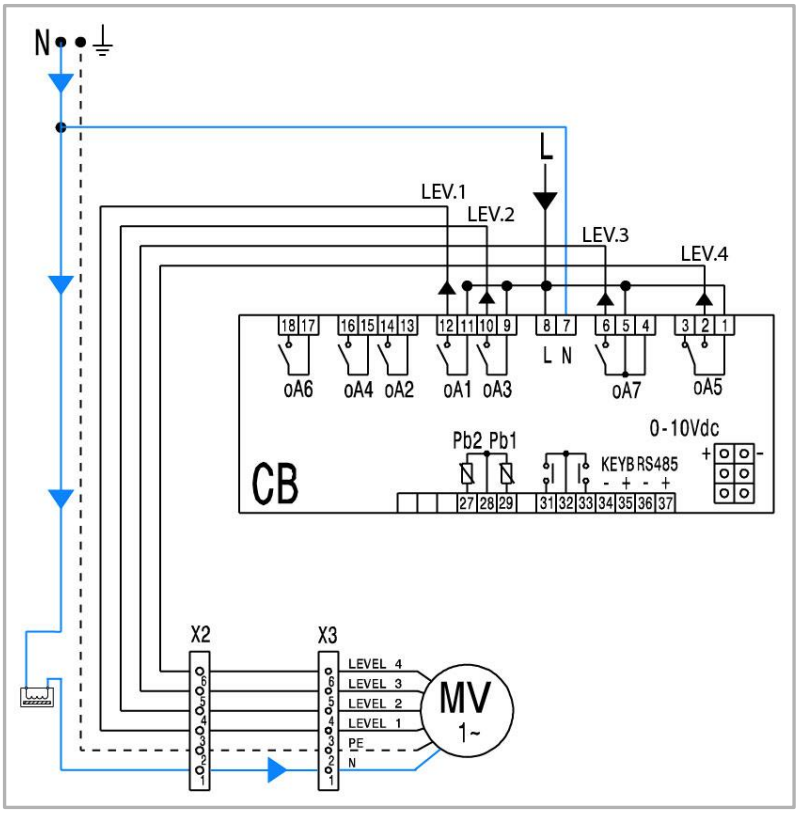
A standard 220V terminal block clamp



4.2.9 B9, MOTORVENTILATOR,MV

The motor ventilator is supplied accordingly to the extraction speed level requested from CB.

230Vnom (200/240) – 230w – 1,8A



4.2.10 B10, COOLING UNIT, RD

The cooled Refrigerated Drawer "**RD**" is not always present in all appliances as it is an "accessory".

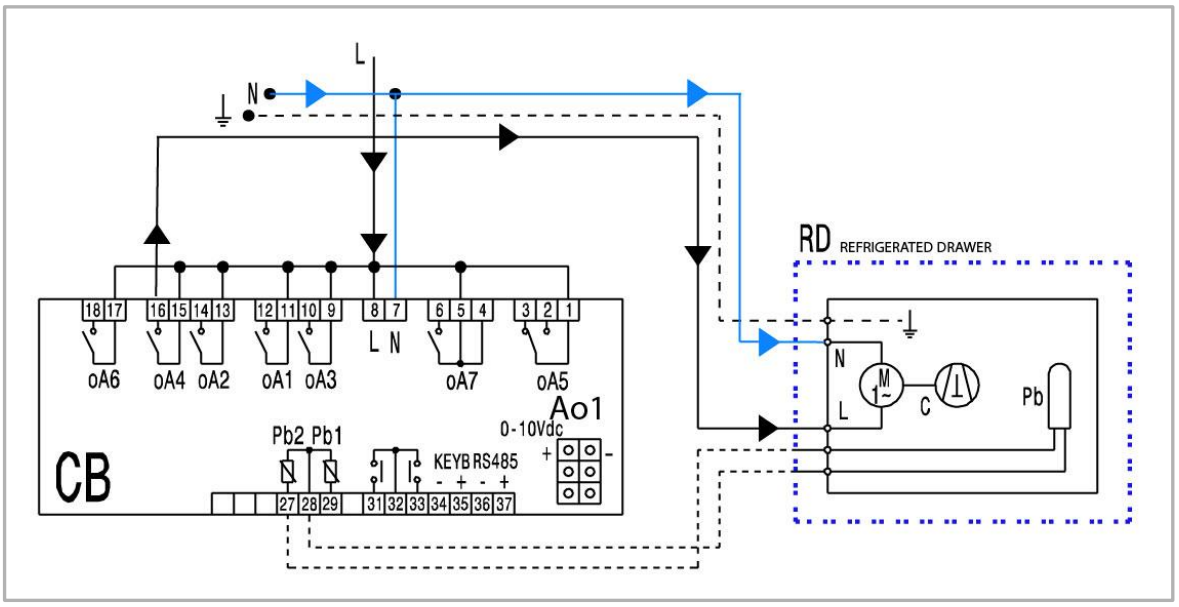
The button 

switches the refrigerated drawers ON or OFF and allows to change the temperature level (from Liv1 to Liv5); then pressing button "**+**" and "**-**" to increase or decrease the level.

Average temperature correspondences:

	Liv 1	**Liv2**	**Liv3**	**Liv 4**	**Liv5**
Medium temp drawer (ambient 43C°)	10C°	8C°	6C°	4C°	2C°
cut off compressor	14,5C°	11,5C°	8,5C°	6C°	3,5C°

Relay outputs of CB that activate the cooling units (if present) are: **oA4** = Compressor right side, **oA2** = Compressor left side.



Pb2 & Pb1 are analog inputs for PTC or NTC probes (10K at 25°C) configurable by parameter **P1C** and **P2C** see also §PARAMETERS §DRAWER LEVEL SET
The working ranges are: -50°C 150°C for ptc probes -40°C 110°C for NTC probes Ω÷.

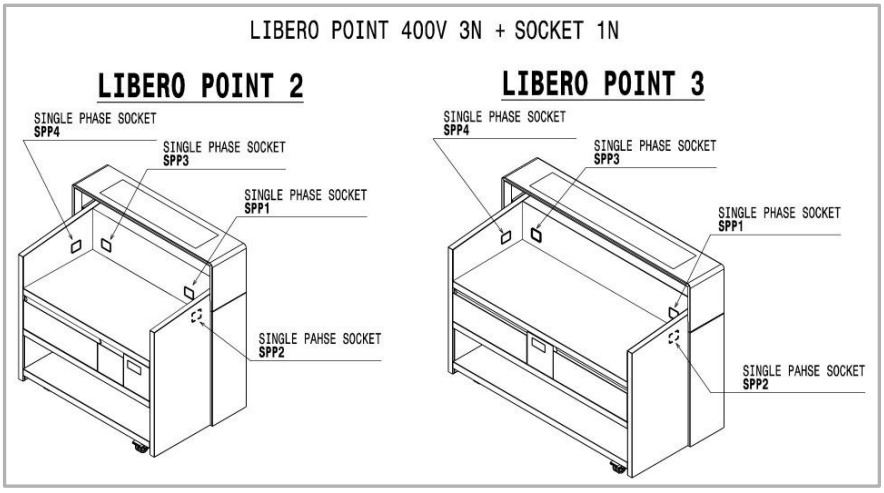
In case of failure of the thermostat probe, the compressor output is managed in time by providing a cyclical on/off according to the times programmed by the **Con** and **CoF** parameters (in minutes). If either of these two parameters is set to zero, their time will not be taken into account and no compressor output switch will occur. During timed compressor adjustment, the anti-switching time is irrelevant to the ON and OFF compressor times.

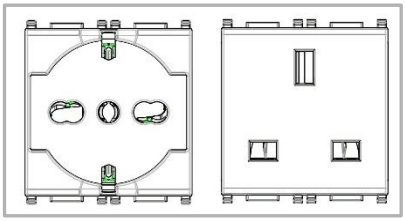
NOTE !

The **Pb2 & Pb1** probes are foamed into the chassis of the refrigerated drawer and cannot be replaced.
In case of need to replace a probe, it will be necessary to replace the hole unit or cabinet of the RD.

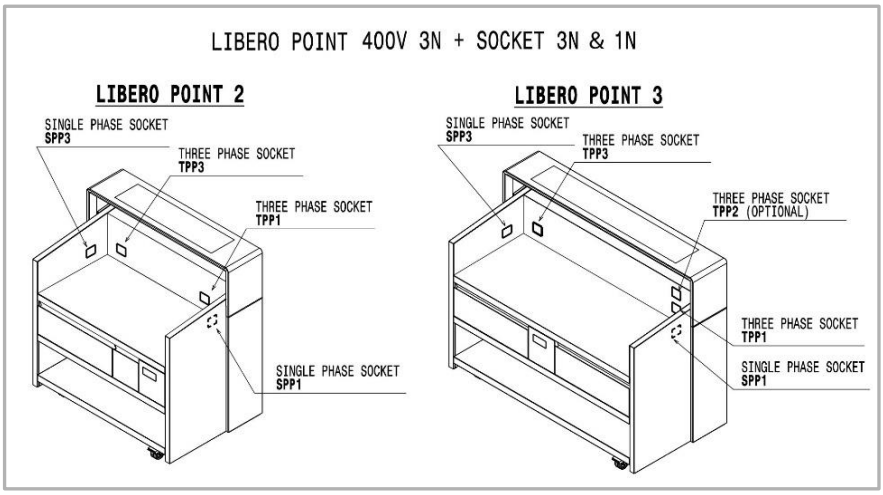
4.2.11 B11, SOKET 1P, SPP1

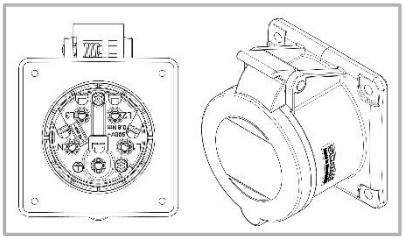
Depending if the Libero point is an EU or UK model the socket will change.



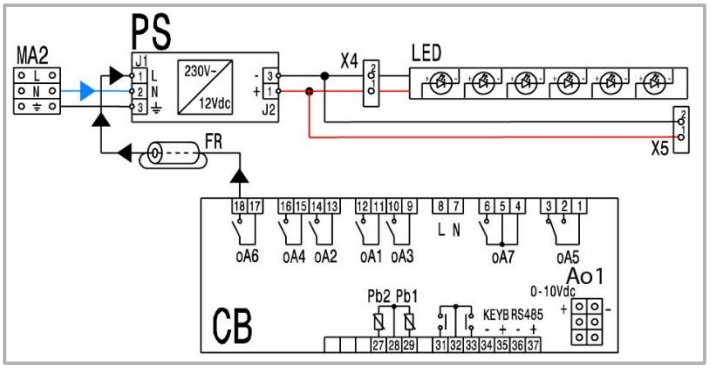


4.2.12 B12, SOKET 3P, TPP1





4.2.13 B13, LED BAR



The function of the light button depends on the **LPC** (Light Push Configuration) parameter.
If **LPC** = NU, the button is not used If **LPC** = LiG, the button on the U.I. is used to activate the light output.
When the light button is pressed on the U.I, the relay output of CB is **oA6**.
The Light button is active both in OFF and in keyboard lock.
One or two Led Bars (contact X4 & X5) are supplied 12V from the PS voltage adaptor.

5 TROUBLESHOOTING

The following chapter is intended only for authorized technicians / engineers only.

LABEL	DESCRIPTION	ALARM TROUBLE SHOOTING §
PoF	U.I buttons Locked	KEY PAD LOCK
Pon	U.I buttons UN-Locked	KEY PAD LOCK
P1	Alarm probe 1	**Pb2 & Pb1** are analog inputs for PTC or NTC probes (10K at 25°C) configurable by parameter **P1C** and **P2C**
P2	Alarm probe 2	**Pb2 & Pb1** are analog inputs for PTC or NTC probes (10K at 25°C) configurable by parameter **P1C** and **P2C**
HA1	High temperature alarm on Compartment 1 (drawer)	Check cooling unit
LA1	Low temperature alarm on compartment 1 (drawer)	Check cooling unit
HA2	High temperature alarm on compartment 2 (drawer)	Check cooling unit
LA2	Low temperature alarm on compartment 2 (drawer)	Check cooling unit
EE	Eeprom, data loss	Power off appliance (disconnect supply) restart appliance, if alarm persists, replace CB.
CLn	Clean filter 1 /or 2	TIMER FILTER CLEANING/REPLACEMENT
CHG	Replace filter 1 /or 2	TIMER FILTER CLEANING/REPLACEMENT

6 SERVICING THE APPLIANCE

The following chapters are intended only for authorized technicians / engineers

WARNING !

Take GREAT CARE when connecting / testing anything with live current, if you are unsure what you are doing and how to use your equipment safely, then **DON'T DO IT.**

6.1 LIST OF NEEDED TOOLS

Socket & Wrench set (from 6 to 22)

Complete allen key set

Bent long nose pliers

Screwdrivers Philips "small / medium / large"

Screwdrivers flat "small / medium / large"

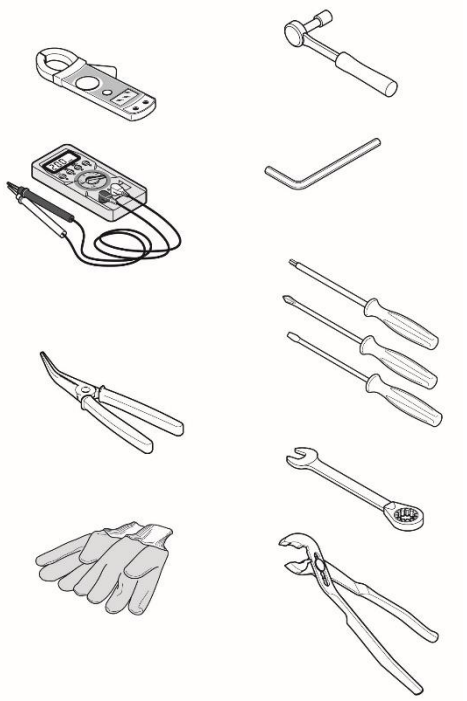
Clamp amp meter

Multimeter (voltage reader)

Tongue groove pliers

Grip lock plier

Protective gloves (heatproof / cut proof)



Refer also to the § PERSONAL PROTECTION EQUIPMENT

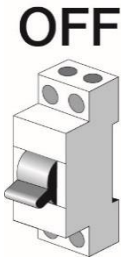
6.2 DISASSEMBLY/REASSEMBLE OF COMPONENTS

This chapter explains how to remove various parts of the equipment to access its functional components: please always refer to this guide to access various parts.

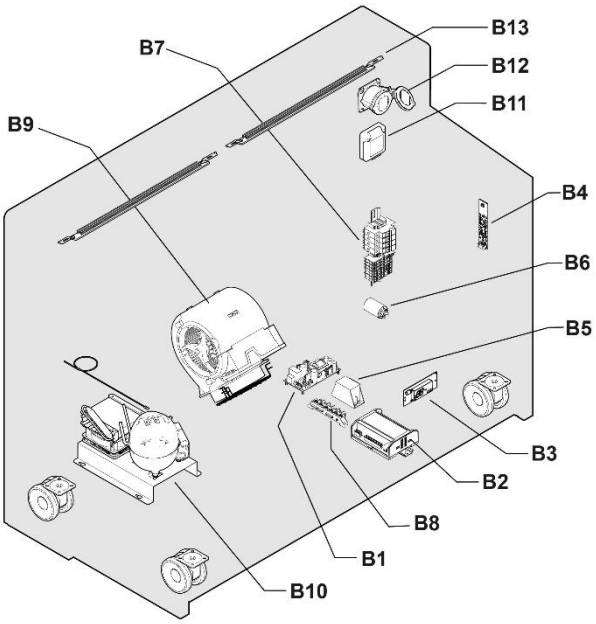
To locate the component of interest, please refer to the " COMPONENTS" illustrations.
Each component is marked with a name/number and a page which explains in detail how to take it apart. Depending on the component to reach, you may need to remove some panels.

WARNING / CAUTION !

Before any operation on the machine read Chapter SAFETY INFORMATION/PRECAUTIONS. We recommend for any phase involving the removal of the components to use cut-resistant gloves



6.2.1 COMPONENTS

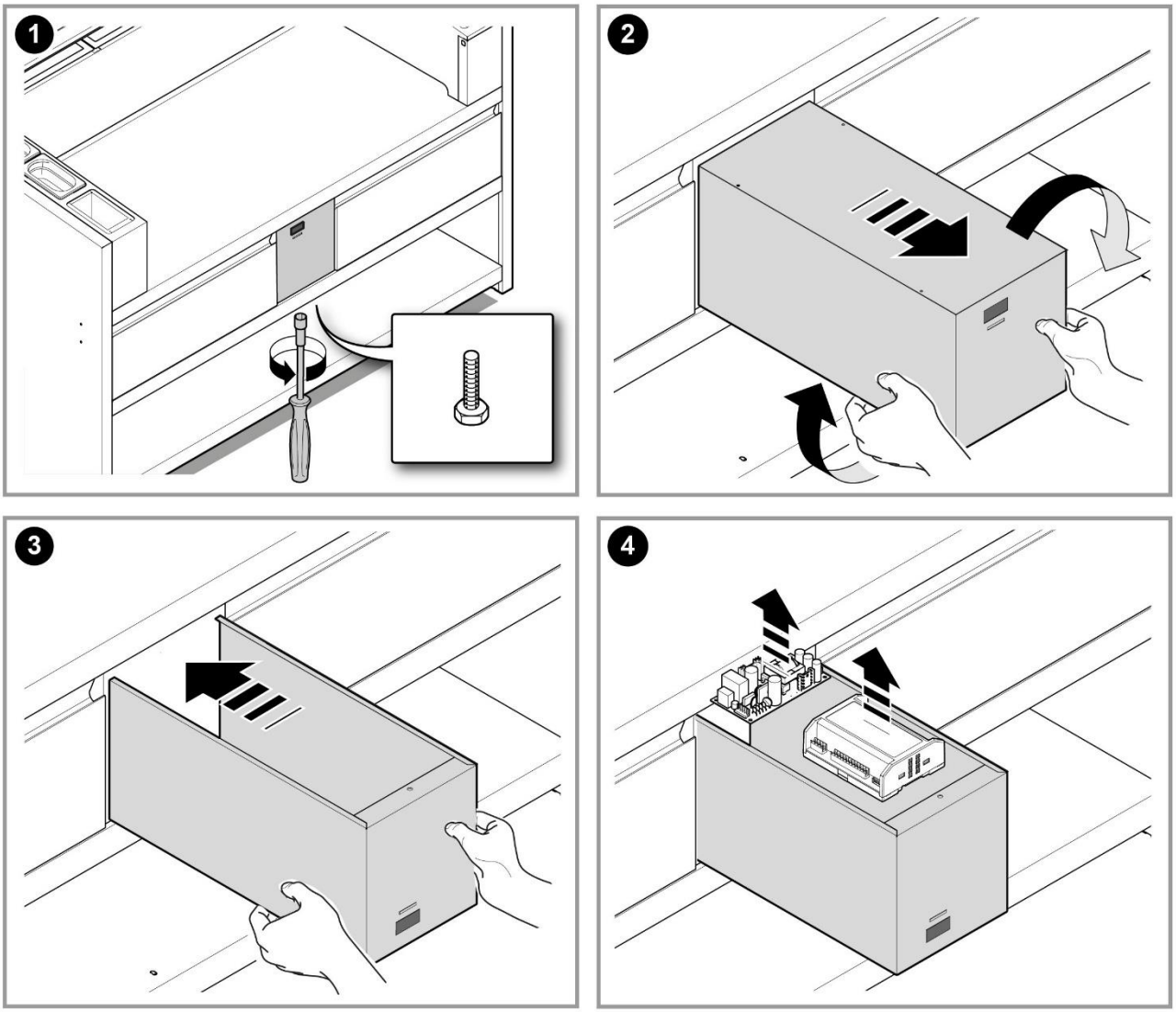


Pos	Component	§.
B1	VOLTAGE ADAPTOR, PS	FRONT COMPONENTS
B2	CONTROL BOARD, CB	FRONT COMPONENTS
B3	U.I.	FRONT COMPONENTS
B4	I.R	B4, INFRA RED SENSOR
B5	INDUCTANCE, L	FRONT COMPONENTS
B6	FERRITE, FR	REAR COMPONENTS
B7	TERMINAL BLOCK, MA1	REAR COMPONENTS
B8	TERMINAL BLOCK, MA2	FRONT COMPONENTS
B9	MOTORVENTILATOR,MV	REAR COMPONENTS
B10	COOLING UNIT, RD	REAR COMPONENTS
B11	SOKET 1P, SPP1	B11, SOKET 1P, SPP1/ B12, SOKET 3P, TPP1
B12	SOKET 3P, TPP1	B11, SOKET 1P, SPP1/ B12, SOKET 3P, TPP1
B13	LED BAR	LED BAR

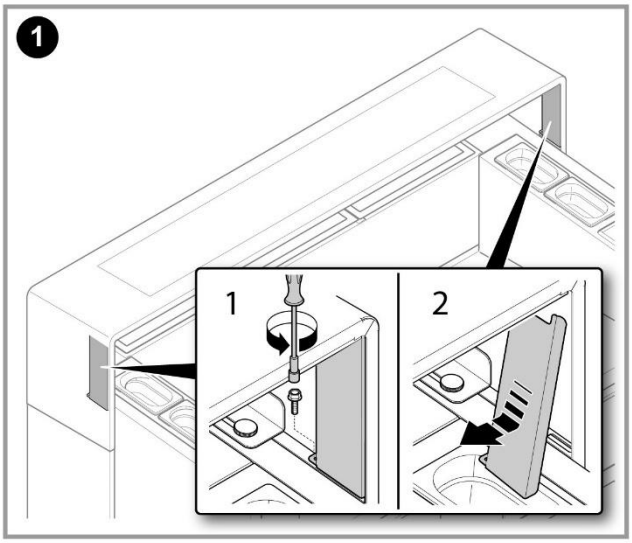
6.2.1.1 FRONT COMPONENTS

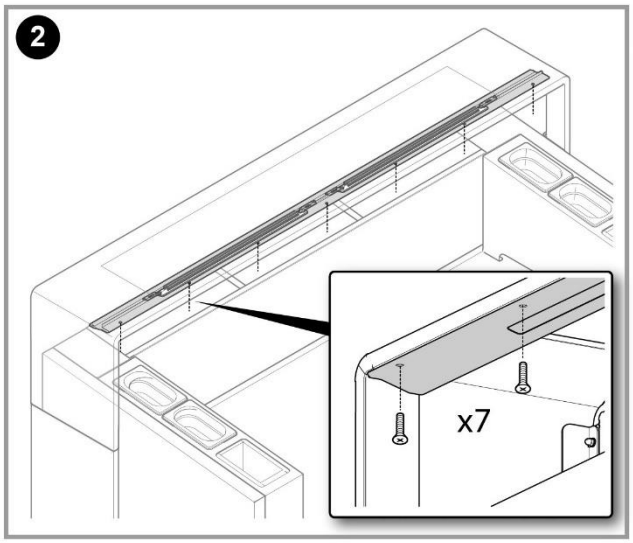
NOTE !

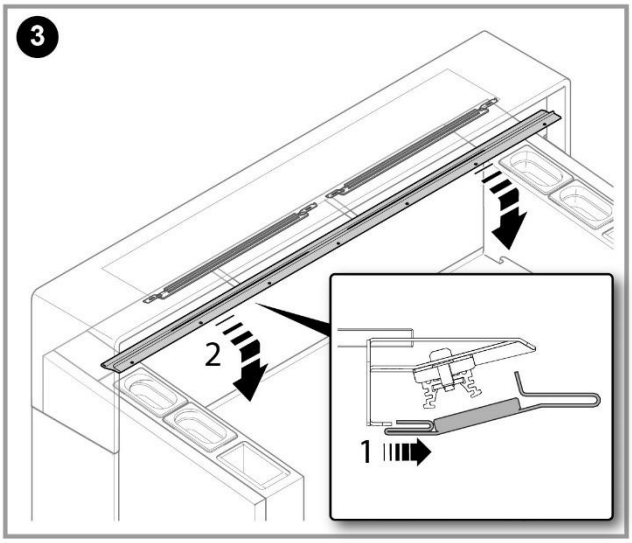
THE IMAGE IS FOR ILLUSTRATION PURPOSE

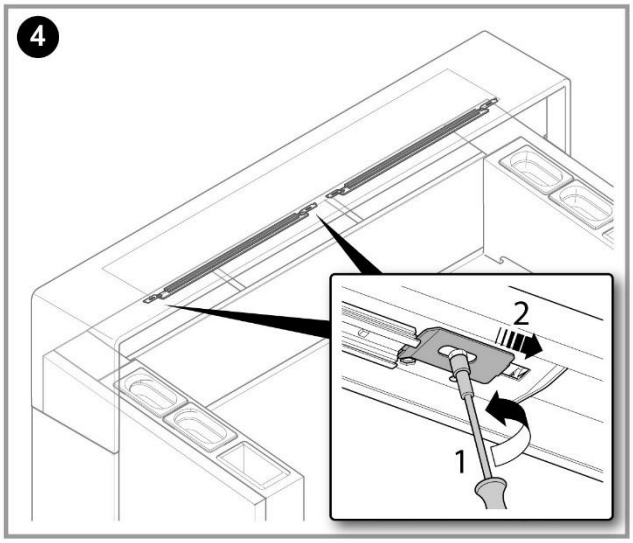


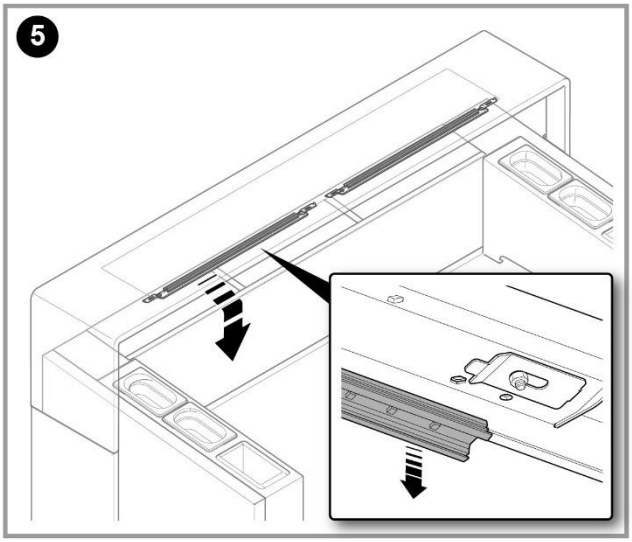
6.2.1.2 LED BAR



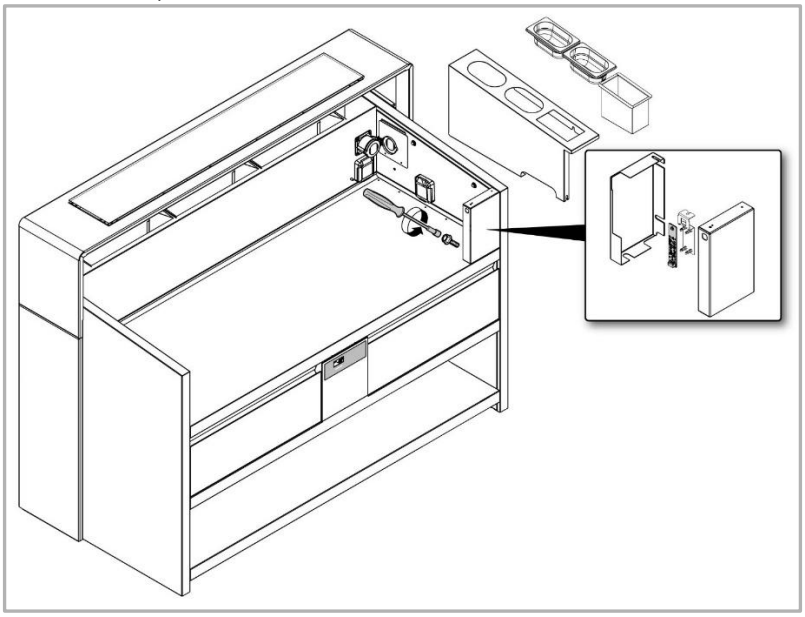






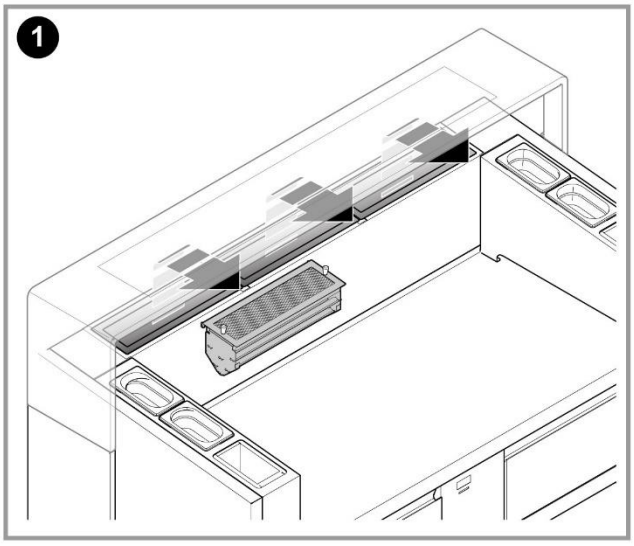


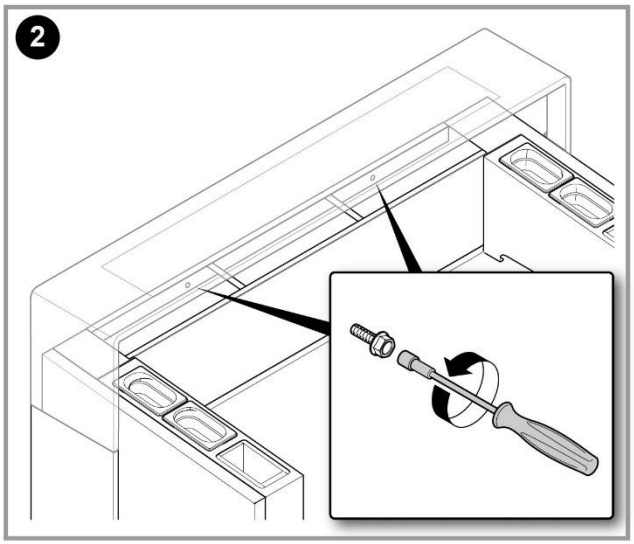
6.2.1.3 B4, INFRA RED SENSOR

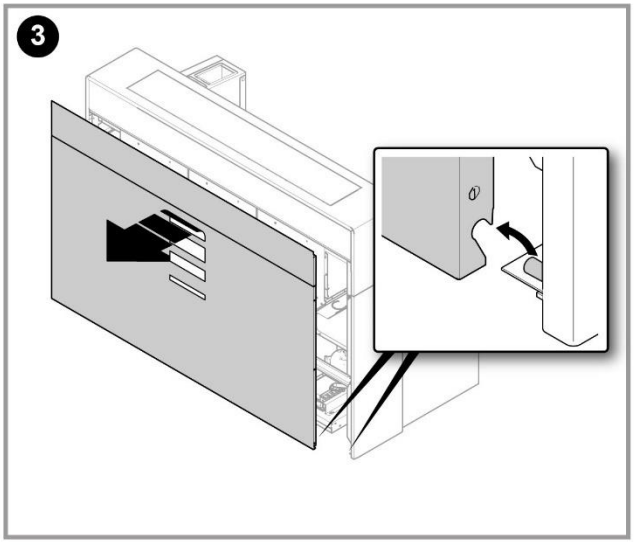


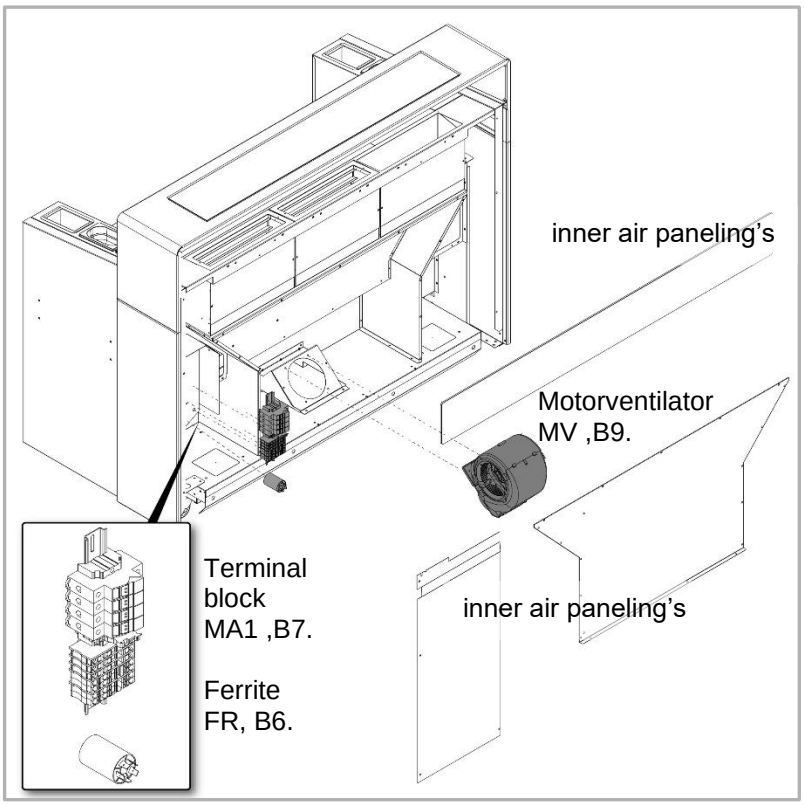
The sensor is located in the side panel. To gain access remove the back cover panel indicated in the detailed picture.

6.2.1.4 REAR COMPONENTS



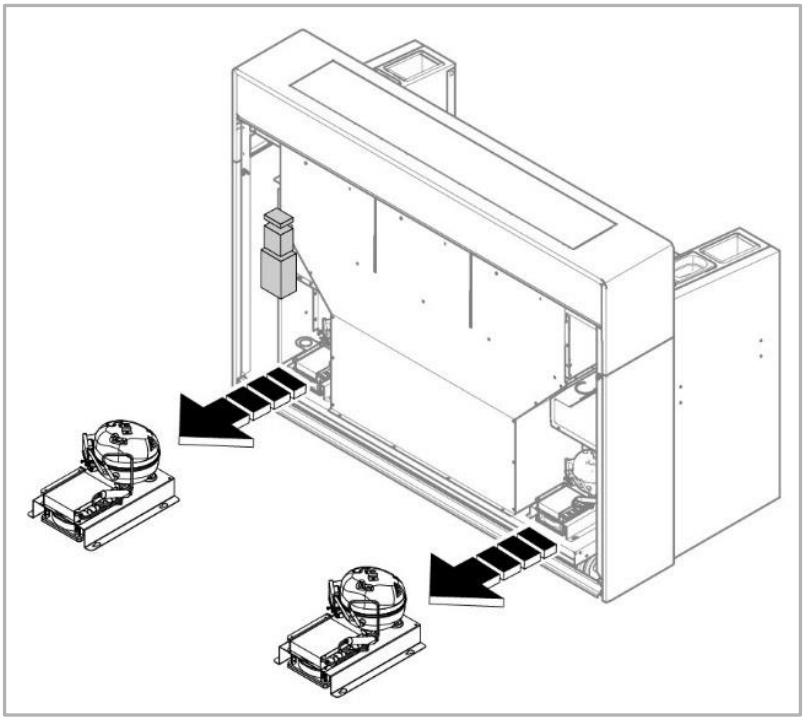




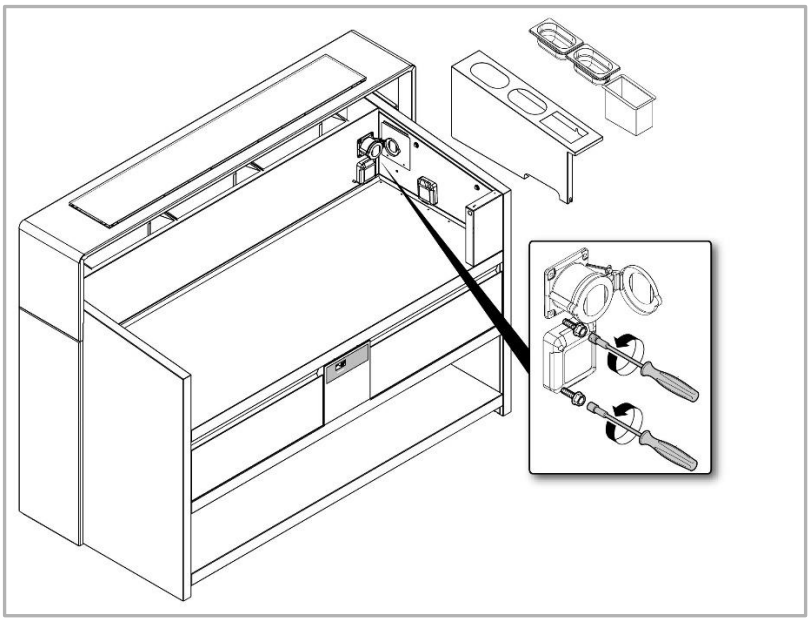


Once that the aesthetic panels have been removed, loosen the inner air paneling's to gain access to the rear components.

6.2.1.5 B10, COOLING UNIT, RD



6.2.1.6 B11, SOKET 1P, SPP1/ B12, SOKET 3P, TPP1



6.3 PREVENTIVE MAINTENANCE

All documentation for each PNC is available for authorized technicians on the web sites (PRIDE-SERVICE PORTAL- AGELUX etc..) and can be downloaded in file. For those that do not have access to the web sites, refer to your local country customer care.

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