mychef.

iCOOK | iBAKE | COOK
BAKE | SNACK
BAKERSHOP

Technical Support Service Manual

INDEX

1. DISASSEMBLY FOR SERVICE ACCESS

Warning: Before proceeding to disassemble any component, make sure that the equipment is disconnected from the power supply.

1.1. Removing the door

Before removing the door, disconnect the communications cable attached to the oven control. See chapter 5.5.

1.1.1. Side-opening ovens

The following picture shows how to remove the door on side-opening models. Remove the 3 screws in the picture and pull the door upwards.

Figure 1. Removing the door (side-opening models)

1.1.2. Front-opening ovens

On front-opening ovens, turn the locking tabs on the right and left hinges. Then lift the door until it is released.

Figure 2. Removing the door (front-opening models)

1.2. Removing the top panel

For side-opening ovens, the door must first be removed. On the upper part of the oven, remove the 6 M5 screws, the door plate and the brackets holding it in place (circled below in red).

Figure 3. Upper top panel screws

Front-opening ovens have the top panel attached to the sides. Remove the rear panel (see next chapter) and then remove all the screws from the side of the top panel.

1.3. Removing the real panel

1.3.1. COOK, iCOOK, BAKE, iBAKE

The following picture shows how to remove the rear panel. Remove the M5 screws circled in red and pull the rear panel downwards.

Figure 4. Removing the rear panel

1.3.2. BAKERSHOP 6 and 10 600x400 trays

For the 600x400 size BAKERSHOP model, remove the screws at the rear of the oven.

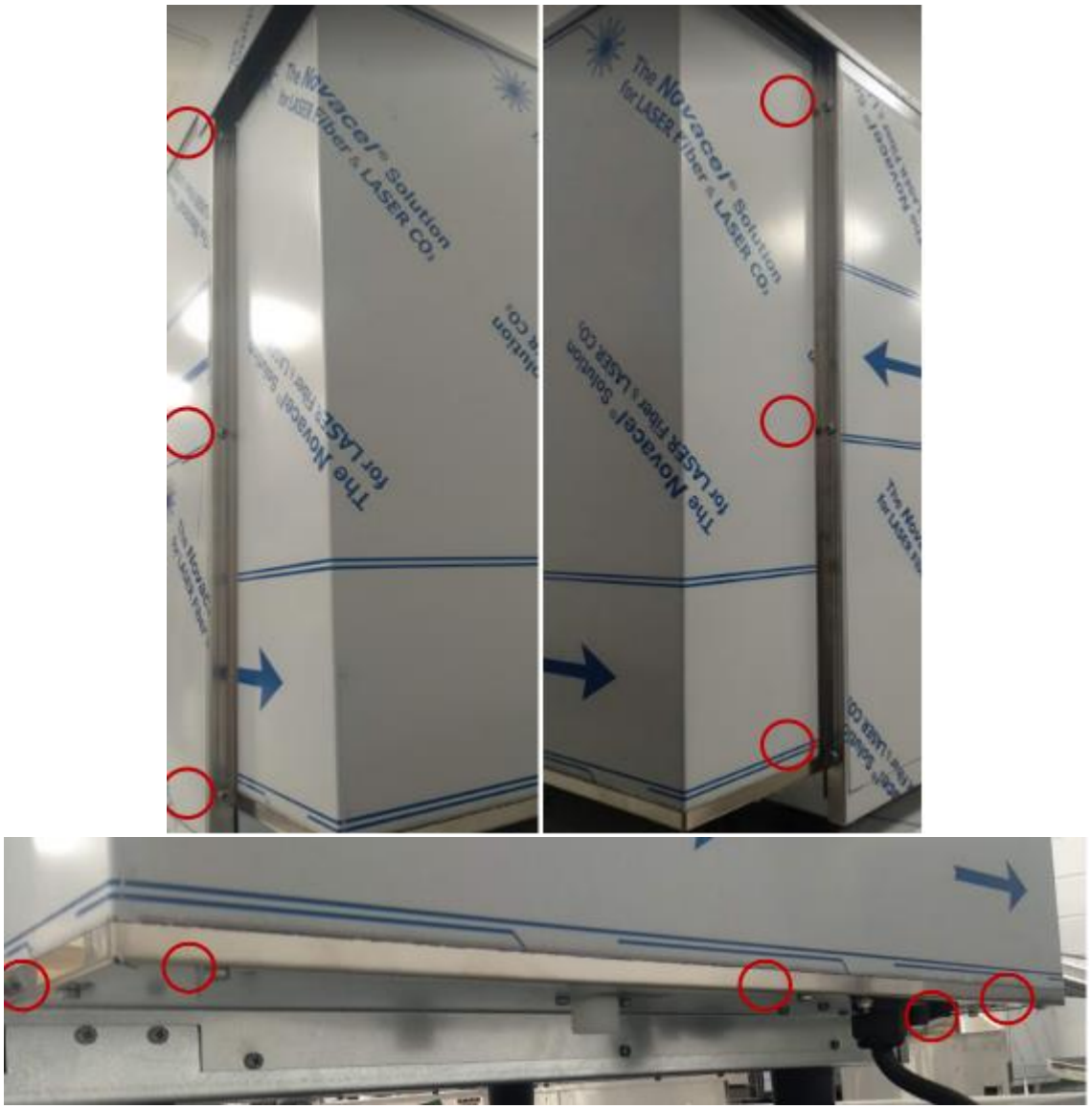

Figure 5. Removing the rear panel

1.3.3. BAKERSHOP and SNACK of 3 and 4 trays

On BAKERSHOP and SNACK models with 3 and 4 trays, remove the screws at the rear of the oven.

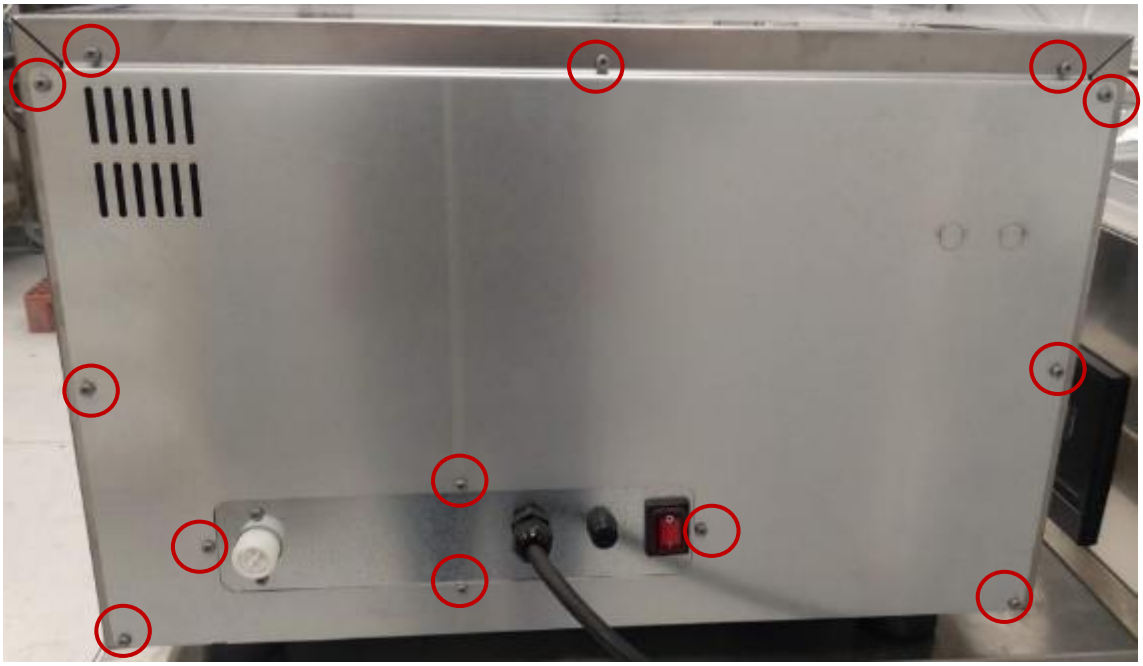

Figure 6. Removing the rear panel

1.4. Removing the side panel

The following picture shows how to remove the side panel. Remove the 4 screws circled in red from the bottom of the left side.

Figure 7. Lower screws on the side

To remove the screws on the upper side, the upper side of the oven must first be removed, as they are the same. See Figure 2.

Open the side panel at the rear and pull it backwards. At this point the side panel should release from the tabs on the chamber frame.

1.5. Removing the convection fan cover plate

The part that separates the cooking chamber with the fan and the heating element can be removed to clean this area. First, remove the tray supports. Move them upwards and then towards the inside of the oven.

Figure 8. Removing the tray supports (bolt-on models)

On some models, the guide supports are screwed to the cooking chamber. Unscrew and proceed in the same way to remove the guides.

Figure 9. Removing the tray supports (screw models)

Once the supports have been removed, repeat the same operation with the part that separates the cooking chamber from the fan and the heating element. A flat-blade screwdriver or other levering tool can be used to pry and make it easier.

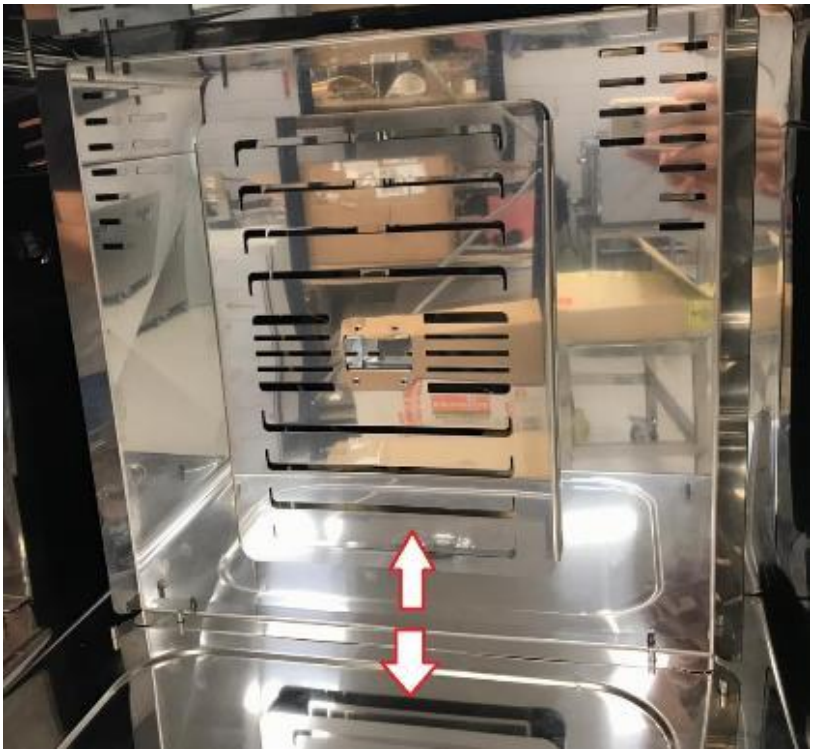

Figure 10. Removing the protective plate (bolt-on models)

Figure 11. Removing the protective plate (screw models)

Once it has been removed, it can be cleaned, either manually or automatically.

Use extreme caution when cleaning this part of the oven. Leave the door ajar and wait until the chamber fan stops.

When this process has been completed, replace the chamber fan suction part in reverse order.

1.6. Accessing the siphon

In ovens equipped with a siphon (COOK PRO, BAKE, iCOOK, and iBAKE), the siphon can be accessed from the inside of the cooking chamber or from the bottom of the oven.

To access the siphon cooling pipes or the front water tray drain, remove the side panel. Oven models that do not have a siphon condensation cooling system instead of the cooling pipe will have a plug in the inlet.

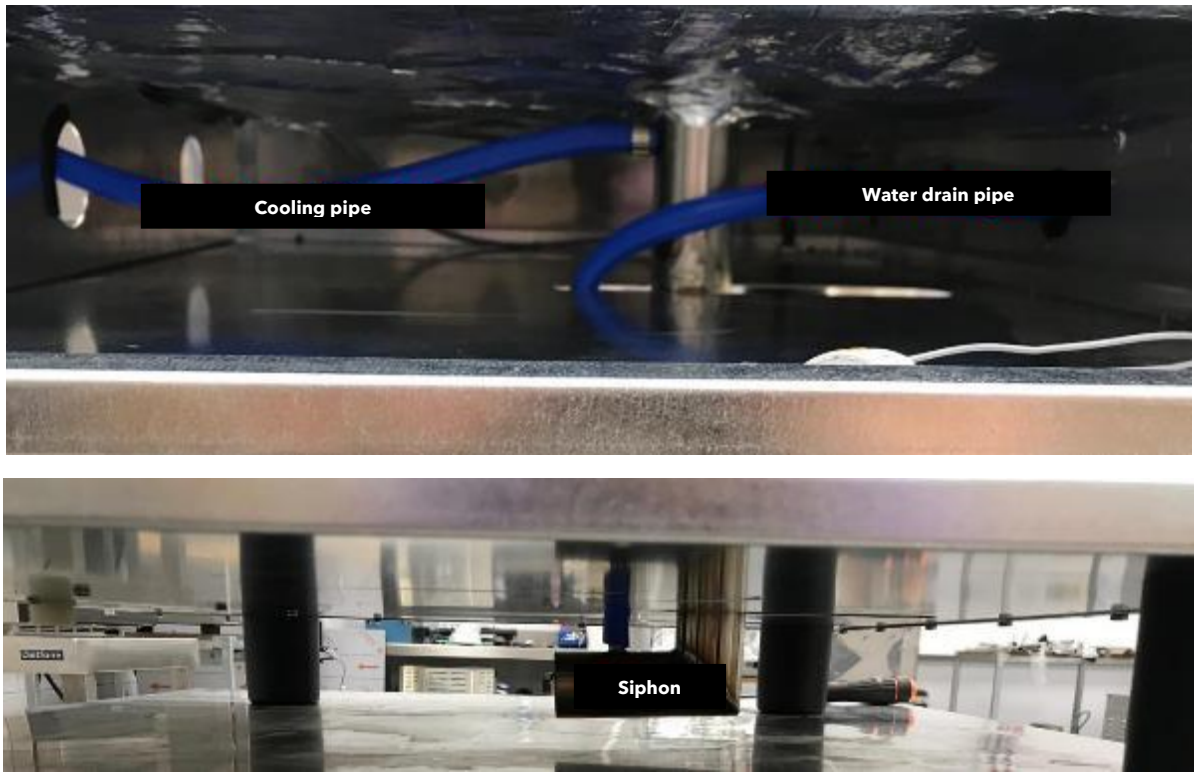

Figure 12. Siphon

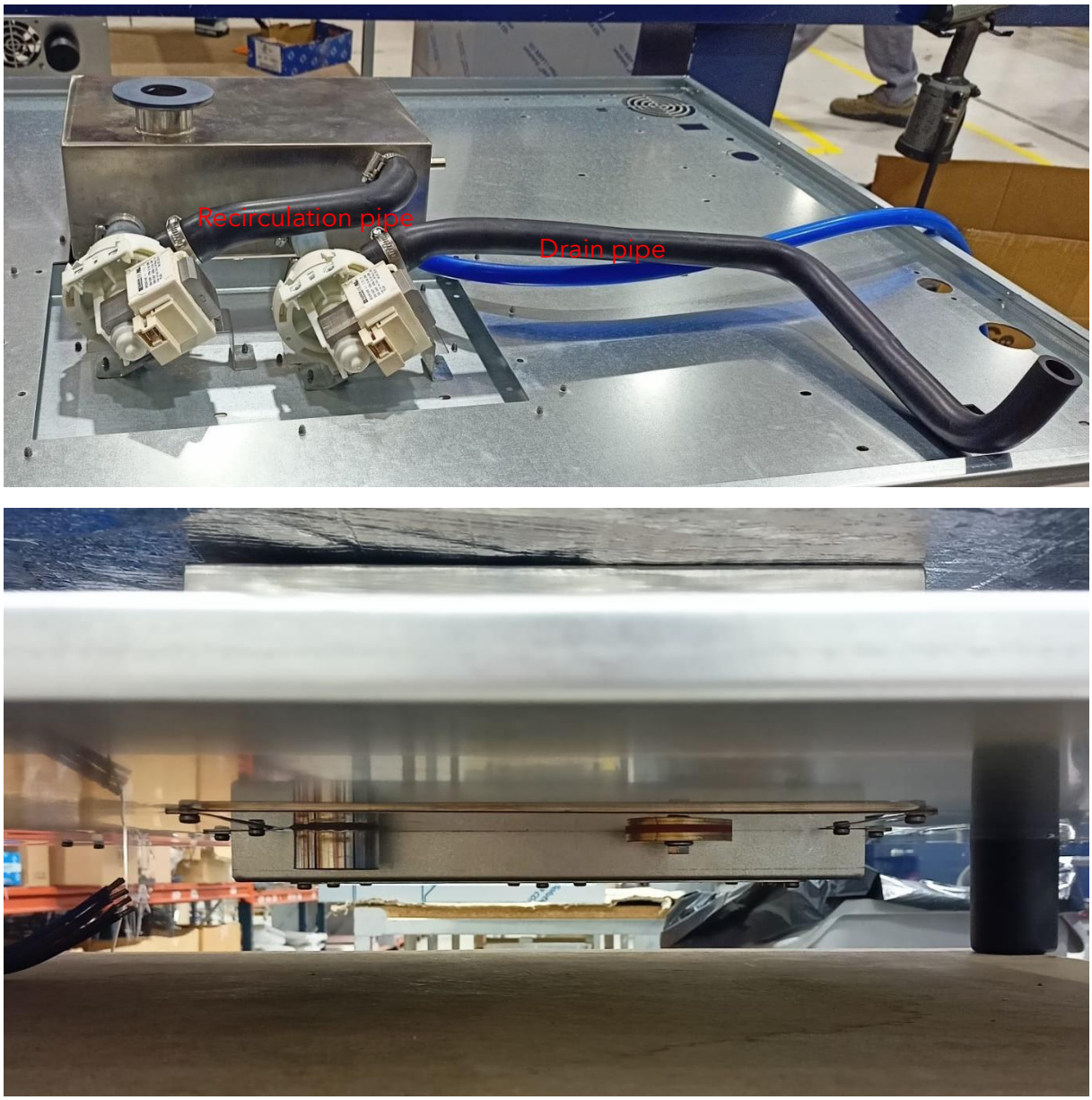

Figure 13. Recirculation siphon

2. TROUBLESHOOTING

2.1. Checking electrical elements

By entering the relay test mode, the oven can activate each relay individually, operating the element connected to it (motor, chimney solenoid, light, etc.).

To check the relays, see chapter 3.2.1.5.

To check the door sensor and the motor safety thermostat, see section 3.3.1.7.

2.2. Checking power supplies

Before starting a troubleshooting process, verify that the voltages are correctly reaching the relay board, contactor (three-phase models only), and control board.

Dismantle the rear part to access the electronics (see 1.3).

2.2.1. Three-phase models

Check the voltage at the power connector.

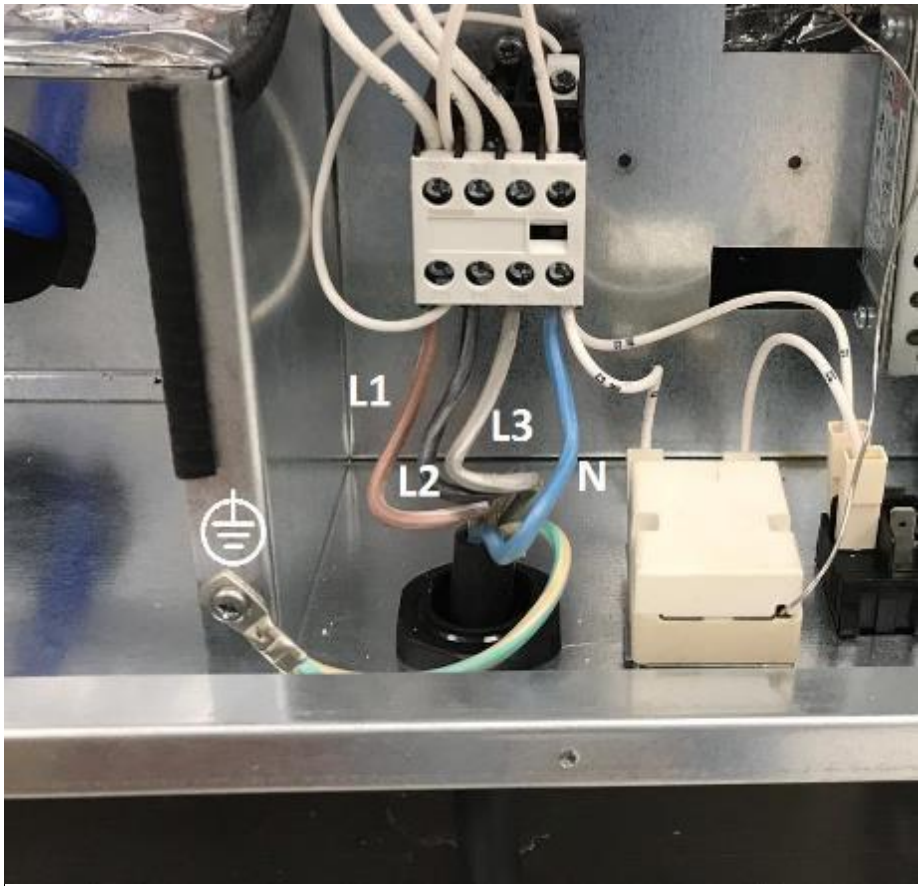

Figure 14. Checking input voltages (three-phase models)

N - L1 = 230VAC

N - L2 = 230VAC (only for ovens with three-phase connection)

N - L3 = 230VAC (only for ovens with three-phase connection)

If this is not the case, check the customer's power cable and electrical installation.

2.2.2. Single-phase models

Single-phase models do not have a general contactor, so the voltage must be measured at the relay board terminals.

Figure 15. Checking input voltages (single-phase models)

Check that the voltage N - L is 230VAC.

2.2.3. Safety thermostat

Depending on the model, the reset button is located on the rear or bottom of the oven. If it has tripped, press it.

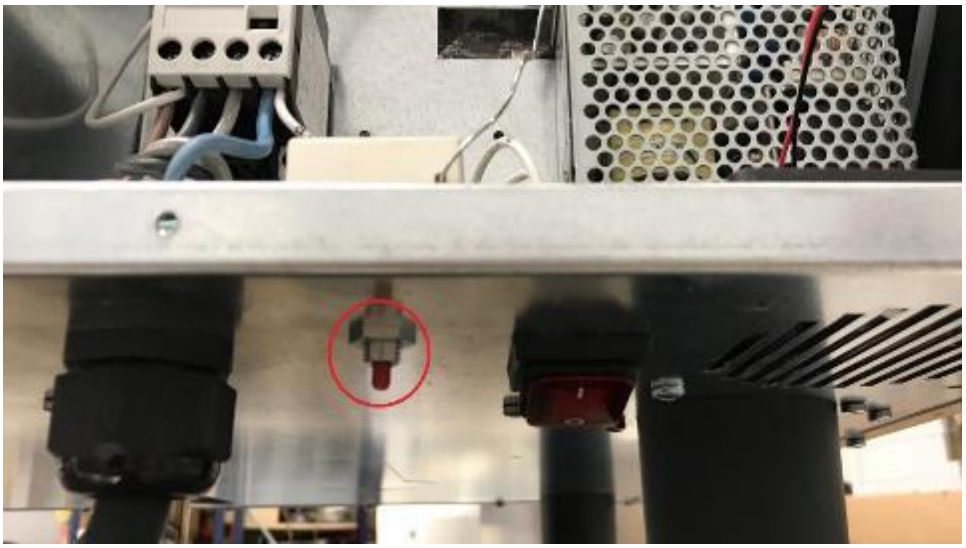

Figure 16. Reset safety thermostat (lower)

Figure 17. Reset safety thermostat (rear)

2.2.4. Safety contactor

The contactor is controlled by the safety thermostat on three-phase ovens. With the oven switched on, press the power switch.

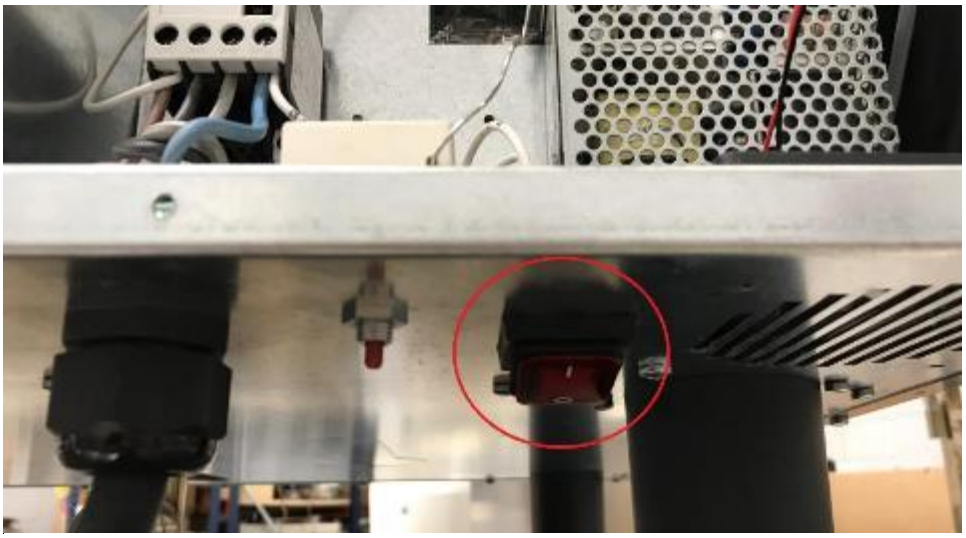

Figure 18. ON/OFF switch

Open the rear of the oven and check that the safety contactor is armed.

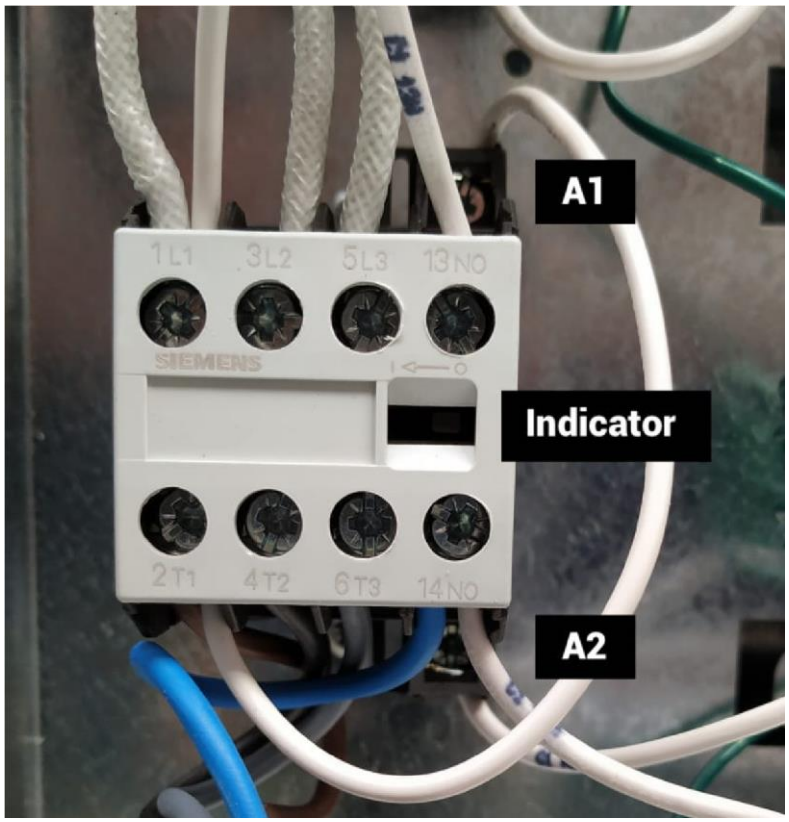

Figure 19. Safety contactor checks

If not, check that the voltage between poles A1 and A2 is 230VAC. If not, check the condition of the safety thermostat, the ON/OFF switch and the wiring between the three elements.

2.2.5. Relay board LED status

Check that the LEDs on the power supply (green) and on the relay board (red) are lit up.

Figure 20. Correct voltage LED on power supply and Mychef relay board

If not, check the wiring condition between the contactor, power supply and relay board.

2.2.6. Communication cable

Check that the Modbus communication cable linking the relay board and the control board is correctly inserted.

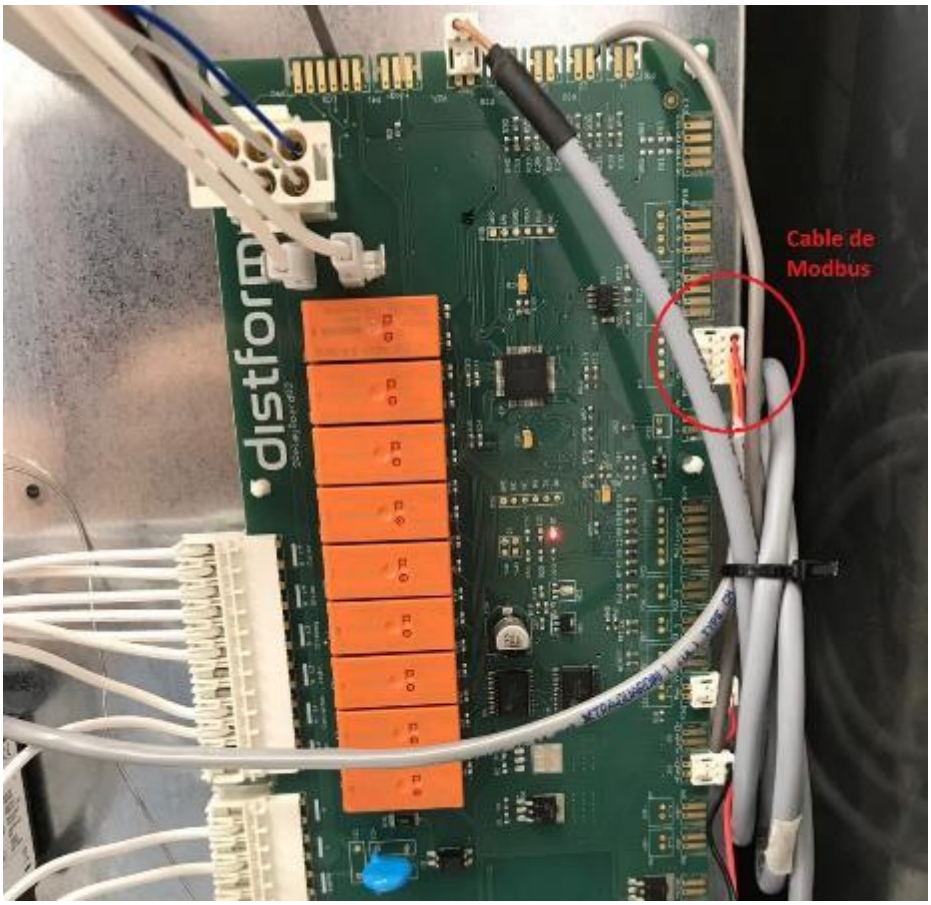

Figure 21. Modbus cable between boards

2.2.7. Control board

The control board should switch on automatically when powered. If not, check the modbus cable and the control board.

2.3. Solutions to common problems

2.3.1. The oven does not turn on

The oven must switch on and standby when the oven ON/OFF switch is pressed. When doing so, in three-phase ovens we must listen to the interlocking of the general safety contactor. See chapter 2.2.4. To start the oven, press the START/STOP button on the front panel of the oven.

If this is not the case, check the following points step by step. Before doing so, check that the power supply cable is properly connected and that no safety mechanism has been activated in the customer's electrical installation (differential, magnetothermic, etc.).

Check the power supply, as specified in the chapter 2.2.

2.3.2. The oven does not start

If an oven does not start, the door sensor may not detect that the door is properly closed.

On COOK, BAKE, iCOOK and iBAKE ovens, place a magnet near the door sensor area. If the oven responds and the motor and resistor start, the problem is that the door is too far away from the strut.

Figure 22. Door sensor (COOK, BAKE, iCOOK and iBAKE)

If placing a magnet next to the door sensor does not start the oven, check that the door sensor is connected properly and that no wires are loose or cut.

The BAKERSHOP and SNACK models are equipped with a mechanical micro switch. Check by manually pressing the switch.

Figure 23. Door sensor (SNACK and BAKERSHOP)

Check the door sensor cable on the relay board.

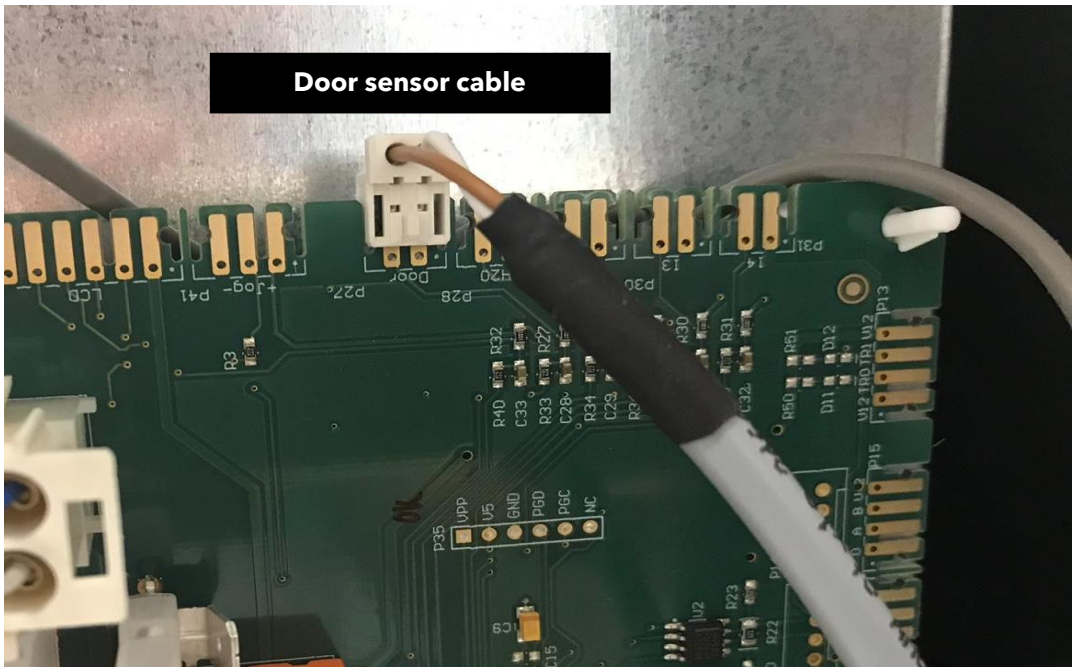

Figure 24. Door sensor wiring

2.3.3. The oven does not heat up

Having started the oven and with a program running, check that the power contactor is armed. If not, check that the voltage between poles A1 and A2 is 230VAC. If not, check the wiring between the relay board and the contactor.

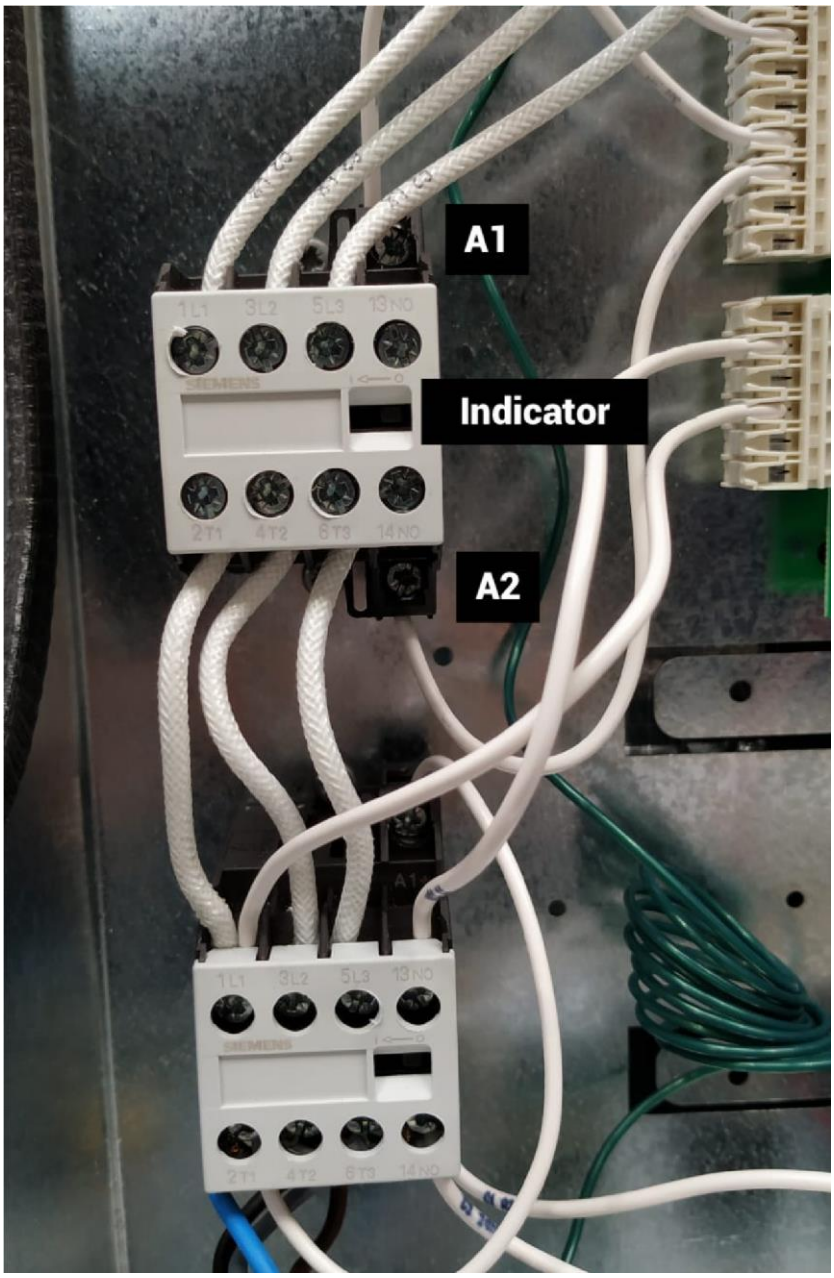

Figure 25. Power contactor

2.3.4. The oven turns itself off or the electronics do not respond

Check if the safety thermostat has tripped. If the oven turns off because the safety thermostat has tripped, check if the temperature inside the chamber is over 350ºC. If the thermostat trips before, change the safety thermostat. If it trips at over 350ºC, the problem may be a contactor or the control plate not regulating the temperature correctly.

If the oven turns off and it is not because the safety thermostat has tripped, the problem will be the temperature on the control or relay board. To check the temperature on the control board, with the oven on, press the time button for a few seconds. To check the temperature on the relay board, with the oven on, press the fan button for a few seconds. Check that these temperatures are below 80°C.

It is also possible that the chamber temperature sensor is not reading correctly.

2.3.5. The oven burns the food

Check that the temperature inside the oven corresponds to the temperature display when the temperature button is pressed down. If the oven is regulating the temperature properly, ask the user if this happens after they have used the oven at a high temperature. If you want to cook at a low temperature after having used the oven at a high temperature, you need to let the oven cool down for a reasonable time.

2.3.6. The oven does not produce steam

Check that the water system is correctly connected, and that the stopcock is open.

If this is all correct, check the water pump using the relay test. Activate the solenoid valve relay and check that it actually pumps water (see 3.2.1.5.).

If it does not, check the voltage to the solenoid valve and make sure it is not obstructed, especially in the flow regulators.

Make sure that the stainless-steel steam injection pipe is not clogged.

The solenoid valve is equipped with a 10L/min regulator at the input.

The steam generation and drainage cooling output (in those ovens that have them) are equipped with 0.15L/min regulators.

The rinsing outlet (in those ovens that have it) does not have a regulator.

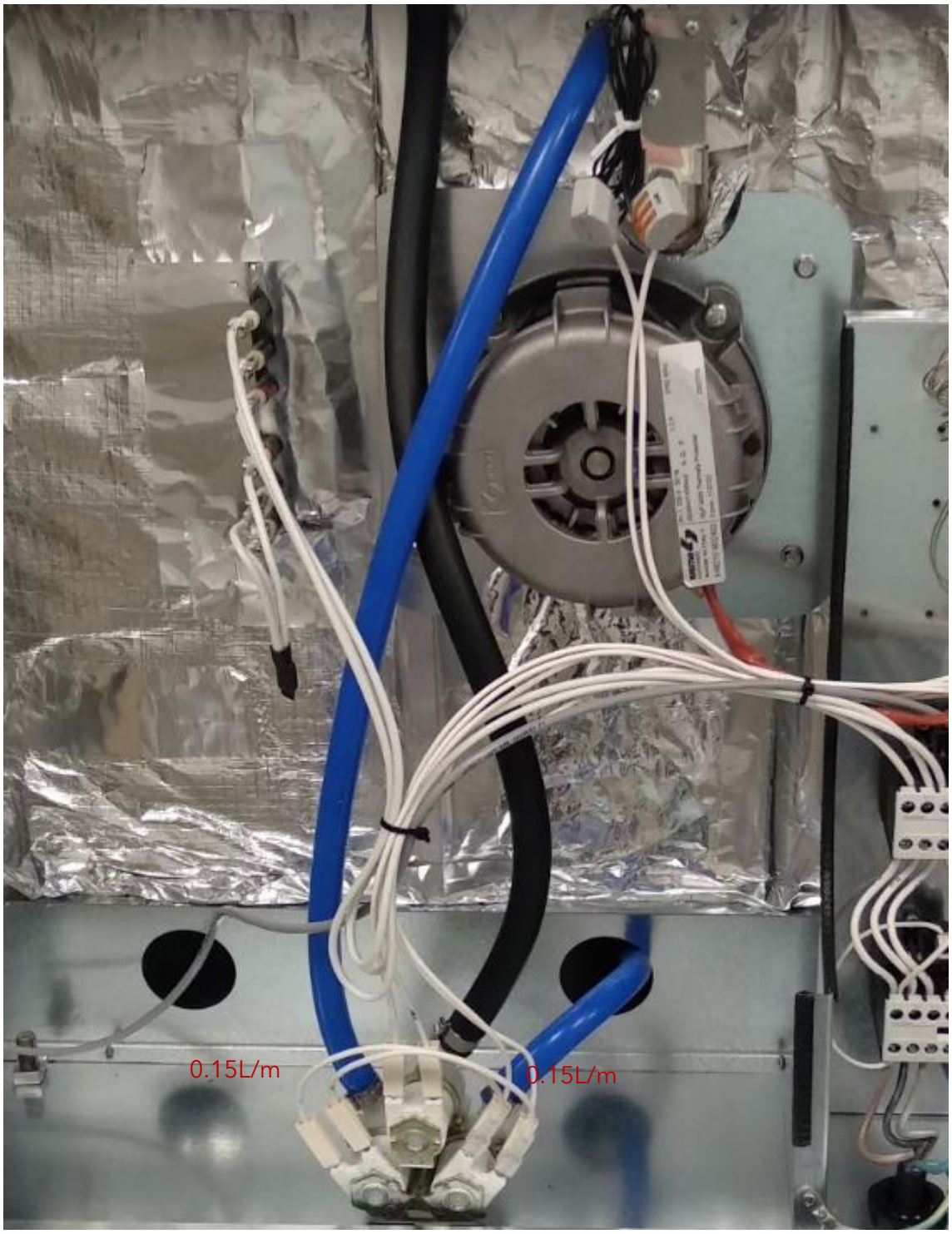

Figure 26. Steam system

2.3.7. The drain is clogged

In COOK, BAKE, iCOOK and iBAKE ovens, if the water is not draining away it is highly likely that the drain is clogged. You will then need to use a spring drain cleaner to remove the material blocking the drain.

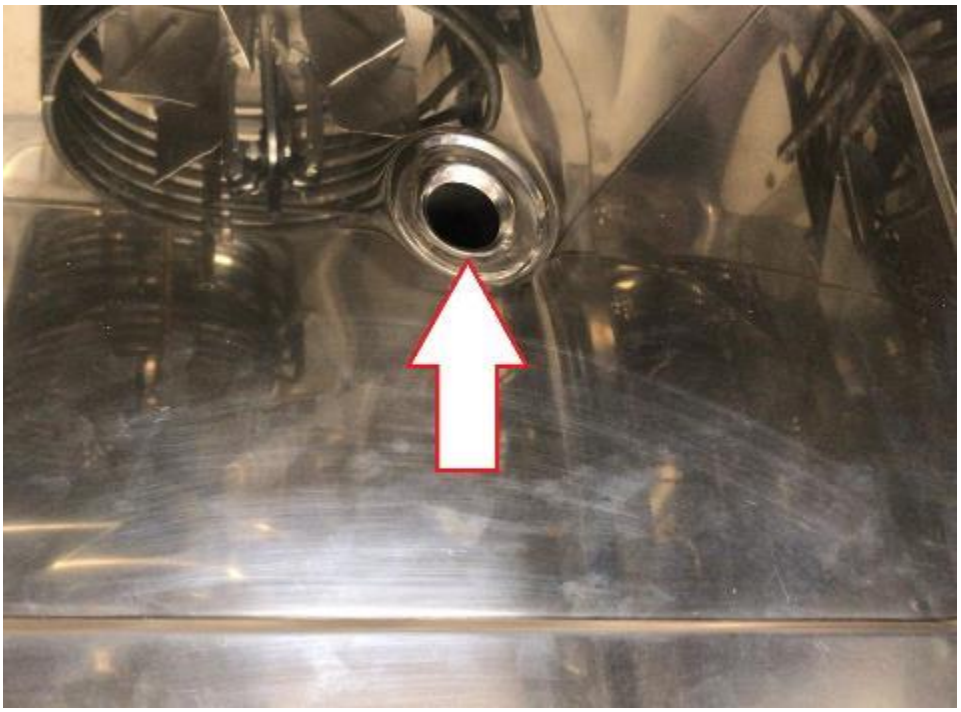

Figure 27. Oven drain

2.4. Automatic error detection

2.4.1. Mychef COOK/ iCOOK/BAKE/iBAKE/BAKERSHOP/SNACK

During the preparation and execution of any of the programmes available in the oven, errors may occur due to equipment failure. If this is the case, the display on the COOK, BAKE, BAKERSHOP and SNACK models will show "Er", followed by the error or alarm number.

Figure 28. Error indicator

For the iCOOK and iBAKE versions the display will show an error message according to the following image, for more information about the error, it is possible to view the description by clicking on "Details":

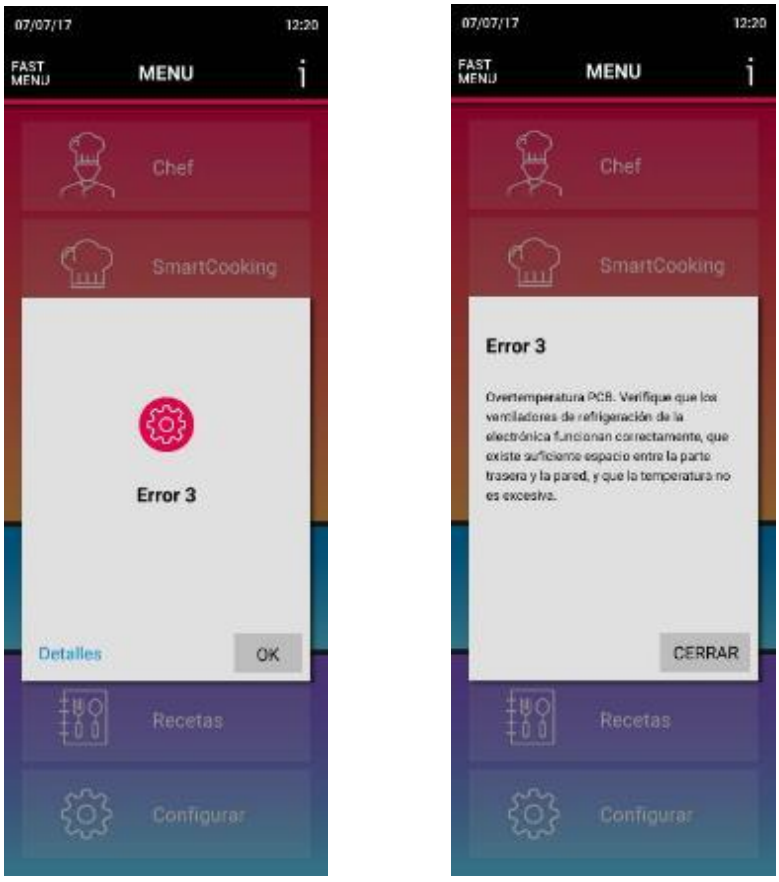

Figure 29. Error indicator for iCOOK / iBAKE ovens

The table below shows the different errors and alarms, as well as possible solutions to them.

Error	Internal definition	Clarification
0	NO ERROR	No error.
1	GENERAL PURPOSE INPUT ERROR	General error input. Not used.
2	ERROR OVERTEMPERATURE	General temperature input. Not used.
3	ERROR OVERTEMPERATURE PCB	Overtemperature PCB. Check that the cooling fans of the electronics are working properly, that there is enough space between the back and the wall, and that the ambient temperature is not too high.
4	ERROR COMMUNICATION	Communication between boards is not responding. Check the cable connecting the power board and the control board.
4.1	PCB ERROR RELAYS	Communication between boards is not responding. Check wiring.
4.3	INVERTER ERROR	Communication between boards is not responding. Check wiring.
4.5	ERROR GAS	Communication between boards is not responding. Check wiring.
4.6	ERROR GAS	Communication between boards is not responding. Check wiring
4.7	HOOD ERROR	Communication between boards is not responding. Check wiring.
4.8	PROOFER ERROR	Communication between boards is not responding or sensors not responding. Check wiring.
4.9	STATIC OVEN ERROR	Communication between boards is not responding or sensors not responding. Check wiring.
5	EEPROM ERROR	Processor and EEPROM communication does not work. Check the control board.
6	ENGINE ERROR	Motor error. Check motor wiring. Motor overtemperature. Motor stuck.
7	ALARM WATER	No water detected. Make sure that the water network is correctly connected. Not used.
8	ERROR WASHING	No detergent/rinse aid detected. Not used.
9	ERROR PROBE1 TEMP SENSOR NOT CONNECTED	External probe not connected. Check external probe and connector. Not used.
10	ERROR PROBE1 TEMP SENSOR SHORTED	External probe short-circuited. Check external probe and connector. Not used.
11	ERROR PROBE2 TEMP SENSOR NOT CONNECTED	External probe not connected. Check external probe and connector. Not used.
12	ERROR PROBE2 TEMP SENSOR SHORTED	External probe short-circuited. Check external probe and connector. Not used.
13	ERROR PROBE3 TEMP SENSOR NOT CONNECTED	External probe not connected. Check external probe and connector. Not used.
14	ERROR PROBE3 TEMP SENSOR SHORTED	External probe short-circuited. Check external probe and connector. Not used.

15	ERROR PROBE4 TEMP SENSOR NOT CONNECTED	Reserved. Not used.
16	ERROR PROBE4 TEMP SENSOR SHORTED	Reserved. Not used.
17	ERROR PROBE5 TEMP SENSOR NOT CONNECTED	Reserved. Not used.
18	ERROR PROBE5 TEMP SENSOR SHORTED	Reserved. Not used.
19	ERROR PROBE6 TEMP SENSOR NOT CONNECTED	Reserved. Not used.
20	ERROR PROBE6 TEMP SENSOR SHORTED	Reserved. Not used.
21	ERROR PROBE7 TEMP SENSOR NOT CONNECTED	Reserved. Not used.
22	ERROR PROBE7 TEMP SENSOR SHORTED	Reserved. Not used.
23	ERROR PROBE8 TEMP SENSOR NOT CONNECTED	Chamber probe not connected. Check probe and wiring.
24	ERROR PROBE8 TEMP SENSOR SHORTED	Short-circuited chamber probe. Check probe and wiring.
25	ERROR PROGRAM NOT TERMINATED	Reserved. Not used.
26	ERROR CLEANING PROGRAM NOT TERMINATED	The oven has been switched off by running a self-cleaning programme. Perform a rinse. Not used.
27	ERROR CLEANING TEMPERATURE TOO HOT	The oven temperature during a self-cleaning programme has risen above a maximum temperature. Not used.
28	ALARM RECOVERY TEMP TOO LOW	The oven has recovered from a power failure, and the temperature in the chamber was below 56°C. Risk of bacterial contamination. Discard or analyse the product in the cooking chamber. Not used.
29.XXXX	INVERTER ERROR	Inverter error. Consult code with the technical service.
30.XX	GAS SAFETY ERROR	Gas safety error. Consult code with the technical service.

Tabla 1. Errors, alarms, and possible solutions

Once the equipment has detected a serious error, it will not be able to function normally until it is repaired.

Due to automatic checks, the equipment may shut down to avoid a serious failure. Proceed to switch it on as normal.

3. SETTINGS MENU

3.1. Access password

Mychef ovens may request a password for parameter modification.

This functionality is currently disabled.

3.2. Mychef COOK / BAKE / BAKERSHOP / SNACK

To access the settings menu, with the oven turned off, press the following simultaneously:

COOK: convection + start/stop

BAKERSHOP/SNACK: P1 + start/stop

Figure 30. COOK UP/PRO and BAKE PRO Panel

Figure 31. BAKERSHOP and SNACK AIR and AIR-S Panel

Figure 32. MASTER control panel

When you enter the settings menu, the three indicators on the top of the oven will all light up at the same time, and the display will show P0:00.

Figure 33. Example. Value of parameter 1 = 1

This menu is structured in a block of records or parameters that contain all the information of the oven.

To navigate through the parameters and to be able to view and edit values, first select the parameter. To do this, press the convection key (COOK and BAKE ovens) or P1 (BAKERSHOP and SNACK ovens). The first part of the display will then flash. You can then change the parameter number with the -/+ keys.

To change the parameter value, press the steam key (COOK and BAKE ovens) or P2 (BAKERSHOP and SNACK ovens). The second part of the display will then flash. You can then change the parameter value with the -/+ keys.

The parameters to be configured **MANDATORY** when changing or reinstalling each control board are:

- Oven type: 6GN 1/1, 10GN 1/1, etc. (P1)
- Number of TSC channels (P2)
- Self-cleaning (P3)

All parameters are presented below:

3.2.1. Oven configuration

This section allows to check the internal configuration parameters for the oven and diagnose faults and malfunctions, as well as their solution by the technical assistance service.

Register	Name	Parameter	Editable
P0	Password	Technical service password	No
P1	Type	Oven type	Yes
P2	Tsc	Number of TSC channels (0 - 4)	Yes
P3	Autoclean	Type of self-cleaning	Yes
P4	FanConfig	Fan and inverter type	Yes
05	RelayTest	Test relays 1 to 15	No
06	GPIOTest	GPIO testing	No
07	KeyboardTest	Keyboard test	No

Tabla 2. SAT configuration

These parameters provide information on huge range of different characteristics, from the type of oven to the fan configuration, etc. They can also be modified and changed in order

to adapt the electronics to all potential equipment configurations. Some records also allow to perform tests to verify that all components are working properly.

3.2.1.1.Password

This field is reserved for future use. Currently it is not necessary to enter the password to modify configuration parameters.

3.2.1.2. Type

Record 1 allows you to select the type of oven. Below is a list of all the ovens and the value assigned to each of them in this field:

NO.	MODEL	MODE
0	TYPE_MYCHEF_COOK_BAKE_PRO	Mychef Cook Pro or Bake Pro
1	TYPE_MYCHEF_BAKERSHOP	Mychef Bakershop or Snack
2	TYPE_MYCHEF_COOK_NOMYCARE	Mychef Cook Up
3	Reserved	Reserved
4	Reserved	Reserved
5	TYPE_MYCHEF_COOK_MASTER	Mychef Cook Master or Bake Master
6	TYPE_AIR	Mychef Bakershop and Snack AIR
7	TYPE_AIR_S	Mychef Bakershop and Snack AIR-S
8	Reserved	Reserved
9	Reserved	Reserved
10	TYPE_DEMO	Demo. Disables fan and resistor.
11	TYPE_TST	Test
12	TYPE_MAX	Reserved

Tabla 3. Oven types

By editing this value, it is possible to configure the control board for each type of oven.

3.2.1.3. TSC Mode

Record 2 sets the number of TSC channels activated. By editing it we can configure the control board for an oven with or without TSC.

For ovens without TSC this value must always be 0.

For electric ovens with TSC this value must always be 2.

For gas ovens this value should be 5 or 6 (see table below).

The other values remain unused.

NO.	MODEL	MODE
0	TSC_DISABLED,	Electric oven without TSC
1	TSC_1_CH	Reserved
2	TSC_2_CH	Electric oven with TSC (electric)
3	TSC_3_CH	Reserved
4	TSC_4_CH	Reserved
5	GAS_1_CH	Gas Oven with 1 burner
6	GAS_2_CH	Gas oven with 2 burners
7	GAS_3_CH	Reserved
8	GAS_4_CH	Reserved

3.2.1.4. Auto clean

The record 4 allows to configure the oven if the equipment has a self-cleaning system.

The AIR, AIR-S and UP oven ranges do not have self-cleaning.

The PRO and MASTER 1/1 electric oven ranges have non-recirculated self-cleaning.

The Master 6 2/1 electric and gas ovens have recirculated self-cleaning.

The MAX and MASTER 10 2/1 electric and gas oven ranges have extended recirculated self-cleaning.

Gas ovens have recirculated self-cleaning.

NO.	MODEL	MODE
0	AUTOCLEAN_DISABLED,	Cleaning disabled
1	AUTOCLEAN_TABS_SETTING1	Recirculated cleaning
2	AUTOCLEAN_TABS_SETTING2	Non-recirculated cleaning
3	AUTOCLEAN_TABS_SETTING3	Extended recirculated cleaning

3.2.1.5. Fan configuration

The record 4 defines the configuration of the fan, which can be of different speeds or controlled by the inverter.

The AIR oven ranges have 1 speed.

The AIR-S, PRO and UP oven ranges have 2 speeds.

The MASTER electric oven ranges (except MAX) have 4 speeds.

The MAX oven ranges are equipped with inverter.

The gas ovens are equipped with an inverter.

NO.	MODEL	MODE
0	FAN_SINGLE_PHASE_2SPEED	2 speeds
1	FAN_THREE_PHASE_INVERTEK	Inverter
2	Reserved	Reserved
3	Reserved	Reserved
4	FAN_SINGLE_PHASE_4SPEED	4 speeds
5	FAN_SINGLE_PHASE_1SPEED	1 speed

3.2.1.6. Relay Test

Record 5 allows to activate or deactivate the relays individually. This is very useful to check that all relays are working correctly and that there are no electrical faults on the electronic board.

To activate them, the following process must be carried out:

- Press the convection key (COOK/BAKE) or P1 (BAKERSHOP/SNACK) and use the -/+ keys to select the P5 record.
- Press the steam key (COOK/BAKE) or P3 (BAKERSHOP/SNACK) and use the -/+ keys to select the relay number to be activated.
- Press the mixed key (COOK/BAKE) or P2 (BAKERSHOP/SNACK) button to activate the relay. The electrical contact will remain closed as long as the button is pressed.

With this process it is possible to check that all relays are activated and deactivated correctly, as well as to make sure that all elements connected to each relay, such as lights, pumps, and motors, are working properly.

The 230V relays are associated with a number from 1 to 15. In addition, there are 2 relays at 12V activated simultaneously with relays 1 and 3.

Relay No.	Definition	
1*	Not used. When this relay is activated, relay 17 (Cooling 12V) is also activated.	
2	Contactor.	
3*	Not used. When this relay is activated, relay 16 (12V light) is also activated.	
4	Chimney.	
5	Steam solenoid valve.	
6*	Condensate cooling solenoid valve.	
7	Siphon filler solenoid valve (rinsing)	
8*	Self-cleaning recirculation pump.	
9*	Siphon drain pump.	
10	Reserved.	
11	Reserved.	
12	Reserved.	
13	Speed 1.	Engine
14	Speed 2.	
15	CW/ACW	
16	Virtual relay. Speed 1 + CW/ACW	
***Includes functions only available in the 17-relay electronics board.**		

Tabla 4. Relay test allocations

To activate them, the following process must be carried out:

- Select record 05 of block P3 and press the PROG button to edit the value.
- Use the display to navigate through the 17 (1...16) possibilities and choose the number related to the relay to be tested.
- Press the STEP button to activate the relay. The electrical contact will remain closed as long as the button is pressed.
- We can vary the number and press STEP to activate the desired relays as many times as necessary.
- At the end of the test, press the M3 button to return to the configuration menu.

With this process it is possible to check that all relays are activated and deactivated correctly, as well as to make sure that all elements connected to each relay, such as lights, pumps and motors, are working properly.

3.2.1.7. GPIO Test

Record 6 shows a value equal to $2^x$where x:

NO.	Sensor
0	Door sensor.
1	Reserved.
2	Trolley sensor (MAX models only).
3	Reserved.
4	Reserved.
5	Engine over-temperature sensor.

Tabla 5. Sensor reading

For example:

- If everything is closed the value will be 0.
- If only the door is open, the value shall be 1.
- If an overtemperature is detected in the motor and the door is open the value will be $2^0 + 2^5$, that is 33.

3.3. Mychef iCOOK / iBAKE

To access the configuration menu, click on "Settings" in the main menu. This submenu allows different configuration options to be carried out on the oven at user level, such as date, language, volume, lighting, among others. To carry out an advanced configuration of the oven parameters, it is necessary to scroll to "Advanced configuration" and access.

Figure 34. Main menu - Settings

Figure 35. Advanced configuration

The advanced configuration menu is structured in a block of registers and parameters containing all the oven information.

To navigate through the parameters and to be able to view and edit values, we must first select the parameter.

Figure 36. Configuration. Parameter settings

The parameters to be configured **MANDATORY** when changing or reinstalling each control board are:

- Oven type: 6GN 1/1, 10GN 1/1, etc.
- Number of TSC channels
- Self-cleaning

All parameters are presented below:

3.3.1. Oven configuration

The "Advanced Configuration" option allows the internal configuration parameters of the oven to be consulted and facilitates the diagnosis of faults and malfunctions, as well as their solution by the technical assistance service.

These parameters report a very wide range of characteristics from oven type to fan configuration, etc. and allow them to be modified and changed in order to adapt the electronics to all possible equipment configurations. Some registers also allow testing to verify that all components are working properly.

3.3.1.1. Password

In order to access the "Advanced Settings" option, it is necessary to enter the password: 159.

3.3.1.2. Type

Record 1 allows you to select the type of oven. Below is a list of all the ovens and the value assigned to each of them in this field:

NO.	MODEL	MODE
0	TYPE_MYCHEF_06123ML	MyChef S 4GN1/1 and MyChef S 6GN2/3
1	TYPE_MYCHEF_06111ML	MyChef S 6GN1/1
2	TYPE_MYCHEF_09111ML	MyChef S 9GN1/1
3	TYPE_MYCHEF_06111MT	MyChef S 6GN1/1 Transversal
4	TYPE_MYCHEF_06111ST	MyChef L 6GN1/1
5	TYPE_MYCHEF_10111ST	MyChef L 10GN1/1
6	TYPE_MYCHEF_20111ST	MyChef L 20GN1/1
7	TYPE_MYCHEF_06211ST	MyChef L 6GN2/1
8	TYPE_MYCHEF_10211ST	MyChef L 10GN2/1
9	TYPE_MYCHEF_20211ST	MyChef L 20GN2/1
10	TYPE_MYCHEF_COOK_4_11	Mychef iCook 4 GN 1/1, Mychef Cook 4 GN 1/1
11	TYPE_MYCHEF_COOK_6_11	Mychef iCook 6 GN 1/1, Mychef Cook 6 GN 1/1
12	TYPE_MYCHEF_COOK_10_11	Mychef iCook 10 GN 1/1, Mychef Cook 10 GN 1/1
13	TYPE_MYCHEF_COOK_20_11	Mychef iCook 20 GN 1/1, Mychef Cook 20 GN 1/1
14	TYPE_MYCHEF_COOK_4_21	Mychef iCook 4 GN 2/1, Mychef Cook 4 GN 2/1
15	TYPE_MYCHEF_COOK_6_21	Mychef iCook 6 GN 2/1, Mychef Cook 6 GN 2/1
16	TYPE_MYCHEF_COOK_10_21	Mychef iCook 10 GN 2/1, Mychef Cook 10 GN 2/1

17	TYPE_MYCHEF_COOK_20_21	Mychef iCook 20 GN 2/1, Mychef Cook 20 GN 2/1
18	TYPE_MYCHEF_SNACK_3_23	Mychef Snack 3 GN 2/3
19	TYPE_MYCHEF_SNACK_3_11	Mychef Snack 3 GN 1/1
20	TYPE_MYCHEF_SNACK_4_23	Mychef Snack 4 GN 2/3
21	TYPE_MYCHEF_SNACK_4_11	Mychef Snack 4 GN 1/1
22	TYPE_MYCHEF_SNACK_6_11	Mychef Snack 6 GN 1/1
23	TYPE_MYCHEF_SNACK_10_11	Mychef Snack 10 GN 1/1
24	TYPE_MYCHEF_BAKE_4	Mychef iBake 4 600x400, Mychef Bake 4 600x400
25	TYPE_MYCHEF_BAKE_6	Mychef iBake 6 600x400, Mychef Bake 6 600x400
26	TYPE_MYCHEF_BAKE_10	Mychef iBake 10 600x400 Mychef Bake 10 600x400
27	TYPE_MYCHEF_BAKE_16	Mychef iBake 16 600x400
28	TYPE_MYCHEF_BS_3_23	Mychef Bakershop 3 GN 2/3
29	TYPE_MYCHEF_BS_3_11	Mychef Bakershop 3 GN 1/1
30	TYPE_MYCHEF_BS_4_23	Mychef Bakershop 4 GN 2/3
31	TYPE_MYCHEF_BS_4_11	Mychef Bakershop 4 GN 1/1
32	TYPE_MYCHEF_BS_6_11	Mychef Bakershop 6 GN 1/1
33	TYPE_MYCHEF_BS_10_11	Mychef Bakershop 10 GN 1/1
34	TYPE_DEMO	Demo. Disables fan and resistor.
35	TYPE_TST	Test
36	TYPE_MAX	Reserved

Tabla 6. Oven types

By editing this value it is possible to configure the control board for each type of oven.

3.3.1.3. TSC Mode

Register 2 sets the number of TSC channels activated. By editing it we can configure the control board for an oven with or without TSC.

For ovens without TSC this value must always be 0.

For electric ovens with TSC this value must always be 2.

For gas ovens this value should be 5 or 6 (see table below).

All other securities remain unused.

NO.	MODEL	MODE
0	TSC_DISABLED,	Electric oven without TSC
1	TSC_1_CH	Reserved
2	TSC_2_CH	Electric oven with TSC (electric)
3	TSC_3_CH	Reserved
4	TSC_4_CH	Reserved
5	GAS_1_CH	Gas Oven with 1 burner
6	GAS_2_CH	Gas oven with 2 burners
7	GAS_3_CH	Reserved
8	GAS_4_CH	Reserved

3.3.1.4. MyCare

This option allows you to configure whether the equipment has a self-cleaning system. It must be set to AUTOCLEAN_DISABLED in ovens without self-cleaning.

The register number allows you to 4configure whether the equipment has a self-cleaning system.

The iBake and iCook 1/1 electric ovens have non-recirculating self-cleaning.

The ovens of the iCook 6 2/1 electric ranges have recirculated self-cleaning.

MAX electric and gas ovens have extended recirculated self-cleaning.

The iCook 10 2/1 electric and gas ovens have extended recirculated self-cleaning.

Gas ovens have recirculated self-cleaning.

MYCARE CONFIGURATION	DESCRIPTION
AUTOCLEAN_DISABLED	Self-cleaning disabled
AUTOCLEAN_TABS_SETTING1	Recirculated self-cleaning
AUTOCLEAN_TABS_SETTING2	Non-recirculated self-cleaning
AUTOCLEAN_TABS_SETTING3	Enhanced recirculated self-cleaning
AUTOCLEAN_TABS_SETTING4	Reserved

Tabla 7. MyCare Configuration

3.3.1.5. Fan

This option defines whether the oven model includes a variable frequency drive to control the oven motor. To select this configuration, choose FAN_THREE_PHASE_INVERTEK or if not included FAN_SINGLE_PHASE_4SPEED.

3.3.1.6. Relay test

This option allows you to activate or deactivate the relays individually. This is very useful to check that all relays are working correctly and that there are no electrical faults on the electronic board.

The 230V relays are associated with a number from 1 to 15. In addition, there are 2 12V outputs activated simultaneously with relays 1 and 3.

Relay No.	Definition	
1*	Not used. When this relay is activated, relay 17 (Cooling 12V) is also activated.	
2	Contactor.	
3*	Not used. When this relay is activated, relay 16 (12V light) is also activated.	
4	Fireplace.	
5	Steam solenoid valve.	
6*	Condensate cooling solenoid valve.	
7	Siphon filler solenoid valve (rinsing)	
8*	Self-cleaning recirculation pump.	
9*	Siphon drain pump.	
10	Reserved.	
11	Reserved.	
12	Reserved.	
13	Speed 1.	Engine
14	Speed 2.	
15	CW/ACW	
16	Virtual relay. Speed 1 + CW/ACW	
***Includes functions only available in 17-relay electronics.**		

Tabla 8. Relay test assignments

To activate them, simply press to select:

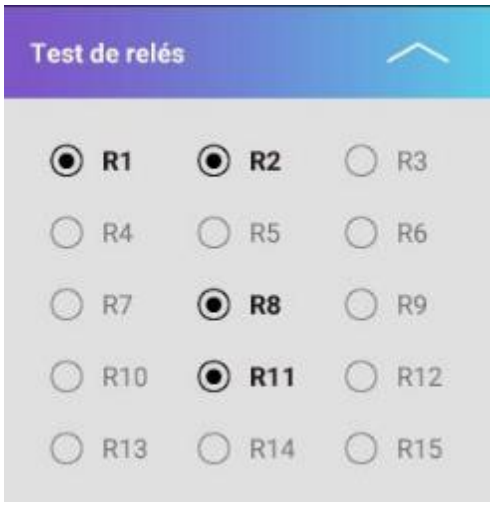

Figure 37. Configuration. Relay test

With this process it is possible to check that all relays are activated and deactivated correctly, as well as to make sure that all elements connected to each relay, such as lights, pumps and motors, are working properly.

3.3.1.7. GPIO testing

This option displays information about the sensors,

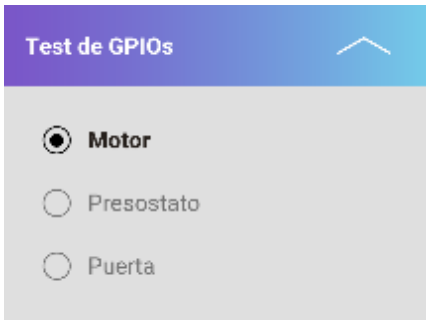

Figure 38. Configuration. GPIOs test

For example:

- If everything is closed, the different options appear inactive.
- If only the door is open, the option will be active.

4. FIRMWARE UPDATE

To update the firmware version, click on the "more information" button in the control panel, then the window containing the link to the IP page will be displayed.

After clicking on the IP address and entering the credentials, the server index is accessed. It is necessary to be connected to the same Wi-Fi network as the oven.

Figure 39. More information window

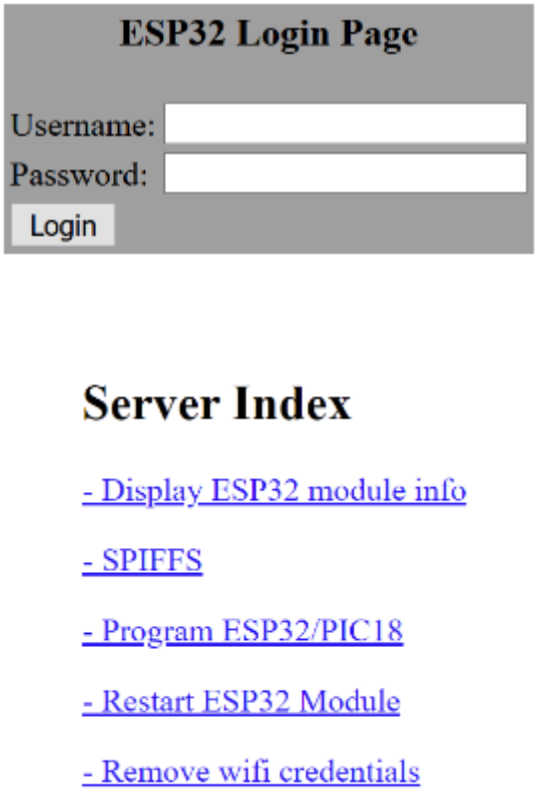

Figure 40. Access to the server index

Within the Server index, access Program ESP32/PIC18.

4.1. Firmware

To load the firmware update, click the "Browse" button in the PIC18 Programmer and select the .hex file (ConceptR3_V3.8.hex).

Click Update PIC18 firmware to install the new version.

BOOT" will appear on the display and the control will restart.

The following display will appear during the update process:

Once the process has finished, the message "PIC18 Programmed successfully" will appear, check that the firmware update has been successful by checking the firmware version on the display.

4.2. Wi-Fi module

To update the wifi module click on the "Browse" button in ESP32 Programmer and select the .bin file. Click on Update ESP32 and wait for the update process to finish.

To check the updated version, disconnect the oven from the power supply and reconnect it. In the Smart Control Version section (Figure 37) the previously installed version will appear.

5. REPLACEMENT OF ELEMENTS

5.1. Replacing the chamber light

The chamber light is located in the door frame. To replace it, open the inner door of the oven by pressing lightly on the fastening clips (hinged models) or removing the screws (hinged models). Then, use two screwdrivers to press the LED light fixing, and proceed to its replacement.

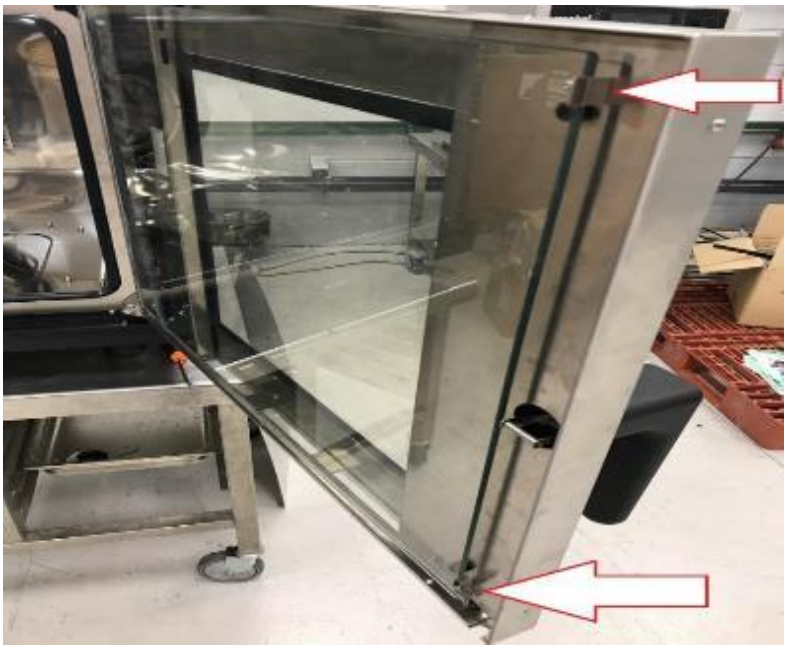

Figure 41. Inner door clips (lateral models)

Figure 42. Inner door screws (lateral models)

Figure 43. Replacement LED light. (COOK and BAKE)

For iCOOK and iBAKE models, use a screwdriver to remove the fixing screws of the LED light assembly.

Figure 44. LED light replacement. (iCOOK and iBAKE)

5.2. Replacement of the chamber probe

To replace the core probe, the rear part must be removed (see 1.3).

From the inside of the oven, remove the two screws that hold the probe to the cooking chamber.

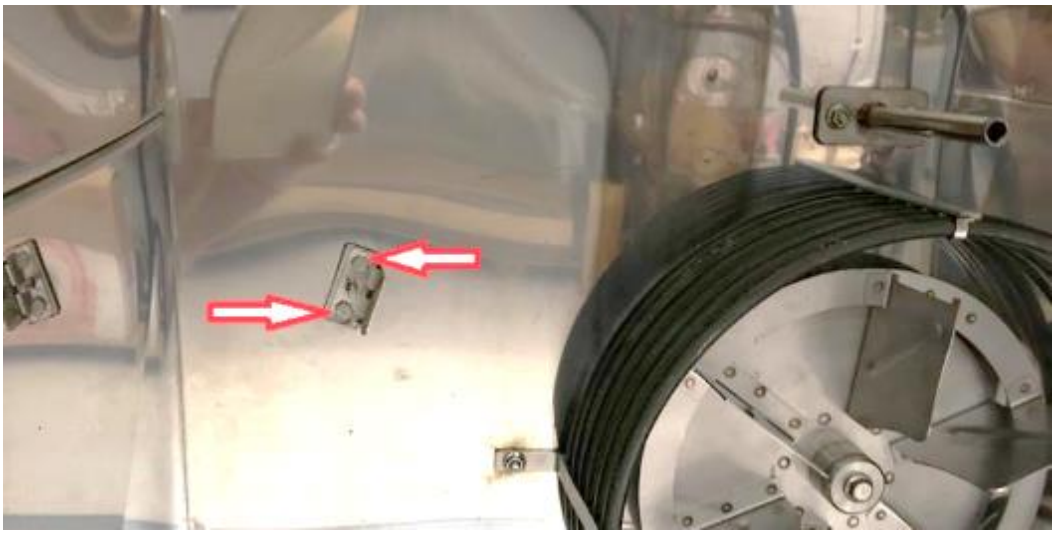

Figure 45. Chamber probe (front)

Remove the connector from the relay board. Remove the probe to be replaced by pulling the end of the probe from inside the oven.

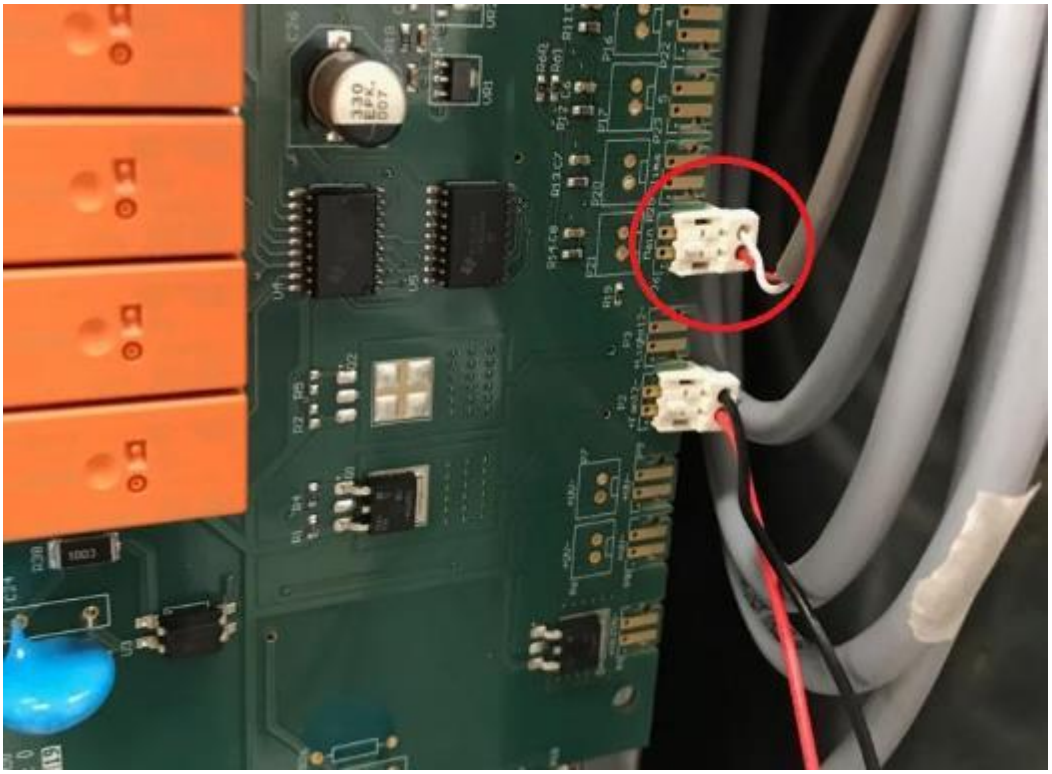

Figure 46. Chamber probe connector

Then attach the new probe terminal to the cable gland. Remember to pass the graphite gasket. Pull the cable gland, connect the terminal to the relay board and screw the two screws inside the firing chamber.

5.3. Replacement of the relay board

To replace the relay board, the rear part must be removed (see 1.3).

Disconnect the multi-terminal connectors, located on the edges of the plate, by pulling upwards. Squeeze the tabs on the motor connector and pull it upwards until it is disconnected. Disconnect the motor starting capacitor. Disconnect the probes from the side. Finally, remove the communications cable.

Remove the six fixing brackets (blue) by pressing the tab on each bracket.

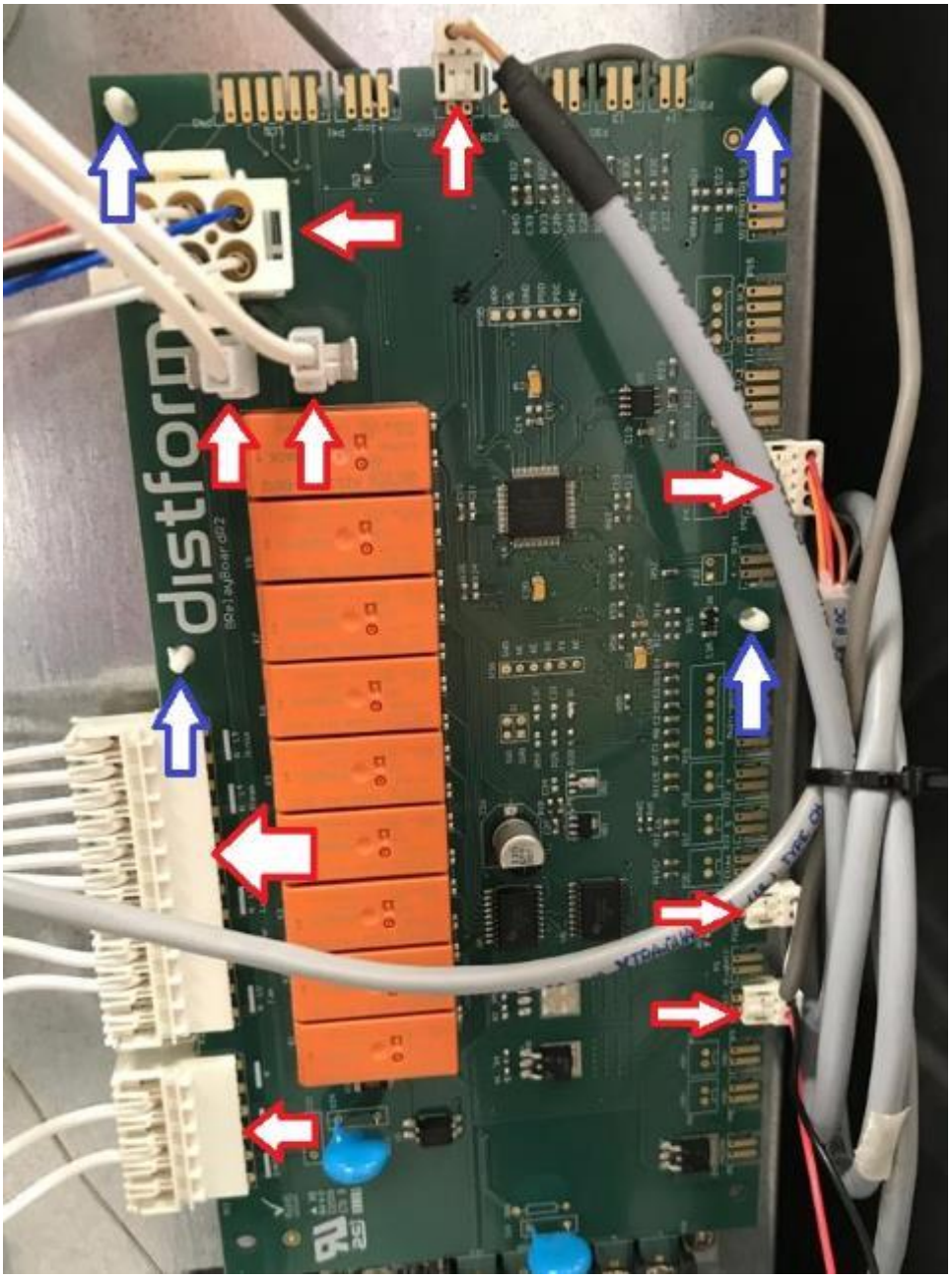

Figure 47. Disassembly of 9-relay board

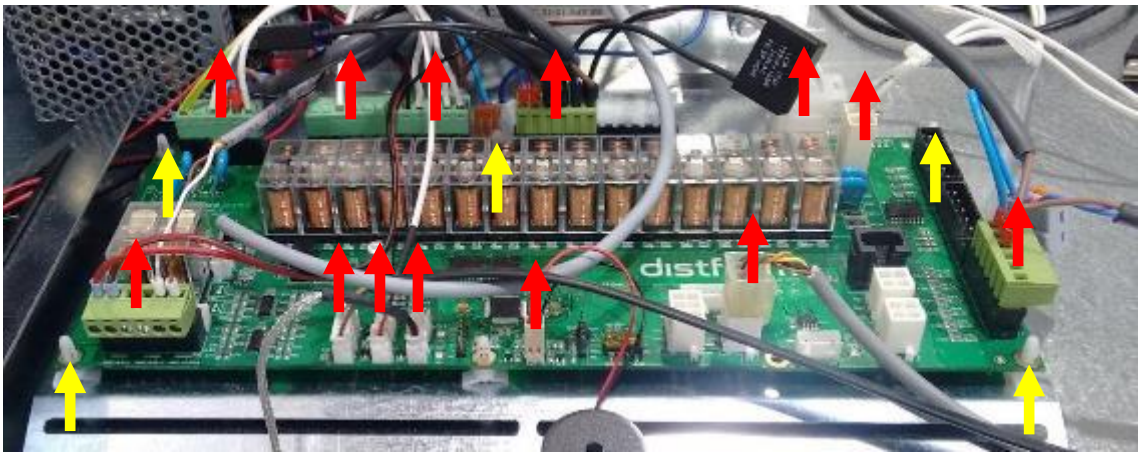

Figure 48. Disassembly of 17 relay board

Two screws holding the power supply must also be removed:

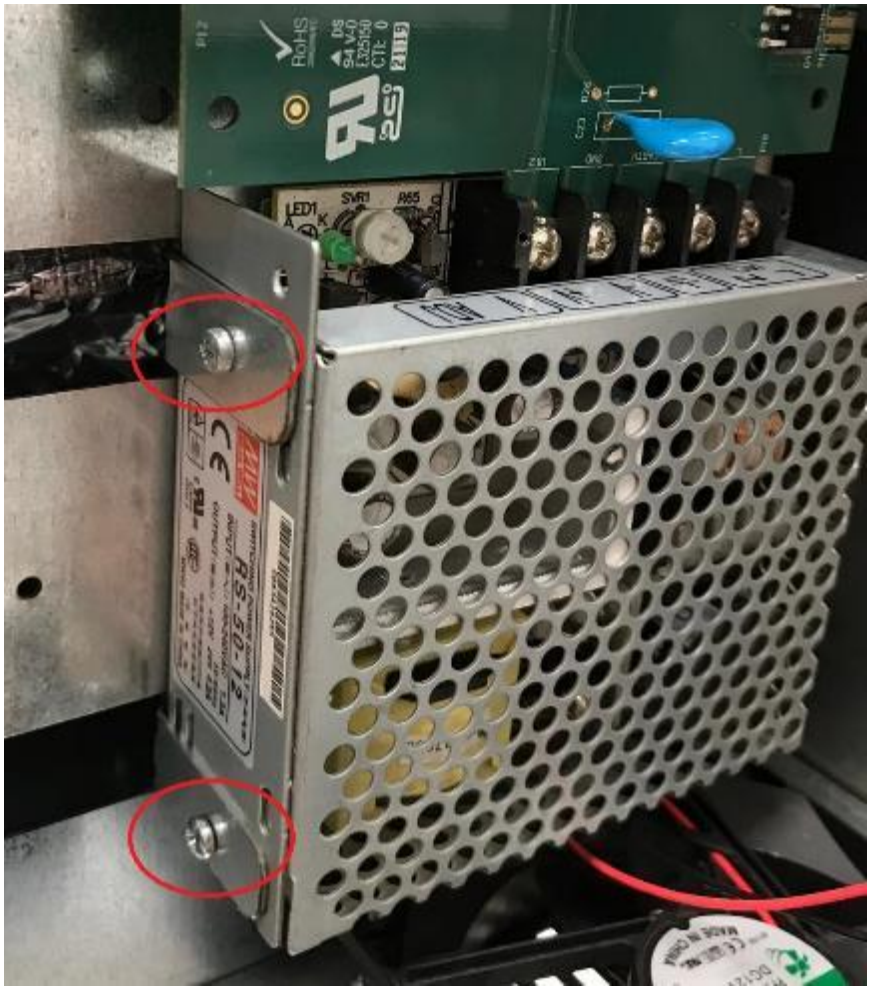

Figure 49. Dismantling power supply

5.4. Replacement of contactors

First remove the rear part (see 1.3). To replace any contactor, first disconnect the wiring. After the wiring is loose, remove the contactor.

Figure 50. Contactors

5.5. Replacement of the control board

Remove the clips from the inner door. (See Figure 21)

Remove the screws on the back of the control.

Figure 51. Control fixing screws

Then remove the control plate towards the front, using a flat-blade screwdriver. To release the quick connectors, press the tab on the quick connectors and pull out the cable.

Figure 52. Release connectors. (COOK, BAKE, BAKERSHOP and SNACK)

(See wiring diagram Figure 73)

Figure 53. Connector release. (iCOOK, iBAKE)

(See wiring diagram Figure 74)

5.6. Replacement of solenoid valves

First of all, remove the rear panel (see 1.1) and then disconnect the FASTON terminals.

The solenoid valve system is an assembly of 3 valves and 3 solenoid coils and must be treated as a single part.

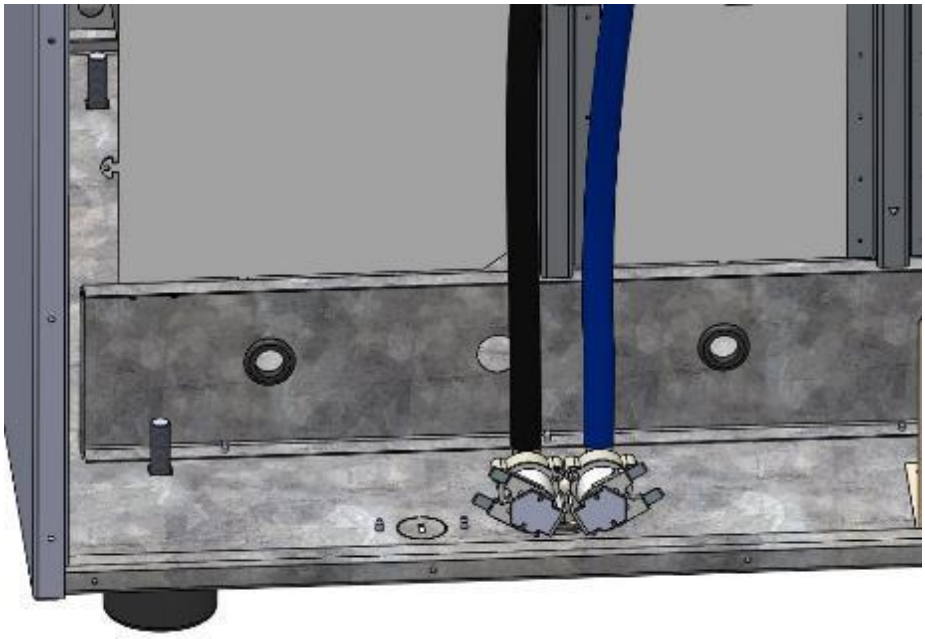

Figure 54. Solenoid valve system

Remove the two retaining screws and remove the solenoid valve.

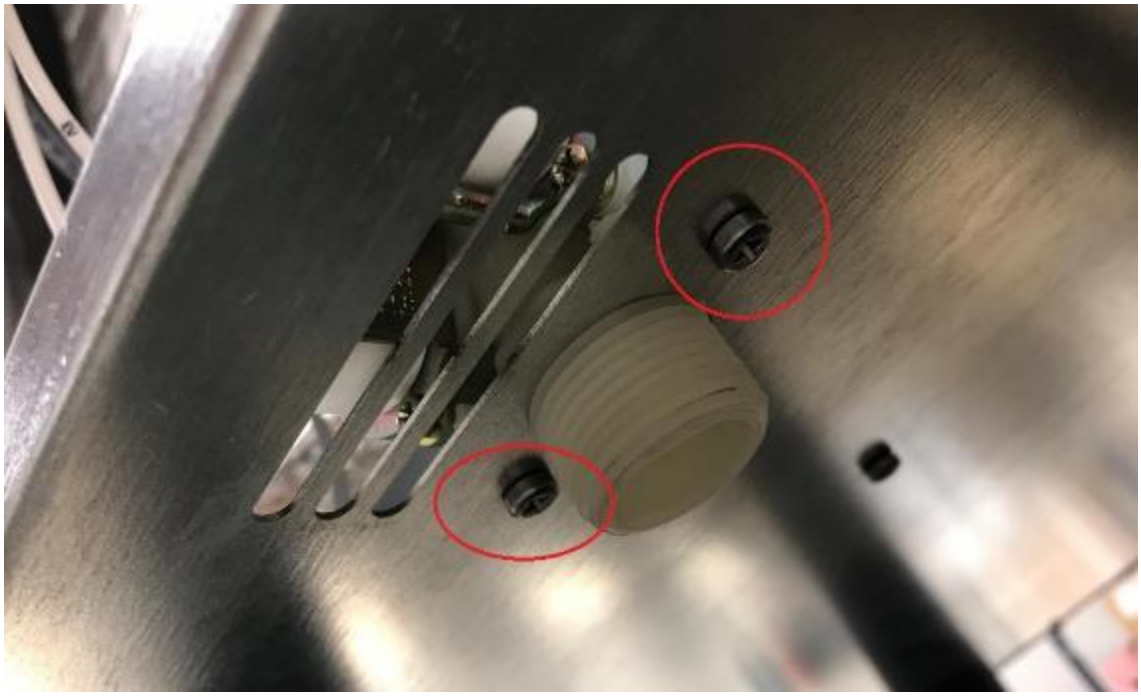

Figure 55. Fastening screws

5.7. Replacement of the safety thermostat

First remove the rear part (see 1.3). Remove the protective plate from the convection fan (see 1.4). 1.5).

First remove the thermostat bulb. At the rear of the oven, pull the insulating fibre away from the bulb until you reach the bulb retaining nut.

Figure 56. Thermostat bulb

Once the bulb has been removed, we will disassemble the thermostat body. To do this, remove the two FASTON connectors, and unscrew the fixing nut.

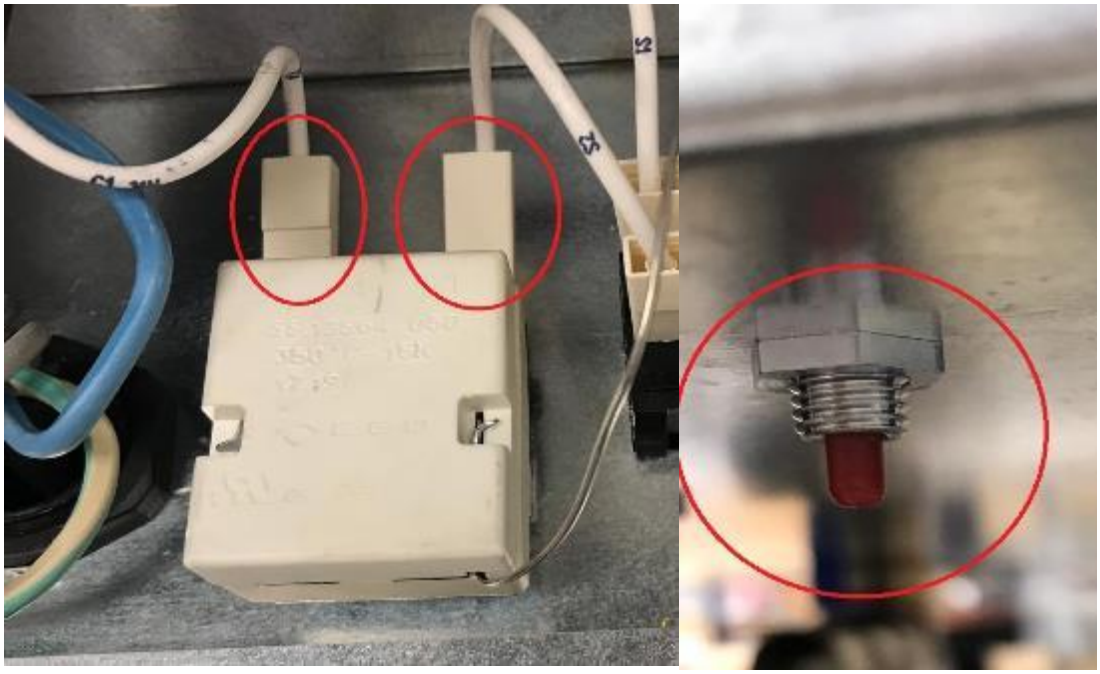

Figure 57. Thermostat body

5.8. Replacement of the steam injection pipe

Remove the convection fan cover plate (see 5) and the rear part (see 1.3).

From the back of the oven, remove the silicone tubes by breaking the flange that holds each one in place.

Figure 58. Steam generation tubes fastening

Once each silicone tube has been removed at the rear, proceed to the extraction of the injection tube inside the chamber by removing the corresponding screws. If the sealing gasket is in good condition, keep it for later use; if it is dry or burnt, replace it. Attention, before replacing the silicone tube, check that it is in good condition, and pay special attention when tightening the flange, to avoid possible sectioning of the tube due to over-tightening or leaks due to weak tightening.

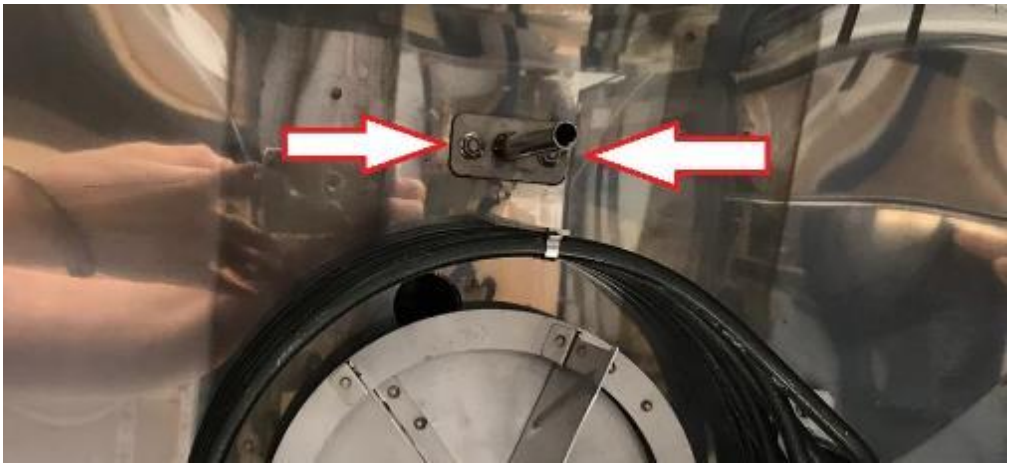

Figure 59. *Steam generation tubes.*

5.9. Replacement of the oven motor turbine

Remove the protective plate from the convection fan (see 5). Then lock the blade and loosen the central screw by only 1 mm by turning it anticlockwise. Once loosened, position the extractor, inserting it through the slot in the turbine shaft.

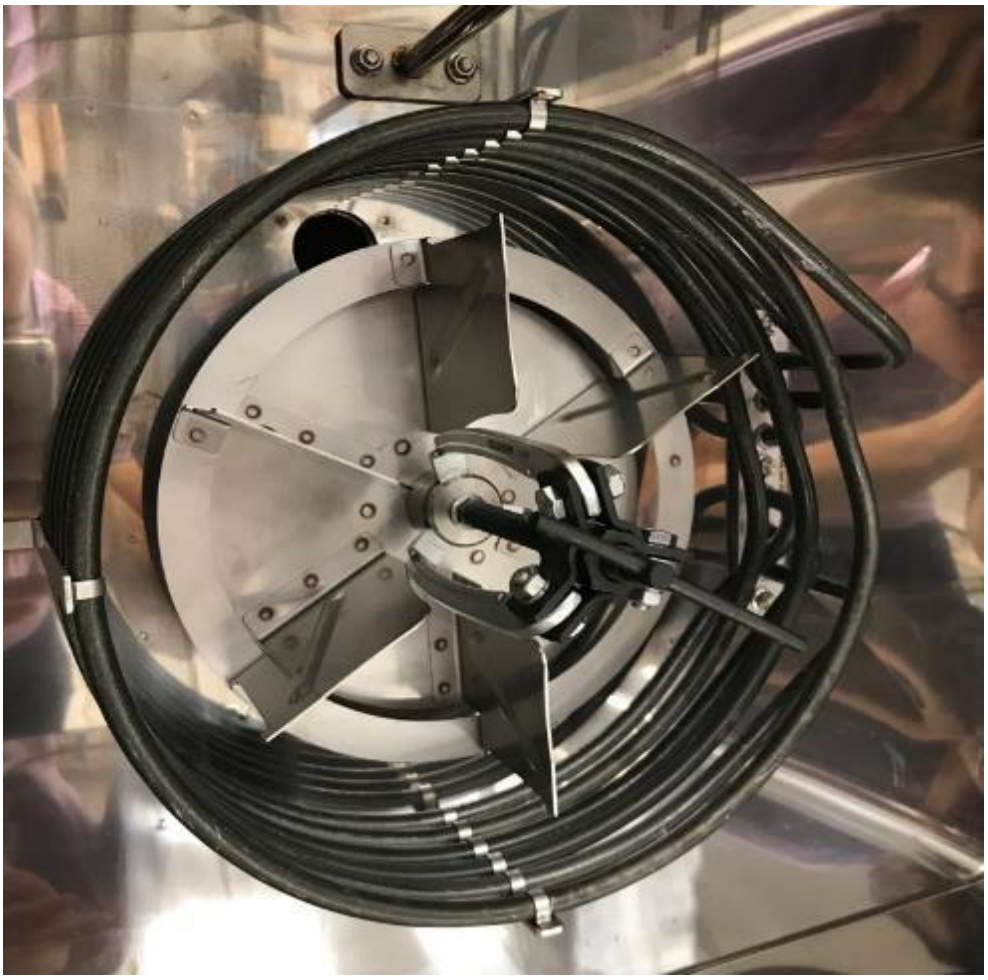

Figure 60. Turbine extractor

Lock the shaft with a spanner and turn the release screw. Once the blade is loose, finish removing the central screw.

5.10. Replacement of the oven motor

Proceed as follows Replacement of the oven motor turbine. Then remove the rear part (see 1.3).

On ovens with a single-phase motor, disconnect the motor connector by pressing on the retaining tabs and pulling firmly on both connectors.

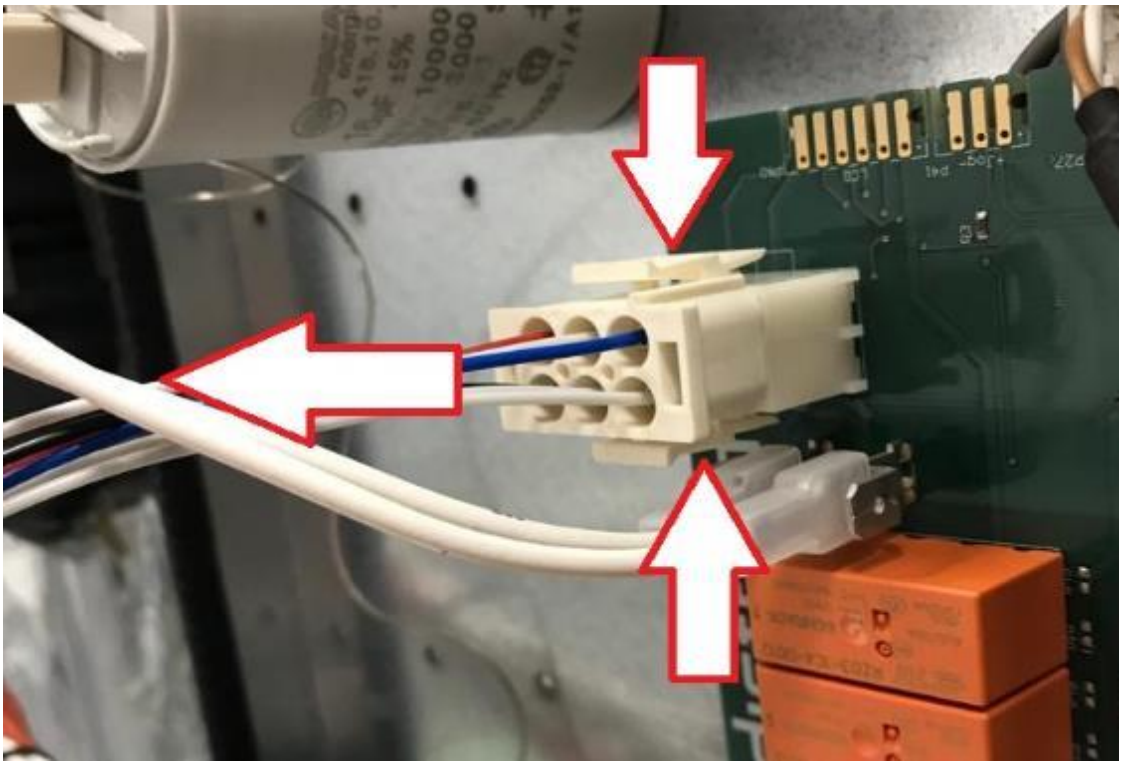

Figure 61. Disconnection of the single-phase motor

Then remove the four nuts and lock washers that hold the engine in place. The engine can now be removed.

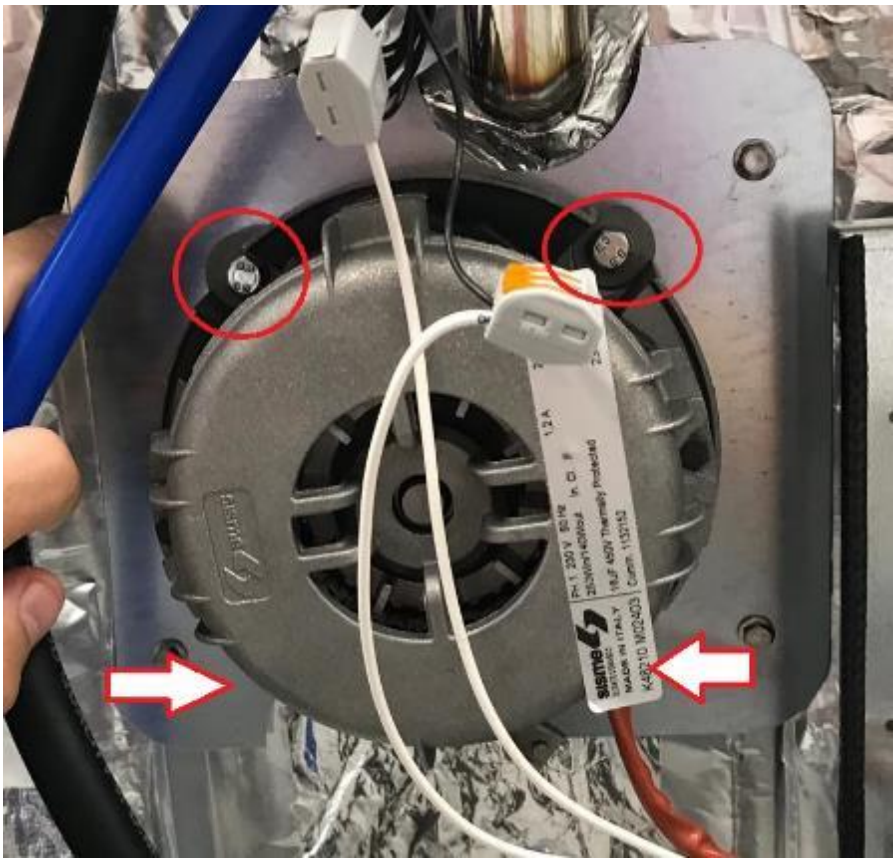

Figure 62. Disassembly of the engine

5.11. Replacement of the oven motor seal

Proceed as follows Replacement of the oven motor turbine. Then remove the rear panel (see 1.1) and the oven roof (see 1.2).

Then remove the four nuts and lock washers securing the engine mounting plate.

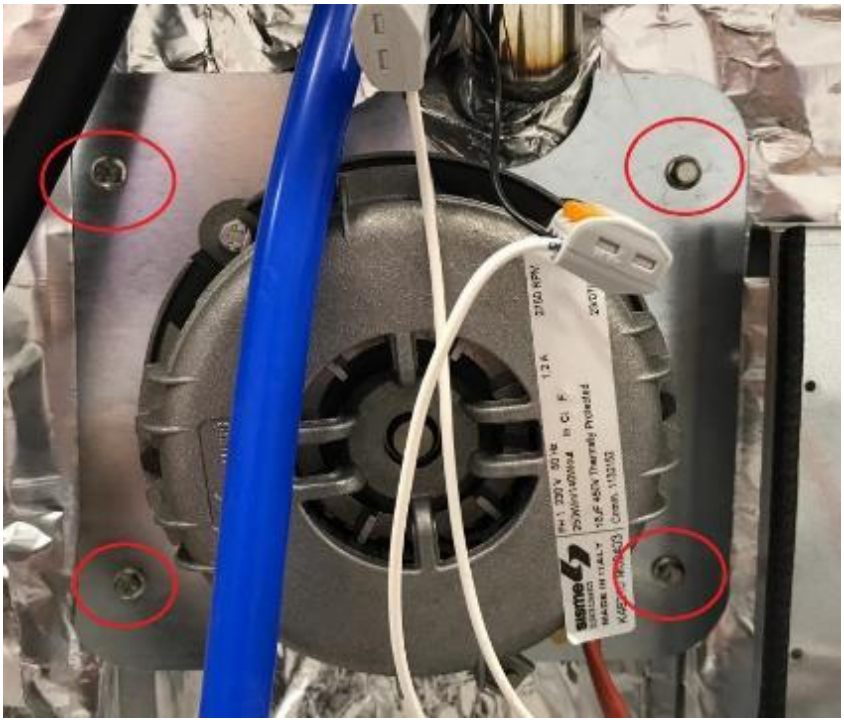

Figure 63. Disassembly of the engine mounting plate

Then replace the oil seal.

Figure 64. Engine oil seal

5.12. Replacement of the resistor

Remove the convection fan cover plate (see 1.5) and the rear part (see 1.1).

Disconnect the 6 wires at the rear of the oven (red).

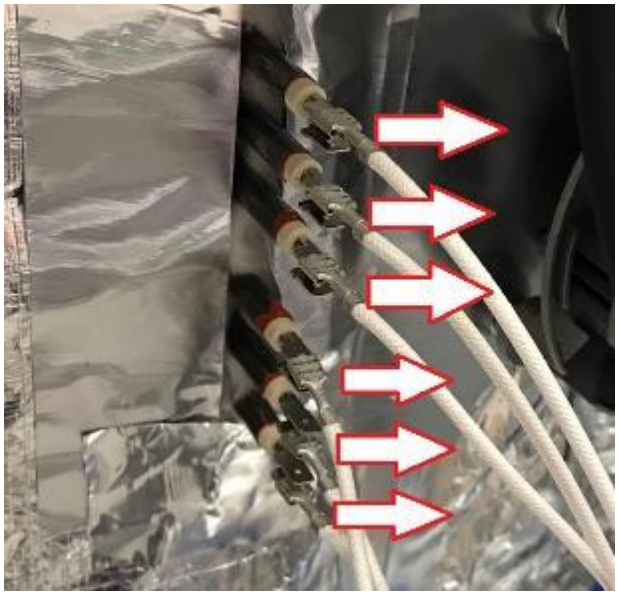

Figure 65. Convection heater (rear)

Inside the oven, remove the screws that hold the heating element to the cooking chamber.

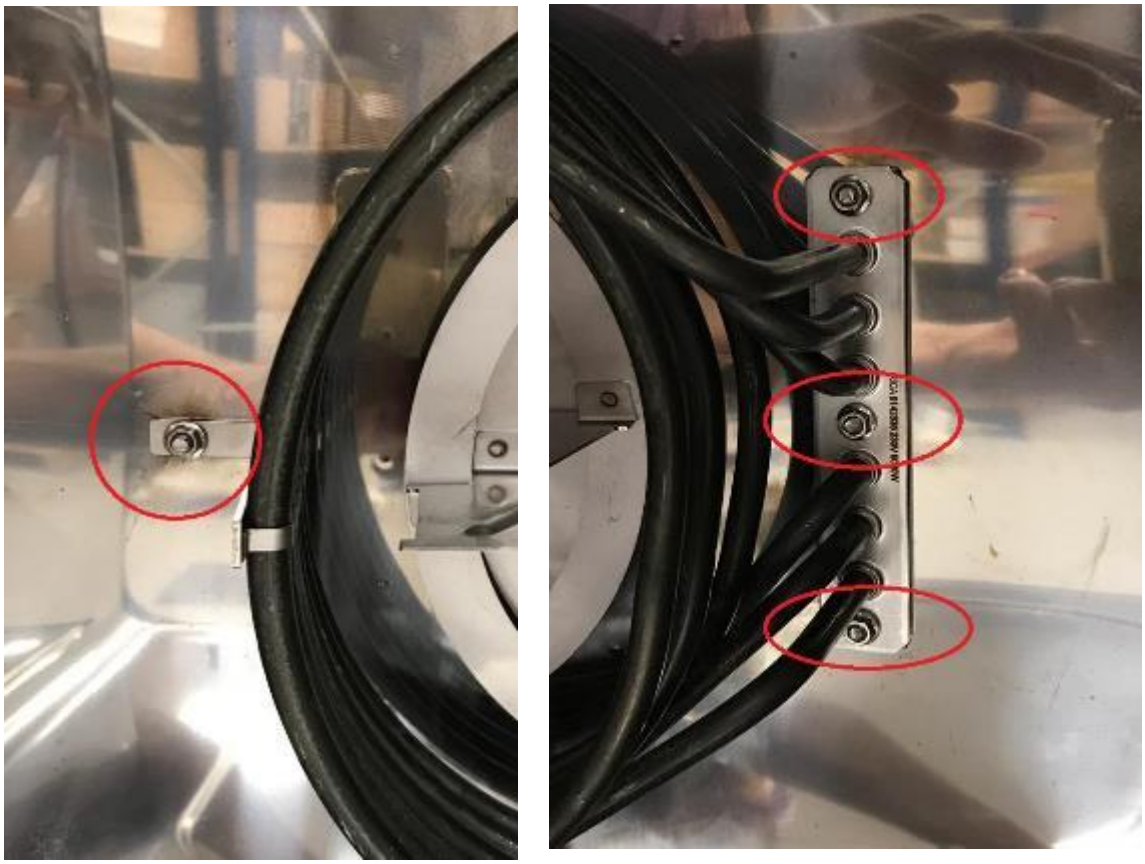

Figure 66. Replacement of the resistor

The heating element can then be pulled out by pulling it from inside the cooking chamber.

Remove the heater and proceed with the replacement. When replacing the heating element, make sure that the gasket between the heating element and the chamber is replaced. At the back of the oven, make the wiring connections.

5.13. Replacement of the suction solenoid

Remove the rear of the oven (see 1.1). Then cut the two solenoid wires, leaving enough length to make a new splice. Remove the two screws from the solenoid and remove it. Remove the rubber seal and place it on the new solenoid. Remember to splice the wires.

Figure 67. Disassembly of the solenoid

5.14. Replacement of the latch hook

Remove the two M5 screws on the front of the oven. This will release the locking adjustment piece. On the back of this part, loosen the lock nut and remove the hook.

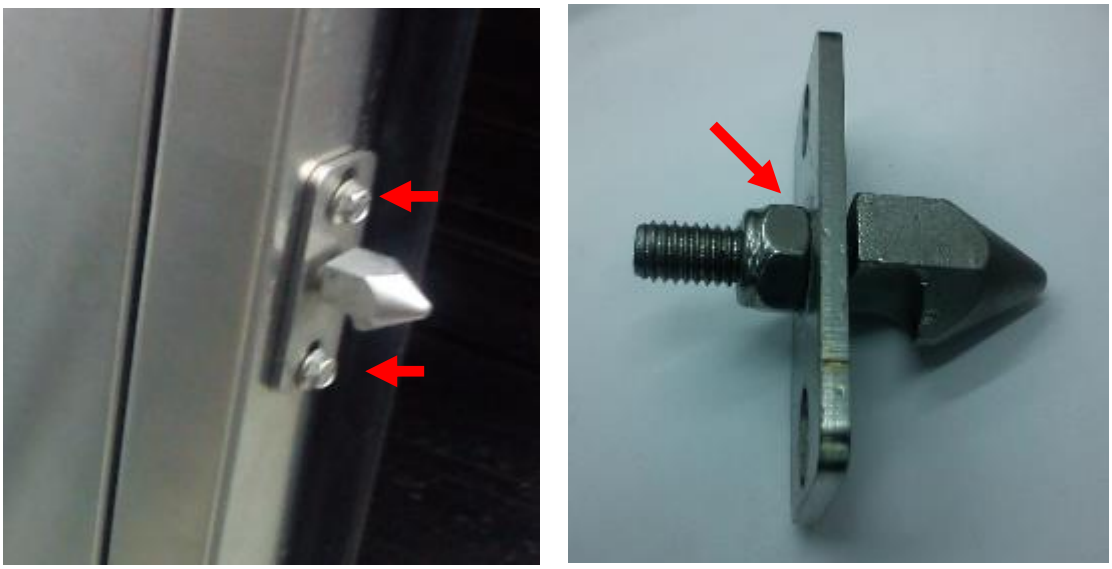

Figure 68. Disassembly of the locking hook

When replacing the hook with a new one, align the bottom of the hook with the door latch. Make sure that the door closes tightly and does not leak.

Figure 69. Alignment of the locking hook

5.15. Replacing the door handle

Remove the three screws that hold the handle to the door, taking care that neither the screw nor the lock washer is inside the door. The use of a magnetic key is recommended.

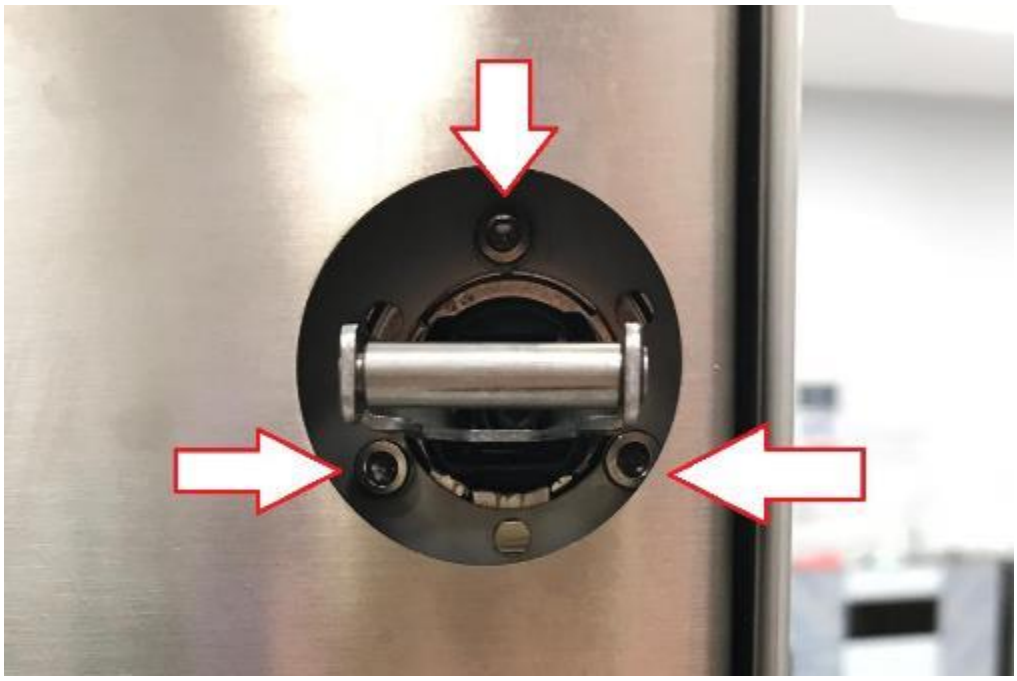

Figure 70. Door handle

When fitting a new lever, do not forget to fit the lock washers on the screws.

5.16. Replacing the door sensor

5.16.1. iCOOK/iBAKE/COOK/BAKE

Remove the drip tray from the oven by removing the 4 lower screws and the 2 upper screws.

Figure 71. Upper drip tray screws

Figure 72. Lower drip tray screws

Then pull hard on the front drip tray to break the silicone cord on the top of the drip tray. This will expose the magnetic sensor. Remove the two screws holding it in place to replace it.

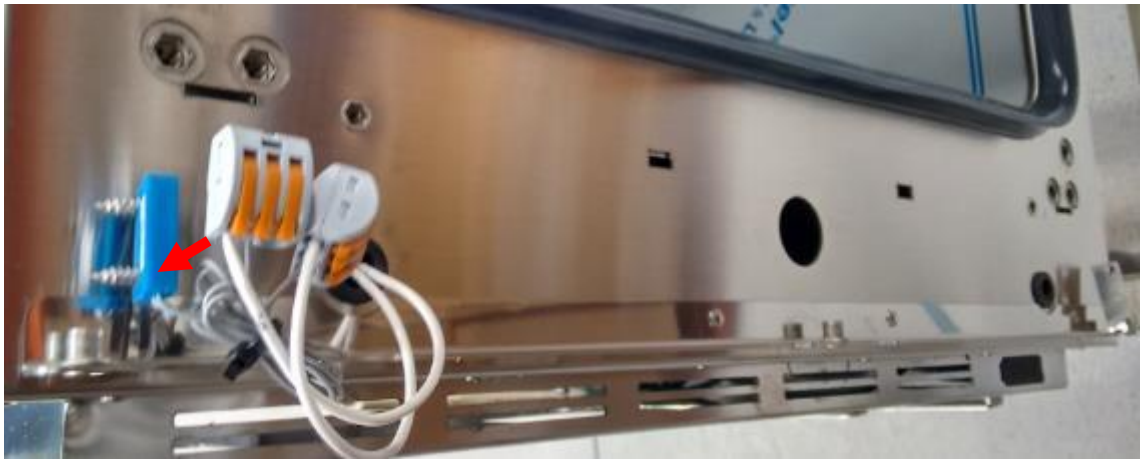

Figure 73. Door sensor

When reassembling the drip tray, apply silicone to the top of the drip tray.

Figure 74. Silicone application on the drip tray

5.16.2. SNACK/BAKERSHOP

Remove the front of the sensor by removing the 2 front screws.

Figure 75. Sensor front screws

Then remove the entire sensor assembly by pulling it outwards.

Figure 76. Remove sensor assembly

Then remove the rear plastic housing and replace the sensor.

Figure 77. Replace door sensor

5.17. Replacement of the door magnet

In iCOOK/iBAKE/COOK/BAKE ovens, the door magnet is located in the bottom left or right-hand corner, depending on which way the door is opened.

Figure 78. Door magnet

5.18. Replacement of the cooling fan

Dismantle the rear of the oven (see 1.23).

Then remove the two cap screws that secure the fans to the mounting plate. They must be disconnected from the motherboard and replaced.

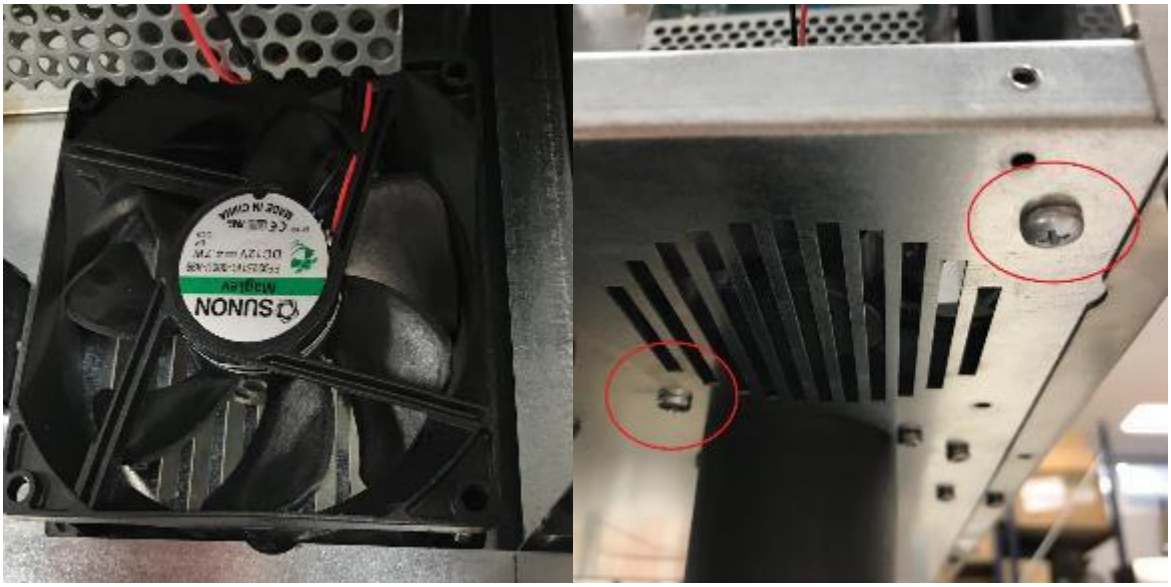

Figure 79. Replacement of the convection fan

6. GENERAL WIRING DIAGRAM

6.1. Mychef 9 relays board

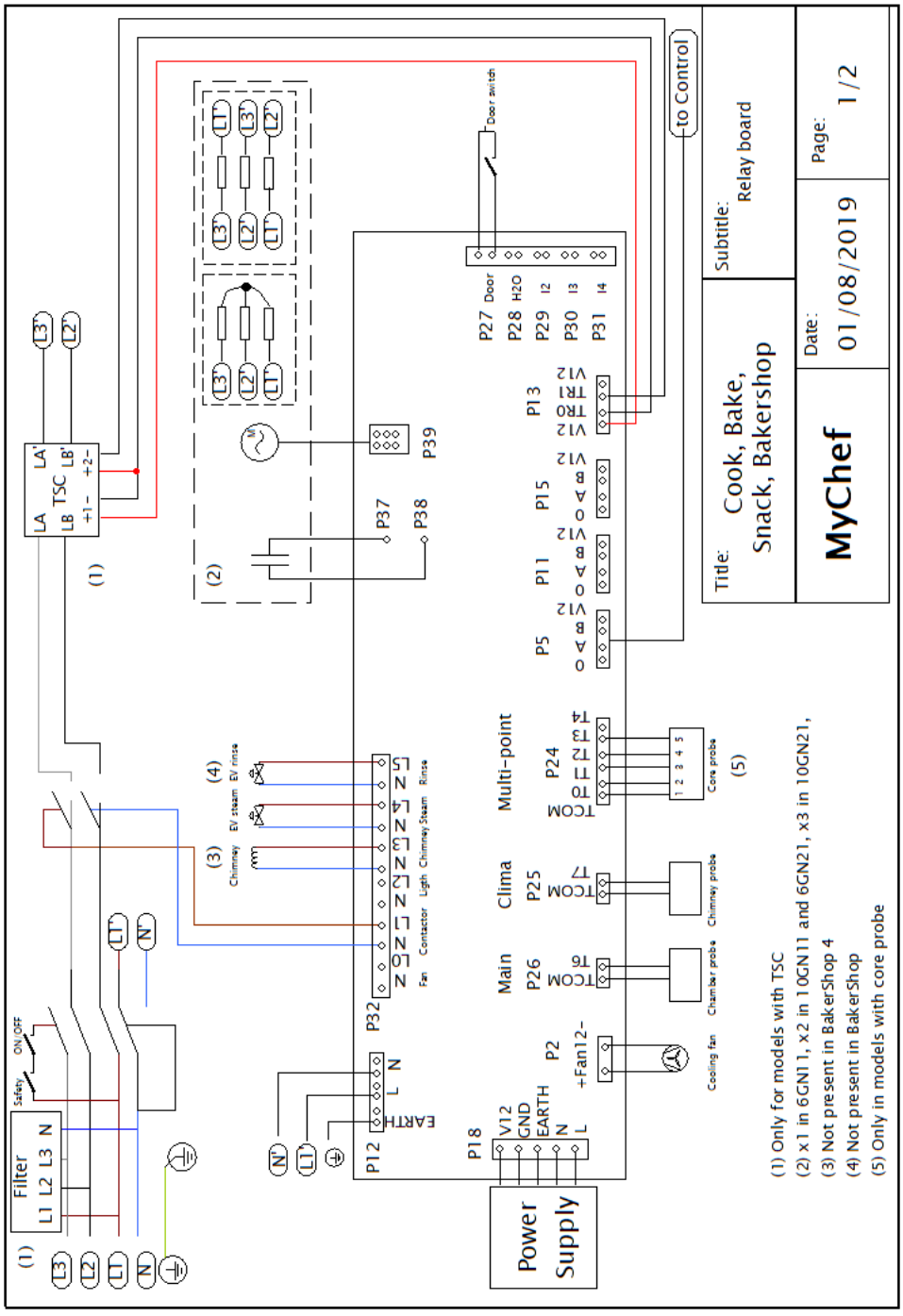

Figure 80. Wiring diagram 9 relays Mychef

6.2. Mychef 17 relay board

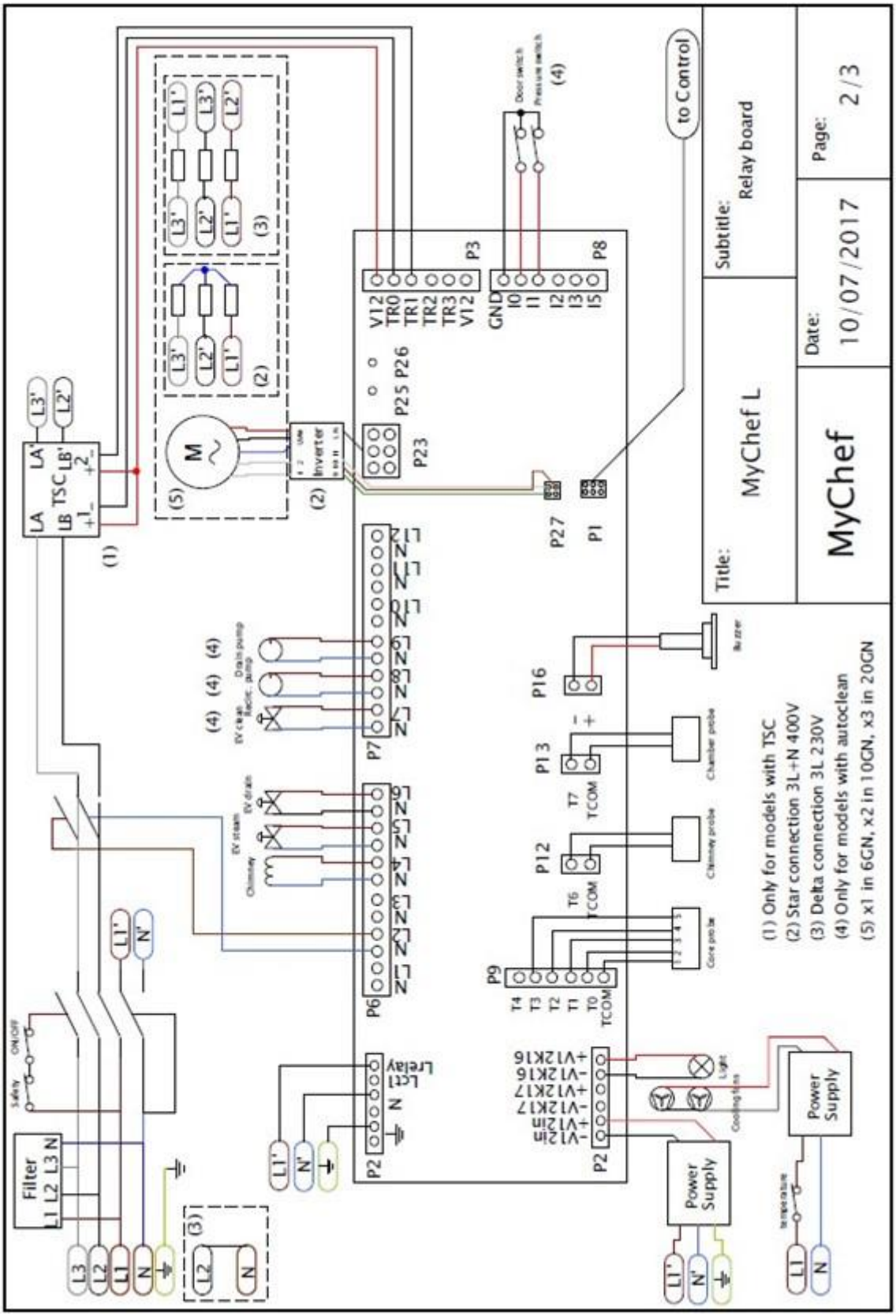

Figure 81. Wiring diagram 17 Mychef relays

6.3. Mychef COOK, BAKE, BAKERSHOP, AND SNACK controls

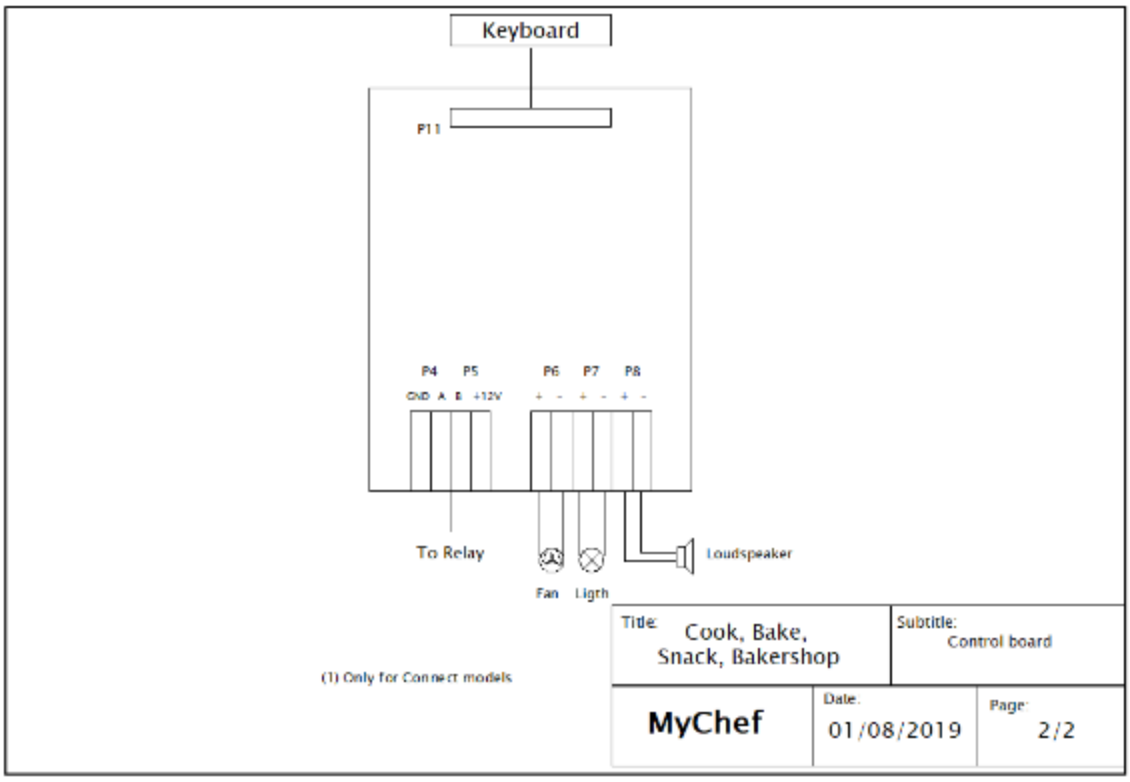

Figure 82. Human interface

6.4. Mychef iCOOK and iBAKE controls

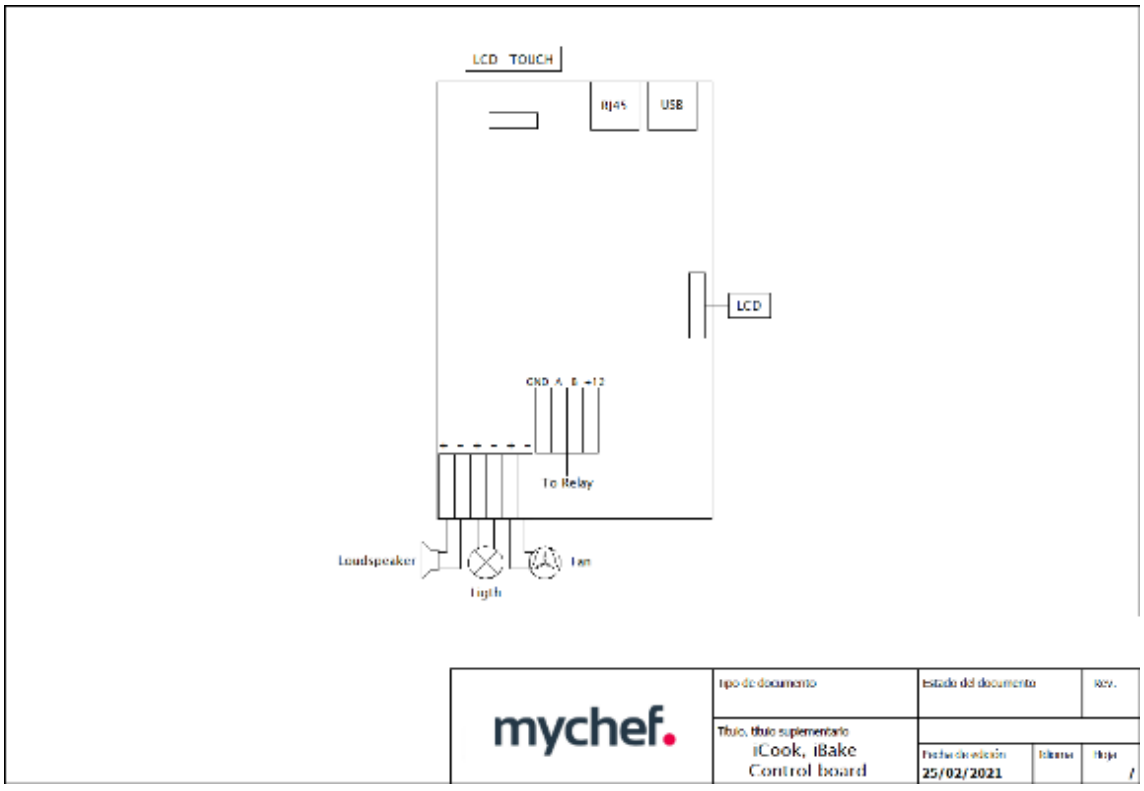

Figure 83. Human interface iCOOK / iBAKE