

1. Switching on the oven

Switch on the electrical panel using the main switch on the front side of the control panel. Wait for the display to have finished loading the cooking cycle management software. When the software has finished loading, the display will show the following image.



Fig.1 - Main panel after switching on

Press the **POWER** key for at least a second to enable the auxiliary circuit to switch on (if the auxiliary circuit is off, the oven CANNOT work). The green illuminated electromechanical button to the left of the red mushroom-shaped button begins flashing. Press the green button to switch on the auxiliary circuit. When the auxiliary circuit is on, the oven control touch-bar appears in the lower part of the display (see figure 2).



Fig.2 - Oven function control touch-bar

1.1 Description of the touch-bar

Every button on the touch-bar has a specific function. The functions of every single touch button are described below.
N.B. - When a button is pressed, it lights up in orange to show the function is active.



HOME button: Allows access to the main oven function management pages (cooking time, top and floor temperature).



RECIPES button: Allows access to the processing recipe management pages. Up to 25 recipes can be managed, all of which are saved in the PLC central memory.



ALARMS button: Allows access to the alarm display pages. The display is divided into active (alarms still present) and log (past alarms).



SERVICE button: Allows access to the additional service management pages. You can change the display language (English/Italian) and the unit of measurement for the temperature (°C/°F).



SETUP button: Allows access to the oven setup pages. The page can only be accessed via LOGIN. Access is only allowed to the oven manufacturer.

1.2 Dressing the emergency mushroom button

If the red mushroom-shaped button on the control panel is pressed, the display informs the operator of the emergency condition, showing a red strip with a warning message (see figure 3) instead of the touch-bar. In this condition, **NO OVEN FUNCTIONS CAN BE ACTIVATED**. Rearm the emergency mushroom to eliminate the warning message and proceed in the start-up sequence as specified in paragraph 1.



Fig.3 - Warning message for emergency mushrooms pressed

2. Cooking cycle control

Pressing the HOME button accesses the cooking cycle management pages (see figure 4). From this page, you can establish cooking times, top and floor temperatures, as well as switch on the heating elements and the food conveyor belt.

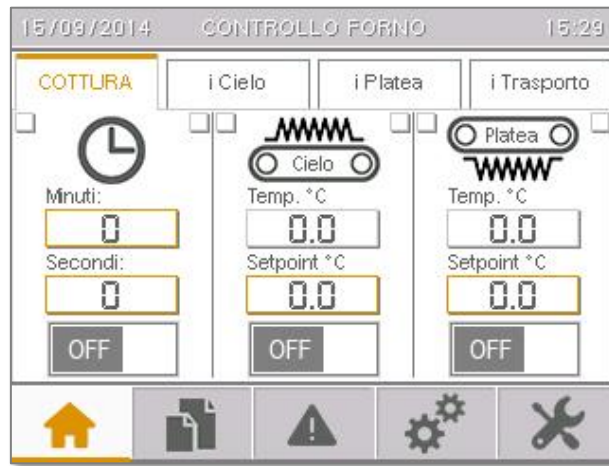
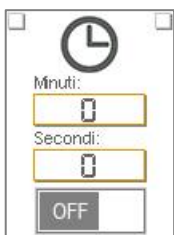


Fig.4 - Cooking cycle management page

The page is divided into three main sections. The left section controls the food conveyor belt and the cooking time. The other two sections control the top and floor temperatures. The slider buttons go to the right and you must hold them down for about 1 second to activate them. To switch them off, instead, a quick tap is sufficient. If the supply is with gas, in the temperature control section will be displayed the burner icon instead of the top and bottom heating elements icon.

2.1 Cooking time control



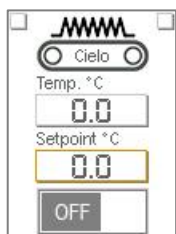
Controlling cooking time is particularly easy. Simply set the required cooking time (expressed in minutes and seconds) and press the grey conveyor belt switch-on button. The time can also be varied with the conveyor belt on. The minimum time that can be set is 30 seconds. The two indicator lights at the upper corners of the image provide the operator with important information.

The meanings are as follows:

- When the right indicator light is on, it means that the conveyor belt has reached cooking speed and, consequently, the set cooking time will be respected with a tolerance of ± 3 seconds. The indicator light is GREEN.
- When the left indicator light is on, the conveyor belt is at a standstill due to an error on the speed management encoder. ATTENTION: Should the encoder error persist, contact the technical assistance service. The indicator light is ROSSO.

N.B. - When the conveyor belt is on, the grey button changes colour and turns orange. To switch them on, you must hold down the button for at least 1 second. To switch them off, a quick tap is sufficient.

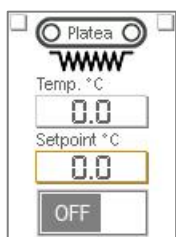
2.2 Top temperature control



Controlling the top temperature is particularly easy. Simply set the desired temperature in the SETPOINT field and press the grey software pyrometer activation button. The numerical field above the setpoint is the actual top temperature detected by the thermocouple. The two indicator lights at the upper corners of the image provide the operator with important information. The meanings are as follows:

- When the right indicator light is on, it means that the top temperature is consistent with the set setpoint. The indicator light is GREEN.
- When the left indicator light is on, the temperature control has an error (in this case, the heating elements are switched off). The indicator light is ROSSO.

2.3 Floor temperature control



Controlling the floor temperature is particularly easy. Simply set the desired temperature in the SETPOINT field and press the grey software pyrometer activation button. The numerical field above the setpoint is the actual floor temperature detected by the thermocouple. The two indicator lights at the upper corners of the image provide the operator with important information. The meanings are as follows:

- When the right indicator light is on, it means that the floor temperature is consistent with the set setpoint. The indicator light is GREEN.
- When the left indicator light is on, the temperature control has an error (in this case, the heating elements are switched off). The indicator light is ROSSO.

If the supply is with gas, it will be only one temperature control that will work directly on the burner.

2.4 Errors that can be detected by the system

The system is able to detect the following 2 errors during the temperature control cycle:

- PError: PROCESS ERROR. This means that the actual temperature has exceeded the alarm temperature set by the manufacturer. Switch off the oven, wait for it to cool down and restart the cooking cycle. Should the error persist, contact the technical assistance service. The error is marked with a P under the red error indicator light.
- FError: FEEDBACK ERROR. During the cooking cycle, the software pyrometer makes sure the heating elements are working as they should. Should the system detect an operating inconsistency, the operator is

immediately alerted. Switch off the oven, wait for it to cool down and restart the cooking cycle. Should the error persist, contact the technical assistance service. The error is marked with an F under the red indicator light.

- THERMOCOUPLE ERROR. If the temperature reading thermocouple is damaged or is not connected properly, the word ERROR appears instead of the temperature. Switch off the oven, wait for it to cool down and restart the cooking cycle. Should the error persist, contact the technical assistance service.

N.B. - When the software pyrometers are active, the grey buttons change colour and turn orange. To switch them on, you must hold down the button for at least 1 second. To switch them off, a quick tap is sufficient. When the heating elements are powered (heating phase), the coil icon on the display changes colour and turns red.

3. System alarms

During normal oven operation, the PLC control constantly checks the efficiency of all the control and command electrical devices. Should there be an anomaly, the display shows an ALARM condition. To know which alarm has gone off, touch the red triangle icon at the centre of the touch-bar.

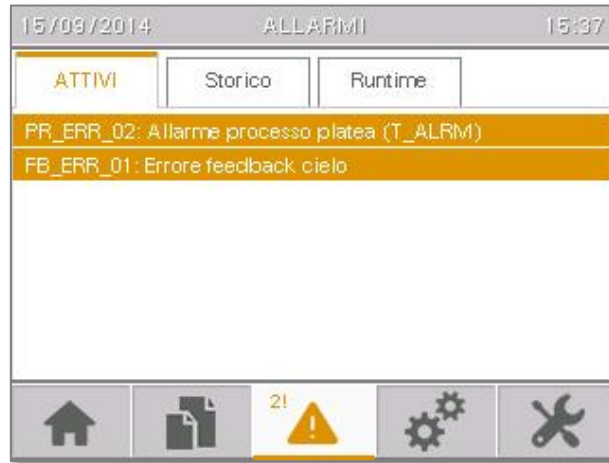


Fig.5 - Active alarms page

If an alarm is active, it is shown on the list. To reset an alarm, touch the triangle-shaped icon again. The alarm list is completely deleted and all the active alarms are reset. Should one or more alarms not reset, contact the technical assistance service.

3.1. Alarms log

Touching the *Storico* (Log) tab accesses the alarm log list, that is, a list of all the alarms recorded since the last time the oven was switched on. This information is useful for technical diagnostics.

3.2. Alarms list

The following is a list of the alarms managed by the system. Every alarm has a specific code to communicate to the technical assistance service should it be necessary.

- **BW_ERR_01: TCB top reading error** Broken-wire error on the top heating element temperature control thermocouple. Press reset to remove the alarm from the display. If the alarm does not reset, contact the technical assistance service.
- **BW_ERR_02: TCB floor reading error** Broken-wire error on the floor heating element temperature control thermocouple. Press reset to remove the alarm from the display. If the alarm does not reset, contact the technical assistance service.
- **PR_ERR_01: Top process alarm (T_ALRM)** Process error in the top heating element temperature control. The temperature has risen above the alarm temperature set by the manufacturer! SWITCH OFF THE OVEN IMMEDIATELY

AND WAIT FOR IT TO COOL DOWN BEFORE SWITCHING IT BACK ON. Should the alarm recur, contact the technical assistance service.

- **FB_ERR_01: Top feedback error** Feedback error in the top heating element start-up contactors. In this condition, temperature control is not guaranteed. ATTENTION: the heating elements may stay on even when they should not! SWITCH OFF THE OVEN IMMEDIATELY AND WAIT FOR IT TO COOL DOWN BEFORE SWITCHING IT BACK ON. Should the alarm recur, contact the technical assistance service immediately.
- **PR_ERR_02: Top process alarm (T_ALARM)** Process error in top heating element temperature control. The temperature has risen above the alarm temperature set by the manufacturer! SWITCH OFF THE OVEN IMMEDIATELY AND WAIT FOR IT TO COOL DOWN BEFORE SWITCHING IT BACK ON. Should the alarm recur, contact the technical assistance service.
- **FB_ERR_02: Top feedback error** Feedback error in the top heating element start-up contactors. In this condition, temperature control is not guaranteed. ATTENTION: the heating elements may stay on even when they should not! SWITCH OFF THE OVEN IMMEDIATELY AND WAIT FOR IT TO COOL DOWN BEFORE SWITCHING IT BACK ON. Should the alarm recur, contact the technical assistance service immediately.
- **PR_ERR_01: Incorrect top T control parameters!** Error in top temperature control software pyrometer factory parameter setting. Should this alarm occur, the software pyrometer parameters must be reset. Contact the technical assistance service immediately.
- **PR_ERR_02: Incorrect floor T control parameters!** Error in floor temperature control software pyrometer factory parameter setting. Should this alarm occur, the software pyrometer parameters must be reset. Contact the technical assistance service immediately.
- **EN_ERR_01: Encoder signal reading error** Conveyor belt speed measuring encoder signal reading error. Contact the technical assistance service immediately.

4. Display setup

The oven control display settings can be customised. You can change the system language from Italian (default language) to English. The temperature can also be displayed in degrees Fahrenheit should the oven be destined for Anglo-Saxon markets. To access the setup page, press the SERVICE button on the touch-bar.



Fig.6 - Display setup page

- To change to English, touch the English button for at least 2 seconds. Once the touch button is released, all the text on the display will be translated into English. To go back to Italian, repeat the same procedure, touching the Italiano button.
- To convert all the temperatures to degrees Fahrenheit, touch the Fahrenheit button for at least 2 seconds. Once the touch button is released, all the temperatures will be shown in degrees Fahrenheit. To go back to degrees Celsius, repeat the same procedure, touching the Celsius button.

4.1 Parameters

Touching the Parametri (Parameters) tab accesses the PLC control setup parameter management page. Only personnel with a username and password are allowed to use this page. Usually, the operations on this page must be done exclusively by technical maintenance personnel.

4.2 Info

Touching the Info tab accesses the information page of the display, containing information regarding the software installed on the oven management PLC control.

5. Using the recipes

Pressing the RICETTE (RECIPE) button accesses the recipe management pages. Using the recipes allows the operator to streamline oven setup when moving from cooking one food to another. Every work recipe saves all the oven work data, that is, TEMPO DI COTTURA (COOKING TIME), TEMPERATURADELCIELO (TOPTEMPERATURE) and TEMPERATURADELLAPLATEA (FLOORTEMPERATURE).



Fig.7 - Recipe loading management page

5.1 Loading a recipe

Loading a recipe is very easy; just follow the steps below point by point:

- Set the number of the recipe to load. You can set values from 1 to 25¹.
- Wait for the recipe to load (the square indicator light between the Attiva (Activate) and Salva (Save) buttons turns green).
- Make sure that the loaded values (tempodicottura - cookingtime, temperaturacielo eplatea - top andfloortemperature) are suitable for the product to be cooked. Otherwise, modify them as you wish².
- Press the Attiva (Activate) button to activate the loaded values on the oven.

¹If you don't remember the number of the recipe to load, press the List tab to browse the recipe archive. To select a recipe from the list, touch its number. This begins loading the selected recipe.

²If the loaded values are modified, press the Save button to update the recipe archive with the new values.

5.2 Saving a recipe

Saving a recipe is very easy; just follow the steps below point by point:

- Set the number of the recipe to save. You can set values from 1 to 25.
- Wait for the recipe to load (the square indicator light between the Attiva (Activate) and Salva (Save) buttons turns green).
- Make sure that the loaded values (tempodicottura - cookingtime, temperaturacielo e platea - top andfloortemperature) are suitable for the product to be cooked. Otherwise, modify them as you wish³.
- Enter a description of the recipe to make it easily recognisable in the future (i.e. cheese pizza).
- Press Salva (Save) to save the data in the archive.



Fig.8 - Recipe saving management page

³Pressing the "Snapshot" button automatically updates the recipe parameters to the work parameters. This keeps from having to fill them out manually, saving time!

