INSTALLATION INSTRUCTIONS AND USER GUIDE

Gabarrón



ECOMBISSH

SMART STORAGE HEATER

ECOSSH158

ECOSSH208

ECOSSH308

ECOSSH408

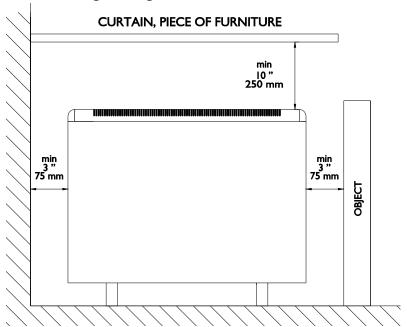
Please, read these instructions CAREFULLY before installing or using this appliance for the first time.

I.-IMPORTANT INFORMATION

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

• WARNING: Please read all instructions before installing or using this heater for the first time.

- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.
- Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, etc. and curtains at least a foot (30cm) from the front, sides and rear of the heater.
- It is essential that the indicated minimum clearances are maintained.
- CAUTION Some parts of this product can become very hot and cause burns.
 Particular attention must be given where children and vulnerable people are present.



- Children should be supervised to ensure they do not play with the heater.
- Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating unattended.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance must not be made by children without supervision.
- Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.
- Children of less than 3 years should be kept away unless continuously supervised.
- Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
- Do not use the heater outdoors.
- To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel.
- Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
- To prevent a possible fire, do not block air intakes or exhaust in any manner.
- Air inlets and outlets provide proper operation of the appliance and prevent its overheating. DO NOT cover air inlet
 and outlet grills.
- A heater has hot and arcing or sparking parts inside. Do not use in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- This guide must be kept and given to any new user.

SAVE THESE INSTRUCTIONS



WARNING: In order to avoid overheating do not cover the heater.

2. - INSTALLATION INSTRUCTIONS

The symbols used in the text are explained below:

WARNING

WARNING This indication shows the possibility of causing death from electric shock.

CAUTION This indication shows the possibility of causing injury or damage to properties only.

This indication shows the possibility of causing injury of damage to properties only.

This indication shows the possibility of causing death or serious injury.

Symbol for useful information.

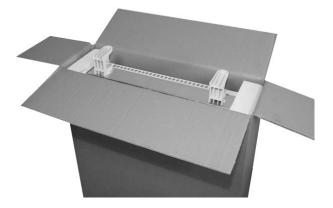
IMPORTANT: Wiring procedures and connections shall be in accordance with the national and local codes having jurisdiction.

- The warranty of the heater will not cover any damage caused by non observance of any of these instructions.
- The installation must be carried out in accordance with the current local electrical regulations. Any installation or reinstallation has to be carried out by an experienced technician.
- Please check that the voltage in the rating label fits the power supply.
- This appliance must be grounded.
- The appliance should not be installed just below an electrical socket.
- The appliance must be installed in such a way that it is impossible for anyone using a bath or shower, to touch the controls.
- If during any installation the thermal insulation shows any sign of damage, it must be replaced.
- This heater should be switched off at the circuit breaker before any repair work is carried out. This should also be done during times of the year when heat is not required.
- This appliance is only for permanent connection to a fix installation. After installation a survey of the first charging cycle should be carried out to ensure that the main input thermostat switches off. Ventilate the room during this first cycle.
- Never open a charged heater.
- To maintain stability, it is essential that the heater is placed on a level surface and care should be taken to avoid irregular surfaces, such as may result from carpets or tiled surrounds partially protruding under the heater.
- The presence of air particles of smoke, dust and other pollutants could, in time, discolor the walls and surfaces around the heater.

In order to achieve a correct installation of this device, follow these steps:

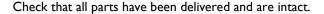
- I. Choose the right location to install ECOMBI SSH. The minimum clearances must be respected from the appliance to any combustible material such as furniture or curtains. To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.
- 2. Open the carton at the indicated side and install the supporting feet without removing the heater.



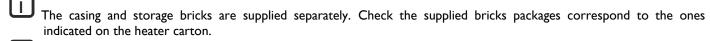


Turn the carton upside down to allow the heater to stand on its feet and remove the carton. Check that it is the correct model

and that it is in good conditions.



- 1 Ecombi SSH heater casing.
- 1 bag containing 2 screws and 2 dowels.
- 2 supporting feet.
- This guide.
- I superior fixing fitting.
- 2 lateral fixing fitting.





3. - Take off the front panel by removing the two screws located at the bottom. Fix the lateral fittings to the metal structure by using the appropriate screws.

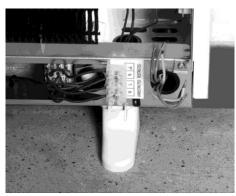




- 4. Place ECOMBI in your selected installation area. Use the heater fixing holes as a template and mark the wall through the fixing holes with a pencil. Drill the required holes into the wall. Place the dowels and screws into the holes before the appliance installation but do not fasten them tightly.
- 5. Attach ECOMBI to the dowels with the crews. IT MUST NOT BE HUNG ON THE SCREWS; these are used only to prevent the device from overturning and not to support it. If there is any doubt concerning the wall strength, consult the corresponding construction specialist. The appliances are heavy; it is the installer responsibility the correct installation and wall support of these devices to prevent them from overturning.
- 6. Connect the heater using the wiring diagram included at the end of this manual. Tighten properly the connection block screws. Do not leave any remaining wire inside the heater.



WARNING Touching live connections can cause serious personal injury.





7. - Disconnect the aluminum heating element by removing the FAST-ON terminal on each end of the element.







Next unscrew the inner panel and remove it.

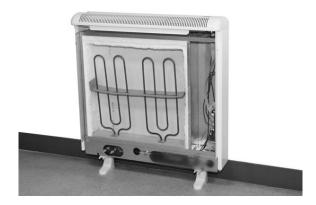


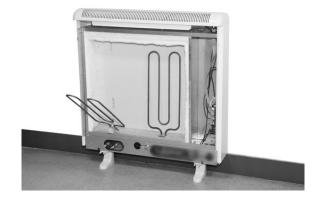




CAUTION In the interior part of this inner panel there is a very delicate thermal insulation MICROTHERM panel. It has to be handled with extreme care. AVOID TOUCHING IT.

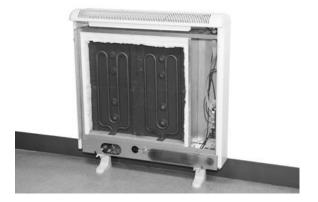
8. Do not disconnect the electrical heating elements. Remove the packing cardboard. Lift and tilt the elements outwards being careful not to damage the insulation on the bottom of the heater.





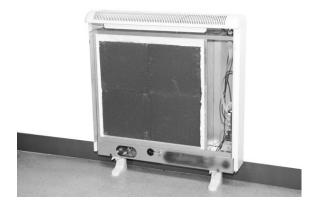
9. - Place the storage bricks carefully, with the flat side facing the back of the heater. Arrange two row levels of bricks.



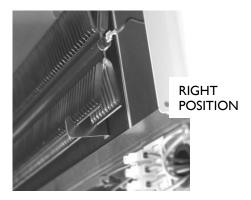


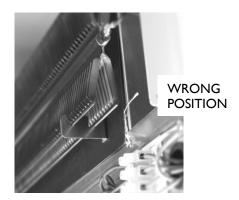
10. Place the heating elements back into their original position. Place the other two rows of storage bricks with the flat side facing out and always on the heating elements supporting tabs.





II. Replace the inner front panel. If the bricks have been fitted correctly you will have no difficulty in replacing the panel. Make sure the bottom edge of the inner panel is inside the front lip of the heater. Please see below:





- 12. Reconnect the two FAST-ON terminals to the aluminum heating element attached to the inner panel at both ends.
- 13. When replacing the exterior front panel, align the 2 plastic upper pegs on the heater with the holes in the exterior panel. Push the top up into place and push the bottom in until it rests on the plastic feet.
- 14. Replace the front panel with screws.

RELOCATION



WARNING: Relocation to another location must be carried out by an experienced technician.

If during reinstallation the thermal insulation shows any sign of damage, it must be removed and replaced by an identical part.

MANUALLY RESET TEMPERATURE LIMITER

This heater employs a manually reset temperature limiter (see LR in the connection diagram).

This safety device operates when high temperatures are reached at the top of the heater. It requires re-setting manually: Let the heater cool. The cause of overheating should be investigated.



WARNING: Re-setting manually must be carried out only by an experienced technician.

Turn off the heater at the circuit breaker.

Take off the front panel by removing the two screws located at the bottom. Find the limiter LR in the connection diagram and push the small pin until a click is heard.

3. - OPERATING INSTRUCTIONS

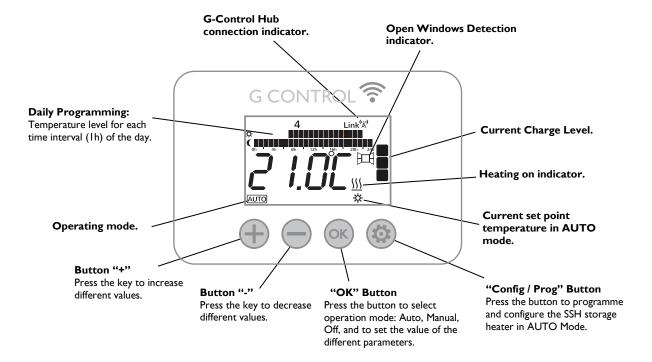


CAUTION: DO NOT USE THIS HEATER TO DRY CLOTHES. Do not cover this heater at any time.

CONNECTION / DISCONNECTION

Power switch.All models are equipped with a switch on the back side panel. It is used to connect and disconnect ECOMBI SSH.

KEYBOARD:



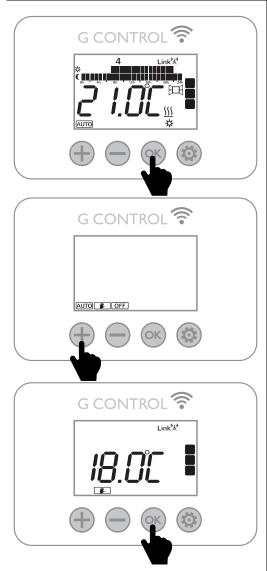
ON/OFF

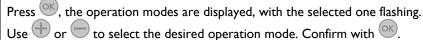
Once the heater is connected to a main supply you can turn the heater ON by switching the main ON/OFF switch positioned at the rear right side of the heater as shown above.

BACKLIGHT

Pressing any button, the display will illuminate with a soft white colour. After certain time if no buttons are pressed the display backlight will turn off.

OPERATION MODES SELECTION





The heater has three different operation modes: Auto, Manual override and Standby Mode.

 Auto: The setpoint temperature varies according to the weekly schedule setup in the unit. 3 different temperature levels (Comfort, Moon and Frost Protection) can be selected for each time interval (I hour) to adjust the temperature in the room to the habits and needs of the different users.



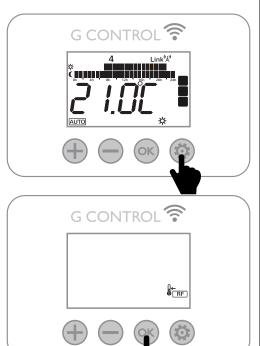
- **Manual Override:** the storage heater will maintain the temperature set point and will ignore the pre-set program.



- **Standby Mode:** the storage heater doesn't maintain any set temperature or run any programs, keeping the time settings configured previously.



AUTO MODE - Temperature Level



To modify the set temperatures within the program permanently, press and release until the display shows the flashing temperature symbol .

Now press to select the temperature you want to change, COMFORT or ECONOMIC. Use and to select the desired temperature.



You can temporary change the set temperature for the time period too. To do this, increase or decrease the current temperature simply by pressing and . Once the time period finishes, the temperature will revert back to the programmed set temperature.

Programming

Enter programming:



Select temperature level:



Next I hour Time Interval:



Time Setting





PROGRAMMING

Press & Hold until the following is shown.



The first segment will start to flash. By pressing you can select whether you want a Frost Protection setting (3°C), Moon setting (18°C) or Comfort setting (21°C). Now press to move to the next I hour time interval.

Once you've gone through all the time intervals for day 1, you will automatically start on day 2 by pressing . Repeat the above steps until you go through all 7 days.

If you do not desire to modify the programming of a day within the week, press to go through the next day.

SSH will not charge in Frost Protection time intervals.

TIME SETTING

After pressing when the last time interval for day 7 is flashing or after pressing in day 7, the time setting configuration starts. The following is shown with the day of the week flashing.



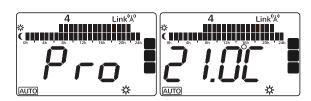
Use and to select today's date. I=Monday, 2=Tuesday, Etc. and Press to confirm.

Now the hours start to flash. Press and until you reach the correct time (hour) and Press to confirm.

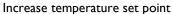
Now the minutes start to flash. Press and until you reach the correct time (minutes) and Press to confirm.

If the device is associated with a G-Control Hub, the adjustment of time is removed and the time in the G-Control Hub is configured in the heater automatically

If you do not desire to modify the time setting, press to exit. After setting the time, the display will show and start to run the program and will flash between the set temperature for the current day, time interval and the word Pro to indicate the heater is running the set program.



MANUAL OVERRIDE





In manual mode, the heater will maintain the temperature set point and will ignore the pre-set program. SSH will maintain the selected temperature for the 24 hours of the day. Use this mode, when the same temperature is desired for every hour in the week.

To modify the temperature set point, press or until the desired temperature is shown.

STANDBY MODE



It is possible to put SSH in standby mode where the heater does not maintain any set temperature or run any programs. It keeps the time settings configured previously. When in this mode, the heater will display the current time and the icon OFF.

KEYBOARD LOCK



During any operation mode, it is possible to lock the keyboard by holding and simultaneously for 3 seconds. When the keyboard is locked, the message **Lock** will be displayed.

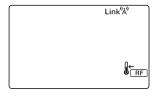
When the keyboard is locked, if any button is pressed, the display will show "Lock" and the unit will not respond.

To unlock the keyboard, press and simultaneously for 3 seconds.

GENERAL SETTINGS



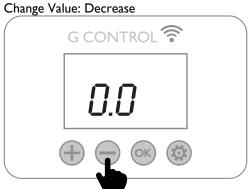
It is possible to modify the general setting. During any operation mode, press & release \bigcirc , the display shows the flashing temperature symbol \bigcirc and the RF symbol \bigcirc RF.



Hold for 5 seconds until the display shows UP01.









Use and to move on through the different parameters.

Use to access the parameter you want to modify. Change the value using the navigation keys and . Confirm the new value with .

It is possible to save the changes and exit at any moment by pressing .

SSH general parameters that can be modified by the user are detailed below:

- UP01: Initial % of storage charge.
- UP02: Starting time of reduced (off-peak) rate electric period.
- UP03: Ending time of reduced rate electric period.
- UP04: Starting time of the second reduced rate electric period. (if not available set up 00:00).
- UP05: Ending time of the second reduced rate electric period. (if not available set up 00:00).
- UP06: Charging days during the week.
- UP07: Temperature ambient sensor correction (values from -5°C to 5°C).
- UP08: Maximum working period of the emitter in on peak electric period. Set up this value to "0" to cancel the emitter operation. With balance resistance operation cancelled, the charge correction will not operate and the same charging level will be applied every day. (Default 5 hours)
- UP09: Excess of temperature protection during the charge, Degrees higher than the comfort set point temperature when the charge is interrupted. (Values 1,2,3,4 & 5).
- UP10: Degrees Celsius or Fahrenheit. (Values: $^{\circ}C$ F).
- UPII: Open Window Detection Activation. (On/Off).
- UP12: Adaptive Start Control Activation (On/Off).
- UPI3: Kind of temperature control. Recommended & default PID.

ECOMBI SSH does not change automatically from summer time to winter time or vice versa when not connected to the internet. Depending on the tariff it may be necessary to change the clock settings to fit these two timings.

WEEKLY CHARGE PERIOD SETTING

Weekly charging days (UP06 parameter) Charging/Not Charging day I



Advance to the next day



Access to the general setting to modify the charging period of your SSH storage heater. (See "General Setting" above). By default, 00:00 to 07:00 charge period is set in every day in the week.

Charge period

Two charging periods can be selected in the electronic control of your SSH.

- I° Charging period: UP02 to UP03. (00:00 to 07:00 by default).
- 2° Charging period: UP04 to UP05. (Disabled by default, 00:00 to 00:00).

Weekly charging days

It is possible to select which days SSH will charge and which days it will not. Access to the UP06 parameter to modify the days you want your SSH takes a charge. (By default, 7 days of the week).

Access to UP06 parameter by pressing . The first day indicator in the top of the display and the charge condition (On/Off) is displayed.

Press and to change the charge condition for this day. Press to go on through the days.

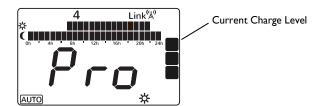
SMART STORAGE HEATER:

SSH optimizes the energy management and consumption and provides the heat demand requested by the user in each period of time reaching the desired comfort.

Smart charging control

SSH allows optimizing the energy management and consumption using a linear regression model based on the temperature registered in the core of SSH to determine the current % of the storage heater charge and use this information to charge only the heat necessary to supply the daily heat demand and avoid unnecessary energy consumption.

The charge level is monitored every time by the electronic control and represented in the display by the dots in the right side of the display. 5 dots represent a fully charge storage heater.



While SSH is charging, the last dot is flashing at the top right part of the display.

Protection for excess of temperature in the room

In order to achieve maximum savings and avoid unnecessary energy consumption, if, during the charging period, the temperature in the room exceeds the temperature set up in SSH for that room, then the charging will be interrupted until the temperature in the room decreases.

Charge correction

The % of the storage heater charge is corrected automatically by SSH software. If working hours of balance resistance is higher than a certain value, storage heater charge will be increased by a certain %. On the other hand, if balance resistance working hours does not exceed this value, storage heater charge level is reduced by the same %.

This behaviour adapts the consumption to the real thermal needs, allowing the maximum level of energy savings at the required comfort. The set-up temperature is independent of the Storage Heater level of charge. Initial setting for charge is 80%. This value can be modified by entering "General Settings" part and modify the initial % of storage charge according to UPOI setting.

Smart discharge

If the energy discharged with natural convection is not enough to satisfy the heat demand of the room where SSH is installed, an emitter incorporated in the SSH body will be connected providing additional heating to the room if necessary to supply the heat demand of the room. The maximum working period of the emitter during on-peak electric electric periods can be adjusted and cancelled by modifying UP08 parameter. (please go to "General Settings").

Open Window Detection

With open window detection activated, the fan assisted discharge and the balance resistance working will be disconnected automatically when a sharp decrease in temperature in the room is detected avoiding energy wastage.

(i)	When Open Windows Detection function is working, the icon	His displayed.
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Adaptive Start Control

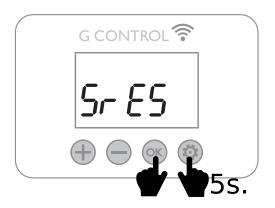
With adaptive start control activated, SSH electronic control analyses the heating requirements of the room where it is installed using this information to turn on the emitter in advance in order to reach the set point temperature at the desired time.

i	When Adaptive Start Control function is working, the icon	₽©	is displayed.
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^{*}Storage Heater and Balance heater will never work at the same time.

DEFAULT SETTINGS & RESET

To reset the unit to factory default settings, press and simultaneously for 5 seconds until the message SrES is displayed. Confirm the reset with.





Default Values

Sun: Comfort temperature	21°C
Moon: Economic temperature	18°C
Frost protection temperature	3°C
UP01: Initial % of storage charge	80%
UP02: Starting time off peak period I	00:00
UP03: Ending time off peak period I	07:00
UP04: Starting time off peak period 2	00:00
UP05: Ending time off peak period 2	00:00
UP06: Charging days of the week	Default -> Charging 7 days of the week.
UP07: Ambient sensor Offset	0°C
UP08: Max. Balance resistance – working period	5 hours
UP09: Overtemperature protection	2°C
UP10: Temperature Unit	°C
UPII: Open Window Detection Function	Off
UP12: Adaptive Start Control	Off
UP13: Kind of temperature control	PID
Default Programming	Comfort : 07:00 to 09:00 & 17:00 to 22:00. Eco : 00:00 to 07:00 & 09:00 to 17:00 & 22:00 to 00:00.

Incorrect time settings, erroneous programming of the reduced rate time and too high temperature settings may result in a high cost of your electricity bill.

4.- REMOTE OPERATION USING THE WIFI G-CONTROL HUB

It is possible to control the full operation of the unit remotely with Gabarron-Elnur app or app-web. The unit must be connected to a Wifi G-Control Hub connected to the internet to use this feature.

4.1 To associate the unit to the G-Control Hub, the discovery mode of the hub must be activated. Press the associate button at the back of the Gateway for 3 seconds. An orange flashing light every second indicates association mode.



4.2 With the hub in association mode, press on the heater for 3 seconds until the Link symbol $Link^{(2)}$ is shown.



You control and adjust the programming and temperatures on the SSH via the Gabarron-Elnur app.

4.3 To disassociate the unit, a reset of the unit must be realized. See "**DEFAULT SETTING & UNIT RESET**". When the heater is reset, it will remove the programming and revert back to the default settings and also disassociate from the RF network and G-Control Hub.

5.- TROUBLESHOOTING

	-
ECOMBI SSH does not heat.	Please check it is connected and switched on. Make sure the device is not covered or the lower air inlets are not obstructed. The LR safety limit may be activated; in this case it is necessary to reset it manually. Please contact technician.
ECOMBI does not reach set up temperature	Make sure that adequate temperature is selected. Make sure the heater is sized correctly for heat loss.
Err Message in display	Please contact technician.
Keyboard does not respond	If the "Lock" message is displayed, the thermal radiator keyboard is locked. Hold "+" and "-" buttons simultaneously for 3 seconds to unlock the keyboard. (See Keyboard Lock Section).
SSH does not communicate with the G Control Hub.	Check the unit is associated, the symbol Link must be shown on the display LCD. For distances greater than 30 metros and 2-3 walls, associate first the closest units. Each unit can work as signal extender. If Link mass symbol is flashing, check the G Control Hub connexion to the network, and if any other device in the RF Net that could be working as signal extender has been removed.

6.- CLEANING MAINTENANCE INSTRUCTIONS

Before cleaning, make sure the power has been turned off at the circuit breaker panel and that the heating element of the heater is cool.

Occasionally, clean dust with a dry, soft cloth. Do not use any solvent or abrasive product for cleaning.

When the Heating season is finished, please disconnect the device by turning off the power switch located at the right back of the unit or at the circuit breaker.

Any other servicing should be performed by an authorized technician.

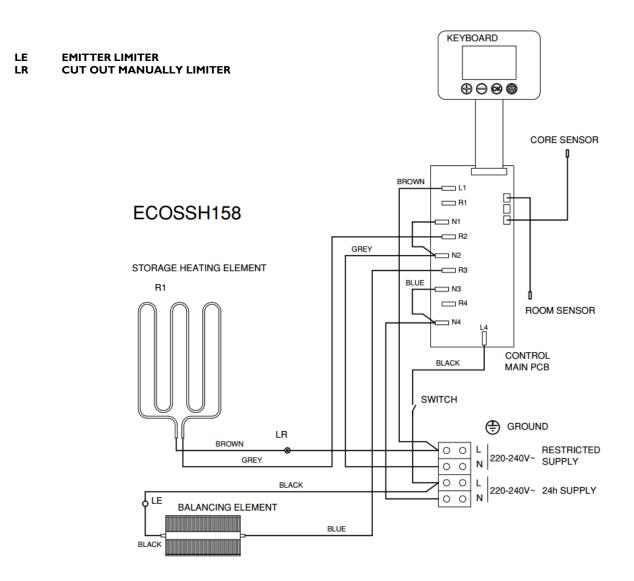
ECOMBI SSH has been manufactured under a fully assured quality system and using environmentally friendly processes.

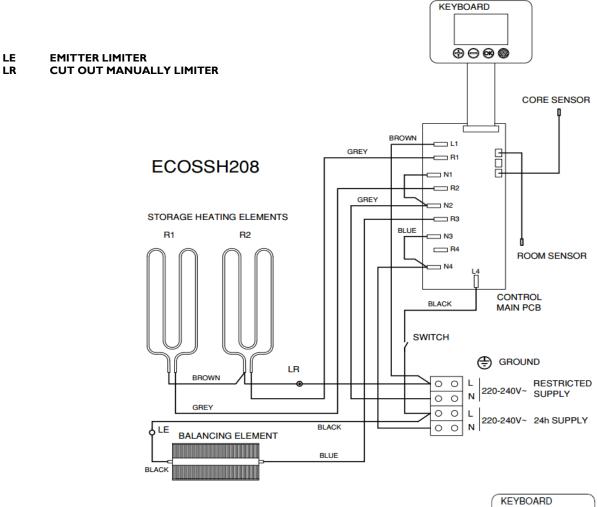
Once its useful life is finished please take the device to a recycling depot so that its components can be recycled in an appropriate way.

7.- MAIN COMPONENTS LIST

Storage Heating Element (All except ECOSSH158)	Ref. 15190091	Switch	Ref. 46100530
Storage Heating Element (ECOSSHI58)	Ref. 15190875	PCB	Ref. 15191870
450W Emitter (ECOSSHI58)	Ref. 15190105	Core Sensor	Ref. 15192140
600W Emitter (ECOSSH208)	Ref. 15190110	Room Sensor	Ref. 46102195
900W Emitter (ECOSSH308)	Ref. 15190120	110°C Emitter Limiter	Ref. 15190725
1200W Emitter (ECOSSH408)	Ref. 15190130	135°C Cut Out Manually Limiter	Ref. 10190460

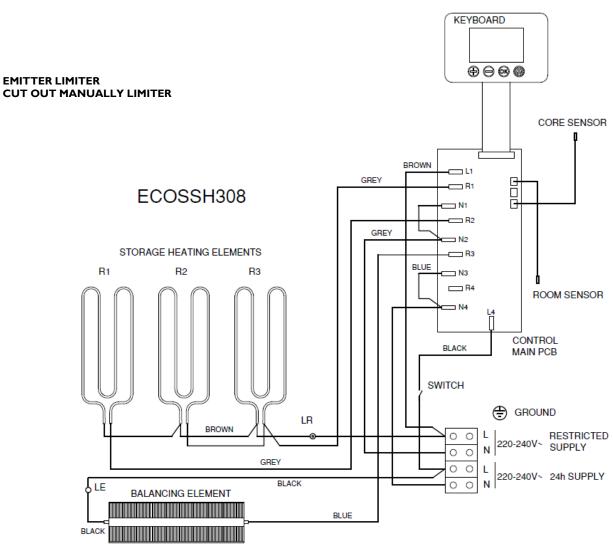
8.- CONNECTION DIAGRAMS

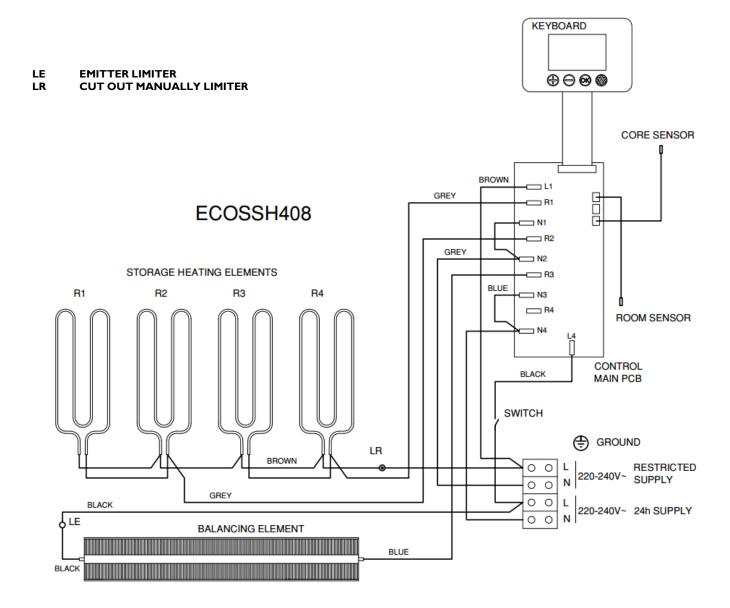




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LR





9.- THECNICHAL FEATURES

Modelo	ECOSSH158	ECOSSH208	ECOSSH308	ECOSSH408
CONNECTION	230 - 240V ~			
CONVECTOR OUTPUT* 230/240	450/490VV	600/653VV	900/980VV	1200/1307VV
STORAGE HEATER OUTPUT 230/240	975/1062W	1300/1415W	1950/2123W	2600/2831W
CHARGE PERIOD	7.6 – 7h	7.6 – 7h	7.6 – 7h	7.6 – 7h
CHARGING	7.4 kWh	7.4 kWh	7.4 kWh	7.4 kWh
INSULATION	Class I	Class I	Class I	Class I
LENGTH	55cm	66cm	89cm	IIIcm
HEIGHT	73cm	73cm	73cm	73cm
DEPTH	18cm	18cm	18cm	I8cm
WEIGHT	59kg	77kg	l 12kg	l 47kg
NUM. OF BRICKS 7,5kg	-	8	12	16
NUM. OF BRICKS 11,5kg	4	-	-	-
BRICK PACKAGE	11072	11016	11016	11016

^{*} Storage heater elements and convector element will never operate at the same time.

PRODUCT FICHE

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MODEL(S): GABARRON ECOSSH158, ECOSSH208, ECOSSH308, ECOSSH408

		Value				
ltem	Symbol	ECOSSH 158	ECOSSH 208	ECOSSH 308	ECOSSH 408	Unit
Heat Output	Heat Output					
Nominal heat output	P _{nom}	1062	1415	2123	2831	W
Minimum heat output	P _{min}	N.A.	N.A.	N.A.	N.A.	W
Maximum continuous heat output	P _{max,c}	1062	1415	2123	2831	W
Auxiliary electricity consumption						
In standby mode	el _{SB}	0,6	0,6	0,6	0,6	W

ltem	Value. All models
Type of heat input	
Electronic heat charge control with room and/or outdoor temperature feedback	Yes
Type of heat output / room temperature control	•
Electronic room temperature control plus week timer	Yes
Other control options	
Room temperature control, with open window detection	Yes
With distance control option	Yes
With adaptive start control	Yes

	ELNUR, S.A.
Contact details	Travesía de Villa Esther, I I
	28110 – Algete (Madrid), Spain

Commission Regulation (UE) 2015/1188 of 28 April 2015. Ecodesign requirements for electric fixed local space heater.



The symbol on the product or in its packaging indicates that this product may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product. These instructions are only valid in the EU member states.



Supplier:

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Manufactured by:

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As part of the policy of continuous product improvement the manufacturer reserves the right to alter specifications without notice.