

# **ORIGINAL OPERATING INSTRUCTIONS**

Read carefully and retain for future reference



**Ceramic Heater** 

Type: RFC

Models: RFC500W; RFC1000W; RFC1500W; RFC 2000W

### **IMPORTANT WARNINGS**

Dear Customer:

Thank you for your confidence in us by purchasing this radiator. These appliances are extremely safe, silent and easy to install.

They do not require special maintenance. They are made of extruded aluminum, a material of high durability respectful to the environment. Before starting it for the first time, carefully read these instructions. Retain them for future references.

### **GENERAL SAFETY INSTRUCTIONS**

- Please read carefully these instructions before starting the device for the first time. Keep these instructions, as well as the guarantee, your invoice and if possible, the complete packing with all the elements inside.
- 2. The guarantee will cease to be valid in the case of not following the recommendations of this manual.
- Before connecting the appliance, make sure the mains voltage is the 230 Volts, and correspond to the marked on the nameplate of the appliance.
- Check that the power is sufficient to supply the appliances. The total draw of the radiators' currents must not exceed the capacity of the circuit breaker that protects them.
- 5. This radiator cannot be used in rooms with presence of gases or other flammable products (glues, etc...).
- 6. <u>WARNING</u>: To prevent overheating, do not cover the device. Do not use the device to dry clothes.



- 7. Make sure the power cable or other objects do not come into contact with the radiator surface while in operation.
- 8. If the power cable becomes damaged it must be replaced by the manufacturer or a suitably qualified trades person. Failure to comply may danger your safety and voids your warranty.
- 9. Check the device and the supply cord regularly. Do not turn the device on if it is damaged.
- 10. PRECAUTION: Some parts of this product can reach very high temperatures and cause burns. Pay special attention when children or vulnerable people are around.
- 11. Do not place the device straight under a power socket.

- 12. Children under the age of three should not be allowed to touch or play with the radiator and should be supervised at all times.
- 13. This device can be used by children under 8 years of age, as well as by people with reduced physical, sensory or mental capabilities when suitably supervised and only when they have been provided the instructions regarding the use of the device and have understood the risks that could derive from it. Cleaning must only be carried out by an appropriate adult.
- 14. Children between3 and 8 years should not turn on or off the device, unless this is installed or placed in a normal position and that children are under proper supervision or have received instructions regarding the use of the device as security and they have perfectly understood the potential dangers. Children between 3 and 8 years old should not connect, adjust or clean the appliance or perform any maintenance measure.
- 15. <u>Warning:</u> Do not use this heater near baths, showers or swimming pools. It should not be possible to access the device's controls from the bath, shower or any other surface that is in contact with water.(Its use in zones 0 or 1 in bathrooms is totally prohibited: seek advice from a qualified electrician).
- 16. For greater safety, this appliance is provided with a device that interrupts its operation in the case of overheating.
- 17. This radiator has been designed exclusively to be fixed to the wall. For further information on the fixing systems, consult the section "INSTALLATION ANDWALL MOUNTING" of this manual.
- 18. Do not use accessories that have not been recommended by the manufacturer, as they could entail a potential risk to the user, and damage the device. Use only original accessories.
- 19. Keep all the packaging elements (plastic bags, cardboard and polyethylene)out of the reach of children, as they can cause potentially dangerous situations.
- 20. Use this device only for domestic / light commercial use and the tasks for which it has been designed. This device has not been designed for industrial use. It must not be used outdoors, in greenhouses or for animal husbandry. Keep it away from heat, direct sunlight, humidity and cutting tools. Do not under any circumstances immerse in water or use this device with wet hands. In the case of humidity or water in the device, immediately disconnect the power supply and do not touch the wet parts.

- 21. Do not attempt to service the device yourself. Contact a qualified technician.
- 22. To disconnect the transmitter from the mains pull the plug, never of the supply cord.
- 23. Respect the "SPECIFIC SAFETY INSTRUCTIONS FOR THIS APPLIANCE" listed below

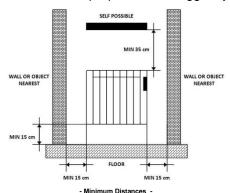
# SPECIFIC SAFETY INSTRUCTIONS FOR THIS DEVICE

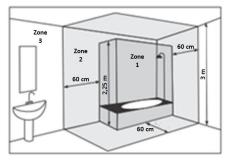
- The appliance must remain in a vertical position.
- Make sure the appliance is secured at all times. Please adhere to the installation distances indicated in this guide.
- Do not hang any object in front or on top of the device.
- Always ensure that the inlet and outlet air are not obstructed.
- Always install the device so that it cannot enter into contact with any combustible material such as curtains or towels (take into account the gusts of wind).
- To clean the device, consult the instructions in the "MAINTENANCE" section, because if water enters the air grilles it could seriously damage the device.
- Do not insert any object through the grille or inside the device.
- This radiator is designed to be connected by plug to the electric installation and fixed to the wall installation. Follow the instructions in "INSTALLATION".
- The guarantee will not apply if these instructions have not been observed.

### **INSTALLATION**

- During the first use and for a few minutes, could occur smells and noise due to the dilatation of some internal parts. This is normal, so you must provide adequate ventilation. The smells are momentary and quickly will dissipate.
- For greater efficiency, make sure to calculate the power or the number of elements of the apparatus according to the surface of the room. We recommend contacting your dealer performing this calculation.
- Fix the radiator to a firm wall and make sure it is well-levelled, in a room with no furniture and no objects avoiding around.
- Avoid installing the appliance in corners.
- We advise against installing the appliance under the windows, because it is favoring the heat loss.
- The radiator must be away, at a minimum distance of 15 cm from any combustible material, curtains, furniture, chairs, etc.(Fig. 1).

- Allow for a minimum distance of 1 m, from the front of the unit to any obstacles (furniture, walls, curtains, for example) that could hinder its operation.
- Also keep a minimum distance of 15 cm between the appliance and the side walls and any other obstacles (walls, for example) that may affect its function.
   Also keep a minimum distance of 35 cm on top the appliance free of obstacles and a minimum distance of 15 cm from the floor.
- WARNING: If this appliance is installed in a bathroom, it must be installed only within Zones 2 or Outside Zones (Zone3), according BS 7671 Requirements for Electrical Installations, Section 701. The installation of this appliance within Zones 0 or 1 of a bathroom is totally prohibited. The figure 2 bellow is only for information purposes, we suggest you contact a professional electrician.





Zone 1: Appliances supplied to Safety Extra Low Voltage (SELV).

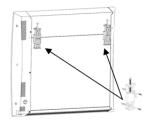
Zone 2: Electrical Appliances Class II – IP X4

Zone 3: Electrical Appliances protected by RCD 30mA

Fig.1

Fig.2

### **WALL-MOUNTING**



The appliance is equipped with the following:

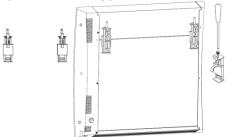
- 2 radiator's suspension supports.

Secure the appliance to the wall, you should use the template attached to the box. Follow these instructions:

- Place the template on the floor and against the wall where you will place the radiator.
- 2. Mark on the wall the location of the four holes.
- 3. Drill four holes for inserting the 8 mm plugs.
- 4. Fix the supports (as shown in the Figure) using the 4 screws and 8 mm plugs .



5. Hang the radiator in the supports fixed on the wall and, finally, completely screw up the two security pieces of the supports.



### **ELECTRIC SUPPLY CONNECTION**

This appliance is equipped with a supply cord **H05V2V2-F 2x1.0mm**<sup>2</sup> and bipolar plug without earthing.

Connect the plug to the base outlet.

Check the condition of your electrical installation and connection cables.

This appliance doesn't require earthing connection, due it has double electrical insulation.

Contact a licensed electrician for assistance.

## TECHNICAL CHARACTERISTICS

Brand	<b>₹</b> HJM						
Model	RFC						
Туре	RFC500W	RFC1000W	RFC1500W	RFC2000W			
Rated Voltage	230 V~	230 V~	230 V~	230 V~			
Rated Frequency	50 Hz	50 Hz	50 Hz	50 Hz			
Rated Power Input	500 W	1000 W	1500 W	2000 W			
Electrical Protection Class	II	II	II	II			
IP Protection Degree	IP24	IP24	IP24	IP24			
Dimensions (LxHxD) (mm)	380x585x105	510x585x105	640x585x105	770x585x105			
Weight (kg)	5,7	8,7	11,50	14,8			

### **SMARTBOX INSTALLATION**

To control the radiators through Web app or Smartphone apps, a smart box that connects the radiators to the Internet is required, using the house's router.

The smart box communicates with the radiators by radio and with the router through an Ethernet cable (supplied).

The process to follow is shown here:



- 1. Connect the smart box to the router.
- 2. Connect the smart box to power supply.



- 3. Check the status of the LED pilot lights.

  Normal: orange light on, alternating with green light every 5 secs.

  If this is not the case, consult point7. Possible problems and solutions.
- 4. Register with HJM through the app that can be found on Google play or Apple store.



HJM

HJM - Hermanos Julián M., S.L.





Access the app through your account and configure the house's data, automatically detect the smartbox and then follow the instructions on the screen.

### PAIRING RADIATORS WITH THE SMARTBOX

The radiators have to be paired with the smart box in order to be controllable through the apps. The link indicator will appear on the screen when it is paired.



Once you have a user's account and registered your smart box, you can use the app. Click "install" (instalar) and follow the wizard:



To pair the radiator with the smart box, it must be in discoverable mode. Press the button at the rear of the smart box for 3 secs. to activate discoverable mode.



The orange light flashing every second indicates that discoverable mode is activated.

With discoverable mode activated in the smart box, press the OK key for 3 secs. until the "Link" symbol appears on the radiator screen.

The radiator will now be paired with the smart box. Now you can control the radiator programming and the temperatures through the HJM app.

You can un pair the radiator from the smart box by resetting the radiator.







# PAIRING THE CONSUMPTION METER WITH THE SMARTBOX

The radiator installation can come with an electricity consumption meter that can be used to both know the electricity consumption in the house and to coordinate radiator consumption in order not to surpass the power limit when turning on ovens, irons, washing machines etc..

The meter is only valid for single-phase installations.



This device is inserted into the house's fuse box.

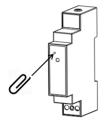
The house's electricity must be switched off before installing it.



Connect the device to a 230V power supply. Connect the meter clip and clasp it to the house's main cable.



To pair the meter with the smartbox, once discoverable mode has been activated(as shown on page 9), press the button inside the device with a paperclip or pointed object:



Through the app, you will be able to see electricity consumption in real time and be able to check consumption by day, month or year:







#### PROGRAMMABLE DIGITAL THERMOSTAT

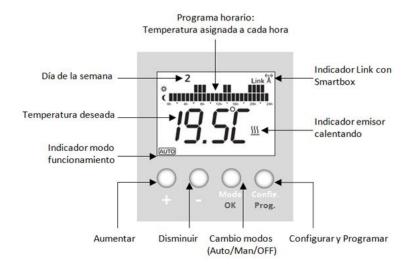
This radiator is equipped with various functions and operating modes that the user can select through the Modo/OK key.

The operating modes are: Auto, Manual and OFF. They can be selected by pressing the Modo/OK key.





#### **SCREEN**



#### 1. ON / OFF (STAND-BY)

To turn the radiator on, press the Modo/OK key and select AUTO mode or MANUAL mode.

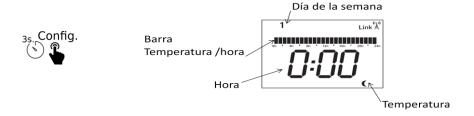
To turn the radiator off (stand-by), press the Modo/OK key and select OFF mode.

#### 2. SETTING THE TIME

In the event that the device is already paired with a smart box, the time setting is annulled and the time in the smart box is configured automatically.

In the event that it is not paired with any other smart box, setting is carried out in the following way:

First, we press and hold the Config./Prog key. for 3 secs. until the following screen appears:

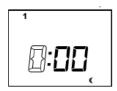


Then we press (short press) the Prog. again. The following screen appears and the day of the week starts to flash.



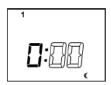
Pressing the + and - keys we can select today's day (1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday, 7: Sunday).

When we have selected the day of the week, press the  ${}^{\rm OK}$  key to confirm the selection and go to the next screen. Now the hour starts flashing.



Pressing the +and -keys we can select the current hour.

Press the OK key to confirm the selection and go to the next screen, in which the minutes start flashing. Change the value pressing the + and - keys.



Modo

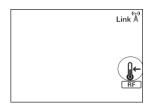
Press the OK key to confirm the selection and it will automatically go to the mode it was in before.

#### 3. CHANGING SET TEMPERATURES

In automatic mode, we can select 3 set temperature levels that will automatically change as per the programming established by the user, who will assign one of the following three temperatures for each hour:

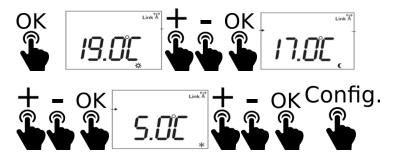
- -Comfort ( \*\* ) when the user is at home and wants maximum comfort.
- -Saving or eco ( , used at night and when away for short periods.
- -Frost protection or minimum ( \*\*), used to set a minimum temperature when away from home.

To establish your values, press the Prog. key and the following screen will appear with the symbol flashing.



Press the OK key and you will go to the screen where you can change the comfort temperature. Press the +and -keys to change to the desired comfort temperature. Once you have selected it press the OK key and you will then be able to select the economic temperature. Once you have selected it press the +and -keys to change to the desired economic temperature. Once you have selected it press the Modo OK key and you will then be able to select the Frost protection temperature. Press the +and -keys to be able to change the Frost protection mode Confirm this temperature by pressing the OK key.

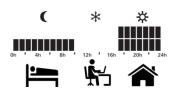
When you have established the three temperatures, you have to press the key to leave the mode you were in before.



### **4. PROGRAMMING**

The radiator allows you to assign one of the 3 previously established temperatures for each hour of the seven days in the week.

When the comfort mode is established at one hour, 2 bars appear above this hour; when the economic mode is established, 1 bar appears above this hour and if you establish the frost protection mode, NO bar whatsoever appears above this hour.



To enter the programming mode you have to press the 3 secs. until the following screen appears.



The first time band will be flashing, it corresponds to 00:00 on day 1 (Monday). By default, the Economic temperature level is selected for all time bands. You can change the type of temperature (comfort, economic or frost protection), Modo pressing the OK key. Every time you press, you change the type of temperature.

If you press the + key, the time band will increase (1 hour), if you press the - key, the time band will go down.

When you have configured all the time bands for day 1 (Monday), press the +key once and you will go directly to program day 2 (Tuesday).

For all 7 days of the week, repeat the steps carried out for day 1 (Monday).

Once the desired configuration has been carried out, press the confirm and leave programming.

You must leave AUTO mode established so that the radiator self-regulates depending on the previously established time bands and temperatures.

### 5. ADVANCED SETTINGS

### 5.1.- C1: Degrees Celsius or Fahrenheit

To access the advanced settings menu, press the **Config.** Prog. key.

The following window will be displayed.



Press the Prog. again for 5 secs and you will access the first advanced parameter. C1 will be displayed on the screen, flashing

To change the parameter, press the can change from Degrees Celsius to Fahrenheit. To confirm the desired value,

press the **OK** key and you will immediately leave the advanced settings menu and return to the previous mode.

#### 5.2. -C2: Control type setting

C2: Setting the type of control (PID-equipment with TRIAC-, PID15min or PID30min- relay equipment, hysteresis of 0.25°C, 0.35°C, 0.5°C, 0.75°C).

To access the advanced configuration menu, press the Prog. key.

The following window will be displayed.



Press the **Prog.** again for 5 secs and you will access the first advanced parameter (C1), which will be displayed on the screen, flashing.

To access parameter C2, press the +key until the flashing C2 symbol appears on the screen.

Press the OK key and you will be able to change the parameter with the +and

keys. To confirm the desired value, press the ok key and you will immediately leave the advanced settings menu and return to the previous mode.

### 5.3. -C3: Temperature gauge setting

There may be a difference between the ambient temperature measured by the external thermometer and the temperature measured by your radiator. The measures can be adjusted within the range of -3°C to 3°C, with intervals of 0,1°C.

To change the C3 parameter, repeat the same steps as in the previous parameter until C3 appears on the screen, flashing.

Press the OK key and then you will be able to change the parameter with the and keys. To confirm the desired value, press the OK key and you will immediately leave the advanced settings menu and return the previous mode.

### 5.4. -C4: Firmware version

This parameter is only informative, to check the equipment's firmware version. To access parameter C4, repeat the same steps as in the previous parameter until C4 appears on the screen, flashing.

Press the OK key to visualise it, and when you press the immediately leave the advanced settings menu and return to the previous mode.

#### 5.5.- C5: Open window detection

The radiator has the option to activate open window detection. By activating this parameter, the radiator automatically disconnects when it detects a drop in temperature in the room caused by the opening of a window or similar. This means that when the temperature in the room drops 2,4°C in 4 minutes, the radiator will disconnect for 30 minutes. After this time, the radiator will connect again in the same mode that it was in before disconnecting.

When it is activated, the following icon will appear on the screen:

To change parameter C5, repeat the same steps as in the previous parameter until C5 appears on the screen, flashing.

Press the OK key and you will be able to activate or deactivate the parameter with the +and - keys. To confirm, press the OK key and you will immediately leave the advanced settings menu and return to the previous mode.

#### **6. KEYBOARD LOCK**

It is possible to lock the keyboard in any operating mode by pressing the + and together for 3 secs.

When it is locked, "LOCK" will appear on the screen.

To unlock it, once again press the +and -keys together for 3 secs.

### 7. POSSIBLE PROBLEMS AND SOLUTIONS

1) The smart box does not connect. Check that it is plugged in and correctly connected to the Internet through the Ethernet without a proxy and with ports 123UDP, 5000TCP open.

The LED lights on the smart box indicate the following:

- Green off and intermittent orange every second: smart box in discoverable mode.
- Orange on and intermittent, very fast green: the router does not assign a valid IP to the smart box.
- Orange on and flashing green every 5 secs.: smart box with IP but does not communicate with server.

- Orange on and alternates with green every 5 secs.:smart box with IP and communication with server.
- 2) Equipment does not communicate with the smart box:

Make sure that the equipment is previously paired with your smart box. The Link icon appears static on the screen.



If the distance, in interiors, from the router to a radiator is greater than 30m and there are 2-3 walls between them, first pair the nearest radiators as each device can function as a relay and, the more devices there are, the greater the scope of the network.

If the "Link" icon flashes this is because it is paired with the smart box but cannot communicate with it. Check that the smart box is correctly connected or if some device that was functioning as a relay has been eliminated. Try placing nearer the devices.

- 3) If the problems continue, try resetting or restarting the devices and try it again.
- 4) Error messages:
- -OC: Temperature sensor not present
- -SC: Temperature sensor short-circuit
- -Err1: Operating element (Relay or Triac) short-circuit
- -Err2: Overload (more power than allowed)
- -Err3: Low charge (low power, check connection with resistance)
- -Err4: Overheating (>90°C in the electronic zone)

## 8.DEFAULT VALUES

Operating mode: OFF
 T<sup>a</sup> comfort: 19°C

Ta eco: 17°C

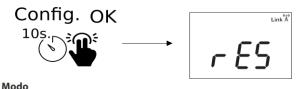
T<sup>a</sup> frost protection: 5°C
 T<sup>a</sup> manual mode: 19°C

Offset of sensor: 0°C

- Without paired RF network
- Temperature units: °C
- Open window protection: deactivated
- Control mode: PID
- Default programme: All Eco

#### 9. RESET THE RADIATOR

To reset the radiator, press the OK and Prog. keys together for 10 secs. The "rES" message will appear on the screen.



Then press the OK key to confirm the Reset.

#### THERMAL SAFETY

In the case of overheating, a safety device automatically cuts the radiators operation. After cooling the radiator will automatically reset.

#### **MAINTENANCE**

Your radiator requires no regular maintenance, however, to ensure its good operation:

Always disconnect the device from the mains before performing any cleaning or maintenance operation.

Let it cool down before cleaning.

To avoid any risk of electrical shock, clean the unit with a soft, damp cloth to wipe the outside of the radiator and remove dust and dirt cloth.

Do not use detergent, solvent, abrasive products or any other chemical product to clean the radiator.

## NEVER immerse the device in water or any other liquids.

You can use a vacuum or flexible brush to clean the air grilles. This maintenance must be carried out regularly to ensure optimum performance. Ensure the radiator is totally dry before turning it back on.

### **EU Declaration of Conformity**



Product:	Ceramic Heater WIFI			
Trademark:	<b>EE HJM</b>			
Models:	RFC500W; RFC1000W; RFC1500W & RFC2000W			
Batch & Serial No.:	Mx- YYDDD-XXX <sup>(1)</sup>			
(1) Explanation of code "Batch & Serial No.": Batch = Mx - YYDDD; where: Mx = Production Line No.; YY = year and				
DDD = correlative day (001,, 365).				
Serial No - XXX (001 999)				

We:

#### HERMANOS JULIÁN M., S.L.

Head Office: Esposos Curie,44 / Factory: Gutenberg,91-93
Polígono Industrial "Los Villares" . 37184 Villares de la Reina . Salamanca . España
Tf.+34 923 222 277 +34 923 222 282 . Fax +34 923 223 397

http://www.calorhim.es

Hereby declare that the following equipment complies with all the essential requirements for health and safety of European Directives.

2014/30/EC EMC DIRECTIVE 2014/35/EC LV DIRECTIVE 2011/65/UE ROHS DIRECTIVE 2009/125/EC (ErP Directive)

With reference to the application of the following standards:

EN 55014-1:2006 +A1:2009 +A2:2011
EN 61000-3-2:2014
EN 61000-3-3:2013
EN 55014-2:1997 +AC: 1997 +A1:2001 +A2:2008
EN 61000-4-2:2009
EN 61000-4-3:2006 +A1:2008 +A2:2010
EN 61000-4-4:2012
EN 61000-4-5:2006
EN 61000-4-6:2013
EN 61000-4-11:2004
EN 60335-2-30:2009 + CORR:2010 +A11:2012
EN 60335-1:2012 +AC:2014 +A11:2014
EN 62233:2008 +CORR:2008
EN 62321-1:2013
UE 2015/1188

		Model:	RFC	
Item	Symbol	Value	Unit	Item
	t output 2000			Type of heat outputemperature controlone)
Nominal heat output	$P_{nom}$	2	kW	single stage heat output and no room temperature control
Maximum continuous heat output	P <sub>max,c</sub>	2	kW	Two or more manual stages, no room temperature control
Auxiliary electricity consumption				with mechanic thermostat room temperature control
At nominal heat output	$el_{max}$	2	kW	with electronic room temperature control
In standby mode	el <sub>sв</sub>	0.0005	kW	electronic room temperature control plus day timer
				electronic room temperature control plus week timer
	t output 1500			Other control options (r selections possible)
Nominal heat output	$P_{nom}$	1.5	kW	room temperature control, with presence detection
Maximum continuous heat output	$P_{max,c}$	1.5	kW	room temperature control, with open window detection
Auxiliary electricity consumption				with distance control option
At nominal heat output	el <sub>max</sub>	1.5	kW	with adaptive start control
In standby mode	el <sub>sв</sub>	0.0005	kW	with working time limitation

	t output 1000				with black bulb sensor	NO
Nominal heat output	$P_{nom}$	1	kW	=		
Maximum continuous heat output	P <sub>max,c</sub>	1	kW	-		
Auxiliary electricity consumption				-		
At nominal heat output	el <sub>max</sub>	1	kW	-		
In standby mode	el <sub>sв</sub>	0.0005	kW	-		
Неа	t output 500			-		
Nominal heat output	P <sub>nom</sub>	0.5	kW	-		
Maximum continuous heat output	P <sub>max,c</sub>	0.5	kW	-		
Auxiliary electricity consumption				-		
At nominal heat output	el <sub>max</sub>	0.5	kW	•		
In standby mode	el <sub>sв</sub>	0.0005	kW	-		
Contact details	HERMANOS JULIÁN M., S.L.  Head Office: Esposos Curie,44 / Factory: Gutenberg,91-93 Polígono Industrial "Los Villares" . 37184 Villares de la Reina . Salamanca . España Tf.+34 923 222 277 +34 923 222 282 . Fax +34 923 223 397 http://www.calorhjm.es					

Requirements regarding ecodesign for local heating:

$$\eta_S = \eta_{S,on} - 10\% + F(1) + F(2) + F(3) - F(4) - F(5)$$

$$\eta = 40 - 10\% + 0 + 7 + 2 - 0 - 0 = 39\%$$

#### RECYCLING (Disposal of the product at the end of its useful life)



According to European Directive **2012/19/UE**, on waste electrical and electronic equipment (WEEE), old electrical household appliances cannot be disposed of in the usual municipal containers; they have to be collected separately to optimise the recycling of the components and materials that comprise it, and reduce the impact on human health and the environment.

The crossed-out wheeled bin is marked on all Electrical and Electronic products, to remind the consumer of their obligation dispose of them separately.

The consumer must contact the local authority or the vendor to learn about the correct disposal of his/her old electrical household appliance.

## Made by



☑ Factory: Gutenberg,91-93
 Polígono Industrial "Los Villares"
 ES-37184 Villares de la Reina . Salamanca . Spain
 +34 923 222 277 - +34 923 222 282

■ Fax: +34 923 223 397
Web: www.calorhjm.es
ESB-37295664