

EHC Electric Combination Radiators



Installation and technical manual



THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE. BE SURE TO OBSERVE ALL LABELS AND WARNINGS ON THE APPLIANCE.



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1. Safety Information

Electrical Connections

IMPORTANT

The wires in the mains leads are coloured in accordance with the following code:

GREEN & YELLOW: EARTH

BLUE: NEUTRAL

BROWN: LIVE



WARNING – THIS APPLIANCE MUST BE EARTHED

The installation of this appliance should be carried out by a competent electrician in accordance with I.E.E. Regulations for Electrical Equipment.

The radiator is fitted with a standard UK 3 pin plug that can be directly connected to an electrical socket. **Care must be taken when connecting radiators in this way not to overload the ring main circuit. If you are unsure contact a qualified electrician.**

Alternatively the mains cable can be cut to length and connected to a suitable fused 20 amp double-pole switched spur adjacent to the radiator. Please ensure that the electricity supply is disconnected prior to using this installation method.

Each supply circuit to the radiator must incorporate a Fused 20 Amp double pole switched spur having a contact separation of at least 3mm.

1. Safety Information (cont.)

Handling



This radiator is very heavy. Take adequate precautions when lifting and manoeuvring it. Always assess the load, and seek assistance with heavy or awkward loads that are beyond your capabilities.

Positioning



This radiator is very heavy. In order to maintain stability and to ensure its future safety in use, it is essential that the radiator is **FIXED SOUNDLY TO A WALL** and that the brackets are mounted on a **FIRM, LEVEL SURFACE**. Castors or Feet can be purchased as an accessory. Care should be taken to avoid irregular surfaces.

It is important that the following instructions are strictly followed.

Keep the following minimum safety distances to avoid fire risk due to high surface temperatures of the appliance during heating cycles:



| | |
|--|---------------|
| <i>Lateral heating walls – masonry</i> | <i>50 mm</i> |
| <i>Lateral heating walls – combustible matter</i> | <i>100 mm</i> |
| <i>Heating walls above floor</i> | <i>80 mm</i> |
| <i>Cover plate – combustible covering installed on top of it</i> | <i>150 mm</i> |
| <i>Cover plate – non-combustible covering installed on top of it</i> ... | <i>100 mm</i> |

Please note that our IPX4 rated models should be used in bathrooms.

Portable radiators must not be fitted in bathrooms or wet areas.

CAUTION – This radiator must not be located below a fixed socket outlet.

DO NOT POSITION under windows where curtains may contact the radiator.

DO NOT PLACE THE APPLIANCE in the vicinity of a swimming pool.

Installation



It is important that the fixing device chosen is appropriate to the wall material to which the radiator is being fixed. Some modern internal building materials are very low density block and require specialised fixing devices to provide a safe, secure installation. (see section 3, page 6)

Ongoing safety



CAUTION – If during any reassembly of the radiator, a part of the thermal insulation shows damage or deterioration which may impair safety, it should be replaced with an identical part.

CAUTION – In order to avoid overheating, do not cover the radiator.

DO NOT COVER OR OBSTRUCT the surfaces of the appliance.

DO NOT PLACE OBJECTS in contact with the radiator.

2. General Information

EHC Combination Electric radiators have been designed using the latest technology to create an elegant solution for all hard to heat situations. They can be installed in almost any location apart from the safety restrictions noted in this manual.

The range has been developed to provide a flexible solution for electric heating in Domestic properties, Conservatories, Holiday homes, Offices and any other temporary heating situation.

Our unique patented 'Magmatic' heating tablets provide the heat source for your new radiator. Whilst the radiator is classed as a 100% efficient Direct Acting appliance, the heating tablets provide partial storage to prolong your heating comfort and to reduce running costs. The radiator has a robust body which incorporates a spot welded high fin surface area to ensure that there are no contraction noises during the heating cycle. The high fin design boasts 6 times the normal radiator surface area to provide a balance of Convection and Radiant heat for your added comfort.

The radiators can be simply plugged in to a Standard socket or Hard wired to an existing spur connection. The range has the flexibility of being Wall mounted or free standing on Castors or Feet.

For added versatility we can supply Conservatory radiators which are also ideal for use below windows with low sills.

All our standard model sizes are supplied with a TEI 1 manual room thermostat. For a fully controllable central heating system, the radiators can be installed with our EHC Control Box, Single Channel Programmer and Room Thermostat to comply with the latest Building Regulations.

In addition to the above we also supply Radio Frequency radiators which provide all the benefits of the standard version however the control wiring is eliminated. These models can be controlled by our TEI 6 and TEI 8 Programmers.

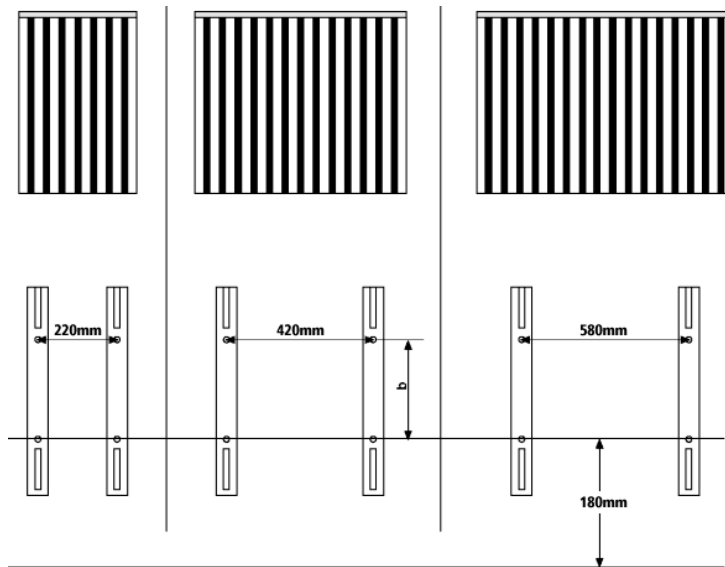
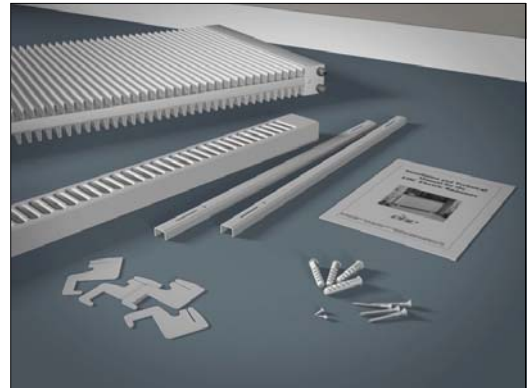
All EHC radiators are manufactured to the highest safety and quality Standards. Each radiator is CE Marked and carries all the necessary European Approvals. Each radiator is fully checked and tested prior to leaving the factory and as such is packed with full Quality certification.

We hope you enjoy the comfort provided by this superior product and we look forward to being of assistance to you in the future.

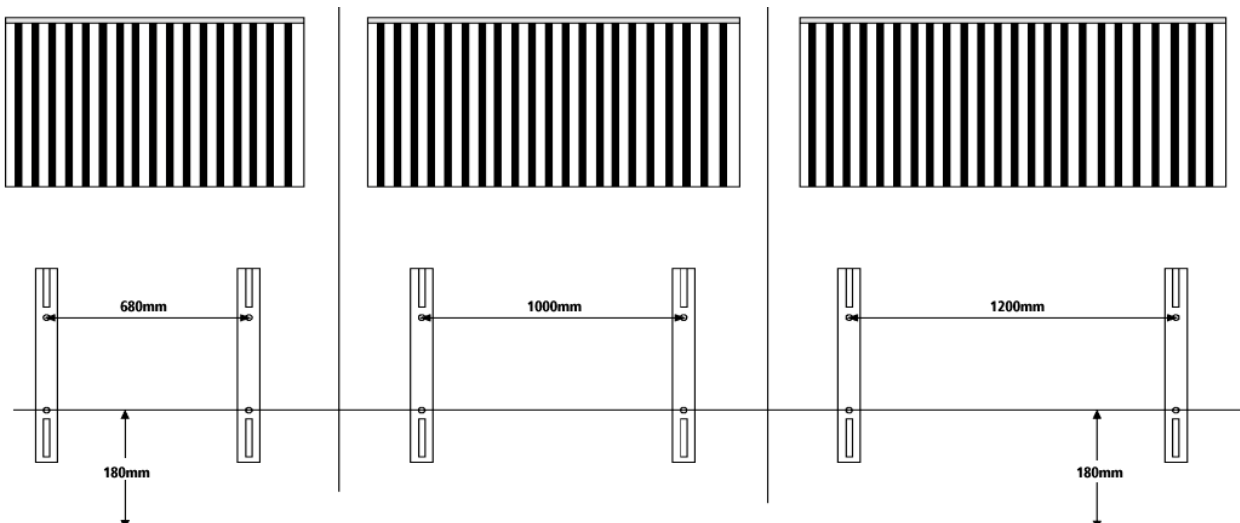
3. Installation

Preparation

1. Before beginning, remove the radiator and parts from the box and check everything is present and correct. In addition to the radiator body, there should be a top grille, a pair of mounting brackets, four suspension hooks, a set of mounting screws/ plugs and an instruction manual.
2. Check page 3 of this manual to find the minimum clearances for your chosen location. Mark the bracket positions on the wall according to the following diagrams:



| Rad. Length (mm) | Bracket separation (mm) |
|------------------|-------------------------|
| 380 | 220 |
| 680 | 420 |
| 850 | 580 |
| 980 | 680 |
| 1280 | 1000 |
| 1580 | 1200 |



3. Installation (cont.)

Wall fixture and fittings

3. Drill, plug, and secure the brackets to the wall. Appropriate fixtures must be used depending on the wall material:

Solid brick/High density block walls

These must be drilled and plugged with the Rawlplug No. 10 size fibre inserts provided. The correct size of drill (5.5mm) should be used and the hole should be drilled to a depth of 8mm greater than the length of the Rawlplug so that the fixing is made below the plaster layer.

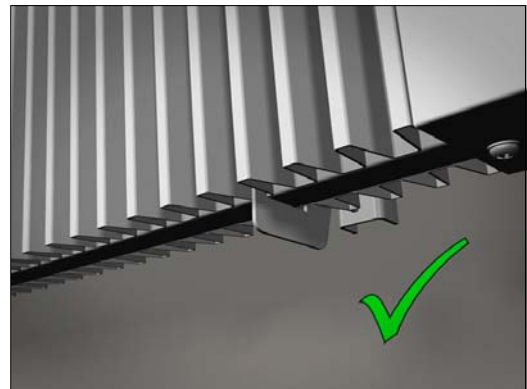
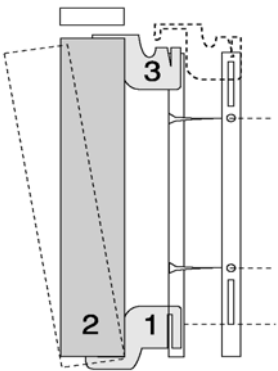
Low density block walls

A special fixing, such as Unifix LB70 should be employed, following closely the manufacturers instructions.

Panelled internal walls

It is preferable to locate the studding and use the No.10 size woodscrews provided. Where it is not possible to locate the studding use Hollow wall anchors and securely fasten the brackets to the plasterboard when this method is used we recommend that radiator feet are used to take the full weight of the radiator. For other wall materials the wall panel manufacturer should be consulted for details of suitable wall fixing devices.

4. Fit two of the suspension hooks into the bottom slots in the brackets, and hang the bottom of the radiator on them. Make sure the radiator is sitting right back on the hooks and not just resting on the fins.



5. Fit the other two suspension hooks in the top slots of the brackets, and lift them up. Push the radiator back against the wall and drop the suspension hooks back down to lock it in position.
6. The top grille of the radiator can then be fitted and secured with the securing screws at each end.



3. Installation (cont.)

7. At the bottom of the radiator, next to the mains connection there is a small temperature sensor. Loosen the gland and pull the sensor down by 50 - 70 millimetres, then re-tighten the gland. This enables the radiator to gauge the room's temperature more accurately.



Electrical connection

8. All EHC radiators come with a standard UK 3 pin plug that can be directly connected to an electrical socket.

Alternatively the mains cable can be cut to length and connected to a suitable Fused **20 Amp double-pole** switched spur adjacent to the radiator. Please ensure that the electricity supply is disconnected prior to using this installation method. The mains plug should be discarded safely and not re-used.



CAUTION – Consideration must be made when connecting a multiple radiator system in this way as there is a limit to the ring mains supply within a property. If unsure please consult a qualified electrician.

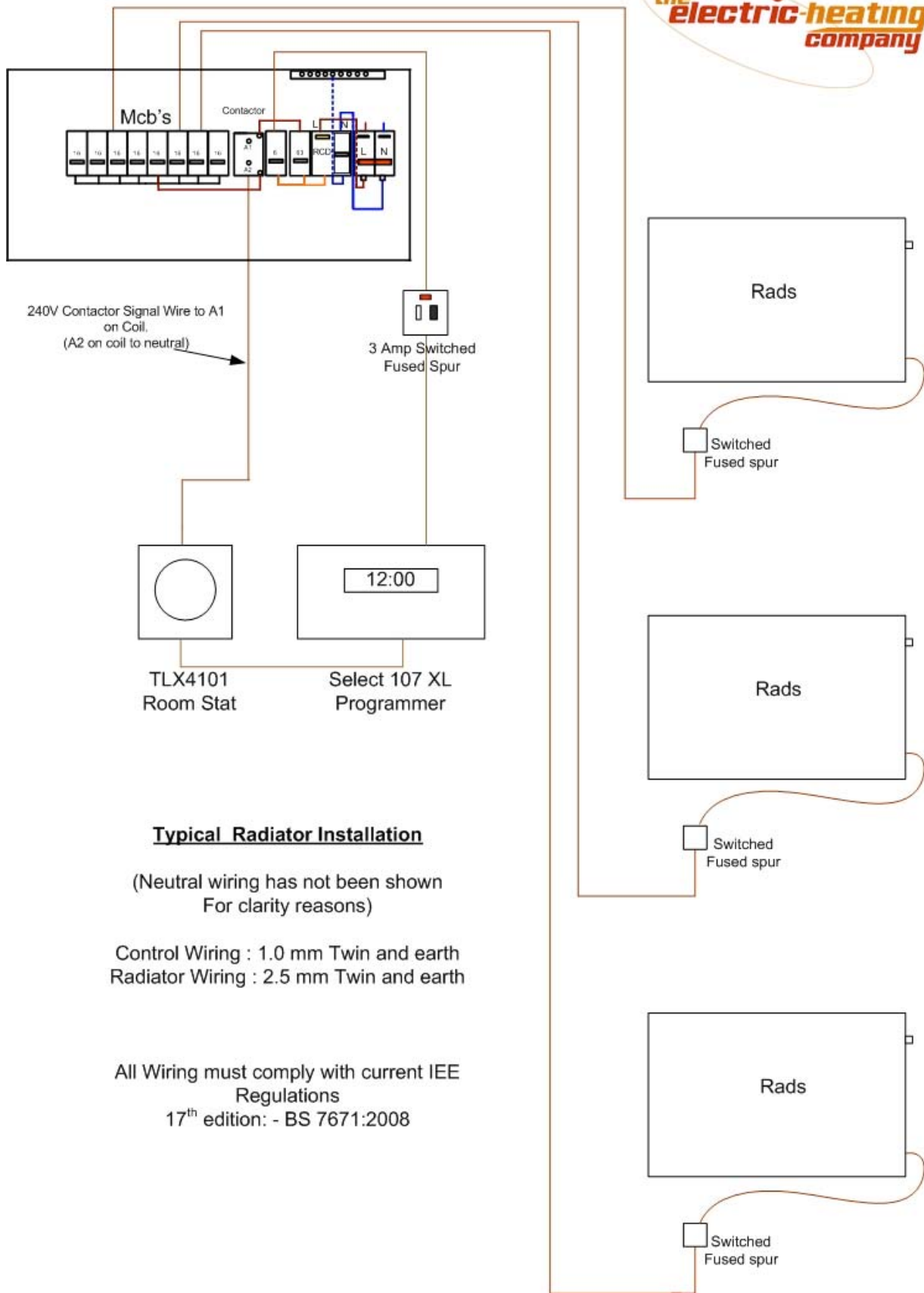
Control cabling – wired versions

9. **TE11 installations** – All standard radiators come complete with a TE11 thermostat for room temperature control. For single radiator installations please follow the instructions outlined in section 8.
10. **EHC CONTROL BOX installations** – For central control of a number of radiators, connect the radiators to an EHC Control box as follows. See the schematic on the following page as a guide.
 - a. Install new radiators as per installation instructions
 - b. Cut the mains cable to length and connect to a suitable Fused **20 Amp double pole** switched **spur** adjacent to the radiator
 - c. Connect the Control Box to the incoming mains supply.
 - d. Connect all radiator mains cables to the Control Box using the pre-connected 16 Amp MCBs.
 - e. Locate the Single Channel Programmer in a suitable area and protect via a 3 Amp fused switched spur. Connect to the Control Box using the 6 Amp MCB.
 - f. Locate the Room Thermostat in a suitable area and connect to the Programmer and Control Box Contactor A1 connection.
 - g. Reconnect the mains supply and test.



CAUTION - After completion of works all electrical connections should be tested for tightness. Additionally an electrical safety check should be carried out ie: short circuit, earth continuity, resistance to earth and polarity check and all the relevant test certificates produced.

3. Installation (cont.)



Typical Radiator Installation

(Neutral wiring has not been shown For clarity reasons)

Control Wiring : 1.0 mm Twin and earth
 Radiator Wiring : 2.5 mm Twin and earth

All Wiring must comply with current IEE Regulations
 17th edition: - BS 7671:2008

3. Installation (cont.)

Control cabling – RF models

All Radio Frequency radiators come complete with a pre-wired TEI-5 Receiver which is controlled by either the TEI-6 or TEI-7 RF Programmers.

11. TEI-6 installations

- a Follow the instructions outlined in section 8 for single radiator installations.
- b Locate the TEI-6 programmer on a suitable wall in the same room as the radiator.
- c Configure the TEI6 programmer and TEI-5 receiver located on the radiator according to the instructions included in the TEI-6 packaging.
- d Set the required program times and temperatures.

12. TEI-8 installations

- a Follow the instructions outlined in section 8 for single radiator installations.
- b Locate the TEI-8 digital room thermostat on a suitable wall in the same room as the radiator.
- c Configure the TEI-8 digital room thermostat and TEI-5 receiver located on the radiator according to the instructions included in the TEI-8 packaging.
- d Set the required temperature by adjusting the +/- buttons.



CAUTION - After completion of works all electrical connections should be tested for tightness. Additionally an electrical safety check should be carried out ie: short circuit, earth continuity, resistance to earth and polarity check and all the relevant test certificates produced.

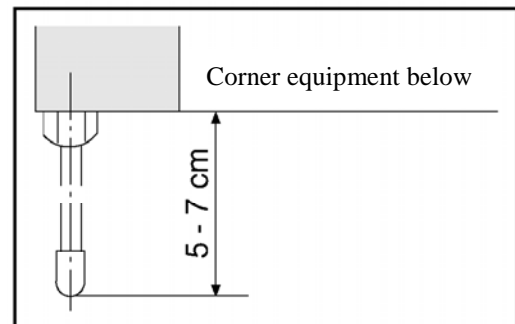
Installing castors and feet

- 13.** All radiators are supplied with wall mounting brackets, however with the exception of the Towel Rail they can also be mounted on feet or castors. Consult the leaflet which comes with them for fixing instructions. If not fixed to a wall, the official feet or castors must be used.

4. Operating instructions

TEI-1 OPERATING INSTRUCTIONS

Each radiator has a temperature sensor installed on the underside of the radiator. This is designed to accurately determine the room temperature – note that this should protrude 50 to 70 mm from the locating screw.



The TEI-1 is operated by turning the control knob. The temperature can be regulated from approx. 10°C to 30°C, including a frost protection setting of approx. 5°C.

| | |
|---------------------------------|---------------------------------------|
| setting *: | <i>approx. 5°C (frost protection)</i> |
| setting between * and 1: | <i>approx. 10°C</i> |
| setting 4: | <i>approx. 20°C</i> |
| setting 6: | <i>approx. 30°C</i> |

The red indicator above the control knob indicate the heating status:

| | |
|---------------------|--|
| LED lit: | <i>heating on or the set temperature has not been reached.</i> |
| LED not lit: | <i>heating off or the set temperature has been achieved.</i> |

CAUTION - Forced turning beyond the end settings of the control knob will cause damage to the thermostat components and as such will invalidate the warranty.

5. Operating safety

This appliance complies with the European Standards EN 60 335-1, EN 60 335-2-61, EN 61000-3-2, EN 61000-3-3, EN 55014 and EN55104 for Safety & Electromagnetic Compatibility. These standards cover the requirement of the EMC Directives 89/336 & 73/23

RADIATOR POSITIONING - A minimum clearance of 150mm to the front of the radiator is essential for safety, however to enable the radiator to attain its maximum performance ensure that any furniture or other obstruction is not placed closer than 250mm.

THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE

IMPORTANT SAFETY INFORMATION

CAUTION - THE SURFACE OF THIS RADIATOR CAN BE HOT.

The surface temperatures of this radiator are within the requirements of EN60-335 the European Standard covering the safety requirements of electric heating appliances, and momentary contact with any part of the radiator should not cause injury. However, in order to be effective, radiators of any type do get hot, especially around the air outlet grille.

5. Operating safety (cont.)

Therefore, if aged or infirm persons, or young children, are likely to be left unsupervised in the vicinity of a radiator precautions should be taken to ensure that prolonged contact with the radiator cannot occur. We recommend that a guard is fitted around the radiator, as is normal with some types of heating appliances in similar circumstances.

CAUTION - IN ORDER TO AVOID OVERHEATING, DO NOT COVER THE SURFACES OF THE RADIATOR AND DO NOT OBSTRUCT AIR OUTLET GRILLES. Surfaces of the radiator should not be covered or obstructed as this can cause excessive temperatures that can be hazardous and may cause safety cut-outs to operate. For example, do not put clothes, fabrics or any combustible materials on the radiator or allow curtains to come within 75mm (3") of the top and ends of the radiator. Do not allow furniture to be pushed up against the radiator. A minimum clearance of 150mm is critical for safety, however to ensure radiator performance is not affected a clearance of 250mm is recommended.

DO NOT PLACE OBJECTS IN CONTACT WITH THE RADIATOR

CAUTION – The radiator must not be located below a socket outlet.

PLEASE NOTE: THIS RADIATOR IS HEAVY AND MUST BE SECURELY FIXED TO A SOUND WALL. No attempt should be made to move the radiator without first seeking specialist advice. If you are not happy that the radiator has been securely fixed, please inform your installer.

UNDER NO CIRCUMSTANCES SHOULD YOU ATTEMPT TO MOVE THE RADIATOR OR LOOSEN WALL FIXINGS WITHOUT TAKING THE NECESSARY ADVICE.

DO NOT SIT OR STAND ON THE RADIATOR.

DO NOT SPILL LIQUIDS ONTO THE APPLIANCE. IF YOU DO, SWITCH THE RADIATOR OFF AND GET A QUALIFIED ELECTRICIAN TO CHECK IT.

DO NOT POKE OBJECTS THROUGH THE GRILLE.

DO NOT PLACE OBJECTS IN THE SPACE BEHIND THE RADIATOR.

DO NOT USE POLISHES ON THE RADIATOR OR ON FURNITURE NEAR TO IT. The hot interior of the radiator can produce paraffin smells from polish vapours which may last for a number of hours.

In case of breakdown or other failure, switch off the radiator at both wall switches and contact your supplier or the EHC Help Desk on 01698 820533.

Always ensure that the radiator is switched off at the wall and fuse is removed before any repair is carried out.

IMPORTANT - Due to the newness of the materials the radiator will produce a slight smell for the first few days of operation.

ROOMS MUST BE WELL VENTILATED AND YOUNG CHILDREN, CAGED BIRDS OR PERSONS WITH RESPIRATORY COMPLAINTS MUST NOT REMAIN IN CLOSE PROXIMITY TO THE RADIATOR DURING THE FIRST 48 HOURS OF THE COMMISSIONING PERIOD. Running the radiator at maximum temperature for the first few days will help to dispel any smells more quickly.

Please note that at high setting the room temperature will be warmer with a corresponding increase in running costs.

5. Operating safety (cont.)

Safety - Overheat Protection

For your safety, this appliance is fitted with thermal cut-outs. In the event that the product overheats, the cut-outs switch the radiator off automatically. In the event of these safety cut-outs activating please inform the installer or the EHC Help Desk.

Cleaning

To maintain the external appearance of the radiator it need only be wiped over occasionally with a dry duster. During the summer months, or at other times when the appliance is not in use and is completely cold, the opportunity should be taken to wipe over with a damp cloth.

Do not use abrasive cleaning powders or furniture polish.

Discoloration of wall finishes can sometimes occur immediately above a radiator due to the properties of some paints and decorating materials or the presence of environmental impurities in the air (such as soot or incense generated from the burning of candles etc.).

After Sales Service

Your EHC Combination Electric radiator is guaranteed for two years for the electronics and fifteen years for the radiator body from the date of purchase. We undertake to exchange or repair free of charge within this period any part found to be defective due to a manufacturing fault. This guarantee in no way prejudices your rights under common law.

Should you require after sales assistance, please contact the EHC Help Desk on 01698 820533.

6. Technical Data

Manual

| Model No. | | Colour | Rating BTUs | Width mm | Height mm | Depth mm | Weight kg |
|----------------------|-----------------------------|--------|----------------|-------------|--------------|-------------|--------------|
| EH500.38.63 | 500W EHC ELECTRIC RADIATOR | White | 1706 | 380 | 630 | 70 | 22 |
| EH800.38.63 | 800W EHC ELECTRIC RADIATOR | White | 2730 | 380 | 630 | 70 | 22 |
| EH1000.68.63 | 1000W EHC ELECTRIC RADIATOR | White | 3412 | 680 | 630 | 70 | 36 |
| EH1500.98.63 | 1500W EHC ELECTRIC RADIATOR | White | 5118 | 980 | 630 | 70 | 50 |
| EH2000.128.63 | 2000W EHC ELECTRIC RADIATOR | White | 6824 | 1280 | 630 | 70 | 62 |
| EH2400.128.63 | 2400W EHC ELECTRIC RADIATOR | White | 8189 | 1280 | 630 | 70 | 62 |

Radio Frequency

| Model No. | | Colour | Rating BTUs | Width mm | Height mm | Depth mm | Weight kg |
|------------------------|--------------------------------|--------|----------------|-------------|--------------|-------------|--------------|
| EH500.38.63RF | 500W EHC ELECTRIC RADIATOR RF | White | 1706 | 380 | 630 | 70 | 22 |
| EH800.38.63RF | 800W EHC ELECTRIC RADIATOR RF | White | 2730 | 380 | 630 | 70 | 22 |
| EH1000.68.63RF | 1000W EHC ELECTRIC RADIATOR RF | White | 3412 | 680 | 630 | 70 | 36 |
| EH1500.98.63RF | 1500W EHC ELECTRIC RADIATOR RF | White | 5118 | 980 | 630 | 70 | 50 |
| EH2000.128.63RF | 2000W EHC ELECTRIC RADIATOR RF | White | 6824 | 1280 | 630 | 70 | 62 |
| EH2400.128.63RF | 2400W EHC ELECTRIC RADIATOR RF | White | 8189 | 1280 | 630 | 70 | 62 |

Conservatory radiators

| Model No. | | Colour | Rating BTUs | Width mm | Height mm | Depth mm | Weight kg |
|----------------------|-------------------------------------|--------|----------------|-------------|--------------|-------------|--------------|
| EH500.68.34 | 500W EHC ELECTRIC CONSERVATORY RAD | White | 1706 | 680 | 340 | 70 | 21 |
| EH1000.85.34 | 1000W EHC ELECTRIC CONSERVATORY RAD | White | 3412 | 850 | 340 | 70 | 24.5 |
| EH1600.128.34 | 1600W EHC ELECTRIC CONSERVATORY RAD | White | 5459 | 1280 | 340 | 70 | 34.5 |
| EH2000.158.34 | 2000W EHC ELECTRIC CONSERVATORY RAD | White | 6824 | 1580 | 340 | 70 | 38 |

Tall radiators

| Model No. | | Colour | Rating BTUs | Width mm | Height mm | Depth mm | Weight kg |
|----------------------|-----------------------------|--------|----------------|-------------|--------------|-------------|--------------|
| EH1200.38.124 | 1200W EHC ELECTRIC RADIATOR | White | 4094 | 380 | 1240 | 70 | 35 |
| EH1800.55.124 | 1800W EHC ELECTRIC RADIATOR | White | 6142 | 550 | 1240 | 70 | 58 |

Towel rail

| Model No. | | Colour | Rating BTUs | Width mm | Height mm | Depth mm | Weight kg |
|------------------|-----------------------------------|--------|----------------|-------------|--------------|-------------|--------------|
| 2003.06WE | 1200W EHC ELECTRIC TOWEL RADIATOR | White | 4094 | 640 | 1020 | 140 | 33 |

Bathroom radiators (IPX4)

| Model No. | | Colour | Rating BTUs | Width mm | Height mm | Depth mm | Weight kg |
|-------------------------|--------------------------------------|--------|----------------|-------------|--------------|-------------|--------------|
| EH600.38.63IPX4 | 600W EHC ELECTRIC BATHROOM RADIATOR | White | 2047 | 380 | 630 | 70 | 22 |
| EH1000.68.63IPX4 | 1000W EHC ELECTRIC BATHROOM RADIATOR | White | 3412 | 680 | 630 | 70 | 36 |

Accessories and controls

| Model No. | |
|-----------------|------------------------------|
| CAST/1 | EHC RADIATOR CASTORS |
| FEET/1 | EHC RADIATOR FEET |
| S/PACK/1 | EHC MANUAL RADIATOR CONTROLS |
| TEI 6 | EHC MILUX R/F CONTROLLER |
| TEI 8 | EHC R/F DIGITAL THERMOSTAT |

| Model No. | |
|----------------|-------------------------|
| HORST/1 | ELECTRONIC 7 PROGRAMMER |
| EHC6W | EHC 6 Way CONTROL BOX |
| EHC10W | EHC 10 Way CONTROL BOX |

For further installation information, call us now on **01698 820533** and request one of our free Product guide and Installation DVDs.



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