

THESE INSTRUCTIONS SHOULD BE READ CAREFULLY AND RETAINED FOR FUTURE REFERENCE.

Note also the information presented on the appliance



Please scan this QR code to view detailed Installation and Operating Instructions on-line.



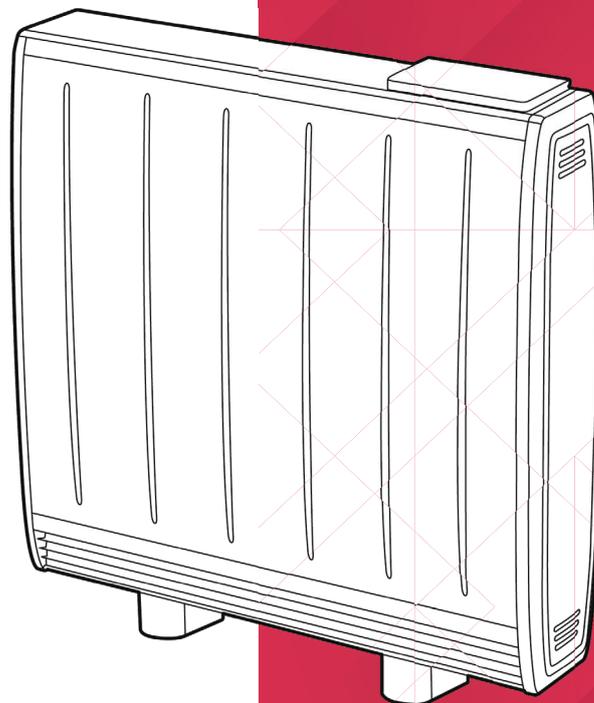
## INSTALLATION and OPERATING MANUAL

### Quantum Series Heater

Models:

QM050RF / QM070RF / QM100RF

QM125RF / QM150RF



### Technical Details

Model Identifier(s):	QM050RF	QM070RF	QM100RF	QM125RF	QM150RF
Input rating 230/240V-	936/1020W	1435/1560W	2042/2220W	2540/2760W	3024/3300W
Max Storage Capacity	7.2kWh	10.9kWh	15.4kWh	19.3kWh	23.1kWh
Fan Wattage	11W	11W	11W	11W	11W
UI Wattage	0.5W	0.5W	0.5W	0.5W	0.5W
Sound Level dB (measured in test chamber)	27	29	32	30	31
Energy Cell Packs Required (047243)	4	6	8	10	12
Height (mm)	730	730	730	730	730
Width (mm)	580	703	825	1069	1069
Depth (mm)	185	185	185	185	185
Battery (to backup real time clock)	CR2032, 3.3V coin cell battery. Battery life > 5 years				



This Heater is rated IPX4

# Operating Instructions



**WARNING** - In order to avoid overheating, do not cover or obstruct the heater.

Do not place material or garments on the heater, or obstruct the air circulation around the heater, for instance by curtains or furniture, as this could cause overheating and a fire risk.

**CAUTION** - Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.

## CHILD SAFETY

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 use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

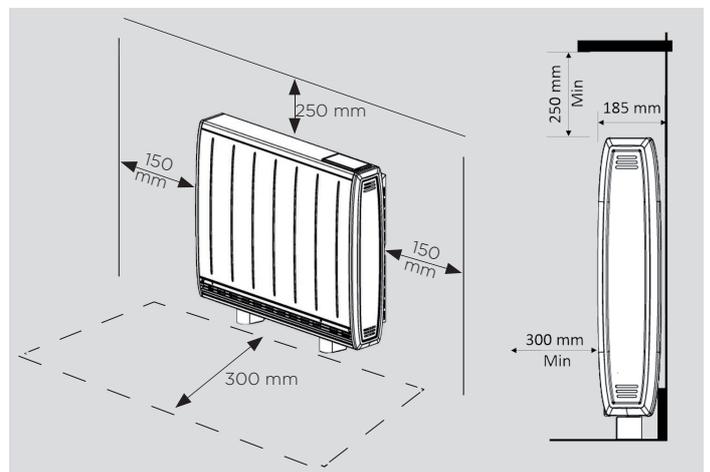
Children of less than 3 years should be kept away unless continuously supervised.

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.

## Product Clearances



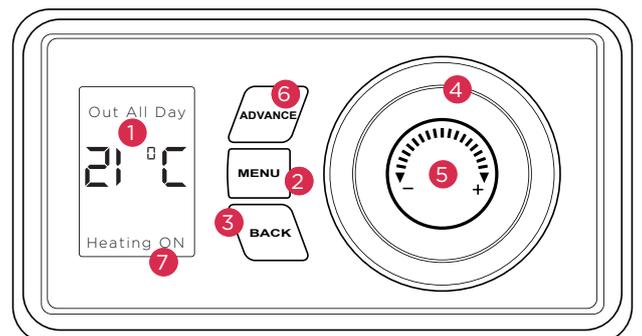
**WARNING: DO NOT PLACE OBJECTS WITHIN 300mm OF THE FRONT OF THE HEATER, 150mm AT EITHER SIDE OR 250mm FROM THE TOP**



## Operation

The controls are located on the top of the heater consisting of a display screen and three buttons and a Dial.

- 1 Display Screen
- 2 'Menu' Button
- 3 'Back' Button
- 4 'Selector Dial'
- 5 'Enter' Button
- 6 'Advance' Button
- 7 Heating Status



# Quick Start Guide

The heater is fitted with an adjustable thermostat enabling the room temperature to be controlled. The minimum room temperature is 7°C. The maximum temperature is set to 30°C by default. A temperature of 21°C is a common comfortable room temperature.

The heater controls can be easily adjusted by using the **Dial** and buttons on the User Interface.

1. The Home Screen.
2. **Menu** - Displays the Main Menu;
  - Boost – Activate Boost Mode
  - Modes - Set the mode of operation.
  - Settings – Time/Date, Temperature units etc.
3. **Back** returns to the previous screen.
4. Rotate the **Dial** to navigate through the menus and adjust the required room temperature on the main screen. The screen colour changes based on the temperature selected, showing deep blue through to bright red.
5. Press the **Dial** to enter sub menus and to confirm actions.
6. The **Advance** button is only used when a Timer Mode is active, it allows the timer schedule to be changed temporarily by forcing a 'Heating On' period to begin or end early.

- The outer case of the Quantum heater will be cooler to touch than a conventional storage heater. This is because less heat is 'lost' through the case, making more heat available from the fan outlet when needed.
- Nothing may be placed in the 300mm (1 foot) in front of the heater at any time. This is to avoid items coming into contact with the grille and the heated air which leaves it. Blocking some or all of this area could represent a fire hazard.
- You do not need to decide how much heat to store. Simply set the timer mode and the temperature to what suits you and leave the heater to meet your requirements.
- Ensure that both supply switches next to the heater are turned on. During the summer when no heat is required, both wall switches can be turned off. Remember to turn both of these back on in autumn when heat is required again.

## How does the heater control work?

The heater control allows you to choose when you want the heating to be on, and at what temperature. To deliver the required heat the control switches on and off a low speed fan that discharges stored heat from the core into the room.

The periods during which the heater is providing heat are called '**Heating On**' (shown at the bottom of the screen). Outside of these periods the heater will not deliver heat and these periods are called '**Heating Off**'. During the '**Heating On**' periods the low speed fan will run to maintain the temperature on the screen. During the '**Heating Off**' periods it will not.

**Note: there is a delay of up to a minute on the fan operation when switching to 'Heating On' or 'Heating off'. This is normal and does not represent a fault.**

## Set the time

The time and date are set in the factory and should not need to be amended, however to check that they are correct press **Menu**, then press the **Selector Dial** with **Time / Date** highlighted. Rotate the **Selector Dial** until the correct value is shown, then press it down to confirm and move on to the next value. Repeat until all details are correct and the main menu screen is showing again, then press **Back**.

The time is automatically adjusted in spring and autumn at the changes between Greenwich Mean Time (GMT) and British Summer Time (BST).

**It is recommended to check the time every couple of months and adjust if necessary.**

## Set the temperature

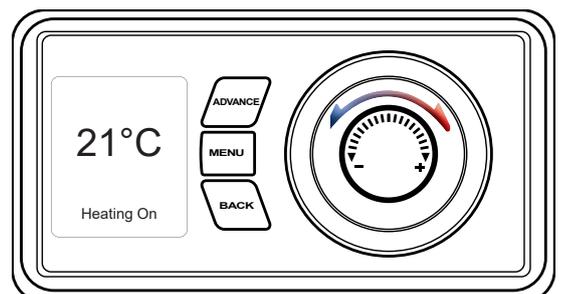
The temperature shown on the display is the room temperature setpoint. This is the temperature that the heater will maintain during the '**Heating On**' periods. If the room temperature is above this temperature then the fan will not operate.

The heater leaves the factory with this temperature set at 21°C which represents a typical, comfortable room temperature.

If you require a different room temperature then rotate the control dial either clockwise or anticlockwise until the display shows the temperature you require.

**THERE IS NO NEED TO TURN THIS DOWN OVERNIGHT**

**NOTE: If you wish to change the temperature permanently, this will need to be done by modifying the room temperature setpoint in your selected timer mode.**



## Set the timer mode

Your Quantum heater comes pre-programmed with four timer modes.

These modes define the periods when the heater will operate in 'Heating On' mode.

The four modes are:

Timer Mode	Description
User Timer	11 hours heating in 4 periods across the day 06:30 - 09:30, 11:00 - 13:00, 15:00 - 17:00, 18:00 - 22:00
Out All Day	6.5 hours heating per day in two periods 07:00 - 08:30, 17:00 - 22:00
Home All Day	13 hours of continuous heating per day 08:00 - 21:00
Away	Set the temperature and number of days for which you are on holiday

Note: The 'Heating On' times in all modes can be customised to suit your lifestyle, this includes adjusting the room temperature setpoint.

## Which timer mode is best for me?

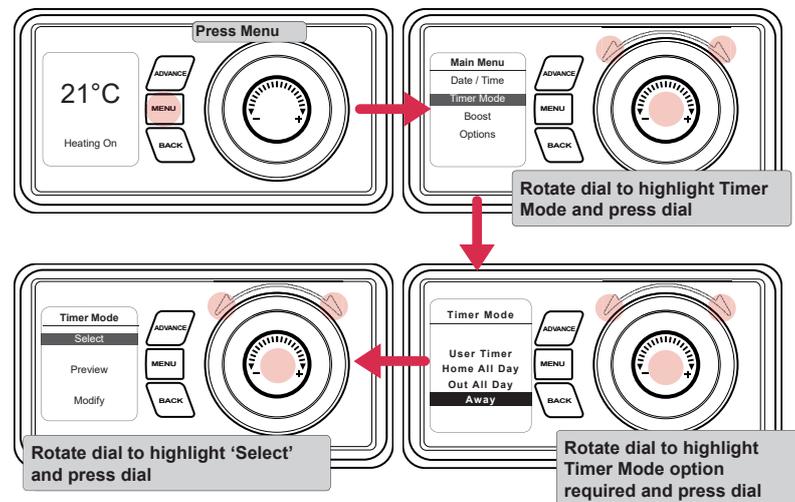
The heater leaves the factory set in **User Timer** mode, this mode will give you four periods of heating split throughout the day.

If you are out during the day and only require heat in the mornings and evenings then select **Out All Day** mode, this mode will suit your lifestyle and you won't need to do anything.

If you are in during the day then you should select the **Home All Day** mode.

If you are away for an extended period then you can use the **Away mode**. This allows you to reduce the heating during the period that you are away, reverting to the previously selected mode on the day you return.

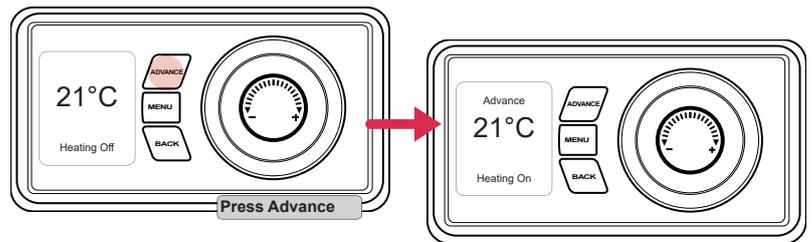
Scan the QR code on the adjacent page to view the full instruction booklet on-line.



## Advance

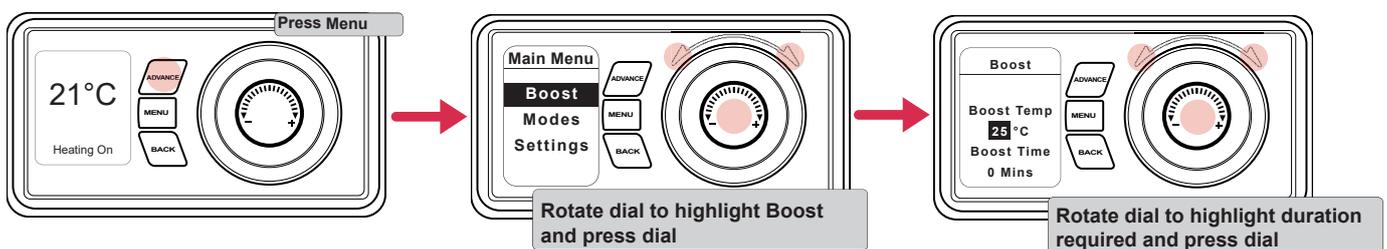
Sometimes you may need to change the way you use your heating temporarily. This is achieved by using the **Advance** function.

If the heater is in 'Heating Off' mode and you want heat - press the **Advance** button. If the heater is in 'Heating On' mode and you don't want heat, press the **Advance** button. The heater will go off until the beginning of the next 'Heating' period, then go back to the timed heating periods.



## Boost

A supplemental boost element controlled by the electronic thermostat is provided if additional room heating is required, for example, due to unusually cold weather. You can select how long the boost will run for, from one to four hours. Once the boost has run for the selected time it will automatically switch off.



**Note: Boost element uses peak rate electricity and could lead to increased running costs.**

# Installation Instructions



Please scan the QR code to access detailed Quantum Installation Instructions. Included are a view of the product, how to unpack the unit, install exterior components, install internal components, securing to the wall, sizing and fitting instructions, electrical connections and set up.



NOTE:

*Read these instructions carefully before proceeding any further with the installation*

## Product Clearances



**WARNING: DO NOT PLACE OBJECTS WITHIN 300mm OF THE FRONT OF THE HEATER, 150mm AT EITHER SIDE OR 250mm FROM THE TOP**

Fig. 1

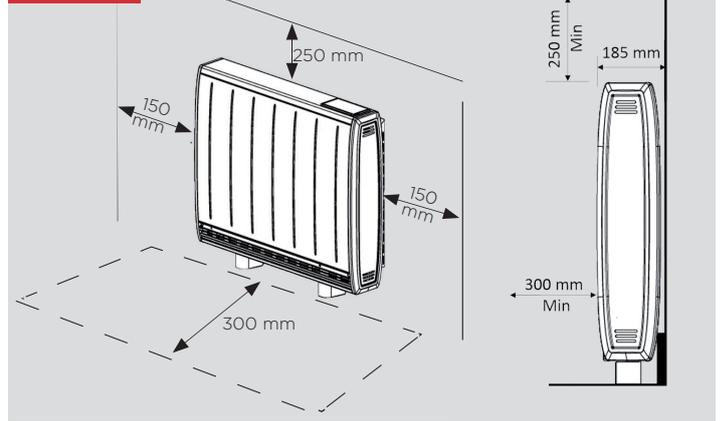
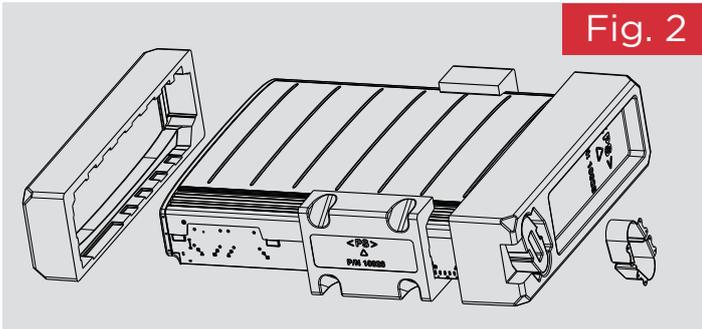


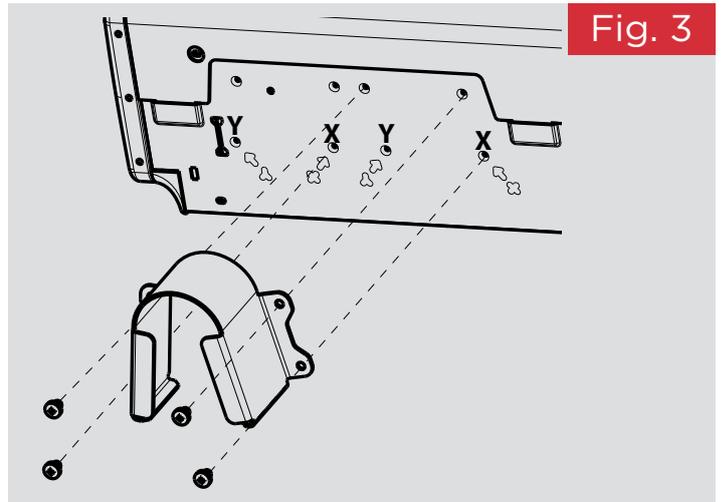
Fig. 2



1. Place the heater flat on the ground with arrows printed on the base of the carton pointing upwards. Open the carton at the bottom, slide the heater out of the carton by at least 200mm exposing the feet and the fixing kit located within the packaging on the right hand side. Remove the feet and the fixing kit. (Fig. 2)

Note - Foot screws are in the fixing kit.

Fig. 3



2. Secure the feet to the heater using all the screws provided (4 per heater). For models QM050, QM070 and QM100 two locations are possible indicated by X and Y markings visible on the base of the heater.

Ensure the feet are fixed at the location holes marked with an 'X', (Fig. 3/3B).

However, if this is a replacement heater check the pitch of the feet and choose the appropriate fixing positions - either X or Y.

The spacing between the feet when secured in location X and Y is indicated in the table below.

Models	Feet spacing in X	Feet spacing in Y
QM 050	248	198
QM 070	306	370
QM 100	422	572
QM 125 & 150	532	n/a



## WARNING

The appliance must be securely fixed to the wall. The installed appliance could weigh up to **165kg** and if it falls off the wall it could cause severe personal injury or death. It is the responsibility of the installer to ensure that the appropriate wall fixing is used and that the floor is capable of bearing the full weight.

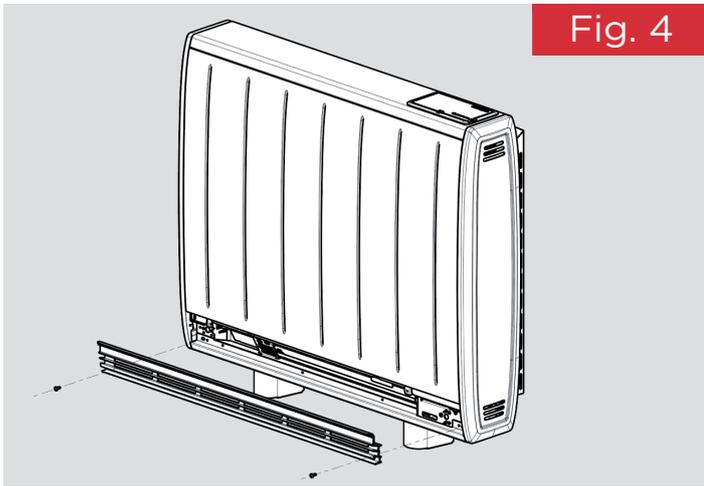


Fig. 4

4. Remove the screws which hold the grille panel in position.  
Set the grille carefully to one side to ensure that it is not damaged.

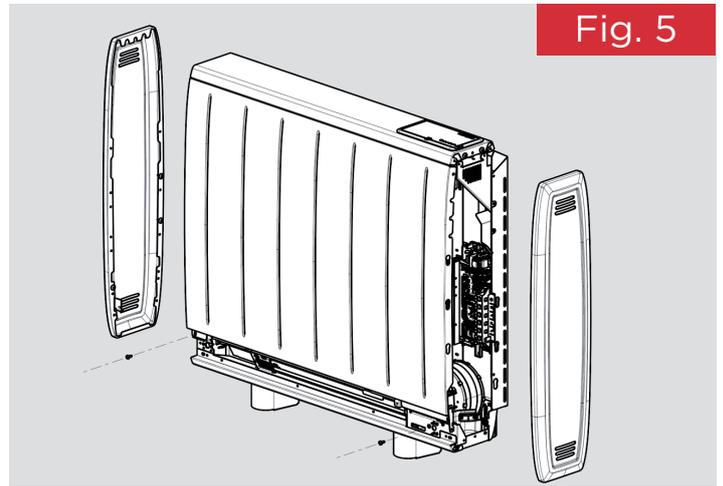


Fig. 5

5. Remove the two screws located towards the bottom, at either end of the heater, which retain the heater sides.  
Push the left hand and right hand sides towards the top of the heater to release each side from its securing points.

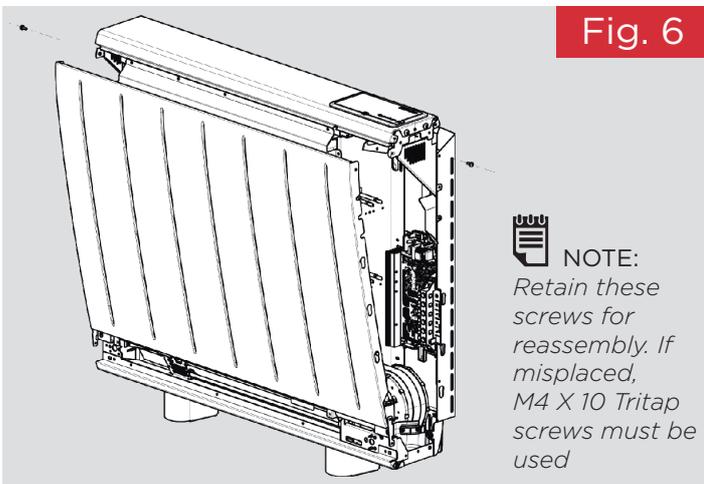


Fig. 6



**NOTE:**  
*Retain these screws for reassembly. If misplaced, M4 X 10 Tritap screws must be used*

6. Remove the two screws securing the front panel, located at the upper sides of the heater, and swing the upper edge of the front panel upwards and unhook it from along the heater base.

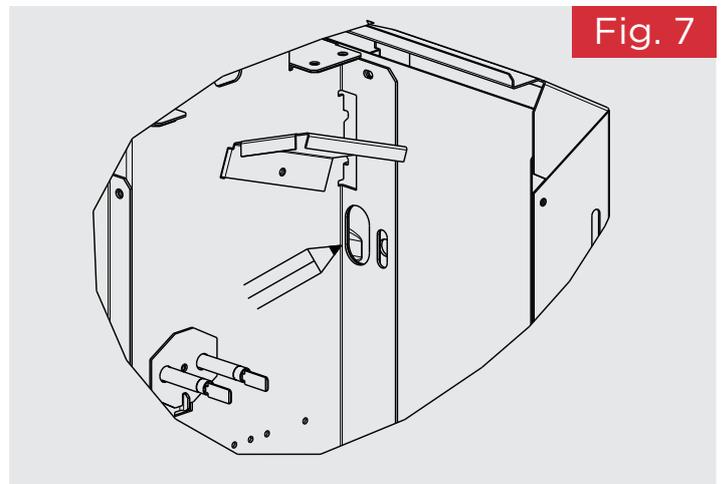


Fig. 7

7. Place the heater in its final position and mark the location holes visible through the back at either side of the heater.  
Remove the wall fixing bracket from the back of the heater.

## FIXING THE HEATER TO THE WALL

The heater must be securely fixed to a wall. Screws with suitable wall fixings for solid walls are provided. If other wall types are encountered it is the installer who must choose the most suitable fixing.

### SUGGESTED FIXINGS

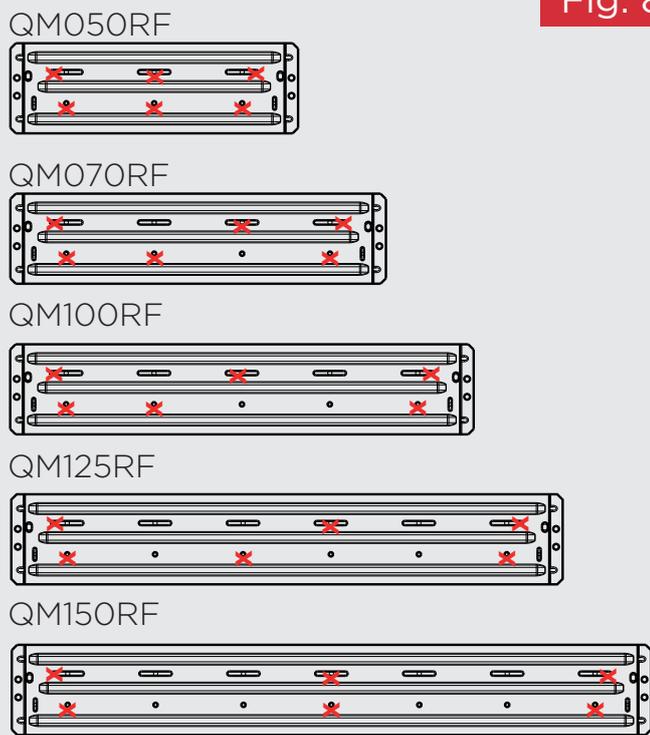
**SOLID BRICK/BLOCK:** No. 10 size high temperature resistant plastic inserts, 8mm drill bit. Drill hole 15mm deeper than plastic insert length.

**PLASTERBOARD** - If possible locate studding and use No. 10 woodscrews directly into the wood, otherwise M5 rawlplug intersets are suitable.



**NOTE:**  
*For other wall types (e.g. timber frame and hollow concrete), seek specialist advice.*

Fig. 8



8. Six fixing positions must be selected for ALL models QM050RF, QM070RF, QM100RF, QM100RF, QM125RF and QM150RF.

Common fixing points for all heater sizes are shown, (Fig. 8).

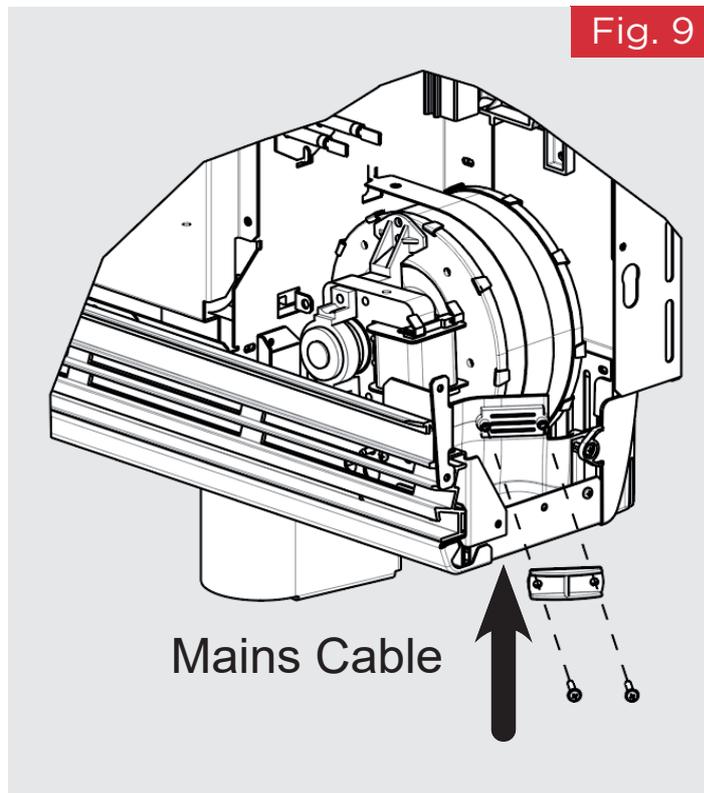
Position the wall bracket on the location mark made previously, drill the holes and fit the wall fixings best suited to the application.

Secure the wall bracket using the correct quantity of screws required per model, using the appropriate screw fittings.

Position the heater over the wall bracket and secure using a screw at either side.

**NOTE: DO NOT FULLY TIGHTEN THE SIDE FIXING SCREWS UNTIL THE ENERGY CELLS ARE FULLY LOADED TO ENSURE FULL WEIGHT IS ON THE FEET AND NOT ON THE WALL FIXINGS.**

Fig. 9



9. The mains cable entry and terminal block will be visible in the centre of the cavity at the right hand side. Insert the mains cables through the cable gland at the bottom of the heater in readiness for connection.

**Cable Sizes**

- Peak mains cable 1.5mm<sup>2</sup>
- Off-peak mains cable 2.5mm<sup>2</sup>
- Single Supply mains cable 2.5mm<sup>2</sup>



Only heat resistant ordinary polyvinyl chloride sheathed flexible cord should be used, the following codes apply;

IEC: 60227 IEC57 or CENELEC: H05V2V2-F

**CONNECTING MAINS SUPPLIES**

**WARNING** - The electrical installation of this heater must be carried out by a suitably qualified or trained electrician, and be in strict accordance with current wiring Regulations.

The supply circuits to the heater must incorporate a double pole isolating switch having a contact separation of at least 3mm.

The peak supply must be connected via a switched fused spur with a fuse rated suitably for the appliances flex, the off-peak supply, via a 20A double pole switch. In both instances a plug and socket arrangement **MUST NOT** be utilised.

- This heater must be earthed
- Do not locate the heater immediately above or below a fixed electrical point i.e. socket outlet.

This appliance is intended for installation to a single phase supply only and is not suitable for connection to 3 phase supplies.

# Electrical Connections

10. The heater leaves the factory configured to operate with two mains supplies, a 24 hour peak supply and an off peak switched supply (see Fig 10a). The heater can also be operated with a single main supply (Fig. 10b).

## Two Mains Supplies

Dual Supply - Storage / Fan circuit (Fig.10A)

24 hour / peak supply  
Off-peak supply

Fan Circuit L = PEAK L  
Storage Circuit L = OFF-PEAK L

Fan Circuit N = PEAK N  
Storage Circuit N = OFF-PEAK N

The brown wire connected to Live - L The blue wire connected to Neutral - N

The earth wire should be connected into the earth terminal block marked E - 

## Mains Terminal Block

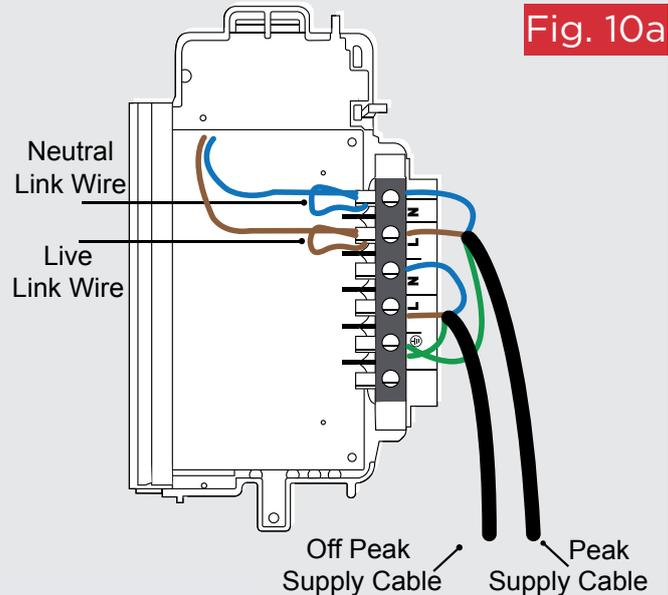
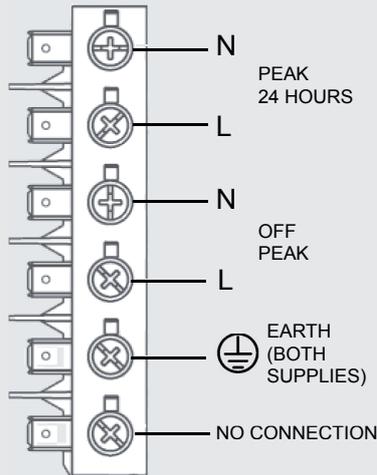


Fig. 10a

**WARNING:** Terminal block Minimum torque of 2Nm and Maximum torque of 2.2Nm

## Single Mains Supply

**Note! Do not connect to existing off peak wiring, unless the supply to these circuits is permanently live!**

*IMPORTANT - This kind of installation relies on the property having a fixed time period, off-peak energy tariff with 'whole home switchover' whereby all wiring in the property utilises the off-peak rate when available.*

Available fixed charge times must be manually programmed into the heater to tell it when to charge; no external timers or contactors are needed. Up-to 4 digital charge times can be set.

Single Supply L = OFF-PEAK L

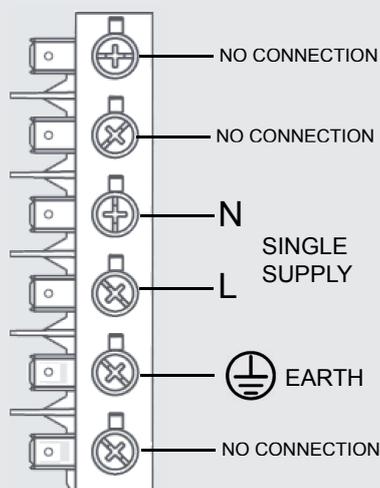
Single Supply N = OFF-PEAK N

The brown wire connected to Live - L

The blue wire connected to Neutral - N

The earth wire should be connected into the earth terminal block marked E - 

## Mains Terminal Block



Rewire the link wires as shown in image

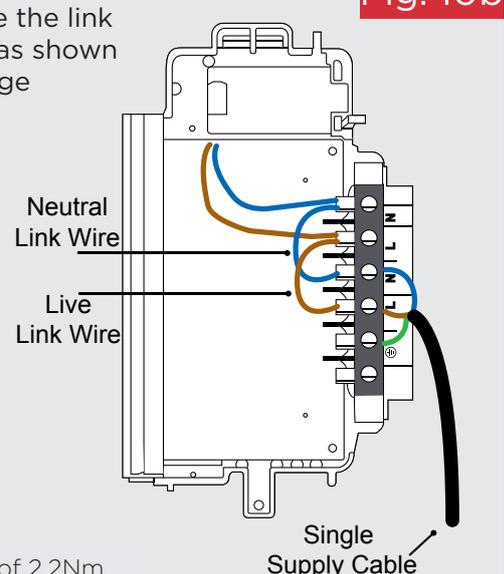


Fig. 10b

**WARNING:** Terminal block Minimum torque of 2Nm and Maximum torque of 2.2Nm

 **NOTE:**  
The property energy supplier should be consulted to confirm that the meter and tariff is suitable for single supply storage heating

# Building the Heater Core

## Energy Cells

The energy cells are supplied separately to the heater in packs of three. The item code is 047243.

 Make sure that energy cells are kept dry. Energy cells should not be exposed to moisture and not installed if this has occurred.

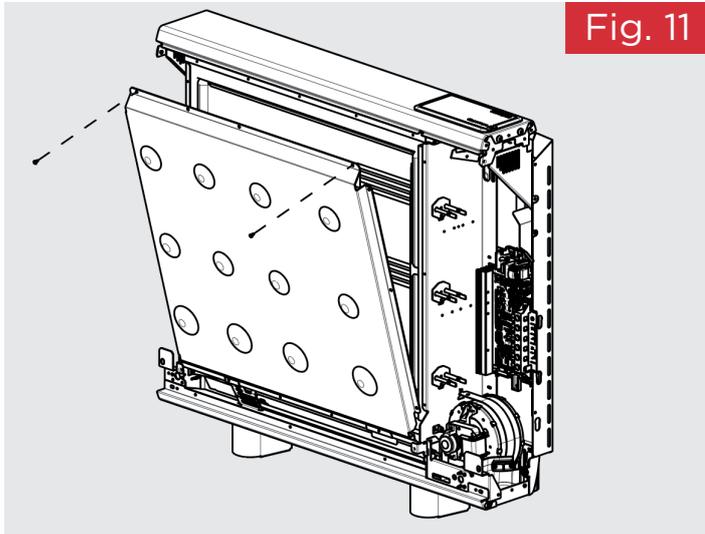


Fig. 11

11. Remove the inner front and insulation to gain access to the core of the heater.

Lay the inner front carefully to one side to ensure the insulation is not damaged. (Fig. 11)

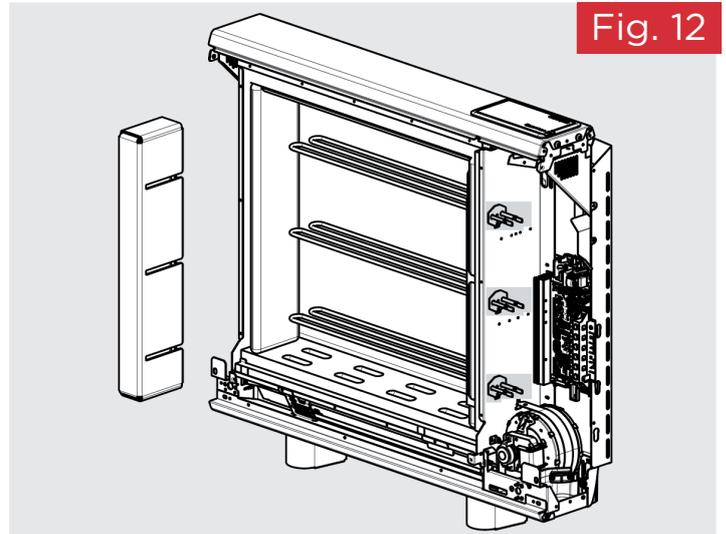


Fig. 12

12. Remove the cardboard element support and dispose of. (Fig. 12)

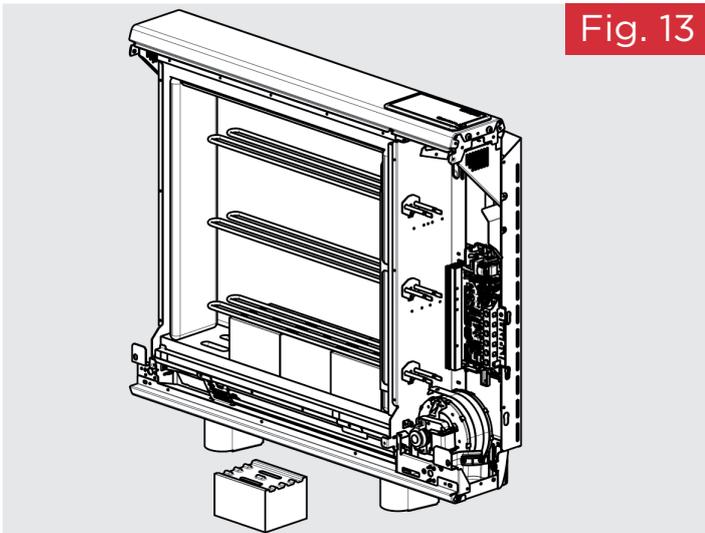


Fig. 13

13. The energy cells have several grooves on one surface for locating around the elements. The two slots through the centre of the energy cell create the air passages within the core.

Position the first energy cell of the bottom row to the right, firmly pressed against the side insulation with the element grooves facing upwards and fitting neatly under the element.

Position the second energy cell in the row against the left-hand insulation.

Fit the remaining energy cells to the bottom row, being careful not to damage or dislodge the element.

 **NOTE:**  
The bends in the element locate around the grooves in the energy cell to secure the element.

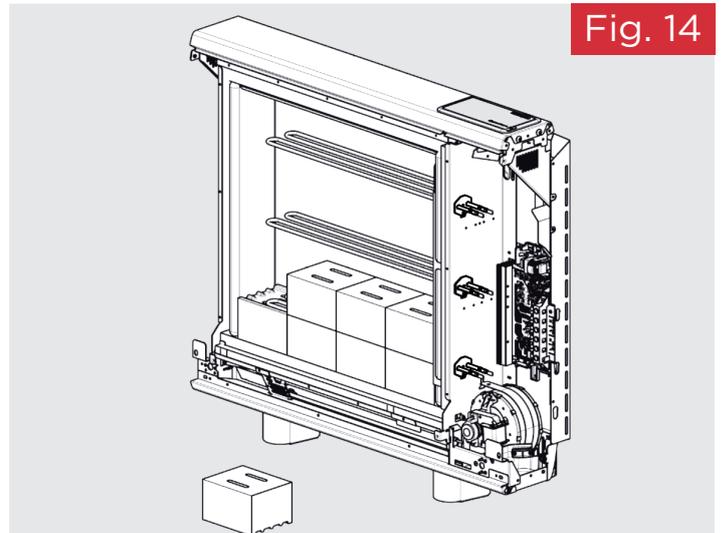
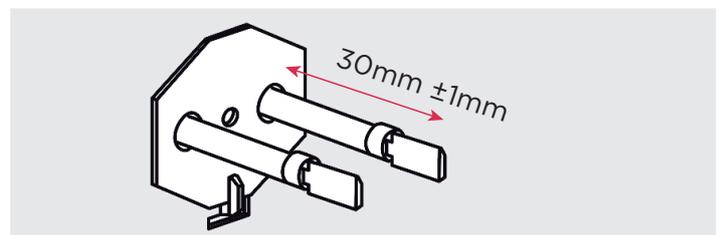


Fig. 14

14. Position the second row of energy cells on top of the first but this time the energy cells must be upside down ensuring the grooves are positioned over the elements. (Fig. 14)

## IMPORTANT:

*The element tails must extend no further than 30mm into the right hand chamber*



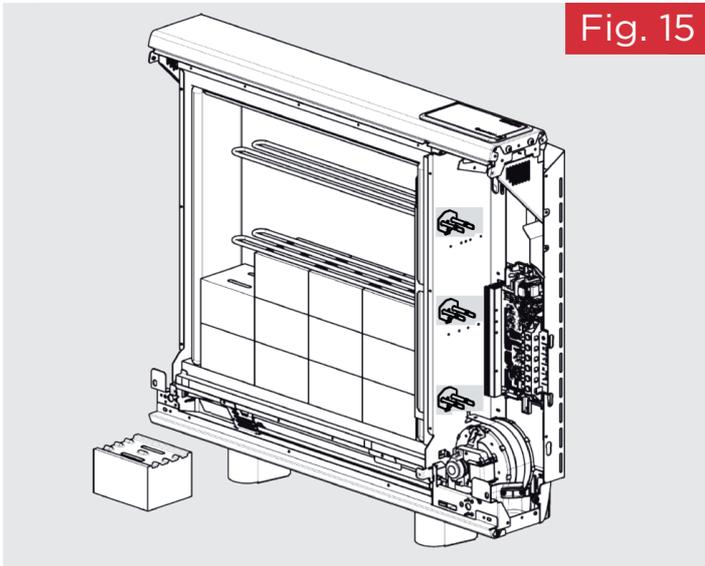


Fig. 15

15. The third row of energy cells is positioned in a manner similar to the first row. Again be careful not to damage or dislodge the element. (Fig. 15)

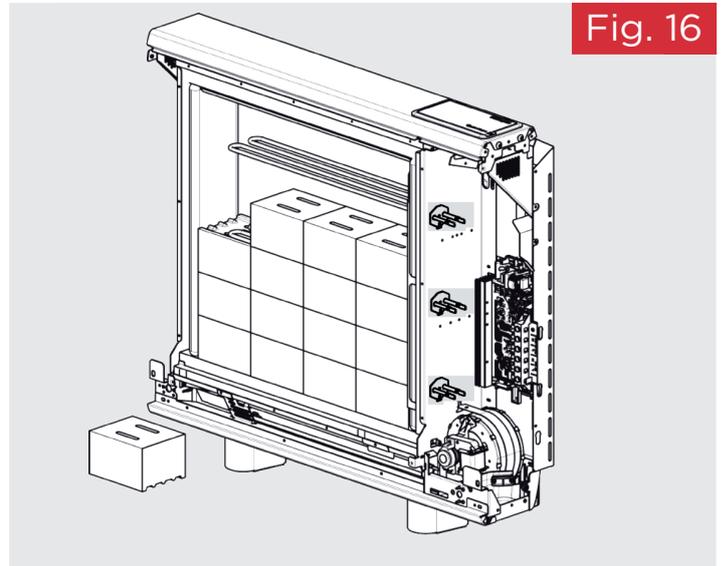


Fig. 16

16. Fit the fourth row of energy cells above the third row in the upside position. (Fig. 16). Repeat for the fifth and sixth rows of energy cells built around the third element to complete the core build.

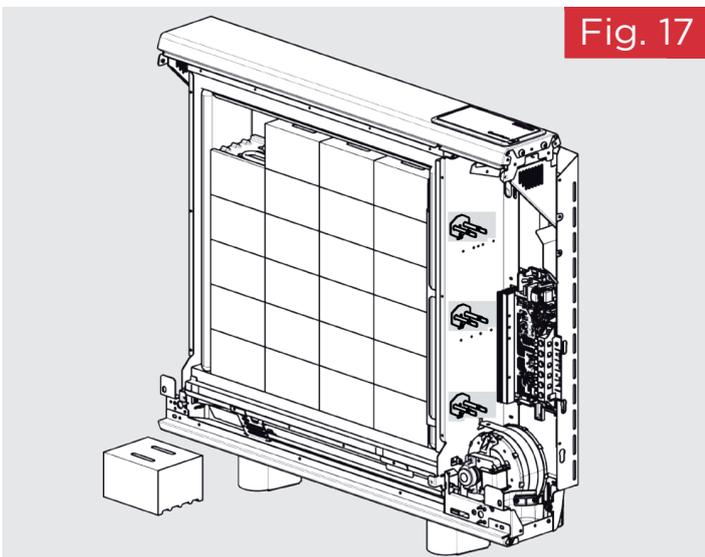


Fig. 17

17. Remember the top row of energy cells must be fitted upside down. (Fig. 17)

Check that all the energy cells are secure and evenly located.

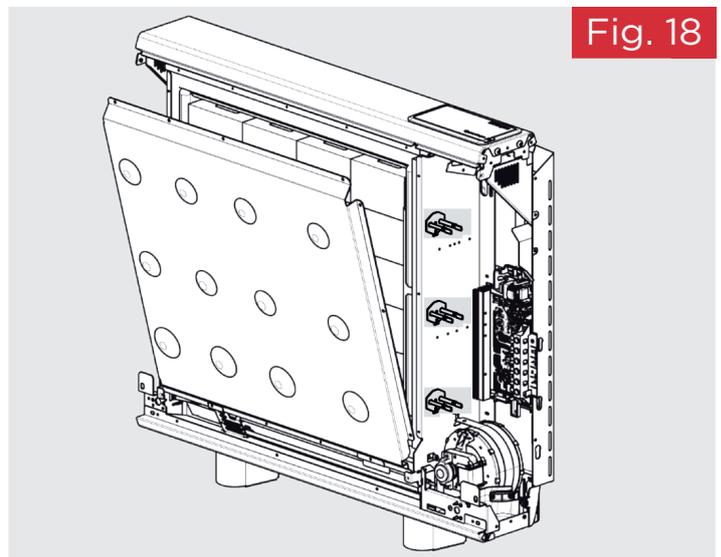


Fig. 18

18. Close the core by refitting the inner front panel complete with insulation. Ensure the bottom tabs are located inside the chassis and that the screws are tightly secured down each edge. (Fig. 18)

 Ensure the screws retaining the heater to the wall are fully tightened, once the energy retention cells are fully loaded. (Fig. 8, page 7)

## IMPORTANT

Double check all mains connections are secure and excess cable is restrained and not in contact with any of the heater casing.

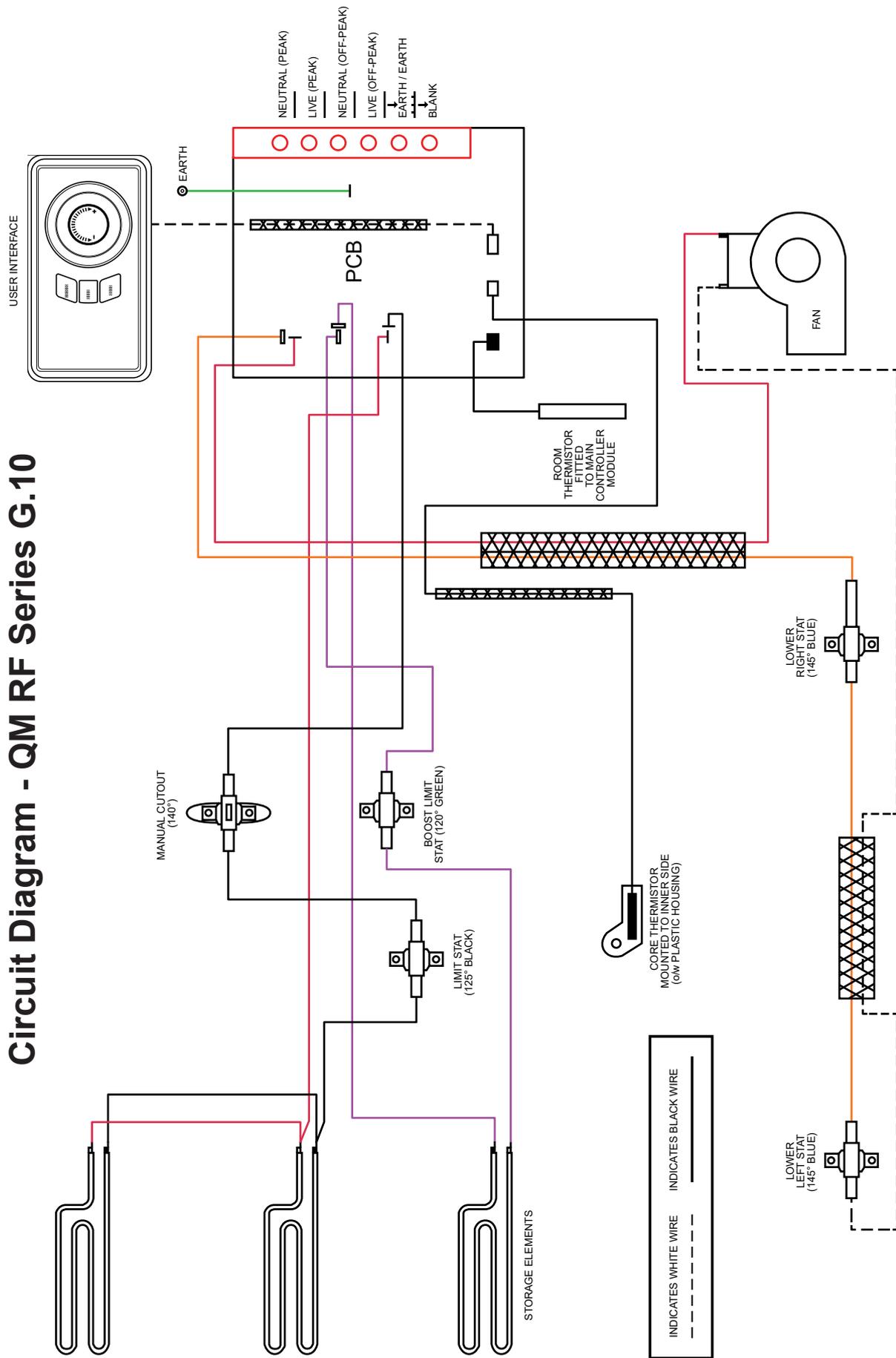
## Reassembly

To replace the front panel, bottom grille and side panels, reverse steps Figs. 4, 5 & 6 (page 6) of these instructions under the section headed Preparation.

Ensure all fixings are secure.

 Once installed DO NOT attempt to reposition the heater without first unloading the energy cells.

# Circuit Diagram - QM RF Series G.10



## Your Guarantee



To view the full guarantee terms and conditions scan this QR code using your smartphone or go to <https://www.gdhv.co.uk/guarantee-terms-and-conditions>.

Your Product is manufactured by Glen Dimplex UK operating as Glen Dimplex Heating & Ventilation. GDHV designs and manufactures products to ensure they deliver reliable service for normal use in domestic dwellings and, where specified by us, in light commercial premises.

GDHV products are individually tested before leaving the factory. Your product comes with a 2 year parts and labour guarantee for repair or replacement of faulty goods and/or partial refund in the event that a repair or replacement is not available.

Your guarantee is provided by Glen Dimplex UK Ltd operating as Glen Dimplex Heating & Ventilation Ltd, Millbrook House, Grange Drive, Southampton SO30 2DF. Terms and conditions apply.

The GDHV guarantee does not in any way diminish or affect your statutory consumer rights in connection with your product.



If you experience a problem with your product during or after the guarantee period, visit our online help centre:

[support.dimplex.co.uk](http://support.dimplex.co.uk)

Please note for support you will need the model and serial number of your product and a description of the fault which has occurred.

 **Important:** For electrical products sold within the European Community. At the end of the electrical products useful life it should not be disposed of with household waste. Please recycle where facilities exist. Check with a Local Authority or retailer for recycling advice in your country. Batteries should be disposed of or recycled in accordance with WEEE Directive 2012/19/EU. Packaging should be recycled where possible.

Products within the Quantum range are protected by one or more of the following patents:

Great Britain: GB2481048, GB2487147, GB2487148, GB2487781, GB2500736, GB2511538, GB2526552

International: EP2830832, EP2831688, EP2965166, EP3132324, WO2011154521, WO2013144170, WO2014135667, WO2015181136

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Glen Dimplex Heating and Ventilation  
Millbrook House, Grange Drive, Hedge End, Southampton, SO30 2DF  
Glen Dimplex Europe, Airport Road, Cloghran, Co. Dublin K67 VE08



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