6iE™ WiFi Thermostat

The smartest, most efficient way to control the world's best selling floor heating

Warmup

User Guide

Pack Contents

x1

x1

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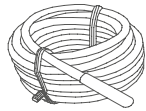
x2



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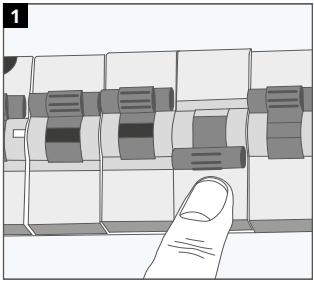
Contents

Safety Information

- ❑ The 6iE must be installed by a qualified electrician. It requires a permanent 230 V AC supply from a 30mA RCD or RCBO protected circuit in accordance with the current edition of the BS7671 Wiring Regulations.
- ❑ Isolate the 6iE from the mains supply throughout the installation process. Ensure that wires are fully inserted into the terminals and secured, free strands should be trimmed, as they could cause a short-circuit.
- ❑ Install the 6iE in an area with good ventilation. It should not be beside a window/door, in direct sunlight or above another heat generating device (e.g. radiator or TV).
- ❑ Ensure the distance from your router to the 6iE is not excessive. This will ensure the wireless connection is not subject to range issues once installed.
- ❑ For bathroom installations the 6iE MUST be mounted outside of Zones 0, 1 and 2. If this is not possible then must be installed in an adjacent room, controlling the rooms using remote sensor(s).
- ❑ The 6iE and its packaging are not toys; do not allow children to play with them. Small components and packaging present a risk of choking or suffocation.
- ❑ The 6iE is suitable for indoor use only. It must not be exposed to moisture, vibrations, mechanical loads or temperatures outside of its rated values.
- ❑ For safety and licensing reasons (CE/UKCA), unauthorised change and/or modification of the 6iE is not permitted.

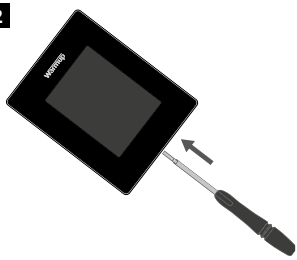
Step 1 - Installation

1



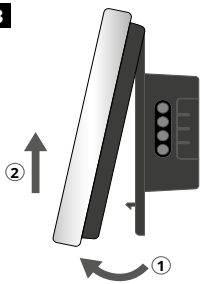
Isolate the 6iE supply from the mains supply.

2



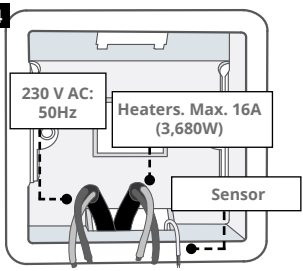
Unclip the display from the power base.

3



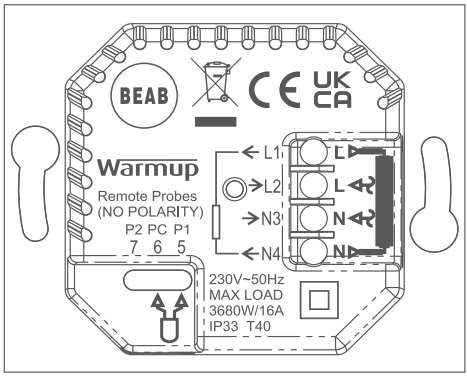
Release the display as shown.

4



Install a 50 mm deep electrical back box in your preferred thermostat location. Pull wires (heater, supply and sensor(s) through back box and complete terminal wiring.

Step 2 - Wiring Connections



WARNING!
The 6iE must be installed by a qualified electrician in accordance with the current edition of the BS7671 Wiring Regulations. Wire the 6iE using the diagram above and heater type wiring information below.

NOTE: For loads above 10 A, the conductor wire gage should be at least 2.5mm²

ELECTRIC UNDERFLOOR HEATING

L1 & N4 Heater Live and Neutral Max. 16A (3680W)
L2 & N3 Supply Live and Neutral
5 & 6* Floor Sensor (No Polarity)

HYDRONIC UNDERFLOOR HEATING

L1 Switched Live to Wiring Centre
L2 & N3 Supply Live and Neutral
N4 Not Used
5 & 6* Floor Sensor (No Polarity)

* Floor sensor connection;
5 & 6 Scheduled floor temperature with air limit
6 & 7 Scheduled air temperature with floor limit

Refer to Appendix 1.0 for alternative thermostat use cases

CENTRAL HEATING

L1 Switched Live to Zone Valve/Boiler
L2 & N3 Supply Live and Neutral
N4 Not Used
5 & 6 Not Used

For extra low voltage or volt-free systems a contactor must be used. Connecting the 6iE directly to extra low voltage or volt-free boilers may cause damage to the boiler circuit.

Step 3 - Thermostat Mounting

1

Insert fixing screws through mounting holes of the power base and tighten.

2

Re-attach the display until a “click” is heard. You can now restore power to the circuit and power up the thermostat. Follow the on screen instructions to set up your system. Once set up a QR Code will appear.

Step 4 - Initial Setup

1

Download the MyHeating App.

2

Open the My Heating App and scan the QR Code on the 6iE screen. Follow the instructions in the App to complete setup.

Step 5 - Add Location and Room

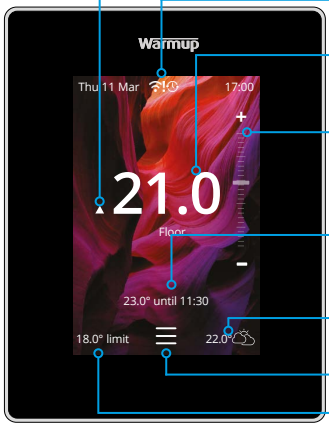
The MyHeating App will guide you through the setup of your 6iE. You will have to set up your house location and then the room within which your new 6iE is located.

Location
A location needs to be setup before a room can be configured and the 6iE device registered. Creating a location is user friendly and easy to follow, it is advised to have details of your current energy tariff and pricing to hand, as these will be required if you wish to use the energy monitoring features.

Room Setup
With a location now setup, the next step is to register a room in which your 6iE is located. This is the heating zone your thermostat will control. Ensure you set the correct System Type and Wattage of heaters connected.

NOTE: If an external relay or contactor relay has been installed please set System Type as Electric + Relay.

Welcome to the 6iE



Heating Indicator
Displays when heating is active

Error Messages
See Troubleshooting Page

Current Floor/Air temperature
Floor will be displayed if floor sensor is installed and switched on

Temporary Override
Use the slider or press the +/- icons to set a temporary override until next heating period

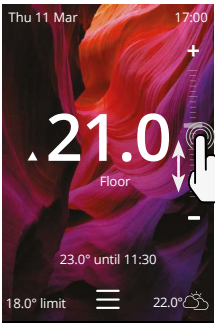
Target Temperature
Temperature you wish the thermostat to achieve

Weather
7-day forecast for your area

Menu

Air limit
Will only be displayed when in floor mode and an air limit is set.
See Appendix 1.0 for alternative thermostat use cases

Getting Started



How to quickly change the temperature

Use the slider or press the +/- icons to change your target temperature.

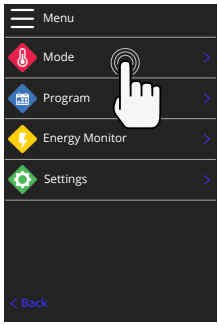
If in ***"Program"*** mode this will set a temporary override until your next heating period.

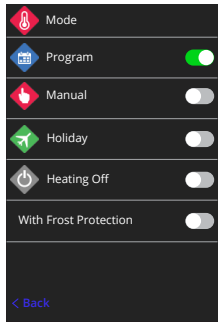
If in ***"Manual"*** mode this will set a fixed target temperature.

Once the target temperature is set above current floor/air temperature the heating indicator will appear.

How to quickly change mode

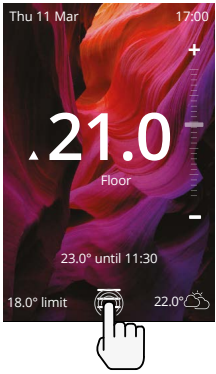
Mode select allows you to quickly change from program, manual or holiday modes. You can also switch ***"Frost Protection"*** on or simply switch the ***"Heating Off"*** from here. Frost protection will ensure that the floor/air temperature does not drop below 7.0°.

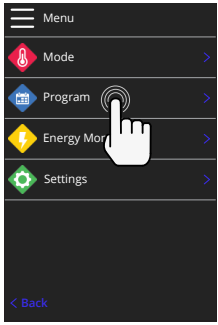


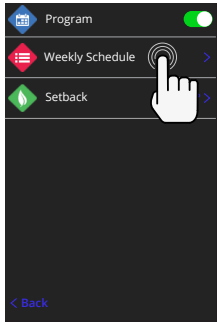


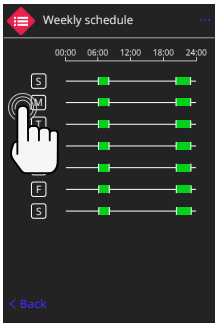
How to set a program

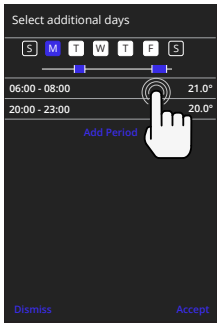
Setting a ***"Program"*** allows you to set comfort temperatures at set times throughout the day. Days can programmed individually, all days the same or weekdays as a block and weekends as a block, the choice is yours.











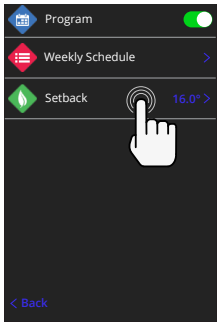
To ***"Select additional days"*** press the days of the week and the squares will be highlighted in white as shown and will follow the programmed heating schedule.

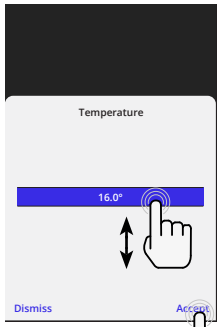
Once you are happy press ***"Accept"*** to save the heating schedule.

NOTE: For tailor-made preset heating schedules for different room types press the three dots "• • •" on the weekly schedule page.

Setback Temperature

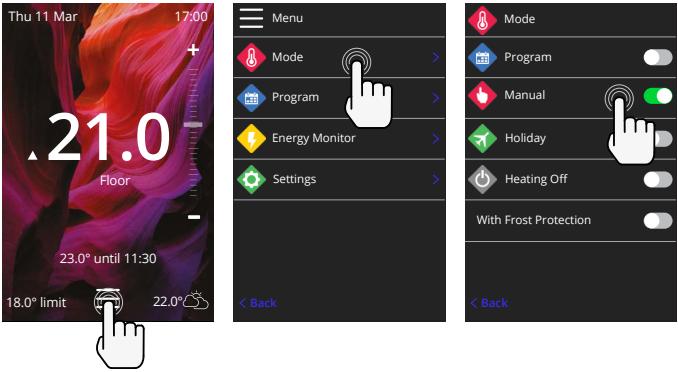
The ***"Setback"*** temperature is a lower energy efficient temperature when outside of a heating period.





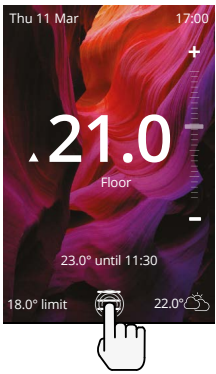
How to set into Manual Mode

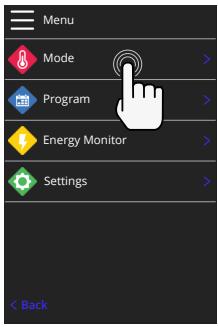
Setting into ***"Manual"*** mode allows you to set a fixed target temperature for the thermostat to achieve. The thermostat will continue to maintain this temperature until another operating mode or temperature is selected.

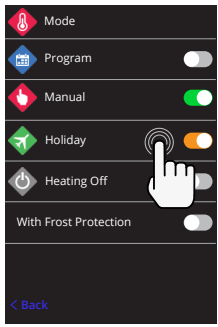


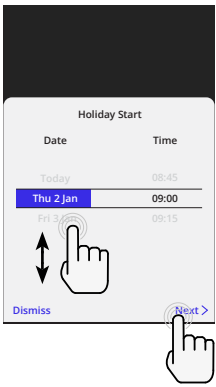
How to set into Holiday Mode

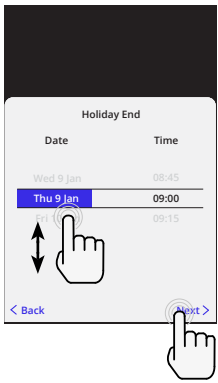
"Holiday Mode" allows you to override your schedule with a lower fixed temperature over a set time to save energy.

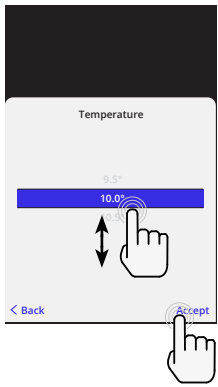






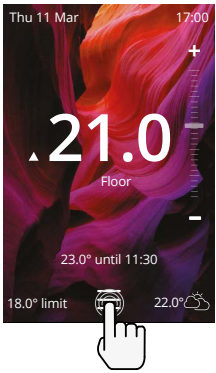


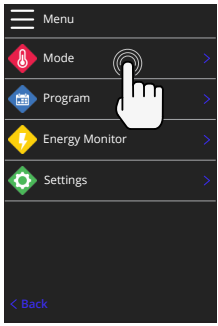


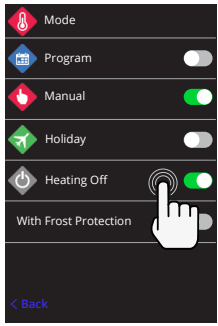


How to switch "Heating Off"

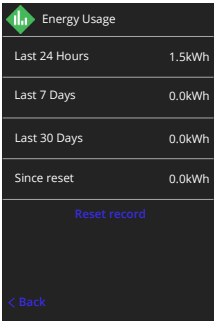
This will switch the heating off until you cancel it by pressing *"Heating Off"* on the homescreen or going into mode select and pressing the *"Heating Off"* slider.

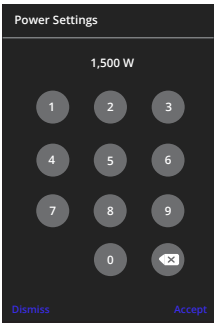






Energy Monitor





How Energy Monitor works

The 6iE learns how you use your system and how your house reacts to heating and weather. Energy monitoring will show the amount of energy consumed over a certain time period. This will be calculated through system power multiplied by efficiency and run time.

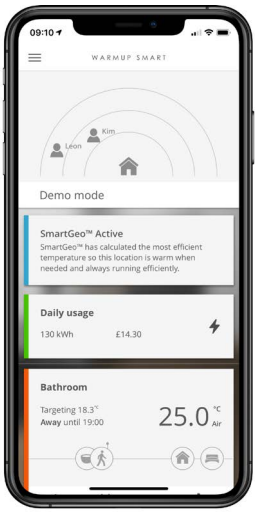
You will need to enter the power of your system, and in some cases, the efficiency.

If you do not know these, speak to your installer or system manufacturer.

Changing the Power Settings

If you have entered the wrong system power during setup it can be changed in Energy Monitor; Power Settings.

SmartGeo



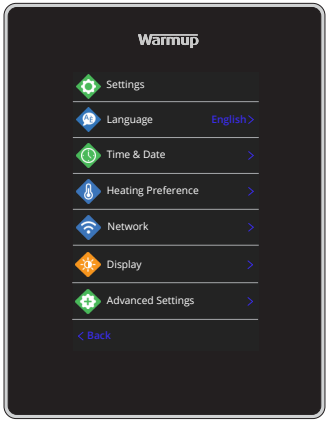
How SmartGeo works

SmartGeo is a unique technology developed by Warmup and built into the MyHeating App that uses an advanced algorithm to understand the most efficient heat settings for your home.

Working automatically; it learns your routines and location through background communication with your smartphone and lowers temperatures when you are away, only rising them up to your ideal comfort temperature in time for your arrival home.

Smartgeo will operate when the thermostat is in the program or manual run modes. It is turned off by default. Use the MyHeating App to switch SmartGeo on.

Settings



Language Settings	Change the 6iE language	
Time & Date	Change the Time and Date	
	Daylight savings	**On/Off**
	24-hour time	**On/Off**
Heating Preference	**Temperature unit**	**°C/°F**
	Open window detection	**On/Off**
	The windows open detection feature is designed to switch off heating to save energy when the thermostat detects that a window or door has been opened and, the outside air temperature is significantly below the indoor temperature.	
	Adaptive Learning	**On/Off**
	Adaptive learning will use the historic heating/cooling rates for the time of day, historic external temperatures and the forecast external temperatures, to work out the heating start time in order to reach the comfort time at the start of the comfort period. It will only work in Program Mode.	
Network	**WiFi Connection**	**On/Off**
	It is possible to set a new WiFi connection from here. The current network connection can also be viewed from this menu, including the signal strength.	
Display	**Background**	**Light** **Dark** **Random**
	Choose the background image of the 6iE. Random is an image selected from Warmup's collection.	
	Standby style	**Temperature** **Time** **Minimalist**
	Choose what will be displayed when the 6iE goes into standby. *Temperature will display current temperature;* *Time will display the current time;* *Minimalist will show neither.*	
	Brightness	**Active** **Standby** **Night**
	Adjust the brightness of the 6iE screen when in Active, Standby or Night Mode.	

Settings

Display, cont'd	Night period		Set the **Start** and **End** period
	This is the time when you usually go to bed at night and wake up in the morning. The brightness of "Night" mode will begin and end using this time.		
	Screen lock		**On/Off**
	Locks the 6iE screen to prevent any unauthorised changes to the 6iE. Requires a 4 digit code to access the menu or make changes.		

Advanced Settings

Advanced settings	Sensors & Application	Internal Air Sensor	**Offset** +/- 10°
		Probe 1 Connected	**On/Off**
			Type 5, 10, 15, 100K **Offset** +/- 10°
		The 6iE uses a 10K sensor. However, if using a 6iE to replace an existing thermostat you must change to the correct sensor type.	
		Probe 2 Connected	**On/Off**
			Type 5, 10, 15, 100K **Offset** +/- 10°
		If a 2nd sensor is wired into terminals 6 & 7 it must be switched on here to act as a limit sensor.	
		Floor thermostat *(Probe 1 On, Probe 2 Off. See Appendix 1.0 for alternative thermostat use cases)*	**Control** Floor Remote Air Regulator **Limit** None/Air
		Choose to switch the method of control for the sensor; floor sensor, remote air sensor if not installed underneath the floor or regulator mode.	
		Regulator Mode; Heating is on for X% out of control cycle (default 10mins). Heating is off for remaining time.	
		Floor type*	**Tile/Stone** **Laminate** **Carpet** **Wood** **Vinyl** **Other**
		Choose the floor type of your installation. This will apply different temperature and overheat limits to the 6iE. * *Not applicable if conventional heating system was selected.*	

Advanced Settings

Advanced settings	**Temperature limits**	Set **Min./Max.** settable temperature limits
	Overheat limit	Set **Overheat air** limit if floor sensor has been installed
	Control Period	Set between **10 - 60 mins.**
	Control period checks the difference in the current measured temperature and the set temperature in a proportional integral algorithm to maintain a steady temperature.	
	About	Details about the 6iE's current firmware, MAC address and WiFi connection information.

Troubleshooting

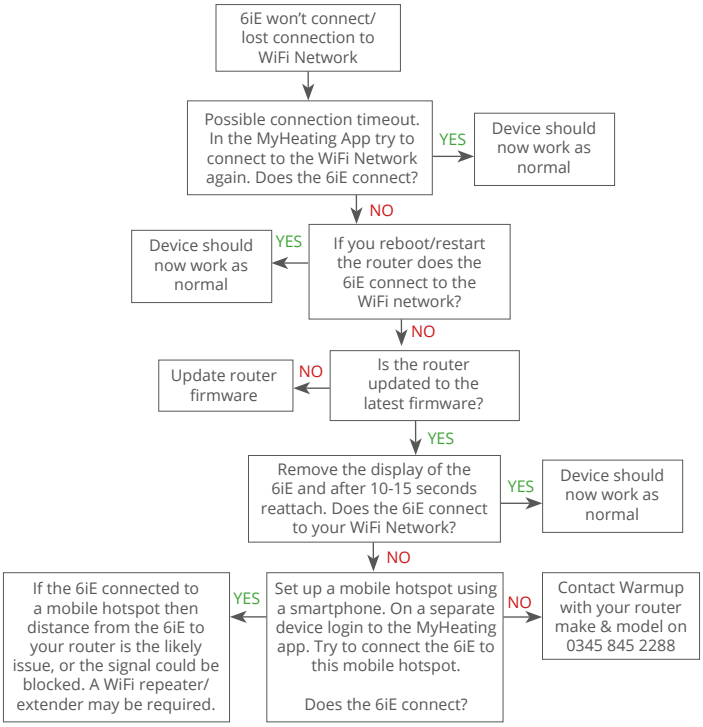
Display is blank	**Brightness**	1. Check that the standby brightness is not set to Off.
	Power	2. **(Electrician Required)** Electrician required to verify power is going to the 6iE and that it is correctly wired.
ER1	**Sensor Error**	**(Electrician Required)** Electrician required to verify that the floor sensor has been wired correctly. If it is correctly wired the electrician will need to check the resistance of the floor sensor using a multi meter. For temperatures between 20°C - 30°C the resistance of the floor sensor should measure between 8K ohms and 12K ohms. If the electrician finds a fault, and the 6iE is in the room to be heated then it can be set into "Air Mode". To set into "Air Mode", go to Sensors & Application in Advanced Settings and switch the probe off.
Heating is coming on earlier than programmed times	**Adaptive learning On**	Adaptive learning will use the historic heating/cooling rates for the time of day, historic external temperatures and the forecast external temperatures, to work out the heating start time in order to reach the comfort time at the start of the comfort period. It will only work in Program Mode.
Cannot to set above a certain temperature	**Floor Type Temperature Limits**	Delicate floor coverings need to have their temperatures limited. If the finished floor is set for wood, laminate, vinyl etc. you are unable to set the temperature above 27°C.
WiFi Error Symbol	**WiFi not setup**	If you have not done so, download the MyHeating App, go to Settings and Network setup and follow the on screen instructions to connect to a WiFi Network.
	WiFi disconnected	Follow the step above to try and to re-connect to the WiFi Network. If the 6iE still fails to connect, see WiFi Troubleshooting.
Clock Sync Icon	**Time and Date not set**	Connect the 6iE to a WiFi network or alternatively set the time and date from the settings menu.

WiFi Troubleshooting

Before following the troubleshooting guide below please check the following:

1. The password is WPA2 protected.
2. The router is set to a 2.4 GHz band. (802.11 b, g, n, b/g mixed, b/g/n mixed)

NOTE: If you need to change any of the items listed above, please refer to your router manual.



Technical Specifications

Model	6iE-01-XX-YY
Operating Voltage	230 V AC : 50 Hz
Protection Class	Class II ⧈
Max. Load	16A (3680W)
Rated impulse voltage	4000V
Automatic action	100,000 cycles
Disconnection means	Type 1B
Pollution degree	2
Max. Ambient Temperature	0 - 40°C
Relative Humidity	80%
IP Rating	IP33
Dimensions (Assembled 6iE)	90 x 115 x 39 mm
Screen size	3.5in
Sensors	Air & Floor (Ambient)
Sensor Type	NTC10k 3m Long (Can Be Extended To 50m)
Operating Frequency	2401 - 2484MHz
Max. Radio-Frequency Power Transmitted	20dBm
Installation Depth	50 mm Back Box
Compatibility	Electric, Hydronic Underfloor Heating. Max. 16A (3680W) Central Heating Systems (Combi & system boilers with switch live, 230V AC input)
Er-P Class	IV
Warranty	12 Years
Approvals	BEAB

CE
UK
CA

NOTE: Hereby, Warmup plc, declares that the radio equipment type 6iE-01-XX-YY is in compliance with the RED Directive 2014/53/EU and Radio Equipment Regulations 2017. The declarations of conformity may be consulted by scanning the QR Code or visiting www.literature.warmup.co.uk/d-o-c/6iE.

Instructions for Disposal
Do not dispose of the device with regular domestic waste! Electronic equipment must be disposed of at local collection points for waste electronic equipment in compliance with the Waste Electrical and Electronic Equipment Directive.

Warranty

Warmup plc warrants this product, to be free from defects in the workmanship or materials, under normal use and service, for a period of twelve (12) years from the date of purchase by the consumer when installed with a Warmup heater.

If at any time during the warranty period the product is determined to be defective, Warmup shall repair or replace it, at Warmup's option. If the product is defective, please either;

Return it, with a bill of sale or other dated proof of purchase, to the place from which you

purchased it, or

Contact Warmup. Warmup will determine whether the product should be returned or replaced.

The twelve (12) year warranty only applies if the product is registered with Warmup within 30 days after purchase. Registration can be completed online at www.warmup.co.uk

This warranty does not cover removal or re-installation costs and shall not apply if it is shown by Warmup that the defect or malfunction was caused by failure to follow the instruction manuals, incorrect installation or damage which occurred while the product was in the possession of a consumer. Warmup's sole responsibility shall be to repair or replace the product within the terms stated above. If the 6iE is installed with a non-Warmup heater a three (3) year warranty will apply. This warranty does not extend to any associated software such as apps or portals.

WARMUP SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND, INCLUDING ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING, DIRECTLY OR INDIRECTLY, FROM ANY BREACH OF ANY WARRANTY, EXPRESS OR IMPLIED, OR ANY OTHER FAILURE OF THIS PRODUCT. THIS WARRANTY IS THE ONLY EXPRESS WARRANTY WARMUP MAKES ON THIS PRODUCT. THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IS HEREBY LIMITED TO THE TWELVE-YEAR DURATION OF THIS WARRANTY.

This Warranty does not affect your statutory rights.

Appendix 1.0 - Thermostat use cases

No.	Reg. Mode	Probe P1 **(5 & 6)**	Probe P2 **(6 & 7)**	Control	Limit Sensor	Use Case
1	**OFF**	**OFF**	**OFF**	**Internal** Air Sensor	None	Thermostat in room air temperature schedule no floor limit
2	**OFF**	**ON**	**OFF**	**P1** Floor Sensor	None	Thermostat in/out of room floor temperature schedule floor limit
3	**OFF**	**ON**	**OFF**	**P1** Floor Sensor	**Internal** Air Sensor	Thermostat in room floor temperature schedule air limit
4	**OFF**	**ON**	**OFF**	**P1** Air Sensor	None	Thermostat out of room air temperature schedule no floor limit
5	**OFF**	**OFF**	**ON**	**Internal** Air Sensor	**P2** Floor Limit	Thermostat in room air temperature schedule floor limit
6	**OFF**	**ON**	**ON**	**P1** Floor Sensor	**P2** Floor Limit	Thermostat in/out of room floor temperature schedule floor limit
7	**OFF**	**ON**	**ON**	**P1** Air Sensor	**P2** Floor Limit	Thermostat out of room air temperature schedule floor limit
8	**ON**	**OFF**	**OFF**	**Reg.**	None	Thermostat in/out of room regulator schedule no limit
9	**ON**	**OFF**	**OFF**	**Reg.**	**Internal** Air Sensor	Thermostat in room regulator schedule air limit
10	**ON**	**OFF**	**ON**	**Reg.**	**P2** Floor Limit	Thermostat in/out of room regulator schedule floor limit

Conventional Electric underfloor heating Hydronic underfloor heating

Warmup

Warmup plc

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Warmup

The world's best-selling floor heating brand™

Warmup StickyMat SPM

Installation Manual

TECHNICAL HELPLINE

0845 345 2288

CE

SAFETY Net™ INSTALLATION GUARANTEE

IMPORTANT!
Read this manual before attempting to install your Warmup heater. Incorrect installation could damage the heater and will invalidate your warranty. Complete and submit your warranty from **online at www.warmup.co.uk**

Warmup LIFETIME LIMITED WARRANTY

Technical Information

SPM 150W/m²

	m	|<--->|	m	W	(-5 %)	Ω	(+5%)	A
SPM 1m²	0.5	x	2	150	335.1	352.7	370.3	0.65
SPM 1.5m²	0.5	x	3	225	223.3	235.1	246.9	0.98
SPM 2m²	0.5	x	4	300	167.5	176.3	185.1	1.30
SPM 2.5m²	0.5	x	5	375	134.01	141.06	148.11	1.63
SPM 3m²	0.5	x	6	450	111.72	117.6	123.5	1.96
SPM 3.5m²	0.5	x	7	525	95.72	100.76	105.80	2.28
SPM 4m²	0.5	x	8	600	83.76	88.17	92.6	2.61
SPM 4.5m²	0.5	x	9	675	74.45	78.37	82.29	2.93
SPM 5m²	0.5	x	10	750	67	70.53	74.1	3.26
SPM 6m²	0.5	x	12	900	55.84	58.78	61.7	3.91
SPM 7m²	0.5	x	14	1050	47.86	50.38	52.9	4.57
SPM 8m²	0.5	x	16	1200	41.9	44.08	46.3	5.22
SPM 9m²	0.5	x	18	1350	37.23	39.19	41.1	5.87
SPM 10m²	0.5	x	20	1500	33.51	35.27	37.0	6.52
SPM 11m²	0.5	x	22	1650	30.45	32.06	33.7	7.17
SPM 12m²	0.5	x	24	1800	27.92	29.39	30.86	7.83
SPM 15m²	0.5	x	30	2250	22.33	23.51	24.7	9.78

SPM 200W/m²

	m	|<--->|	m	W	(-5%)	Ω	(+5%)	A
2SPM 0.5m²	0.5	x	1	100	502.55	529.0	555.45	0.44
2SPM 1m²	0.5	x	2	200	251.28	264.5	277.73	0.87
2SPM 1.5m²	0.5	x	3	300	167.52	176.3	185.15	1.30
2SPM 2 m²	0.5	x	4	400	125.64	132.3	138.86	1.74
2SPM 2.5m²	0.5	x	5	500	100.51	105.80	111.09	2.17
2SPM 3m²	0.5	x	6	600	83.76	88.2	92.58	2.61
2SPM 3.5m²	0.5	x	7	700	71.79	75.57	79.35	3.04
2SPM 4m²	0.5	x	8	800	62.82	66.1	69.43	3.48
2SPM 4.5m²	0.5	x	9	900	55.84	58.78	61.72	3.91
2SPM 5m²	0.5	x	10	1000	50.26	52.9	55.55	4.35
2SPM 6m²	0.5	x	12	1200	41.88	44.1	46.29	5.22
2SPM 7m²	0.5	x	14	1400	35.90	37.8	39.68	6.09
2SPM 8m²	0.5	x	16	1600	31.41	33.1	34.72	6.96
2SPM 9m²	0.5	x	18	1800	27.92	29.4	30.86	7.83
2SPM 10m²	0.5	x	20	2000	25.13	26.5	27.77	8.70
2SPM 15m²	0.5	x	30	3000	16.74	17.63	18.51	13.04

Voltage
230VAC ~ 50Hz
Minimum bending radius
25mm
IP rating
IPX7
Minimum Wire Spacing
50mm
Minimum Installation Temperature
5°C

Contents

WARNING

Your Warmup® Underfloor heating mat has been designed so that installation is quick and straight forward, but as with all electrical systems, certain procedures must be strictly followed. Please ensure that you have the correct heater(s) for the area you wish to heat. Warmup plc, the manufacturer of the Warmup® Sticky Mat, accepts no liability, expressed or implied, for any loss or consequential damage suffered as a result of installations which in any way contravene the instructions that follow. It is important that before, during and after installation that all requirements are met and understood. If the instructions are followed, you should have no problems. If you do require help at any stage, please contact our helpline:

0845 345 2288

You may also find a copy of this manual, wiring instructions and other helpful information on our website:
www.warmup.co.uk

Do's and Don'ts

DO

Carefully read this instruction manual before commencing installation. Consult our helpline or a competent professional if you are unsure how to proceed.

Ensure the system is tested before, during and after installation.

Plan your mat layout and installation so that any drilling after tiling (e.g. for sanitary ware) will not damage the wiring.

Maintain a minimum gap of 50mm between wire runs and from conductive parts such as water pipes.

Check that the mat is working immediately before commencing tiling.

Take particular care when tiling not to dislodge or damage the heating wire. Ensure that during the course of the installation that no damage is caused by, for example, falling objects, sharp objects etc.

Wear gloves to prevent irritation from the fibreglass mesh.

Ensure the end cap and manufactured joint are under a full bed adhesive or levelling compound and covered with a tile.

Ensure that a heat loss calculation has been carried out and heating requirements have been met if you are using the underfloor heating system as a primary source of heating.

Ensure that the heaters are separated from other heat sources such as luminaires and chimneys.

Ensure that the maximum thermal resistance of the floor does not exceed 0.15 [m^2K / W].

Ensure that the control card at the back of the manual is completed and fixed at the main consumer unit along with any plans and electrical test records. As per the current BS7671:2008 17th Edition wiring regulations.

DON'T

Cut or shorten the heating element at any time.

Commence installation on a concrete floor that has not been fully cured.

Leave surplus matting rolled up under units or fixtures - **USE THE CORRECT SIZE MAT.**

Install the mat on irregular surfaces such as stairs or up walls.

Use staples to secure the the heating element to the subfloor.

Run the floor sensor wire or power lead over or under the heating element or close to other heat sources such as hot water pipes.

Connect two mats in series, only connect mats in parallel.

Commence tiling before testing the mat.

Switch on the installed mat until 8 days after fitting to allow the tile adhesive to dry completely.

Install the mat in temperatures less than +5°C.

Bend the heating cable under 25mm radius.

Use the heating system to dry out levelling compound or adhesive.

Tape over the end cap or manufactured joint.

Attempt a DIY repair if you damage the heater. Contact Warmup on 0845 345 2288. If you accidentally damage a the heating mat BEFORE tiling,under the Warmup Safetynet guarantee you may return the damaged heater to Warmup, who will replace the heater FREE OF CHARGE. See details of the safety net warranty at the back of the manual.

Floor Coverings

This installation manual gives instruction for installation of the Warmup underfloor heating mat under ceramic, quarry or natural stone tiles. The maximum thermal resistance of the floor must not exceed 0.15 [m^2K / W].

It is possible to install the heating element under floor finishes such as wood or vinyl by applying a self levelling compound over the heating mat .You must ensure that all heating cables are completely covered with a minimum of 10mm self levelling compound. It is important that the levelling compound is suitable for use with underfloor heating.

NOTE: Delicate floor finishes such as wood or vinyl have a maximum floor surface temperature of 27°C. This temperature must **NOT** be exceeded. Please contact Warmup for further advice if you wish to install the underfloor heating mat under any floor finishes other than ceramic, quarry or natural stone tiles.

What You Need for Installation

Components included in your Warmup SPM kit:

- Warmup SPM Mat
- Installation Manual

Additional components needed as part of your Warmup heating installation:

- A Warmup® Thermostat with floor sensor
- 30mA Residual Current Device (RCD), required as part of all installations
- Digital Multi-meter required for testing the resistance of the mat and floor sensor
- Electrical housing, back boxes and junction boxes. (Back box for the thermostat must be at least 35mm deep)
- Electrical trunking/conduit for housing the power leads
- Duct Tape (to secure the floor sensor and loose wires)
- Scissors for cutting the fibreglass mesh
- Gloves
- Warmup® Insulation Boards.

NOTE: Only Warmup® Thermostats should be used.

Subfloor Preparation

Wooden Subfloors

- Ensure adequate underfloor ventilation
- Existing floorboards need to be securely fixed and if necessary pre-levelled with a latex/cement self-levelling compound to give a flush fit for the subsequently applied WBP plywood (18mm) or an insulated tile backer board (10mm) (Warmup® Insulation Boards).
- A rigid base is essential - Fixing WBP plywood or Warmup® Insulation Board to joists will not provide a suitable floor finish for accepting tiles.
- Refer to BS5385: Part 3: 1999, clause 14.4 for more information on sealing the backs and edges of the WBP plywood before fixing.
- The above recommendations apply to floors of small areas as advised in clause14.4 of BS 5385: Part 3: 1999.

Concrete Subfloors

- Ensure you use an extruded polystyrene building or tile backer board (Warmup® Insulation Board) if installing your mat onto a cement-based floor.
- Fixing the board should be as per the manufacturer's instructions.

Testing the Heater

The heaters must be tested before, during and after tiling. We recommend the use of a digital multi-meter set to a range of 0-2 K ohms for testing. The resistance (ohms) of each mat should be measured. You should carry out the following tests and should expect the results detailed below:

• Live to neutral should show the Ohms value listed in the table on page 2. A +/- 5% Ohm reading tolerance is allowed under manufacturing guidelines. Record the readings on the control card at the back of the manual.

• Live to earth and neutral to earth should show infinity.

NOTE: Due to the high resistance of the heating element, it may not be possible to get a continuity reading from the mat and as such, continuity testers are not recommended. When checking resistance, make sure your hands do not touch the meter's probes as the measurement will include your internal body resistance and render the measurement inaccurate.
If you do not get the expected results or at any time you believe there may be a problem, please contact Warmup's Technical Team on 0845 345 2288 for guidance.

Floor Sensor
Ensure that the floor sensor is tested before the final floor finish has been laid. The floor sensor values can be found in the thermostat instructions. When testing the floor sensor ensure that the meter can read up to 20k ohms.

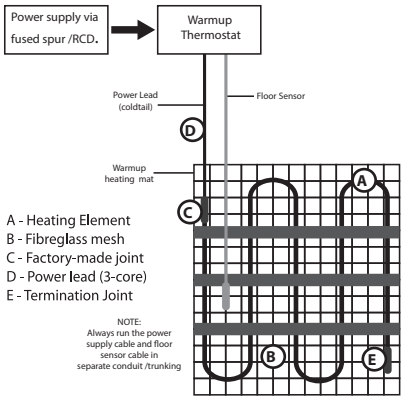
Electrical Safety Considerations

As with all electrical projects governed by Part P regulations, all mains electrical connections must be undertaken by acertified electrician. All work must conform to current IEE Wiring Regulations. The Underfloor heating must be controlled via a floor sensor thermostat at all times.

Installing a Residual Current Device (RCD)
Warmup® Underfloor Heating Mats must be wired via an 30mA RCD. You must install a dedicated RCD if one is not already present. You may wish to use a fused spur/RCD. No more than 4.8kW of heating may be connected to a single 30mA RCD.

NOTE: It is possible to run the heater from an existing circuit. Consult a certified electrician to determine whether or not the circuit can handle the load and if it is RCD protected.

Installing Electrical Boxes and Trunking
You will require a deep (35-40mm) back box for the thermostat. If you are installing more than two heaters, a junction box will be required. The wiring from the heater to the thermostat should be protected by conduit or plastic trunking.



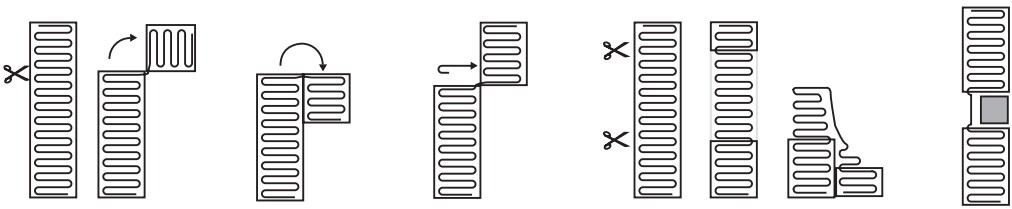
Connecting the Thermostat
The thermostat must be connected to the mains electrical supply via a double pole isolator fused spur or RCD that has a contact separation in all poles providing full disconnection under over-voltage category III conditions . The thermostat should be installed within the room to be heated. In most bathroom installations the thermostat cannot be located within the bathroom itself as the thermostat is IP20 rated and must be located outside of Zone 2. In such cases the thermostat must be fitted to the outside of an internal wall of the bathroom, as close to the under floor installation as possible.

Warmup thermostats are rated up to 16 amps. For larger installations exceeding 16 amps multiple thermostats or a suitable contactor will be required. For further advice contact Warmup on 0845 345 2288.

Once the electrical connections have been made and the system has been tested, the electrician must complete the control card at the back of this installation manual. As per BS7671:2008 this information must be displayed at or near to the consumer unit.

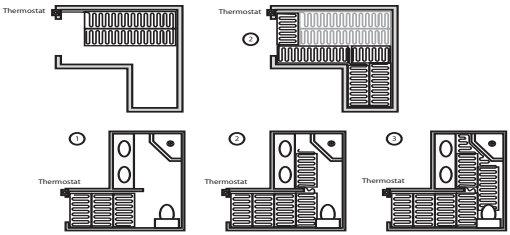
How You Can Modify the Mat

In order to fit your mat into a specific area, it may be necessary to cut and turn the mat (examples below).
NEVER cut the heating element. When cutting and flipping the mat take care not to cut or damage the heating cable.



Check mat size
Please take a moment to double-check that your plan has the proper room dimensions and that you have the correct size and proper number of mats. Mats should run backwards and forwards between walls and obstructions as shown in the examples. Depending on insulation, air-flow & overall heat-loss within the room, additional heating may be required.

NOTE: When laying two or more heaters, ensure the coldtails reach the thermostat.



Installing the Mat

Step 1 - Mark the subfloor

Ensure that the subfloor is of the same construction where you intend to lay the mat to ensure that the heater performs effectively. Warmup always recommend that insulation boards, such as Warmup® Insulation Boards (10mm recommended), are used to improve the efficiency of the mats.

Using a permanent marker, mark out areas on the subfloor where units and fixtures will be fitted. DO NOT install the mat in any of these areas.
Start by laying the mat in the location closest to the thermostat. Mark the positions and planned route of the power lead cables as well as the floor sensor.

ALL MANUFACTURED JOINTS NEED TO BE PLACED ON THE FLOOR UNDER A FULL BED OF ADHESIVE AND TILES.

If you have awkward areas in the room the loose wire can be removed from the mat to fit these areas. When doing this ensure that you DO NOT let the heating element cross or touch. Ensure any loose wires are no closer than 50mm from each other, the wall or from any other wires still attached to the mesh. Loose wire taken from the mat can be secured to the floor using duct tape.

Step 2 - Test the Heater

Before installing the heating mat perform the same test as described on page 5 to ensure that the heater has not been damaged during planning.

Step 3 - Cut, turn and affix the mat

When you have marked the positions and planned the route of the mat on the floor, start laying the mat cutting and turning where the marks have been made, beginning at the location closest to the thermostat. Be careful and never cut the heating cable. Affix the mat to the floor using its self-adhesive mesh, or using the double sided tape on the mat.

Use duct tape to affix any loose wires which have been removed from the mat. Once the mat is fitted, ensure that there are no loose sections, paying close attention to the ends of the mats and any section which has been turned.

DO NOT TAPE OVER THE MANUFACTURED JOINTS OR FLOOR SENSOR TIP.

If you find that once the heater has been laid you have too much of the mat left over STOP, contact Warmup immediately on 0845 345 2288. Remember you must NEVER cut the heating element to fit an area or leave surplus mats behind units or fixtures.

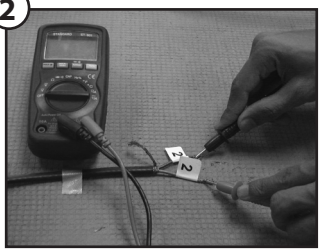
If you are installing multiple mats in one room they should be connected in parallel.

Step 4 - After installation test

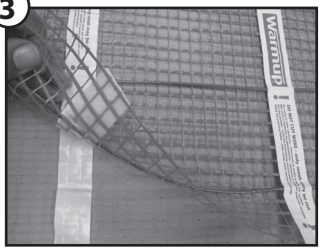
Perform the same test as in step 2. If at this stage you do not get the expected reading or you are getting an open circuit contact Warmup on 0845 345 2288.

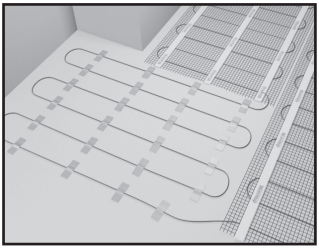
1

2



3





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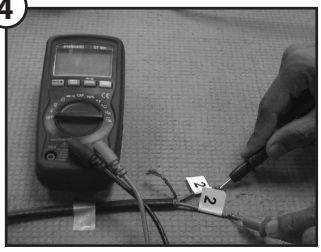


Installing the Mat (Continued)

Step 5 - Install floor sensor

Place the floor sensor below the fibreglass mesh. The floor sensor must be installed centrally between the two runs of heating element and should extend a minimum of 150mm into the heated area. Secure the sensor to the floor using tape.
NOTE: DO NOT TAPE OVER THE SENSOR TIP.

It is best to avoid placing the floor sensor in areas of heat fluctuations e.g. near hot water pipes or radiators. It may be necessary to cut a channel in the floor to ensure that the floor sensor and power supply cable are kept at the same height as the heating element.

When installing the floor sensor (located in the thermostat box) DO NOT cross over or under the heating element.

At this stage the floor sensor must also be tested. Check the resistance of the floor sensor using your multi-meter (20K ohms). You should get a reading of approximately 9-23K ohms depending on the room temperature. If you do not get a reading your floor sensor may be damaged. If this is the case call the Warmup Technical Helpline to request a replacement.

NOTE: The sensor may be extended up to 50m.

Step 6 - Fit Power Leads

Each mat is fitted with a single power lead for connecting the mat to the thermostat. To ensure the power lead remains at the same level as the heating element, you may need to cut or chisel a channel in the subfloor. When doing this take care not to damage the heating element. Secure the power lead in place using tape but do not tape over the manufactured joint where the power supply cable meets the heating element.

The power lead will go into the electrical trunking/conduit up to the thermostat. It is possible to extend the power lead using twin and earth cable.

NOTE: Instructions for fitting the Warmup® thermostat are included in the thermostat box.

Step 7 - Tile & grout the floor

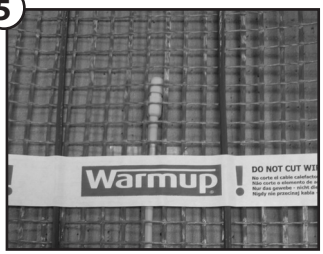
Ensure you use tile adhesives and grouts suitable for use with underfloor heating systems (they must contain a flexible additive). It is important that each tile is solidly bedded in adhesive, with no air gaps or voids beneath. (2 Part Flexible Adhesive). Do NOT dot and dab the tiles. Check with the manufacturers of the adhesive to ensure suitability. Use a plastic notched trowel to move the adhesive along the element. Use a piece of cardboard on top of the exposed element to use as a crawl board. Ensure to test the resistance of the heating mat regularly during tiling to check the mat hasn't been damaged during tiling.

If using flexible levelling compound before tiling make sure that the mat is completely flat, extra tape can be used to secure the edges of the fibre glass mesh to the floor.

Do not store tiles or heavy objects on the mat while tiling. Wait for 8 days to allow the adhesive to dry before you switch on the system.

FINALLY TEST THE RESISTANCE OF THE HEATER(S) ONCE TILING IS COMPLETE.

5



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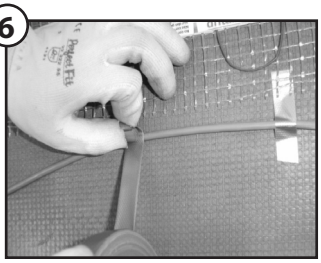

7

Warranty

The best underfloor heating - **guaranteed**™

Terms and conditions apply
Models: DWS heaters, PFM and SPM heaters manufactured by Warmup Plc.

THE LIFETIME ELEMENT OF THIS GUARANTEE DOES NOT EXTEND TO THERMOSTATS WHICH ARE COVERED BY SEPARATE GUARANTEES. THIS GUARANTEE DOES NOT AFFECT YOUR STATUTORY RIGHTS.

Warmup® Underfloor Heater is guaranteed by Warmup plc ("Warmup") to be free from defects in materials and workmanship under normal use and maintenance, and is guaranteed to remain so subject to the limitations and conditions described below. The UNDERTILE HEATER is guaranteed for the LIFETIME of the floor covering under which it is fitted, except as provided below (and your attention is drawn to the exclusions listed at the end of this guarantee).

This lifetime guarantee applies:
1. only if the unit is registered with Warmup within 30 days after purchase. Registration can be completed online at **www.warmup.co.uk.** In the event of a claim, proof of purchase is required, so keep your invoice and receipt - such invoice and receipt should state the exact model that has been purchased; and
2. only if the heater has been earthed and protected by a Residual Current Device (RCD) at all times.

Thermostats are guaranteed for a period of 3 YEARS from the date of purchase, except as provided below. The guarantee for the Warmup 3Ie thermostat can be upgraded to lifetime. Contact Warmup for details 0845 345 2288.

Neither guarantee continues if the floor covering over the heater(s) is damaged, lifted, replaced, repaired or covered with subsequent layers of flooring. The guarantee period begins on the date of purchase. During the period of the guarantee Warmup will arrange for the heater to be repaired or (at its discretion) have parts replaced free of charge. The cost of the repair or replacement is your only remedy under this guarantee which does not affect your statutory rights.

Such cost does not extend to any cost other than direct cost of repair or replacement by Warmup and does not extend to costs of relaying, replacing or repairing any floor covering or floor.

If the heater fails due to damage caused during installation or tiling, this guarantee does not apply. It is therefore important to check that the heater is working (as specified in the installation manual) prior to tiling.

WARMUP PLC SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO EXTRA UTILITY EXPENSES OR DAMAGES TO PROPERTY.

WARMUP PLC is not responsible for:
1. Damage or repairs required as a consequence of faulty installation or application.
2. Damage as a result of floods, fires, winds, lightening, accidents, corrosive atmosphere or other conditions beyond the control of Warmup plc.
3. Use of components or accessories not compatible with this unit.
4. Products installed outside the United Kingdom.
5. Normal maintenance as described in the installation and operating manual, such as cleaning thermostat.
6. Parts not supplied or designated by Warmup.
7. Damage or repairs required as a result of any improper use, maintenance, operation or servicing.
8. Failure to start due to interruption and/or inadequate electrical service.
9. Any damage caused by frozen or broken water pipes in the event of equipment failure.
10. Changes in the appearance of the product that does not affect its performance.

SafetyNet™ Installation Guidelines: If you make a mistake and damage the new heater before laying the floor covering, return the damaged heater to Warmup within in 30 days along with your original dated sales receipt. WARMUP WILL REPLACE ANY PRE-TILED HEATER (MAXIMUM 1 HEATER) WITH ANOTHER HEATER OF THE SAME MAKE AND MODEL - FREE.

Please note:
(i) Repaired heaters carry a 5 year warranty only. Under no circumstances is Warmup responsible for the repair or replacement of any tiles / floor covering which may be removed or damaged in order to affect the repair.

(ii) The SafetyNet™ Installation Guarantee does not cover any other type of damage, misuse or improper installation due to improper adhesive or subfloor conditions. Limit of one free replacement heater per customer or installer.

(iii) Damage to the heater that occurs after tiling, such as lifting a damaged tile once it has set, or subfloor movement causing floor damage, is not covered by the SafetyNet™ Guarantee.

Register your Warmup® warranty online at www.warmup.co.uk

Control Card

Warmup

The best underfloor heating - **guaranteed**™

Heater Location _____

Total Wattage _____

CAUTION
Radiant Floor Heating Systems
Warming-Risk of electric shock
Electric-wiring and heating panels contained below the floor. Do not penetrate with nails, screws, or similar devices. Do not restrict the thermal emission of the heated floor.

Attention:

Do not cut or shorten the heating element.

Ensure that the entire heating elements including the joints are installed under the tiles in the installation.

The Heating element must be used in conjunction with a 30mA RCD.

Heater Model	Resistance Before	Resistance After	Insulation Resistance Pass	Floor sensor resistance

Date _____ Signed _____ Company stamp/name _____

This form must be completed as part of the Warmup Guarantee. Ensure that the values are as per the instruction manual.

This card must be situated close to the consumer unit in a visible place.

Note: Draw a Plan showing the layout of the heater.

Warmup Plc 702 Tudor Estate Abbey Road London NW10 7UW T: 0845 345 2288 F: 0845 345 2299 www.warmup.co.uk

Warmup

The best underfloor heating - **guaranteed**™

Documentation of Ownership, Installation & Part P Electrical Connection

This form must be filled out completely, otherwise you may invalidate your warranty

.....

Owner's Name

.....

Owner's Address

.....

....

Post Code Telephone

.....

Email

.....

Installer's Name

.....

Installer's Telephone Number

I hereby confirm that I have read & understand the contents of the installation manual & that the heater(s) has been installed as specified therein. I acknowledge that no claim can be brought against the manufacturer or its agents for any consequential loss or damage whatsoever. I confirm that the heater(s) was working prior to tiling.

....

Installer's Signature Date

.....

Electrician's Name

.....

Electrician's Address

.....

.....

Electrician's Telephone Number

.....

Electrician's Part P Certificate Number

Warmup plc., United Kingdom
702 & 704 Tudor Estate
Abbey Road, London
NW10 7UW

Web:www.warmup.co.uk
Email:uk@warmup.com

Tel:0845 345 2288
Fax:0845 345 2299

V7.0 04/15

Cement Coated Insulation boards

Installation (Floors)

Concrete Floors

STEP 1 - The subfloor must be clean and dry and if necessary, smoothed with a latex/cement self-levelling compound to give an SR1 surface regularity.

STEP 2 - The insulation board should be installed using a flexible, cement-based adhesive. The adhesive should be trowelled out and combed through with a 6/8 mm notched trowel to give a ribbed bed, any slight depressions being filled by the mortar.

STEP 3 - The boards should be laid on the freshly applied ribbed bed and thoroughly bedded in to ensure that no voids are left beneath the boards and they are solidly supported. All boards should be laid with staggered joints.

Timber Floors

STEP 1 - The subfloor must be clean and dry. Existing floorboards should be structurally sound and if necessary, smoothed with a latex/cement self-levelling compound to give an SR1 surface regularity.

STEP 2 - The insulation board should be installed using a flexible, cement-based adhesive. The adhesive should be trowelled out and combed through with a 6/8 mm notched trowel to give a ribbed bed, any slight depressions being filled by the mortar.

STEP 3 - The boards should be laid on the freshly applied ribbed bed and thoroughly bedded in to ensure that no voids are left beneath the boards and they are solidly supported. All boards should be laid with staggered joints.

STEP 4 - When the adhesive has cured, the boards should be secured using screws and washers. These are installed at the rate of 12 per board (3 rows of 4). The screws should be a minimum of 30 mm from the edge of the insulation board. Tighten the screw and washer into the board until the screw head is flush with the surface.

NOTE: Allow the adhesive attaching the boards to the subfloor to cure before laying electric underfloor heating directly onto the boards. Tile over heater using cement-based flexible adhesive and grout.

WATERPROOFING: To attain waterproof joints the boards should be sealed during installation using silicone sealant. The sealant should be applied to the edge of the fixed board immediately prior to the next board being installed and placed in position.

Installation (Walls)

Solid walls

STEP 1 - The substrate must be clean and dry. It is possible to adhere the boards to existing plaster however plastered walls must be sealed before fixing the boards.

STEP 2 - The insulation board should be installed using a flexible, cement-based adhesive. The adhesive should be trowelled out and combed through with a 6/8 mm notched trowel to give a ribbed bed, any slight depressions being filled by the mortar.

STEP 3 - The boards should be laid on the freshly applied ribbed bed and thoroughly bedded in to ensure that no voids are left beneath the boards and they are solidly supported. All boards should be laid with staggered joints.

NOTE: Allow the adhesive attaching the boards to the substrate to cure before laying electric wall heating directly onto the boards. Tile over heater using cement-based flexible adhesive and grout.

Stud walls

IMPORTANT: For stud walls at 600 mm centres you must use 20 mm insulation boards or thicker. 10 mm boards are suitable for stud walls at 300 mm centres only.

STEP 1 - All board edges must be supported by noggins. Install noggins between studwork where board edges are likely to need supporting.

STEP 2 - The insulation board should be installed using screws and washers. These should be applied every 300 mm on each stud. For studs at 600 mm, use 2 rows of 5 fixings. At 300 mm centres use 3 rows of 5 fixings. All boards should be laid with staggered joints.

STEP 3 - Tighten the screw and washer into the board until the screw head is flush with the surface.

NOTE: Electric wall heating can be applied directly onto the boards. Tile over heater using cement-based flexible adhesive and grout.

WATERPROOFING: To attain waterproof joints the boards should be sealed during installation using silicone sealant. The sealant should be applied to the edge of the fixed board immediately prior to the next board being installed and placed in position.

Warmup plc,
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Abbey Road
London
NW10 7UW

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uk@warmup.com
www.warmup.co.uk

Warmup

Heated Towel Rails

Installation Manual

Technical Helpline

0345 345 2288

IMPORTANT!
Please read this manual before attempting to install your Warmup product. Complete and submit your warranty form online at **www.warmup.co.uk**

CE

Warmup 5 YEAR WARRANTY

www.warmup.co.uk

Warmup

The world's **best-selling** floor heating brand™

Over 2 million installations in more than 60 countries

Experience MyHeating™

Download now for iOS and Android

Unique to Warmup:

SmartGeo™
Smarter geo-fencing. Reduce energy usage by up to 25%

EasySwitch™
Always on the best tariff, automatically

Easy to use
Simple and secure set up with 24/7 support

Natural Language Programming™
Programming that speaks your language

4iE® SMART WIFI THERMOSTAT

Please scan the QR code for more information

WARNING!

Your Warmup® heated towel rail has been designed so that installation is quick and straight forward, but as with all electrical systems, certain procedures must be strictly followed. Warmup plc, accepts no liability, expressed or implied, for any loss or consequential damage suffered as a result of installations which in any way contravene the instructions that follow.

It is important that before, during and after installation that all requirements are met and understood. If the instructions are followed, you should have no problems. If you require help at any stage, please contact our helpline.

You may also find a copy of this manual and other helpful information on our website:

www.warmup.co.uk

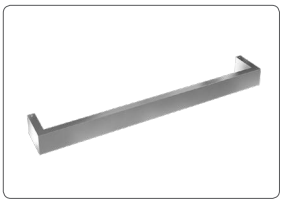
Components available from Warmup

Ladder Rails

Warmup Heated Towel Rail and Components

- HTR-4ROPO • HTR-4SQPO
- HTR-6ROPO • HTR-6SQPO
- HTR-8ROPO • HTR-8SQPO

Single Bar Rails



Warmup Heated Towel Rail and Components

- HTR-1ROPO • HTR-1SQPO
- HTR-1ROBR • HTR-1SQBR
- HTR-1ROBL • HTR-1SQBL

Additional components needed as part of your Warmup heating installation:

- ☑ 30 mA Residual Current Device (RCD), required as part of all installations.
- ☑ Digital Multi-meter required for testing the resistance of the heated towel rails.
- ☑ Measuring tape.
- ☑ Electrical housing, back boxes and junction boxes.
- ☑ Hammer.
- ☑ Masking tape.
- ☑ Spirit level.

☑ DO

- ☑ Install the Warmup Heated Towel Rails in line with these instructions. The towel rail is designed to warm towels only and not provide primary heating.
- ☑ Ensure that the control card at the back of the manual is completed and fixed at the consumer unit along with any plans and electrical test records as per the current edition of BS 7671.
- ☑ Install the towel rail at least 600 mm above the floor in order to avoid a hazard for very young children.
- ☑ Ensure that all electrical connections conform to the current BS 7671 Wiring Regulations. Final connections to the main electricity supply MUST be completed by a Part P qualified electrician.
- ☑ Ensure that the power supply to the towel rail is isolated before any installation or maintenance.

☒ DON'T

- ☒ Attempt a DIY repair if you damage the heated towel rail, contact Warmup for assistance.
- ☒ Pull on the power supply cable as it may cause damage to the towel rail.
- ☒ Attempt cleaning the towel rails using abrasive or chemical cleaners as these will damage the surface finish over time, use a soft clean cloth and a non abrasive cleaning agent.

WARNING: 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.

Zone Chart

Install the RCD

Install a dedicated 30 mA RCD or use an existing RCD. No more than 7.5 kW of heating may be connected to each 30 milliamp RCD. For larger loads, use multiple RCD's.

NOTE: In the case of bathroom installations, electrical regulations prohibit the installation of Mains Voltage products such as thermostats, contactors, fused spurs, isolators or junction boxes, within Zones 0 or 1.

Warmup Heated Towel Rails have an IP rating of IP55 and are suitable for installation within Zone 1, Zone 2, Zone 3 or outside of any Zones.

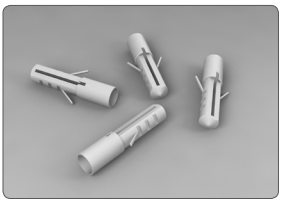
All electrical connections must conform to the current BS 7671 Wiring Regulations. Final connections to the main electricity supply MUST be completed by a Part P qualified electrician.

Before you begin

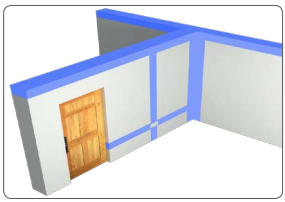
In order to avoid a hazard for very young children, heated towel rails should be installed so that the lowest heated rail is at least 600 mm above the floor.

IMPORTANT: DO NOT mount towel rails to plasterboard alone as they will not provide enough support.

- Ensure that the wall you intend to mount the rails onto is strong enough to hold the weight of the towel rail.
- When you intend to mount the rails to stud walls, fixings must be made into the studs or noggins.



- When you intend to mount the rails to masonry walls use the wall plugs supplied.
- Cables back boxes etc., will have to be chased into masonry walls.



- Mains voltage cables installed within a wall must be fixed at least 50 mm from the wall surface or occupy the horizontal and vertical safe zones in accordance with BS 7671.

Components List

1A
Normal Leg
x 3

1B
Exposed Wiring Leg
x 1

1C
Concealed Wiring Leg
x 1

2
M5 x 4
Grub screws
x 4

3
M5 x 6
Grub screws
x 4

4
Wall plugs
x 4

5
Mounting Screws
x 4

6
Wall Mount
x 3

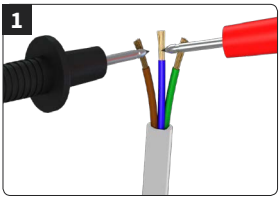
7
Concealed Wiring Wall Mount
x 1

8
Exposed Wiring Wall Mount
x 1

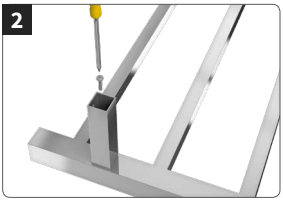
9
Hex key
x 1

10
Short screws
x 4

Warmup's Ladder Towel Rails can be installed with either concealed or exposed wiring. The instructions below concentrate on concealed wiring.

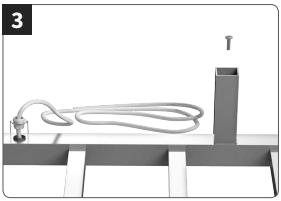


- Measure and record the resistance of the towel rails in the "Resistance Before" column of the control card, supplied as part of this installation guide.
- Stop installation immediately and contact Warmup if its resistance falls outside the values set out in the resistance table.



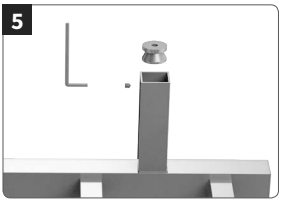
- Using a long screwdriver, screw the short screw **(10)** though the leg **(1A)** securing it to the towel rail body.

NOTE: The grub screw **(3)** should face the floor when the towel rail is mounted on the wall.

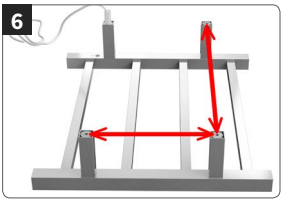


- Install the remaining 2 legs **(1A)** to the towel rail body as shown in Step 2.

- Attach the final leg **(1B or 1C)**, for exposed or concealed wiring, to the towel rail body using the grub screws **(2)** as shown.



- With all 4 legs secured to the towel rail body, install the wall mounts **(6)** into each leg using the grub screws **(3)**.
- Install the concealed wiring wall mount **(7)** or exposed wiring wall mount **(8)**.



- Use a tape measure to measure the centre to centre distances between the wall mounts **(6)** which are secured in each leg and concealed **(7**) or exposed wiring **(8)** wall mounts.

- Mark the measurements taken in the previous step on the wall of your intended towel rail location keeping in mind that the lowest rail should be at least 600 mm above the floor level.
- Ensure the markings on the wall are level.

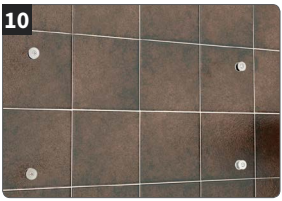
- Drill 3 holes in the wall for each of the 3 x wall mounts **(6)**.

NOTE: For exposed wiring drill a 4th hole of equal size.

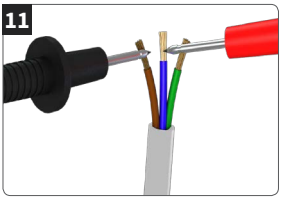
For masonry walls gently tap wall plugs **(4)** into the holes using a hammer.

- Remove the wall mounts x 3 **(6)** from the legs **(1A)**.
- Insert the mounting screws **(5)** through the wall mounts and secure to the wall as shown ensuring that they sit flush with the wall.

  NOTE: For exposed wiring, install exposed wiring wall mount **(8)**.



- Drill a larger 4th hole for the concealed wiring leg.
- Remove the concealed wiring wall mount **(7)** from the leg **(1C).**
- Apply grab adhesive to the wall mount thread and press into the drilled hole until it sits flush with the wall.



- Conduct another resistance test before mounting the towel rail to ensure it has not been damaged and record in the control card.

- Position the rail against the wall and insert the power supply cable through the concealed wiring wall mount **(7)**.
- Place the rail onto the wall mounts **(6)** and secure by tightening the grub screws **(3)** as shown.

Components List

1A
Wall mounts
(Round Rails)
x 2

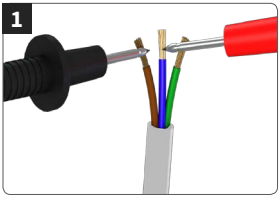
1B
Wall mounts
(Square Rails)
x 2

2
M5 x 8
Grub screws
x 2

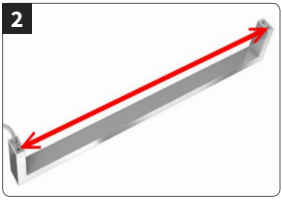
3
Wall plugs
x 3

4
Mounting
Screws
x 3

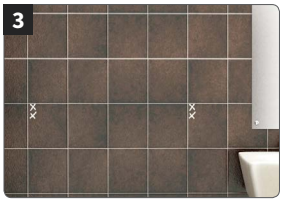
5
Hex key
x 1



- Measure and record the resistance of the towel rails in the “Resistance Before” column of the control card, supplied as part of this installation guide.
- Stop installation immediately and contact Warmup if its resistance falls outside the values set out in the resistance table.



- Place the wall mounts **(1A or 1B)** into the rail. Use a tape measure to measure the distance between the screw holes on the wall mounts.
- Also measure the distance between the screw and power supply cable holes.

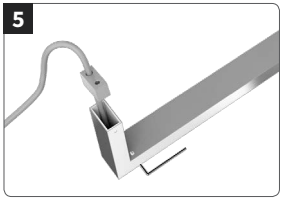


- Mark the screw and power supply cable hole positions on the wall you intend to mount the rail using measurements taken in Step 2. Ensure the markings are level.

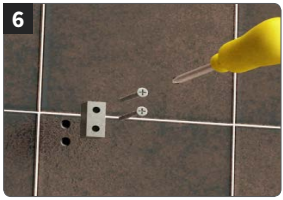
  NOTE: The supply cable mount should be on the right hand side.

- Drill three holes into the previously marked positions, two for the mounting screws and one for the supply cable

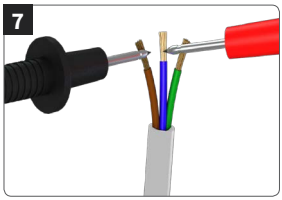
  NOTE: For masonry walls gently tap wall plugs **(3)** into the mounting holes using a hammer.



- Remove the wall mounts **(1A or 1B)** from the towel rail by unscrewing the grub screw **(2)** located at the bottom of the rail.



- Insert the mounting screws **(4)** through the wall mounts **(1A or B)** and screw into the wall.



- Conduct another resistance test before mounting the towel rail to ensure it has not been damaged and record in the control card.

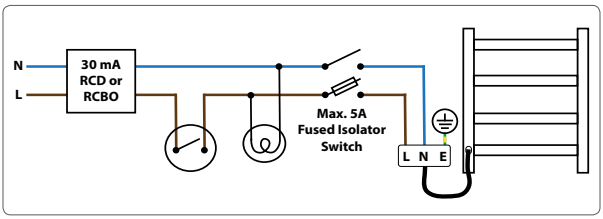
- Position the rail against the wall and thread the power supply cable through the wall mount **(1A or 1B)**.

- Secure the rail onto the wall mounts by tightening the grub screws **(2)** using the hex key **(5)** as shown.

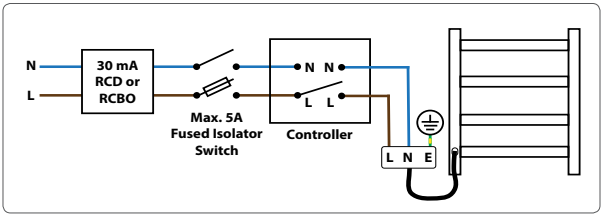
The Warmup Heated Towel Rails electrical connection must conform to the current BS 7671 Wiring Regulations. Final connections to the main electricity supply MUST be completed by a Part P qualified electrician.

- The supply should be on a circuit protected by a maximum 5 amp fuse or circuit breaker. It is recommended that the heated towel rails supply is fitted with an in-line isolator to allow it to be independently isolated. Please see Page 6 for correct zoning.

Warmup Heated Towel Rails can be connected into the rooms lighting circuit, enabling the towel rail when the lights are switched on.

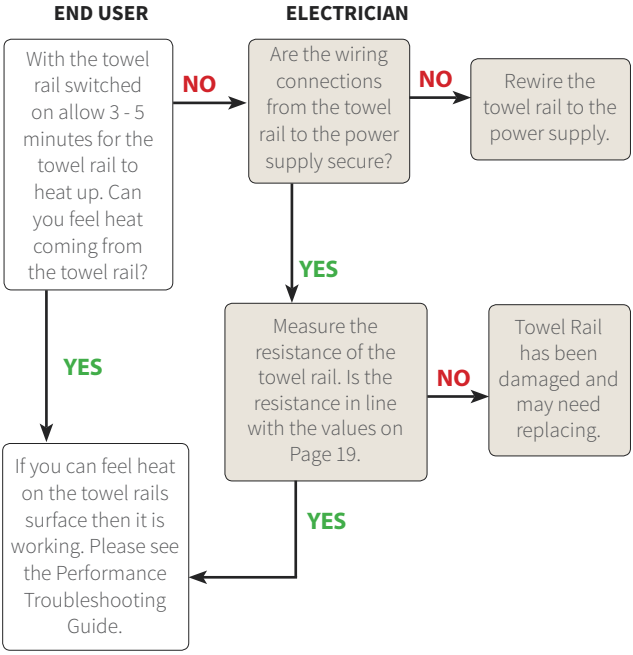


Alternatively they can be controlled by an independent controller that provides power on demand.

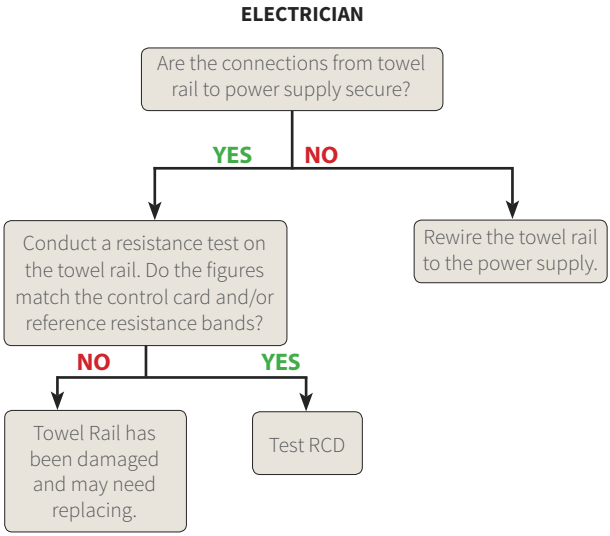


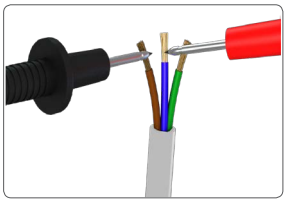
Instructions which are shaded must completed by a qualified electrician.

HEATING ISSUE 1 - The towel rail does not heat up.



HEATING ISSUE 2 - The towel rail trips the RCD





The heated towel rails must be tested before they are installed and again before final connection is made. The resistance (ohms) of each heater should be measured. You should carry out the following tests and should expect the results detailed below:

• Heated Towel Rail Resistance Test

Set a multimeter or ohmmeter to record resistance in the range of the heated towel rail. Measure the resistance across the live (brown) and neutral (blue) wires. Ensure the measured resistance is in line with Resistance values for the rail being tested.

Record the readings on the control card in line with the installation procedure.

• Earth Fault Check

Set a multimeter or ohmmeter to record resistance in the range of 1MΩ or greater if available. Measure the resistance across the live (brown) and neutral (blue) wires to the earth (green/yellow) wire.

Ensure the measured resistance is showing as greater than 500MΩ or infinite if the meter cannot read this high.

Insulation resistance test

Set an insulation resistance tester to 500VDC. Measure the resistance across the live (brown) and neutral (blue) wires to the earth (green/yellow) wire. Ensure the measured resistance is showing greater than 500MΩ to indicate a pass.

Warmup® Heated Towel Rails are guaranteed by Warmup plc ("Warmup") to be free from defects in materials and workmanship under normal use and maintenance, and is guaranteed to remain so subject to the limitations and conditions described below. The Heated Towel Rail is guaranteed for 5 years, except as provided below (and your attention is drawn to the exclusions listed at the end of this guarantee).

This 5 year guarantee applies:

1. Only if the unit is registered with Warmup within 30 days after purchase. Registration can be completed online at www.warmup.co.uk. In the event of a claim, proof of purchase is required, so keep your invoice and receipt - such invoice and receipt should state the exact model that has been purchased;

&

2. Only if the towel rail has been earthed and protected by a Residual Current Device (RCD) at all times.

The guarantee period begins on the date of purchase. During the period of the guarantee Warmup will arrange for the heater to be repaired or (at its discretion) have parts replaced free of charge. The cost of the repair or replacement is your only remedy under this guarantee which does not affect your statutory rights.

Such cost does not extend to any cost other than direct cost of repair or replacement by Warmup and does not extend to costs of refacing, replacing or repairing any wall covering or walls. If the heater fails due to damage caused during installation or through misuse, this guarantee does not apply. It is therefore important to check that the heater is working (as specified in the installation manual) prior to installing.

WARMUP PLC SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO EXTRA UTILITY EXPENSES OR DAMAGES TO PROPERTY.

WARMUP PLC is not responsible for:

1. Damage or repairs required as a consequence of faulty installation or application.
2. Damage as a result of floods, fires, winds, lightening, accidents, corrosive atmosphere or other conditions beyond the control of Warmup plc.
3. Use of components or accessories not compatible with this unit.
4. Products installed outside the United Kingdom.
5. Normal maintenance as described in the installation and operating manual, such as cleaning.
6. Parts not supplied or designated by Warmup.
7. Damage or repairs required as a result of any improper use, maintenance, operation or servicing.
8. Failure to start due to interruption and/or inadequate electrical service.
9. Any damage caused by frozen or broken water pipes in the event of equipment failure.
10. Changes in the appearance of the product that does not affect its performance.

Register your Warmup® warranty online at www.warmup.co.uk

Heater Location

.....

.....

Total Wattage

.....

WARNING

Heated Towel Rail wiring located behind wall. Risk of electric shock!

DO NOT penetrate the wall with nails, screws, or similar devices in this towel rails location.

Heated Towel Rail Model	Resistance Before	Resistance After	Insulation Resistance

Date Signed Company stamp/name

This form must be completed as part of the Warmup Guarantee. Ensure that the values are as per the instruction manual.

This card must be situated close to the consumer unit in a visible place.

Warmup Plc 702 & 704 Tudor Estate Abbey Road
London NW10 7UW

T: 0345 345 2288 F: 0345 345 2299 www.warmup.co.uk

TECHNICAL SPECIFICATIONS - Heated Towel Rails	
OPERATING VOLTAGE	230 V AC : 50 Hz
IP RATING	IP55
ELECTRICAL CLASS	Class I
CONNECTION	1.5 m LONG “COLDTAIL” CONNECTION

Heated Towel Rail Size Guide

Ladder Rails				
PRODUCT CODE	SIZE (mm)	POWER (W)	LOAD (A)	RESISTANCE +/- 10 % (Ω)
HTR-4ROPO	**4 Bar Ladder - Round Polished** 520(h) x 500(l) x 120(d) mm	52	0.23	1017
HTR-4SQPO	**4 Bar Ladder - Square Polished** 435(h) x 525(l) x 120(d) mm	52	0.23	1017
HTR-6ROPO	**6 Bar Ladder - Round Polished** 600(h) x 650(l) x 120(d) mm	90	0.39	588
HTR-6SQPO	**6 Bar Ladder - Square Polished** 600(h) x 650(l) x 120(d) mm	95	0.41	557
HTR-8ROPO	**8 Bar Ladder - Round Polished** 800(h) x 530(l) x 135(d) mm	100	0.43	529
HTR-8SQPO	**8 Bar Ladder - Square Polished** 912(h) x 620(l) x 120(d) mm	115	0.50	460

Single Bar Rails				
PRODUCT CODE	SIZE (mm)	POWER (W)	LOAD (A)	RESISTANCE +/- 10 % (Ω)
HTR-1ROPO	**Single Bar - Round Polished** 32(h) x 650(l) x 100(d) mm	19	0.08	2800
HTR-1SQPO	**Single Bar - Square Polished** 40(h) x 650(l) x 100(d) mm	19	0.08	2800
HTR-1ROBR	**Single Bar - Round Brushed** 32(h) x 650(l) x 100(d) mm	19	0.08	2800
HTR-1SQBR	**Single Bar - Square Brushed** 40(h) x 650(l) x 100(d) mm	19	0.08	2800
HTR-1ROBL	**Single Bar - Round Black** 32(h) x 650(l) x 100(d) mm	19	0.08	2800
HTR-1SQBL	**Single Bar - Square Black** 40(h) x 650(l) x 100(d) mm	19	0.08	2800

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Bathroom
Heating

www.warmup.co.uk