

HEATSTRIP[®]

R A D I A N T O U T D O O R H E A T E R S



Product Manual



**HEATSTRIP[®] *ELEGANCE* with
Remote and App control
(THE-RA Range)**

Superior Technology. Superior Style.



HEATSTRIP® Elegance with Remote and App Control. Superior Technology. Superior Style

Rev C MAY 21

After many years of developing, researching and working in partnership with coating technology experts, Thermofilm, a world leader in electric heaters, has produced a unique composition to produce the new generation of outdoor heaters.

HEATSTRIP® Elegance with Remote and App Control comes in an "off-white" colour which blends

in seamlessly with most white ceilings in alfresco areas.

- Electric radiant heater perfect for your protected alfresco area, pergola, verandah or café
- The elegant, slimline design and "off-white" colour blends in seamlessly with most white ceilings
- World leading element design produces a more compact and higher output heater
- Significantly more cost-effective than bottled gas heaters
- Corrosion-resistant to handle the toughest outdoor environments
- Convenient DIY installation on 2400W models, 3200W model must be hard wired
- Optional mounting brackets
- 2 year residential warranty and 1 year commercial warranty

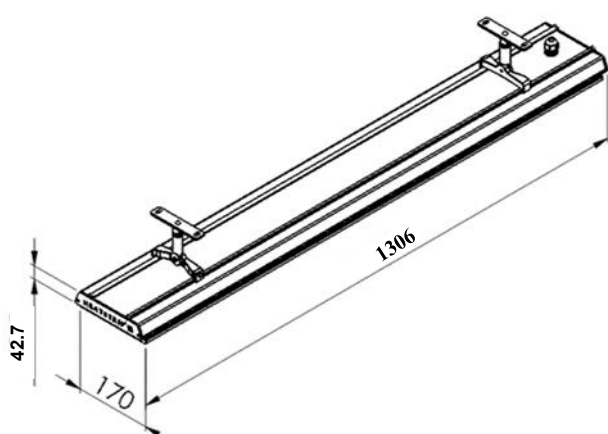




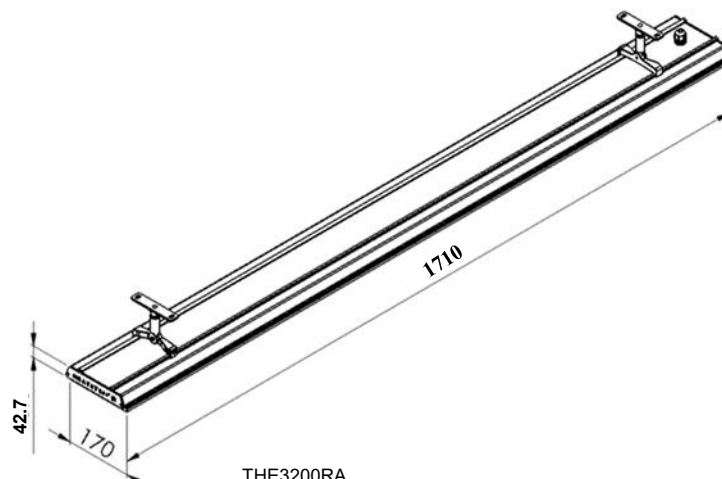
Specifications - Australia

MODEL	POWER (WATTS)	CURRENT (AMPS)	DIMENSIONS (mm)	WEIGHT (Kg)	LEAD LENGTH (mm)	PLUG
THE2400RA	2400	10	1306 x 170 x 42.7	6	1000	YES
THE3200RA	3200	13	1710 x 170 x 42.7	9	1000	NO

MODEL		
HEATER TYPE	High intensity electric radiant overhead heater with high surface area profiled alloy	
OUTPUT	Refer to model code chart above	
POWER	240 Volts Nominal at 50 Hertz, Single Phase	
CONNECTION	3 Core Cable 2.5mm ²	
APPROVALS	AUSTRALIA/NZ	
MOUNTING HEIGHT	MINIMUM RECOMMENDED MAXIMUM	2.1 m 2.3 m to 2.5 m 2.7 m in a fully enclosed outdoor area (For higher ceiling heights, units can be lowered using optional bracket kits or refer to the HEATSTRIP Max range)
MOUNTING OPTIONS	Suitable for ceiling, wall, beam, fixed umbrella and recess mounting. Also available for extension mount using rigid fixing poles and chains / wire suspension.	
PROTECTION RATING	IP55 Protection from water ingress from all directions	
MATERIALS OF CONSTRUCTION	High temperature coated aluminium alloy	



THE2400RA



THE3200RA



Operating cost comparison

In many instances, patio heaters powered by gas bottles are used as an outdoor heating source. The below table shows the operational cost comparison between HEATSTRIP® and a bottled gas outdoor heater. Not only are the hourly running costs considerably less with HEATSTRIP®, but you never have to worry about running out of gas, no refilling, no unattractive gas bottle to waste space; and HEATSTRIP® actually improves the value of your property.

RUNNING COST	OUTDOOR GAS HEATER	HEATSTRIP ELEGANCE ELECTRIC RADIANT HEATER	
		THE2400R	THE3200R
PER HOUR	\$2.78/hr	\$0.60/hr	\$0.80/hr
PER YEAR	\$500.40	\$108.00	\$162.00

Notes:

1. Calculations of hourly running cost for outdoor gas heater is based on \$25.00 average to fill a 9kg gas bottle and average running time of 9 hours. $\$25.00 / 9 \text{ hours} = \2.78 per hour
2. Electricity rate of 25.0 cents/kWh
3. All calculations are excluding GST.
 - 1.8kW x 0.25 cents = \$0.45 or 45 cents per hour
 - 2.4kW x 0.25 cents = \$0.60 or 60 cents per hour
 - 3.2kW x 0.25 cents = \$0.80 or 90 cents per hour



Calculations of yearly running cost are based on 180 hours usage

180 hours x \$2.78 = \$500.40 yearly running cost for outdoor gas heater

180 hours x \$0.60 = \$108.00 yearly running cost for 2400W HEATSTRIP Elegance

180 hours x \$0.80 cents = \$144.00 yearly running cost for 3200W HEATSTRIP Elegance





Spot heating principle

In most outdoor or difficult-to-heat indoor applications, there are 2 options when calculating the size and quantity of the heaters required.

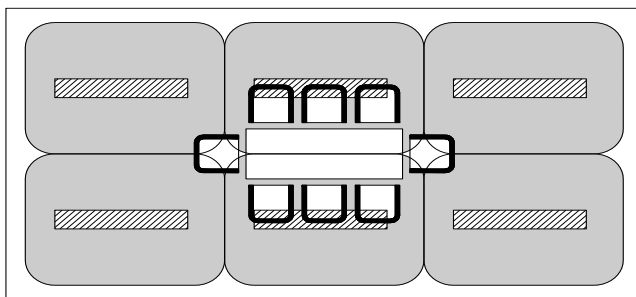
Option 1 is to comfort heat the entire area based on the total dimensions of the space, regardless of whether the entire area is being fully occupied.

Option 2 is to spot heat the high use areas, such as over outdoor tables, BBQ's, lounges, assembly lines or indoor workstations.

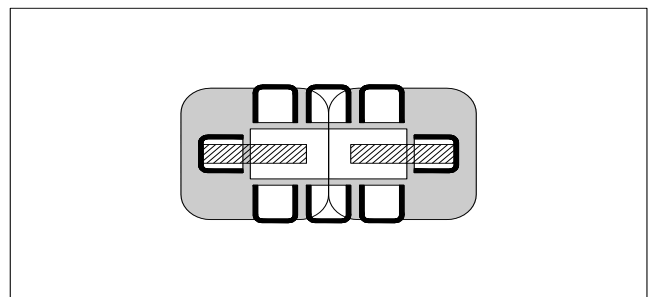
Often it is more practical and efficient to spot heat high use areas. Spot heating will reduce both the initial capital cost as well as the ongoing running costs. Spot heating will allow the area to be "zoned", meaning only the areas that are being used are heated, such as tables in a restaurant or outdoor alfresco area.

Option 1 and 2 show a comparison between heating an entire area or spot heating over a table.

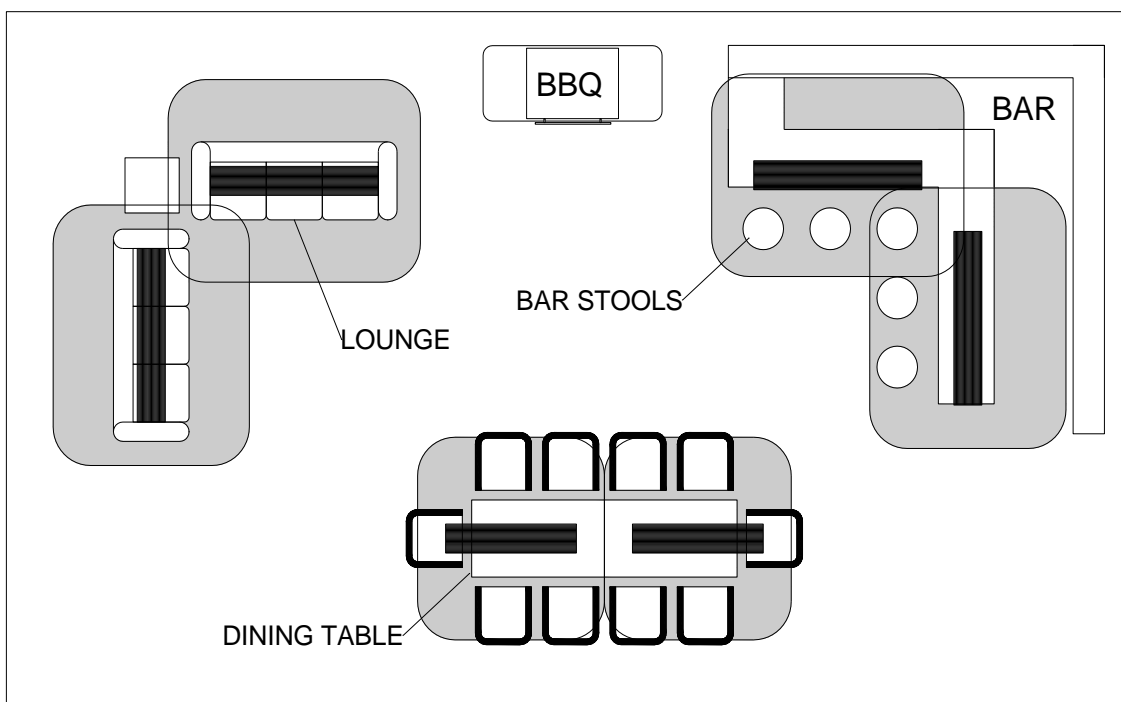
The bottom layout shows the flexibility of using HEATSTRIP® to provide a comfortable environment, even when the layout of the area is very unusual.



Option 1: 6 x THE2400RA



Option 2: 2 x THE2400RA





Radiant footprint

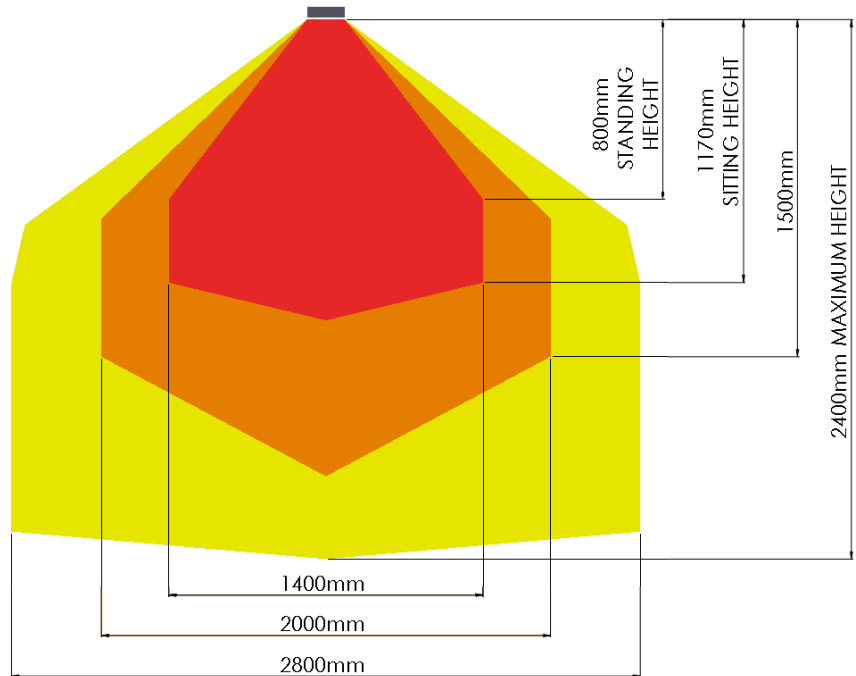
HEATSTRIP® electric heaters produce radiant heat which heats objects rather than the air. Therefore, it is imperative that objects to be heated (ie. people), are within the direct radiant footprint of the heater.

The diagram to the right shows the radiant footprint of HEATSTRIP® Elegance with Remote and App control and is an approximate guide based on a fully enclosed outdoor environment.

This diagram shows that the maximum heat output is found directly under the heater, and the temperature decreases as you move away from the heater.

It highlights the importance of maintaining recommended mounting heights, and if possible, positioning the heater directly above the area to be heated.

Note that the temperature is similar for all 3 models, regardless of the wattage however, as the size increases and the length of the unit increases, the radiant footprint will be longer.

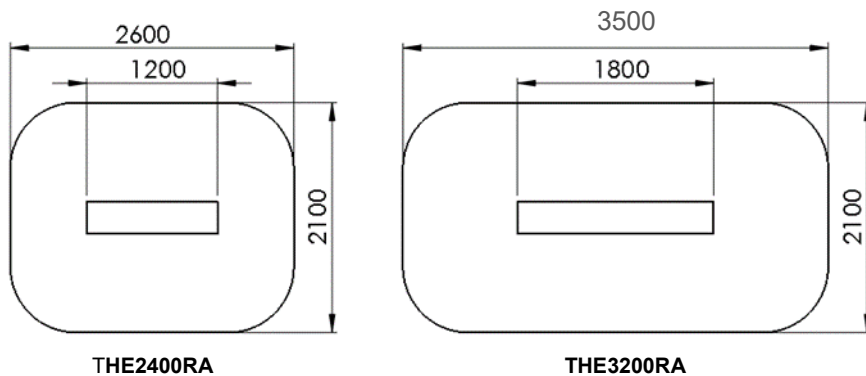


The below diagrams show the approximate heating area for each model, based on both an indoor and outdoor enclosed environment, with direct overhead mounting.

The radiant footprint is reduced in angled and wall mounted installations.

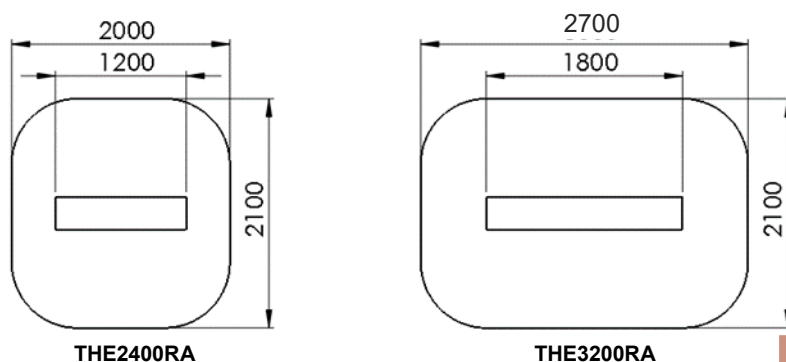
HEATED AREA

INDOOR SPOT HEATING



HEATED AREA

OUTDOOR ENCLOSED HEATING





Selection guide

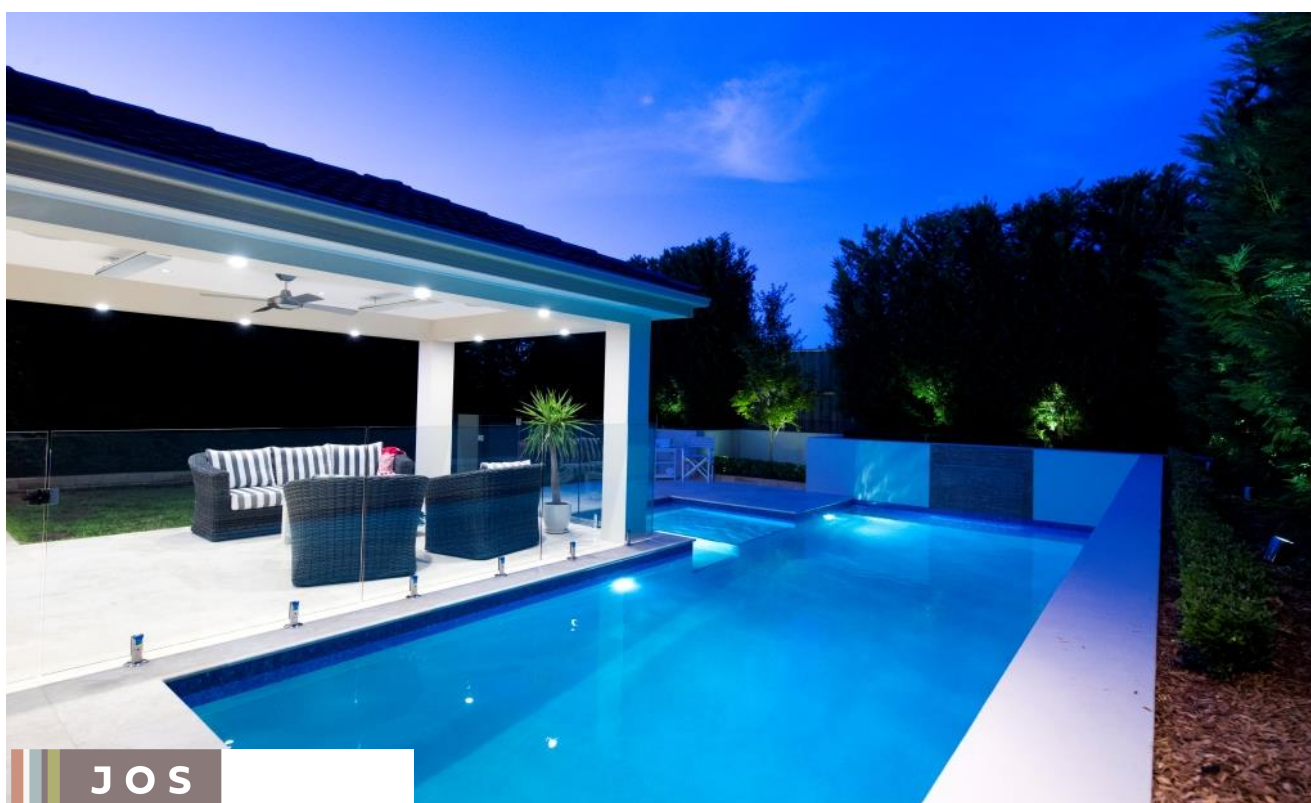
General recommendations for **HEATSTRIP® Elegance with Remote and App Control**:

- Ideal mounting height: 2.3m to 2.5m. Maximum is 2.7m in a fully protected/enclosed outdoor environment.
- Ideal mounting location: ceiling mounted, directly above area to be heated (eg. above a table)
- Minimum recommended heating capacity for various installations are: 400W/m² for indoor spot heating; 500W/m² for protected outdoor areas, and 600W/m² for exposed outdoor areas. To ensure the HEATSTRIP® Elegance provides satisfactory performance, Thermofilm strongly recommends using conservative coverage areas when specifying how many heaters are required for each installation.

The table below outlines the *maximum* coverage of each **HEATSTRIP® Elegance with Remote and App control** model based on 2 different scenarios with direct overhead mounting at minimum installation height. For example, for an outdoor area that is protected from prevailing winds by walls, café blinds etc, Model THE2400R will cover a *maximum* of 4.8m² and Model THE3200R will cover a *maximum* of 6.4m².

For angled wall mounting applications, the coverage is reduced by up to 40%.

MODEL	INDOOR PROTECTED (m ²)	OUTDOOR ENCLOSED (m ²)	OUTDOOR EXPOSED (m ²)
THE2400RA	6	4.8	4
THE3200RA	8	6.4	5.3



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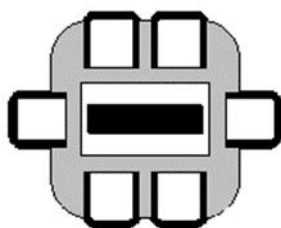
TERRASADVIES



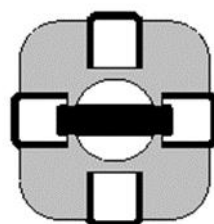
Table layout

For the majority of outdoor applications, the most effective method is to spot heat a table or similar area. The diagrams below provide an easy selection guide for the approximate model and quantity of heaters required to heat common residential table settings.

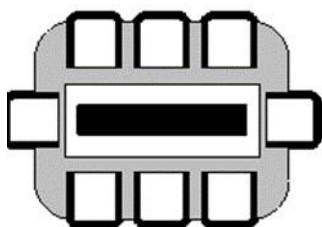
Selections are based on HEATSTRIP® Elegance with Remote and App Control being mounted at 2.4m from the floor in a fully enclosed undercover outdoor area.



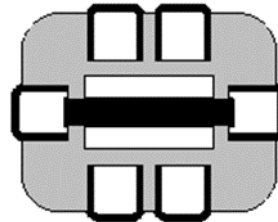
THE2400RA



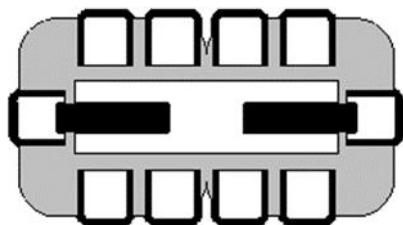
THE2400RA



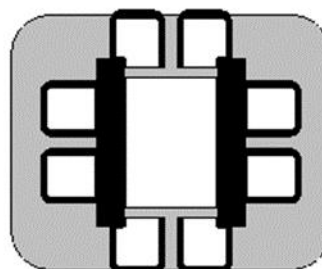
THE3200RA



THE3200RA



2x THE2400RA



2x THE3200RA

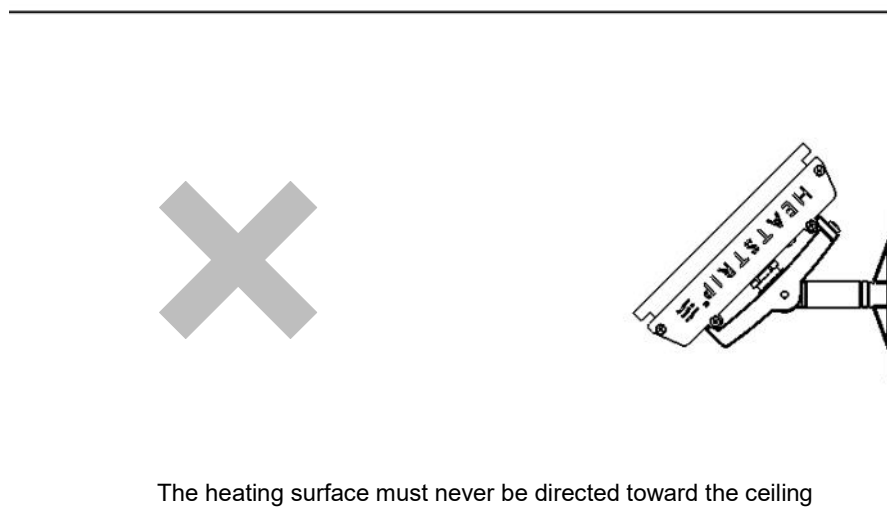
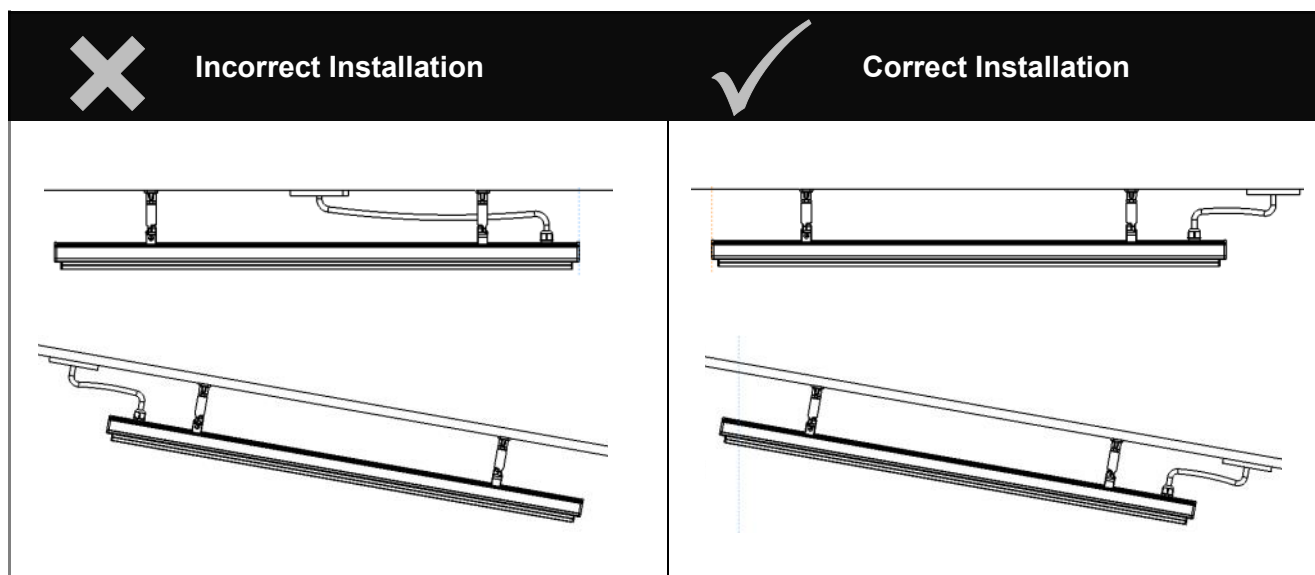
Installation Requirements

The ideal mounting position for the HEATSTRIP® Elegance with Remote and App control is on the ceiling directly above the area to be heated. If this is not possible, HEATSTRIP® can be mounted on a wall and angled downwards. In this situation, ensure the mounting height is in the range of 2.1m to 2.7m and the table is close to the wall.

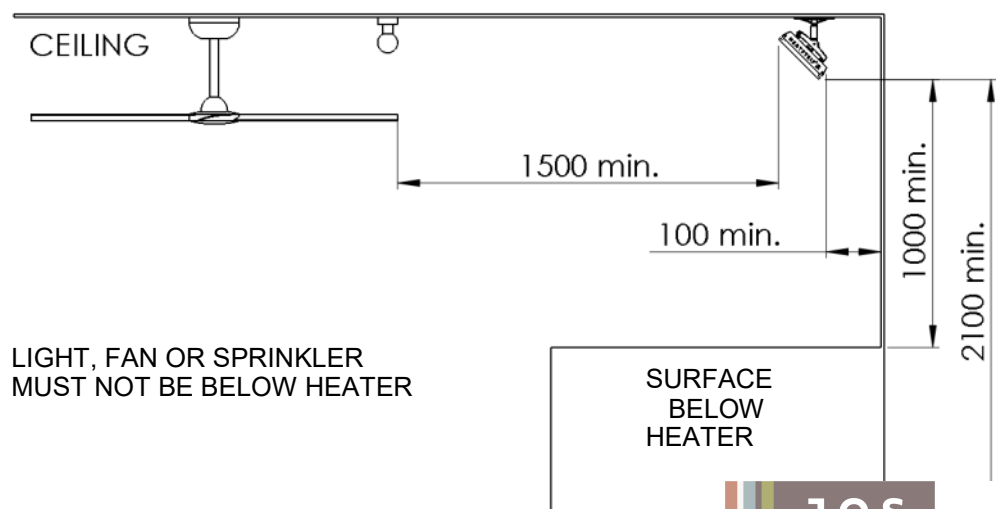
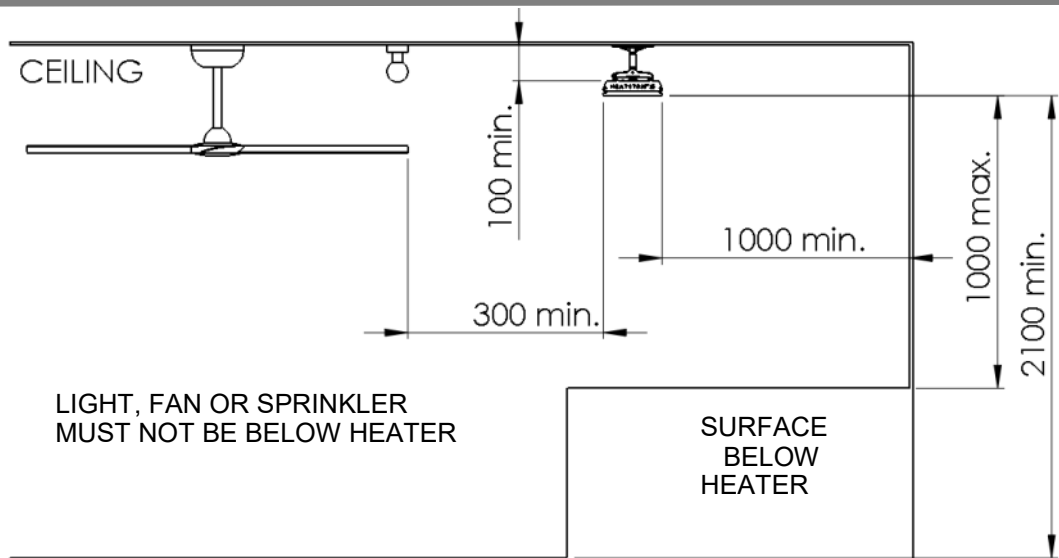
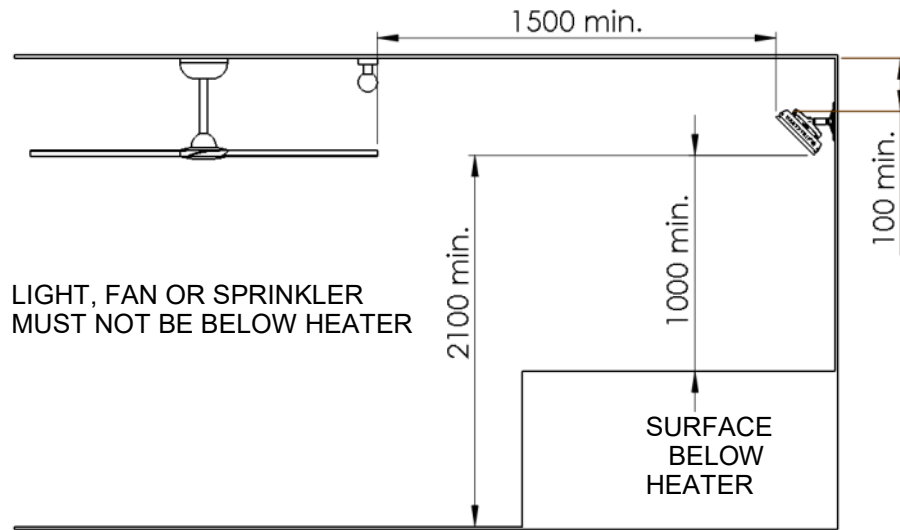
For mounting heights more than 2.7m, we recommend the use of the optional accessories to reduce the height of the heater to 2.3m—2.5 m. This will increase the effectiveness of your HEATSTRIP®. Refer to the Mounting Accessory section for more information.

Electrical connections/GPO's should not be located at the back of the heater. They should be located outside the physical footprint of the units to minimize heat build-up behind the units.

If the heater is to be mounted on an incline (e.g. vaulted ceiling), ensure the electrical connection is located at the lowest point of the heater.



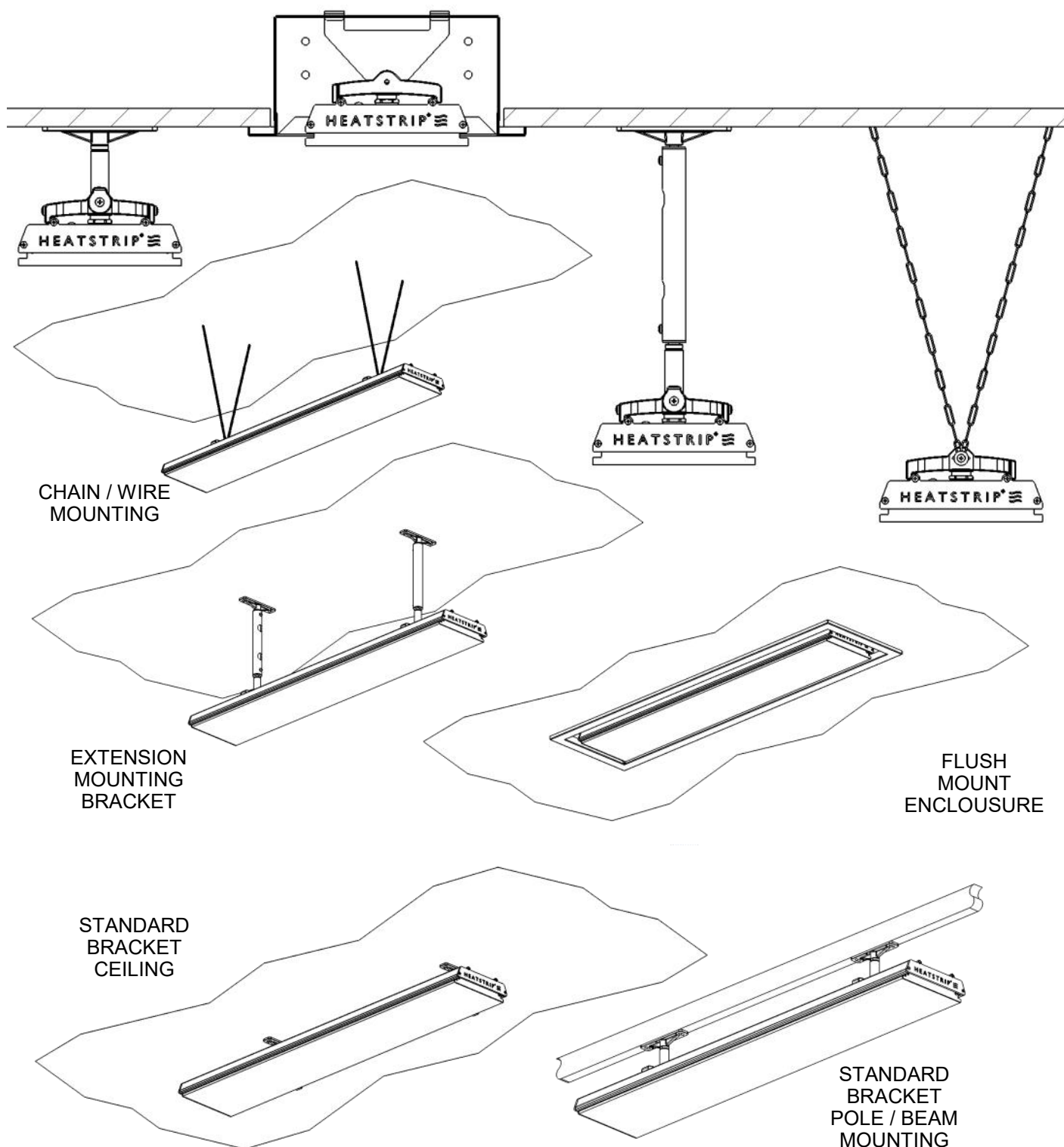
WARNING: This heater is not equipped with a device to control the room temperature. Do not use this heater in small rooms when they are occupied by persons not capable of leaving the room on their own, unless constant supervision is provided.



Mounting options

Installing the HEATSTRIP® Elegance with Remote and App Control is simple and easy using the standard mounting brackets supplied. For other irregular locations there are range of mounting options available - refer to diagrams below

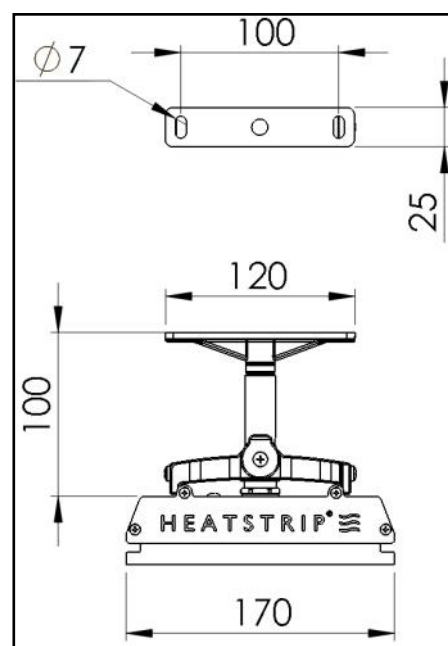
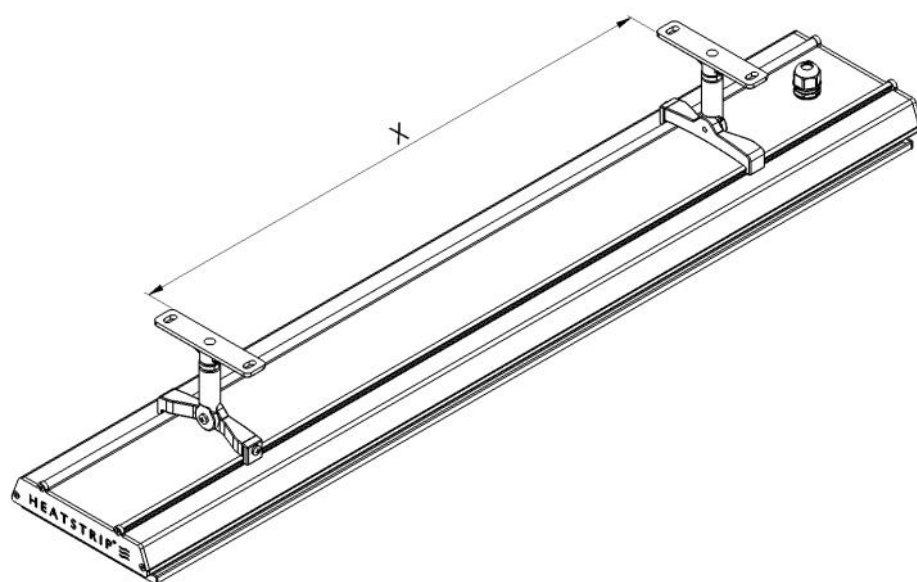
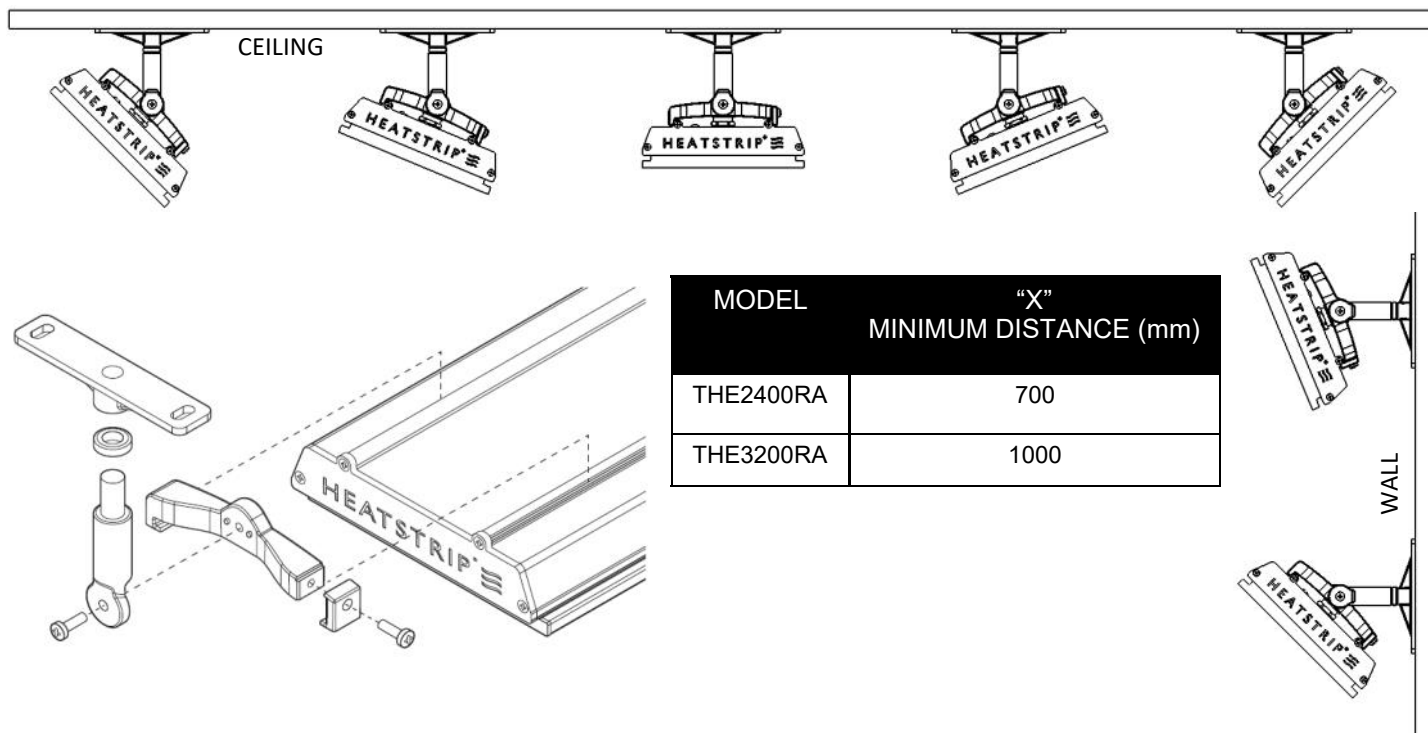
The HEATSTRIP® Elegance with Remote and App Control can be mounted directly to the ceiling, angled downwards on a wall, fitted flush with the ceiling, attached to beams or poles or suspended by rods, wires or chain .





Standard mounting brackets

The HEATSTRIP® Elegance with Remote and App Control comes with a pair of standard mounting brackets. These adjustable brackets allow direct ceiling, wall or pole/beam mounting, and come with pre-set angle options of parallel, 22.5° and 45°.



PART No	PACKAGED DIMENSIONS (mm)	WEIGHT (kg)	MATERIALS
ZBRAK-113W	125 x 150 x 40	0.2	ALLOY



Flush mount enclosure

The Flush Mount Enclosure is an ideal way to neatly install the HEATSTRIP® into a ceiling. They are available for all HEATSTRIP® Elegance with Remote and App Control models, and are supplied as a one-piece unit suitable for mounting individual heaters. Flush mounting can be used with plaster or timber lined ceiling materials.

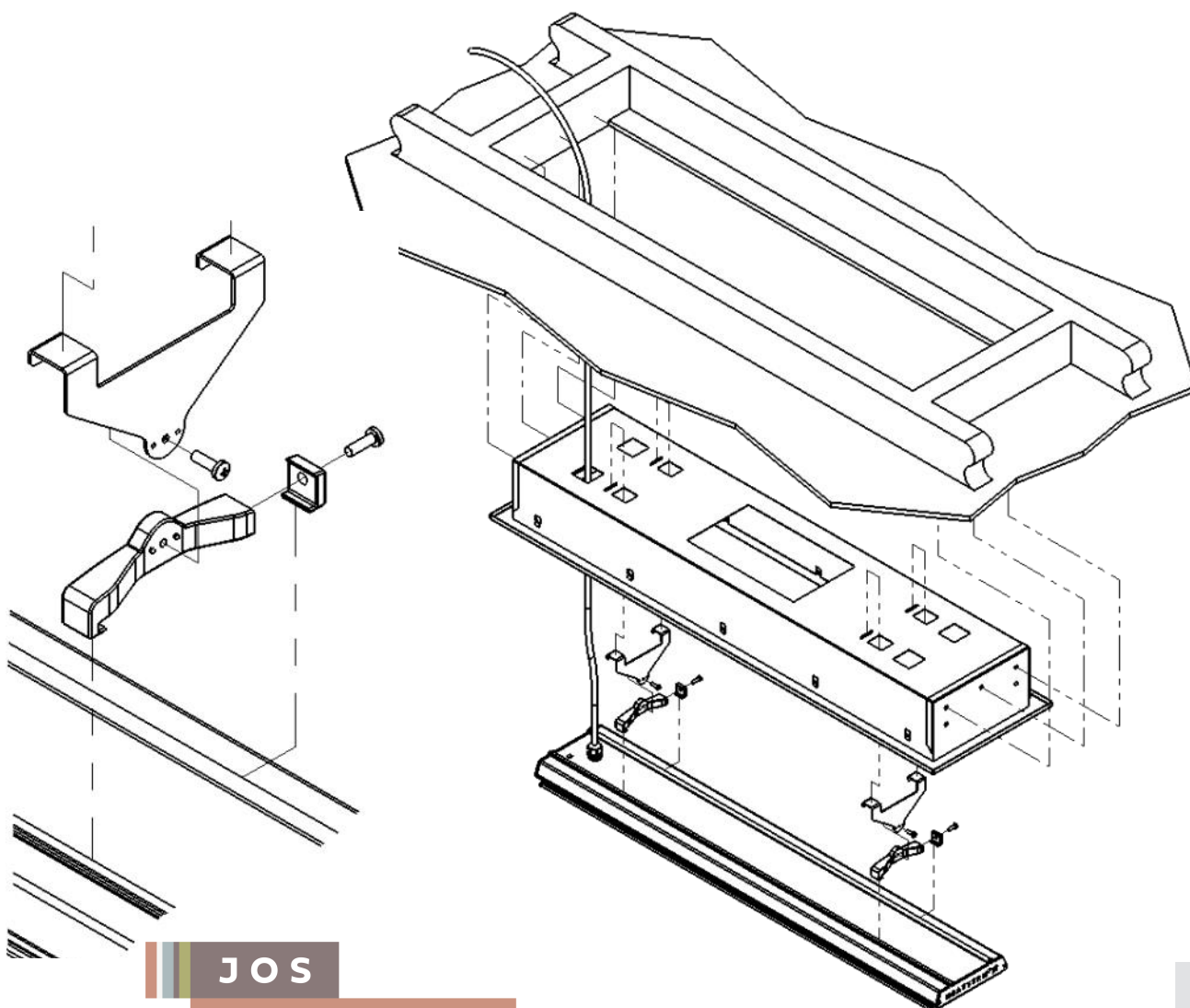
An ideal mounting height is 2.3m-2.5m, with a maximum ceiling height of 2.7m in an outdoor enclosed environment. Maximum mounting heights should be strictly followed, otherwise the performance of the units may be reduced.

A minimum clearance of 150mm behind the enclosure must be provided.

The enclosure is manufactured from powder coated steel.

Please refer to the Flush Mount Enclosure Installation Manual for more detailed installation information.

SUITABLE FOR MODEL	PART No	HOLE CUTOUT DIMENSIONS (mm)	OVERALL DIMENSIONS (mm)	WEIGHT (kg)
THE2400RA	THERAC-056	235W x 1385L	290W x 1439 L x 125 D	8
THE3200RA	THERAC-057	235W x 1785L	290 W x 1839 L x 125 D	9



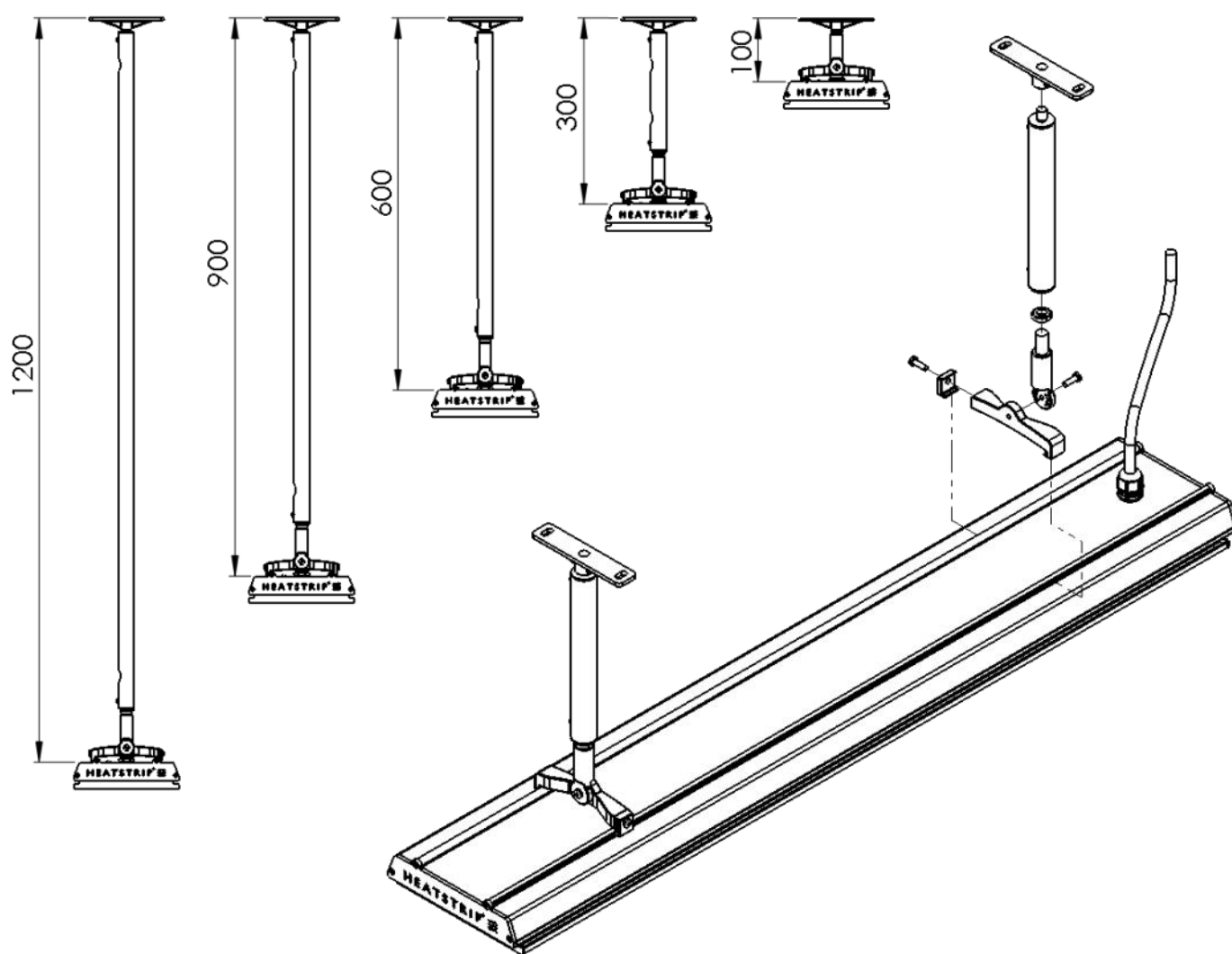


Extension Mount Bracket

The Extension Mount bracket allows HEATSTRIP® Elegance units to be lowered from high ceilings using rigid connections. The standard length options as part of the kit are 300mm, 600mm, 900mm and 1200mm.

The kits include all brackets, poles and screws necessary for connection to the heaters, however it does not include screws for attachment to the ceiling.

The extension mount bracket utilises component from the standard bracket kit which is supplied with each heater. For minimum distance requirements between poles please refer to page 14.



PART No	PACKAGED DIMENSIONS (mm)	WEIGHT (kg)	MATERIALS	NOTES
THEAC-043	300 x 150 x 50	0.21	Aluminium	Kit includes 2x300mm extension pole
THEAC-044	600 x 150 x 50	0.38	Aluminium	Kit includes 2x600mm extension pole
THEAC-045	900 x 150 x 50	0.55	Aluminium	Kit includes 2x900mm extension pole
THEAC-046	1200 x 150 x 50	0.71	Aluminium	Kit includes 2x1200mm extension pole

Chain / Wire Suspension Mount

HEATSTRIP® Elegance with Remote and App Control can be suspended using chain or wire to lower the installation height from high outdoor or indoor roofs or ceilings.

Thermofilm does not provide any dedicated installation kit for this type of mounting, however the following information may be used to assist in safely installing the HEATSTRIP® Elegance with Remote and App Control.

Any chain or wire must be suitably rated to withstand the weight of the heater.

The use of chain or wire mounting is NOT recommended for unprotected outdoor installations.

It is recommended to use the component from the standard bracket kit (shown below) which is supplied with each heater to attach any chain or wire to the heater.

For minimum distance requirements between poles please refer to page 14.

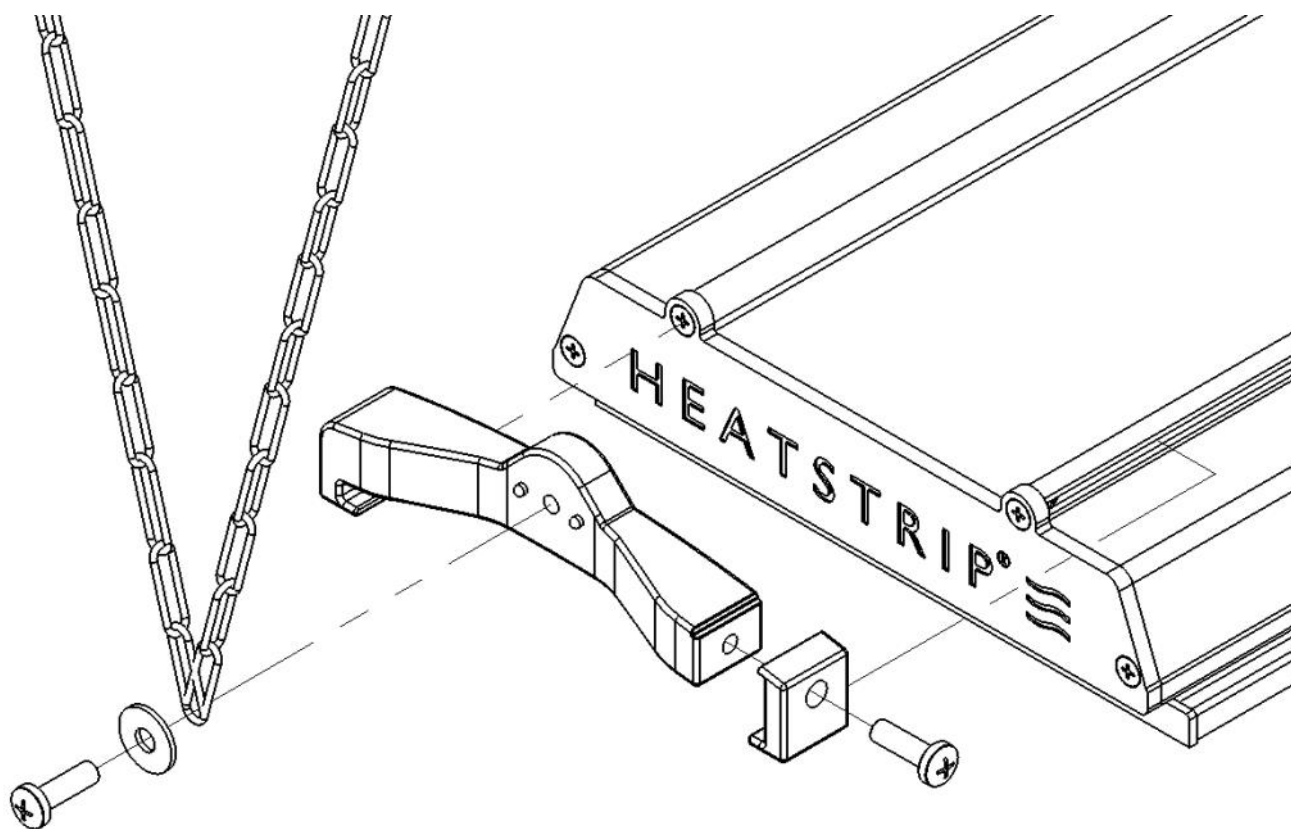


Diagram above shows one potential means of installation using chain or wire



THE-RA Setup Instructions

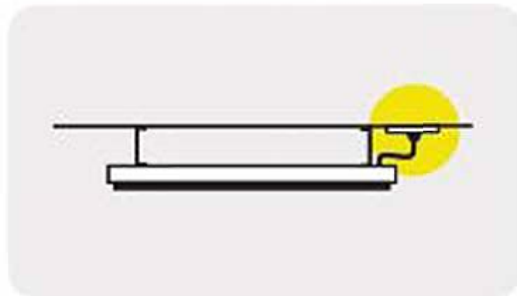
- 1 Visit the Apple App Store or Google Play and download Tuya Smart App.



- 2 Register and login into TuyaSmart App. (Make sure Wi-Fi is enabled).



- 3 Connect the HEATSTRIP Heater to Power. [Either Plug-In or Hardwired]



- 4 Once the power is switched on, hold the 2H button on the remote until all the lights are flashing green.



- 5 Open the App and select "Add Device".



- 6 Select Device Type "Small Appliances".



- 7 Select "Heater".



- 8 Select "Next" [Wi-Fi must be connected].



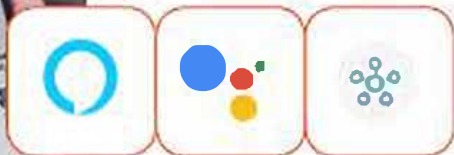


THE-RA Setup Instructions

- 7** Confirm the 3 indicator is blinking rapidly on the heater and select "Next" (If the LCD lights are not blinking on the heater, you will need to hold down the 2H button on the remote until the 3 indicators are blinking).



- 8** Once the pairing cycle has been completed, the App and HEATSTRIP Heater should be paired together.



Pairing with Google Assistant

1. Download the Google Home app on the app store or Google Play
2. Pair the Google device to the Google Home App
3. Once paired, click on the TuyaSmart App.
4. Select "Me"
5. Select "Google Assistant"
6. Select "Link with Google Assistant"
7. Select "Agree and link"
8. Choose device "Select HEATSTRIP Elegance"
9. Pairing completed



THE-RA Operation Control with Remote

The THE-R is a custom designed and manufactured heater. It has been designed for ease of use and provide low running cost of your heater. It provides both temperature control (allowing the user to turn the heater output up or down depending on the ambient temperature and conditions) and a timer for automatic heater shut– off operation

When the heater is plugged in, press “power” on the remote, the power indicator light on the unit is lit, and then press the function button. It provides both temperature control allowing the user to turn the heat output High or Low and a timer for automatic heater operation, either 1, 2 or 4 hours.

THE-RA Functions

The heater allows a combination of the multiple timer (1/2/4 hour) and heat outputs (High/Low). The default operation is continuous operation at full temperature.

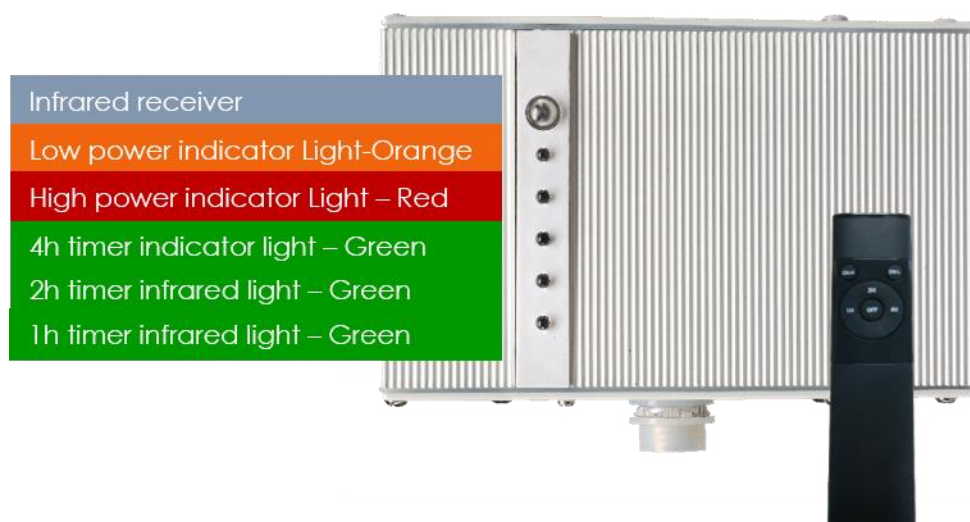
The timer function has four settings: 1 hour, 2 hours, 4 hours or constantly ON. This feature is ideal for applications such as alfresco areas, restaurant dining, assembly line production etc. when continuous heat is not required. The timer also reduces the likelihood of heaters being inadvertently left turned on.

Depending on the ambient temperature, there may be a requirement to adjust the heat. The controller has 2 settings: they are High and Low.

Remote pairing

All units operate using the same remote control frequency, therefore, multiple heaters can be operated using a single remote control.

The remote will function at distance of over 8m when used in a straight line. This distance reduces when used at an angle.



Controller functionality, please refer to page 17.



Remote Control Operation

Signal Transmitter

- To use the remote controller, aim the transmitter to the heater. A line of sight transmission is required for the unit to function.
- The controller does not have a protection rating. The controller must be kept away from wet applications.
- The remote will function at distances of over 8m when used in a straight line. This distance reduces when used at an angle.

Automated Countdown Timer

- Press 1H to begin 1 hour automatic shutdown.
- Press 2H to begin 2 hour automatic shutdown.
- Press 4H to begin 4 hour automatic shutdown.

Receiver

- Receiver is located on the heater.



Temperature Control Button

- Press ON-H temperature will be adjusted to HIGH.
- Press ON-L temperature will be adjusted to LOW.

OFF Button

- Press this button once to turn OFF operation.

Battery

- AAA Battery required for operation.



REMOTE FUNCTIONS

ON-H	Temperature High
ON-L	Temperature Low
OFF	Unit Off
1H	1H Automatic Timer
2H	2H Automatic Timer
4H	4H Automatic Timer

Infrared receiver

Low power indicator Light-Orange

High power indicator Light – Red

4h timer indicator light – Green

2h timer infrared light – Green

1h timer infrared light – Green





Safety

HEATSTRIP® Elegance with Remote and App Control has an IP rating of 55. This means it is safe for water ingress from all directions. The HEATSTRIP® can be safely hosed down.

HEATSTRIP® has undergone extensive testing both in laboratory conditions, in Thermofilm's manufacturing facility in Melbourne and field trials in Australia and overseas. It is this testing that gives the purchaser the confidence of a high quality product. Independent laboratory testing has confirmed Thermofilm's full compliance with Australian and other International Standards including CE, AS/ANZ, UL/CSA

HEATSTRIP® is Class 1 equipment and must be earthed.

In operation, this heater is VERY HOT— do not touch any part of the heater while it is turned on. Do not touch any part until 30 minutes after it is turned off.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or intellectual capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.

WARNING: This heater is not equipped with a device to control the room temperature. Do not use this heater in small rooms when they are occupied by persons not capable of leaving the room on their own, unless constant supervision is provided.

Do not allow any cables, furnishings, flammable materials or other items come in contact with any surface of the heater.

If installed in wet areas, the heater switches or controls must be located so that they cannot be touched by persons in the bath or shower.

The heater needs to be installed as per the installation instructions paying special attention to the minimum clearances. The heater needs to be mounted on a rigid bracket or fixing.

The heater must not be mounted immediately below or in front of a socket outlet.

The heater comes in plug (2400W) and hardwired (3200W) versions. In both cases the fixed wiring must be installed by a licensed electrician in accordance with the relevant wiring regulations. Provision for disconnection must be incorporated into any fixed wired heater installation.

The supply cord can not be replaced. If the supply cord is damaged the appliance shall be scrapped or returned to the point of purchase for return to Thermofilm.

Maintenance

The HEATSTRIP® Elegance with Remote and App Control is made from durable materials, however regular care and maintenance of your heater will help prolong the life of the heater.

It is recommended that you clean the heater with a soft cloth gently wipe the surfaces of the heater with a mild detergent to remove the built up contaminants from the environment. Then rinse all detergent off the heater. All chemicals in the atmosphere including cigarette smoke, pollution etc. will tarnish the surface of the heater. In this case, additional cleaning and maintenance may be required. Carrying out the cleaning process at least every three months will reduce the amount of build up and keep the HEATSTRIP® in good condition. If the heater is in a corrosive environment eg. salt spray, we recommend that you clean your heater with a light spray of fresh water every week. After cleaning, turn the heater on for 20 minutes to dry any water residue and prevent water staining. Before cleaning or inspection activity, the heater must be switched off and cooled down completely. Do not use any abrasive materials or products to clean the heater, this includes solvents, citrus based cleaners or other harsh cleaning products.

When handling the heater, ensure that your hands are clean or that you use clean gloves as grease or dirt can mark the surface of the heater.

Do not use high pressure water to clean heaters.



Warranty Terms & Conditions

The below Warranty Terms and Conditions apply for **New Zealand and Australia only**. For international warranty please refer to international warranty terms and conditions.

Thermofilm warrants to the original owner that HEATSTRIP Elegance products will be free from defects in materials and workmanship for a period of 24 months from the date of purchase for residential applications and 12 months for commercial applications in accordance with the following warranty terms and conditions.

Provision of this warranty is subject to:

- The HEATSTRIP® products must be installed in accordance with the Installation Instructions and relevant electrical standards and codes.
- The HEATSTRIP® products must be maintained and cleaned according to instructions detailed in the Installation Manual.
- There is no warranty expressed or implied with regard to capacity requirements. The selection of the unit or units depends entirely upon the system design and capacities as determined by the purchaser.
- The customer has not repaired, opened or altered the product in any unauthorised manner.
- This warranty excludes damage to the product or components arising from circumstances outside the control of Thermofilm, including, but not limited to, where the product is not used for intended purpose; where the product has been rectified in any way; incorrect installation; incorrect power supply; damaged caused during delivery; misapplication, misuse, abuse, vandalism, lack of maintenance or accident.
- Thermofilm's obligations under this warranty are limited to repair or replacement at Thermofilm's factory of any components of the product which Thermofilm identifies to its satisfaction to be defective.
- Transportation charges involved in return of the product to the Thermofilm factory (or any other location authorised in writing by Thermofilm) is the sole responsibility of the customer.
- All products are inspected and tested before despatch and are at the risk of the purchaser after the shipment from the Thermofilm factory, if not delivered by Thermofilm to destination.
- No products or components will be supplied in advance of an examination of the faulty product or components by Thermofilm or an authorized representative of Thermofilm.
- Thermofilm does not participate in any site related costs or labour expenses incidental to replacement of parts, repairing, removing, installing, servicing, transportation or handling of parts to complete products, and assumes no liability on parts repaired or replaced without written authorisation. Thermofilm shall not be liable for any default or delay in performance of its warranty obligations caused by any circumstances beyond its control, including, but not limited to, judicial or government restrictions, strikes, fires, floods, abnormal weather conditions, delayed supply of components.

Should products be determined as damaged on arrival, immediately notify the transport company of the condition and have them noted on the freight documents. If damage is discovered after unpacking, demand immediate inspection by the transportation company and insist that a record of the damage is made on the freight documentation.

The customer warrants using the product in accordance with:

- Any instructions provided to it by Thermofilm from time to time.
- All government and local regulations, including but not limited to all relevant electrical, environmental laws and regulations governing the installation, storage, use, handling and maintenance of the goods.
- All necessary and appropriate precautions and safety measures relating to the installation, storage, use, handling and maintenance of goods.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

All warranty requests for repairs or replacements must be accompanied by a complete "Warranty Claim Form" available from Thermofilm, together with proof of purchase (and where possible, photos of the installation) and the heater returned to the place of purchase.

In the event of a warranty claim, the goods need to be returned to the distributor/retailer for repair/replacement. Contact