

HEATSTRIP[®]

RADIANT OUTDOOR HEATERS



Product Manual



HEATSTRIP[®] *INTENSE* Electric Heaters





Innovative, High Performance Electric Heating Technology

Rev B Mar 21

Features & Benefits

High Output radiant heat

HEATSTRIP® *Intense* electric radiant heaters produce radiant heat that travels through the air directly to people and surfaces below – similar to the heat rays emitted by the Sun. Radiant heating is the only viable option for outdoor or tough indoor sites.

Maximum heat performance – multiple applications

The high temperature output of the HEATSTRIP® *Intense* is perfect for exposed outdoor sites, high ceilings and hard-to-heat indoor and outdoor applications.

Suitable for permanent outdoor mounting, no protection needed.

For outdoor applications, the HEATSTRIP® *Intense* is suitable for both permanently exposed (eg. courtyards and patios) and undercover installations - does not need to be fully protected from the elements.

Corrosion protection

Built from corrosion resistant alloy, it is suitable for use in most applications, including difficult corrosive environments such as coastal areas.

Multi-Purpose Mounting Options

The HEATSTRIP® *Intense* is supplied with flexible mounting options. The standard bracket will allow both ceiling and wall mounting, at various angles, as well as suspension by chains/wires and metal rods.

DIY

The THY2200 & THY2200W is supplied with a lead and plug, and is therefore ideal for DIY installations with brackets included.

Element

Carbon filament infra-red heating element provides high performance instant heat.

Warranty

2-year residential and 1-year commercial warranty.

Material & Design

Anodised alloy casing and end caps with a powder coat hexagon grille. Available in both a black and off-white colour.



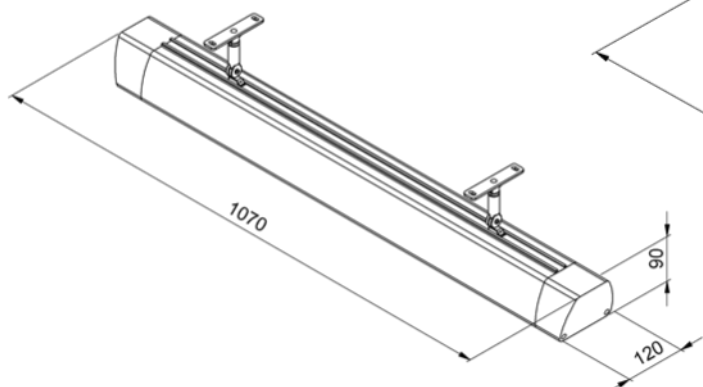


Specifications - Australia

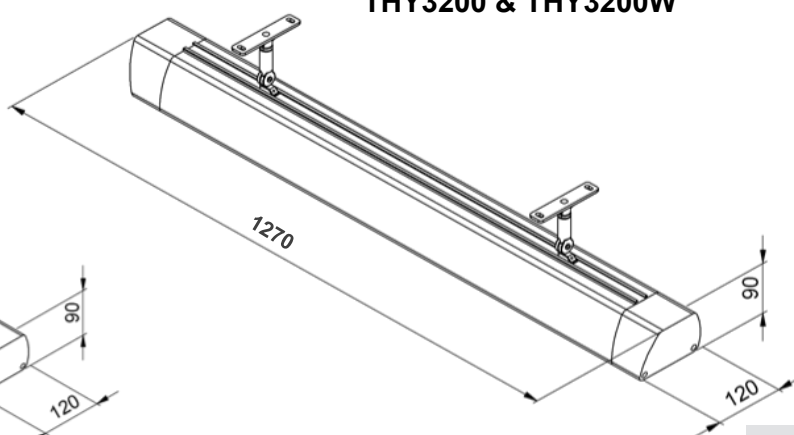
MODEL	POWER (WATTS)	CURRENT (AMPS)	DIMENSIONS (mm)	WEIGHT (Kg)	LEAD LENGTH (mm)	PLUG	COLOUR
THY2200	2200	9.2	1068 x 120 x 90	6	1000	YES	Black
THY3200	3200	13.3	1270 x 120 x 90	7	1000	NO	Black
THY2200W	2200	9.2	1068 x 120 x 90	6	1000	YES	Off-White
THY3200W	3200	13.3	1270 x 120 x 90	7	1000	NO	Off-White

MODEL	
HEATER TYPE	High intensity electric radiant, infra-red overheat heater with carbon filament element.
OUTPUT	2200 watts or 3200 watts
POWER	230-240 Volts Nominal at 50—60 Hertz, Single Phase
CONNECTION	3 Core Cable 2.5mm ²
APPROVALS	AUSTRALIA / NZ / EU
MOUNTING HEIGHT	MINIMUM 2.1 m RECOMMENDED 2.3 m - 2.5 m MAXIMUM 2.8m Outdoors and 3m Indoors (For higher ceiling heights, units can be lowered using optional brackets kits)
MOUNTING OPTIONS	Suitable for ceiling, wall, and beam mounting as well as suspension by chains & wires using standard brackets. Optional mounting accessories include extension mount poles and flush ceiling mount kit.
PROTECTION RATING	IPX5 Protection from water ingress from all directions
MATERIALS OF CONSTRUCTION	Anodised alloy casing and end caps with powder coat grille (THY2200 & THY3200) Anodised alloy with high temperature Off - White ceramic coating (THY2200W & THY3200W).

THY2200 & THY2200W



THY3200 & THY3200W





Spot heating principle

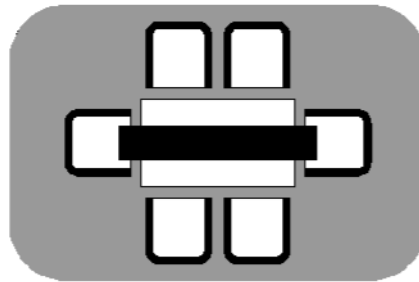
In most outdoor or difficult-to-heat indoor applications, there are 2 methods when looking at the size and quantity of heaters required.

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 or not.

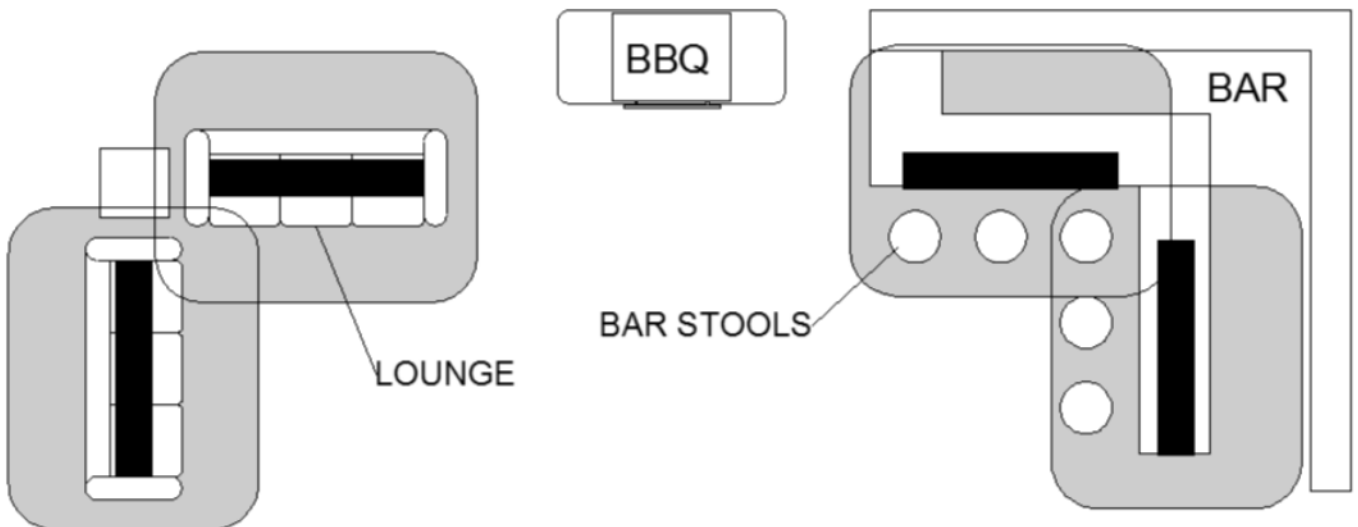
Option 2 is to spot heat the high use areas, such as over outdoor tables, BBQ's, lounges, assembly lines or indoor work-stations.

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

The top diagram shows how HEATSTRIP® *Intense* is recommended to be used directly over a table, while the bottom diagram indicates how to spot heat a large area.



THY2200 over table





Selection guide

General recommendations for **HEATSTRIP® Intense**:

- Ideal mounting height: 2.3m to 2.5m, and the maximum is 2.8m. Minimum is 2.1m.
- Ideal mounting location: ceiling mounted, directly above area to be heated (e.g. above a table)

The below table outlines the coverage HEATSTRIP® *Intense* model (in m²), based on 3 different scenarios. For example, in an outdoor area that is protected from prevailing winds by walls, café blinds etc, (e.g. outdoor enclosed)

This data is based on direct overhead ceiling mounting. If the heaters are wall mounted, the radiant footprint will be reduced.

MODEL	INDOOR PROTECTED (m ²)	OUTDOOR ENCLOSED (m ²)	OUTDOOR EXPOSED (m ²)
THY2200	14	9	5
THY3200	21	13	8
THY2200W	14	9	5
THY3200W	21	13	8

BLACK



OFF-WHITE





Table Layout

General recommendations for **HEATSTRIP® Intense**:

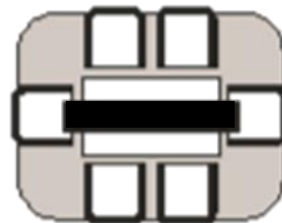
- Ideal mounting height: 2.3m to 2.5m, and the maximum is 2.8m. Minimum is 2.1m.
- Ideal mounting location: ceiling mounted, directly above area to be heated (e.g. above a table)

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

Selection are based on HEATSTRIP *Intense* being mounted at 2.4m from the floor in a fully enclosed undercover outdoor area.



THY2200



THY3200



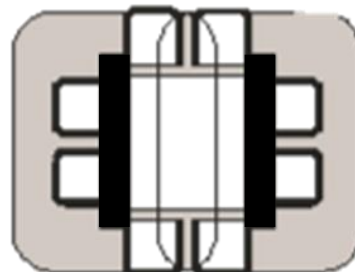
THY3200



2x THY2200



2x THY2200



2x THY3200



Installation Requirements

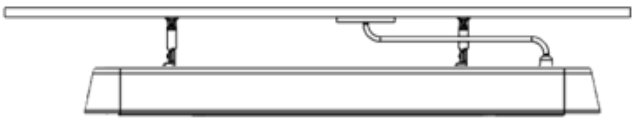
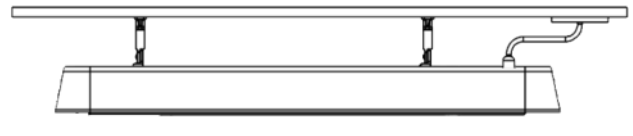
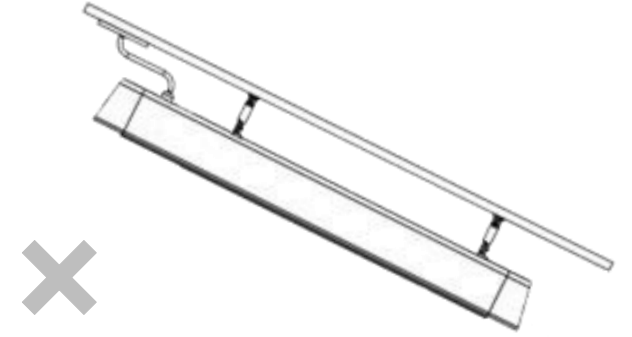
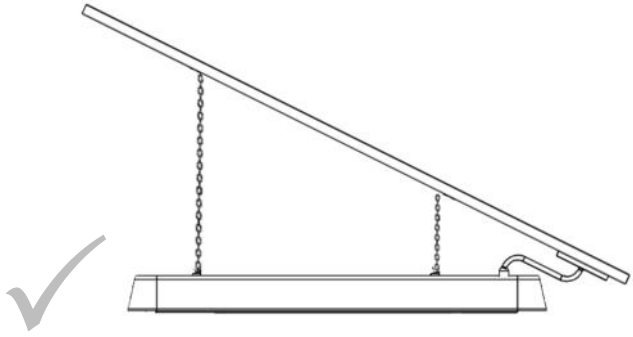
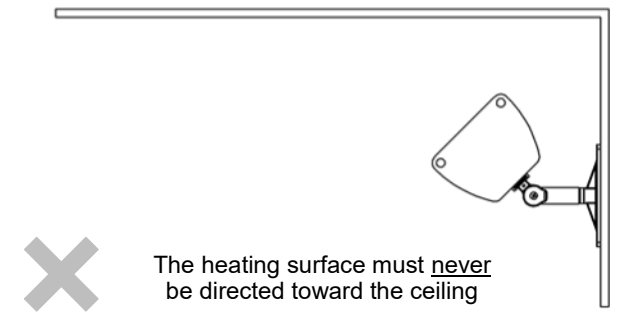
The ideal mounting position for the HEATSTRIP® *Intense* is on the ceiling, directly above the area to be heated. If this is not possible, HEATSTRIP® *Intense* can be mounted on a wall and angled downwards. In this situation, ensure the mounting height is in the range of 2.1m to 2.5m.

For mounting heights more than 2.8m outdoors, we recommend the use of the optional accessories to reduce the height of the heater to 2.3m—2.5m. 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.

The HEATSTRIP® *Intense* is not suitable for mounting on an incline, along the length.

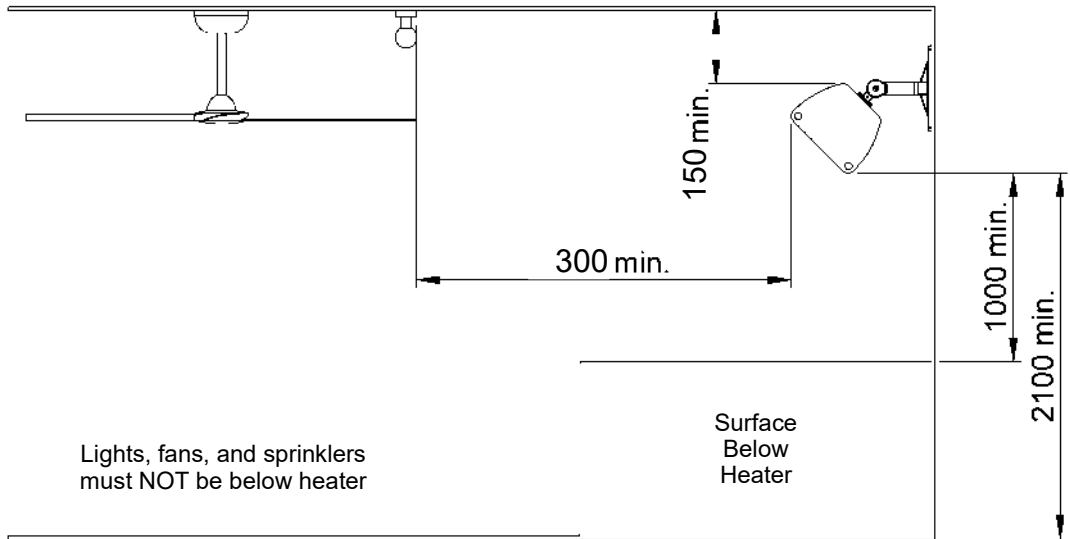
This Model may be hardwired and connected to an On/Off switch. In this situation, the heater must be installed by a licenced electrician.

Incorrect Installation	Correct Installation
 <p data-bbox="175 1164 255 1254">✘</p>	 <p data-bbox="821 1164 901 1254">✔</p>
 <p data-bbox="175 1556 255 1646">✘</p>	 <p data-bbox="821 1556 901 1646">✔</p>
 <p data-bbox="175 1948 255 2038">✘</p> <p data-bbox="303 1971 654 2027">The heating surface must <u>never</u> be directed toward the ceiling</p>	

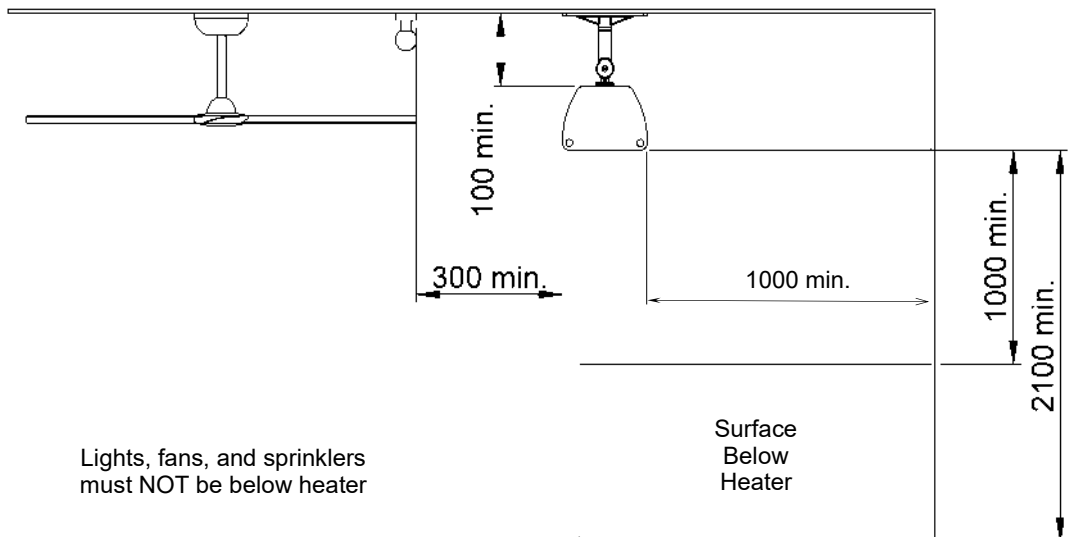


Installation location — the below diagrams confirm the minimum recommended clearances.

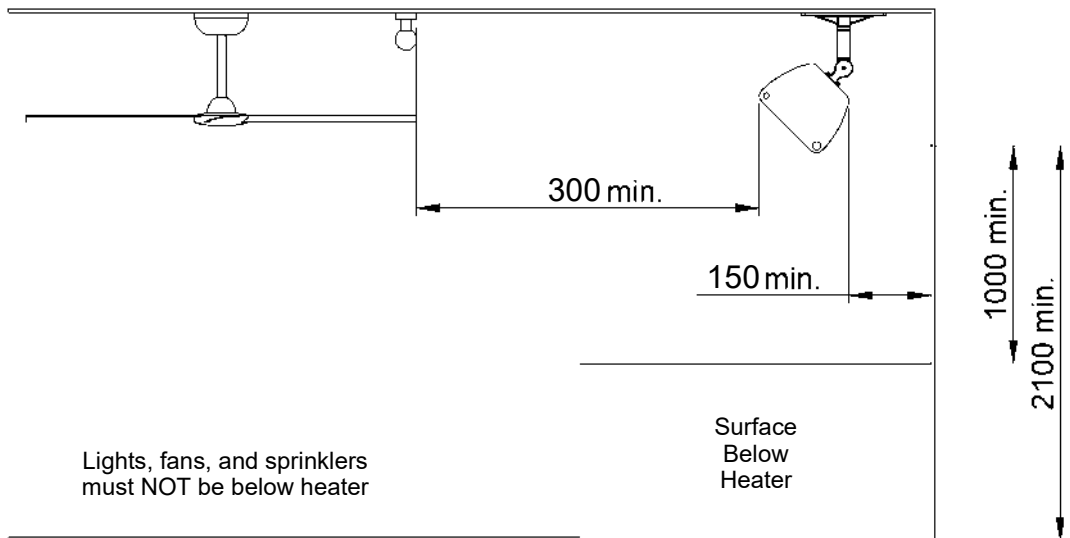
Angled Wall Installation



Ceiling Installation



Angled Ceiling Installation



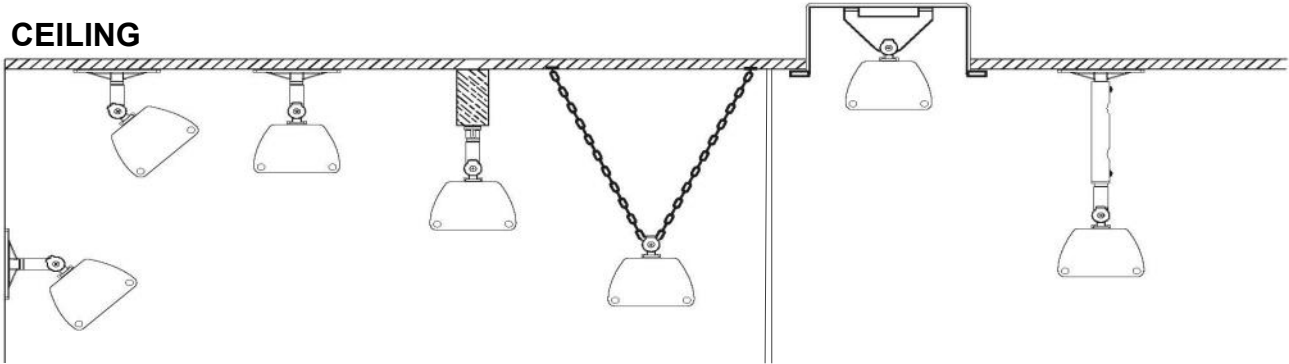


Mounting options

The installation of HEATSTRIP® *Intense* is simple and easy with the standard mounting brackets supplied. For other more challenging locations there are a range of mounting options available - refer to below diagrams.

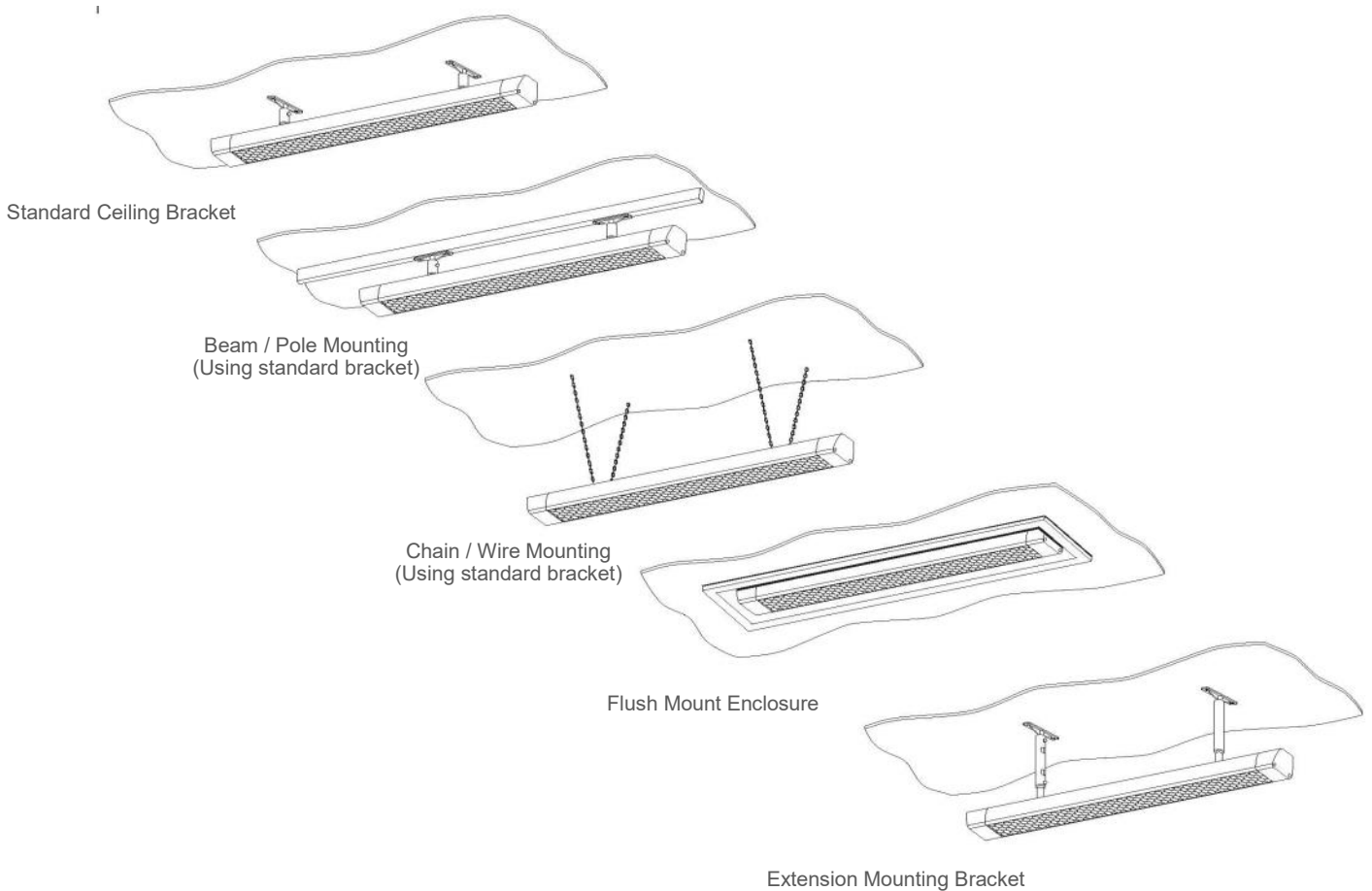
The HEATSTRIP® *Intense* can be mounted directly to the ceiling, flush mounted into the ceiling, angled downwards on a wall, suspended on chains, poles or attached to beams and rafters. Refer to the following pages for more detailed information on each mounting option.

CEILING



Installation options with standard bracket
(*Chain not included)

Optional Mounting Accessories





Standard mounting brackets

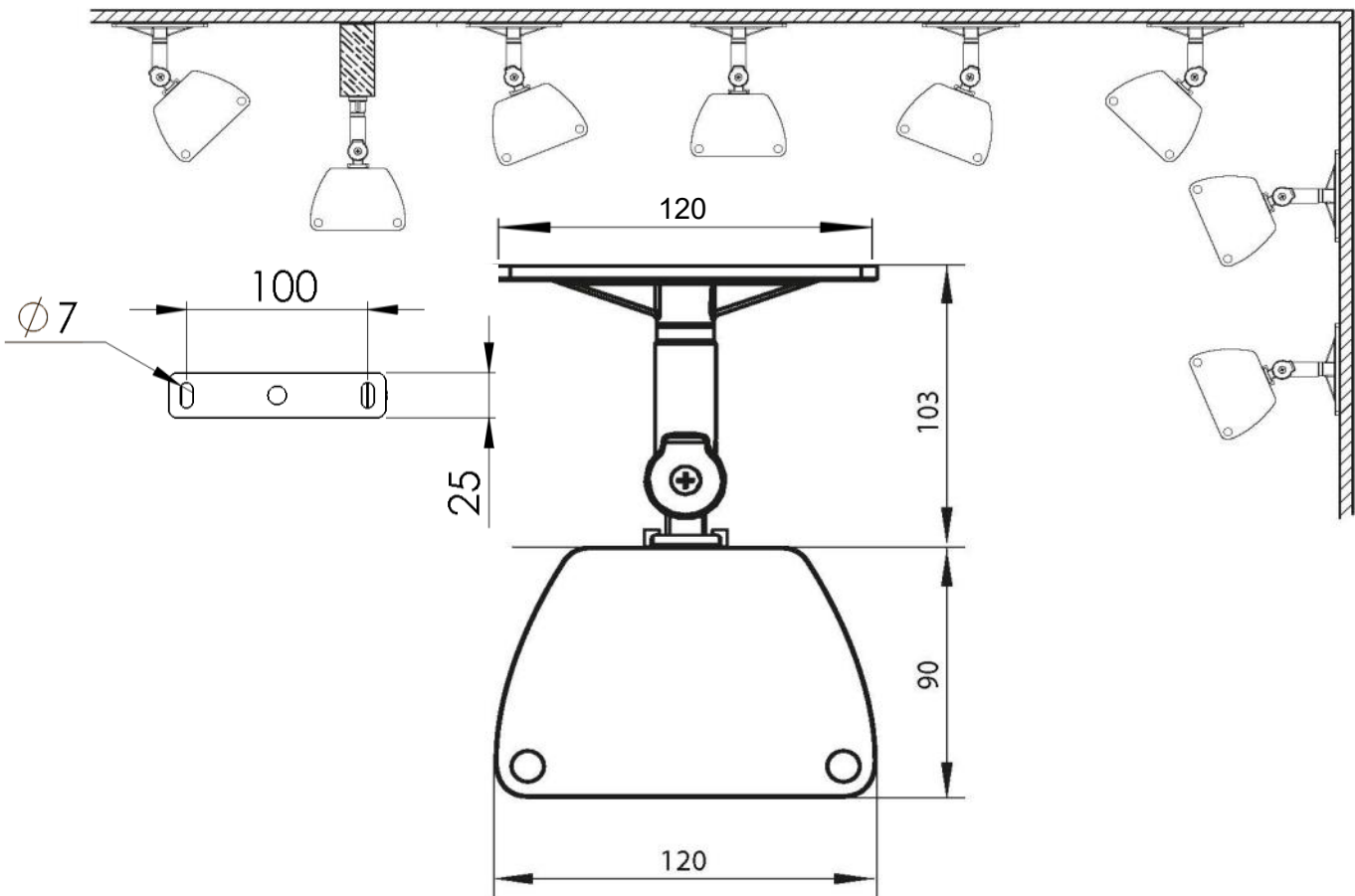
The HEATSTRIP® *Intense* comes with a pair of standard mounting brackets. These adjustable brackets allow direct ceiling or wall mount, and come with pre-set angle options of parallel, 22.5° and 45°.

The flexible standard mounting bracket can be turned 90 degrees to mount onto a beam, it can also be used to suspend with chains.

The brackets need to be mounted onto a secure frame or wall with a minimum distance between the two brackets. The minimum distance ("B") for each model is listed on the next page. All dimensions shown below are in (mm).

When completing the installation, ensure all screws are tight and unit is secure.

Note: When suspension mounting, chains are not included.



Standard Mounting Bracket

PART No	PACKAGED DIMENSIONS (mm)	WEIGHT (kg)	MATERIALS	COLOUR
ZBRAK-132B	125 x 100 x 40	0.2	ANODISED	BLACK
ZBRAK-132W	125 x 100 x 40	0.2	ANODISED	OFF-WHITE



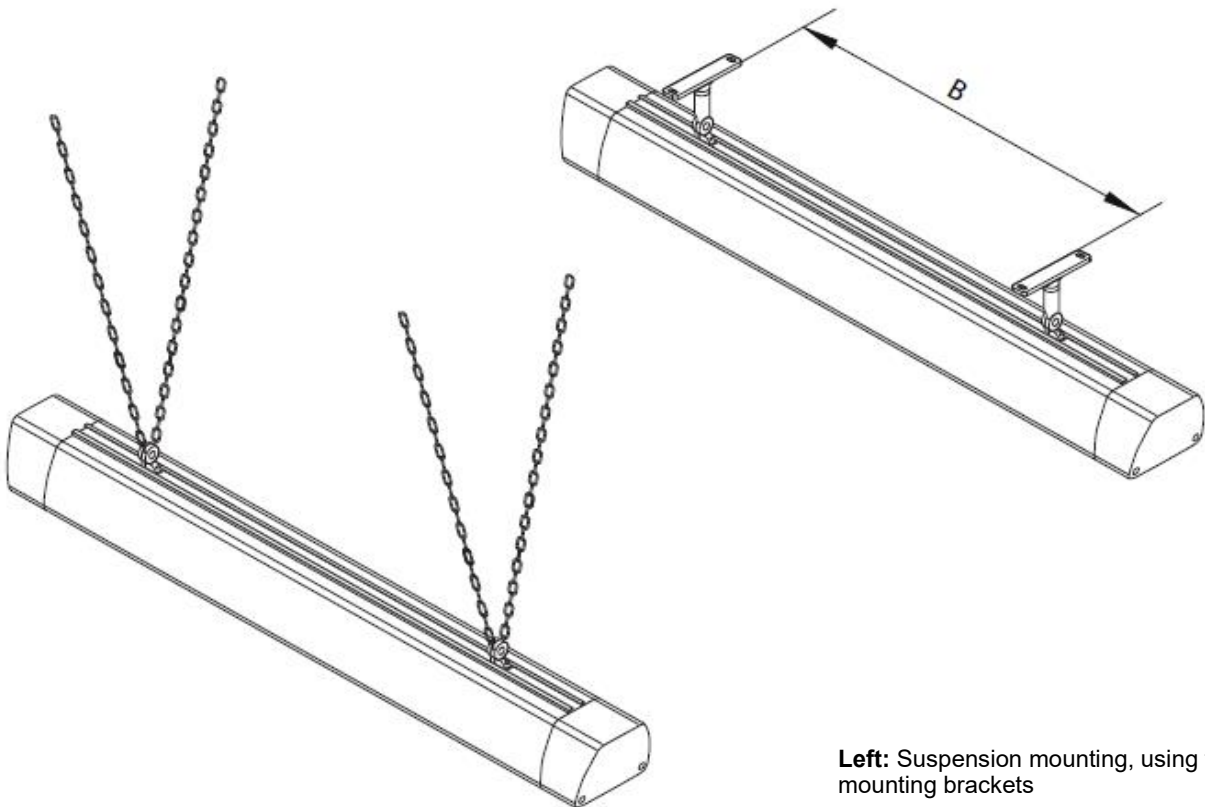
MOUNTING

Fix the two mounting brackets to the ceiling or wall in the desired location (refer minimum bracket centre chart). Make sure the method of fixing (bolts or screws) will be more than strong enough to support the weight of the heater, allowing for strong winds and other conditions.

- Slide the 2 locking brackets into the groove on the back of the heater. Make sure the pins on the locking bracket are facing the matching holes in the top mounting bracket.
- Lift heater into position and secure the 2 locking brackets to the mounting brackets using the screws provided. Make sure the 2 pins on the locking bracket engage with the matching holes in the mounting bracket. The pins will allow for both horizontal or angle mounting as required
- Tighten all screws and tighten the round nut at the top of the bracket, so it locks onto the top part of the mounting bracket.

NOTE: The standard bracket allows for normal or angle mounting of the heater and is suitable for ceiling or wall mounting.

MODEL	"B" MINIMUM DISTANCE (mm)
THY2200	350
THY3200	700
THY2200W	350
THY3200W	700



Left: Suspension mounting, using the standard mounting brackets

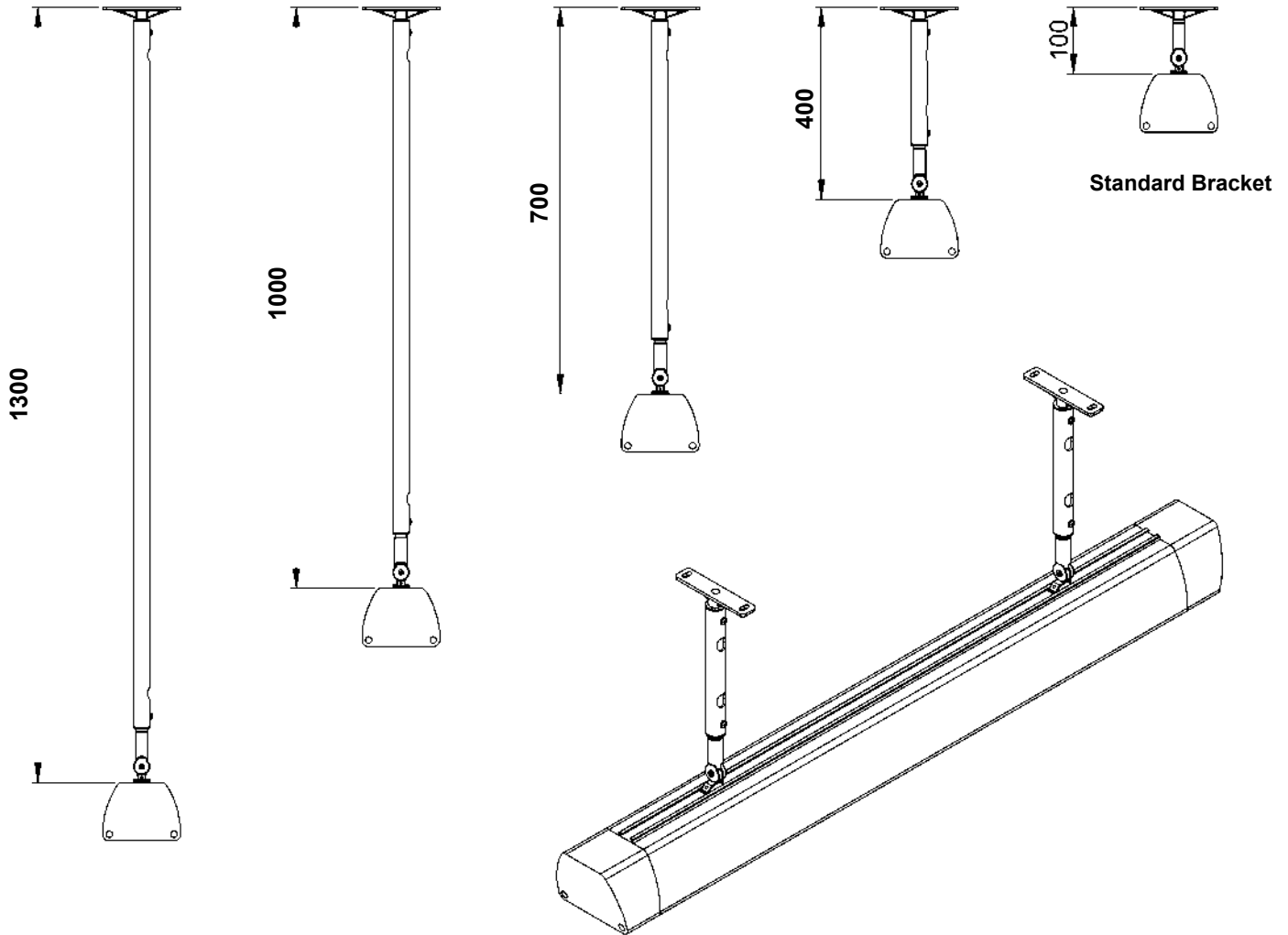
NOTE: Chains or wire not included



Extension Mount Bracket

The Extension Mount bracket allows HEATSTRIP® *Intense* 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 extension mount bracket utilises components from the standard bracket kit which is supplied with each heater.



PART No. (OFF-WHITE) Suitable for THY2200W / THY3200W	PART No. (BLACK) Suitable for THY2200 / THY3200	PACKAGED DIMENSIONS (mm)	WEIGHT (kg)	MATERIALS	NOTES
THEAC-043	THYAC - 047	300 x 150 x 50	0.21	Aluminium	Kit includes 2x300mm extension pole
THEAC-044	THYAC - 048	600 x 150 x 50	0.38	Aluminium	Kit includes 2x600mm extension pole
THEAC-045	THYAC - 049	900 x 150 x 50	0.55	Aluminium	Kit includes 2x900mm extension pole
THEAC-046	THYAC - 050	1200 x 150 x 50	0.71	Aluminium	Kit includes 2x1200mm extension pole



Flush mount enclosure

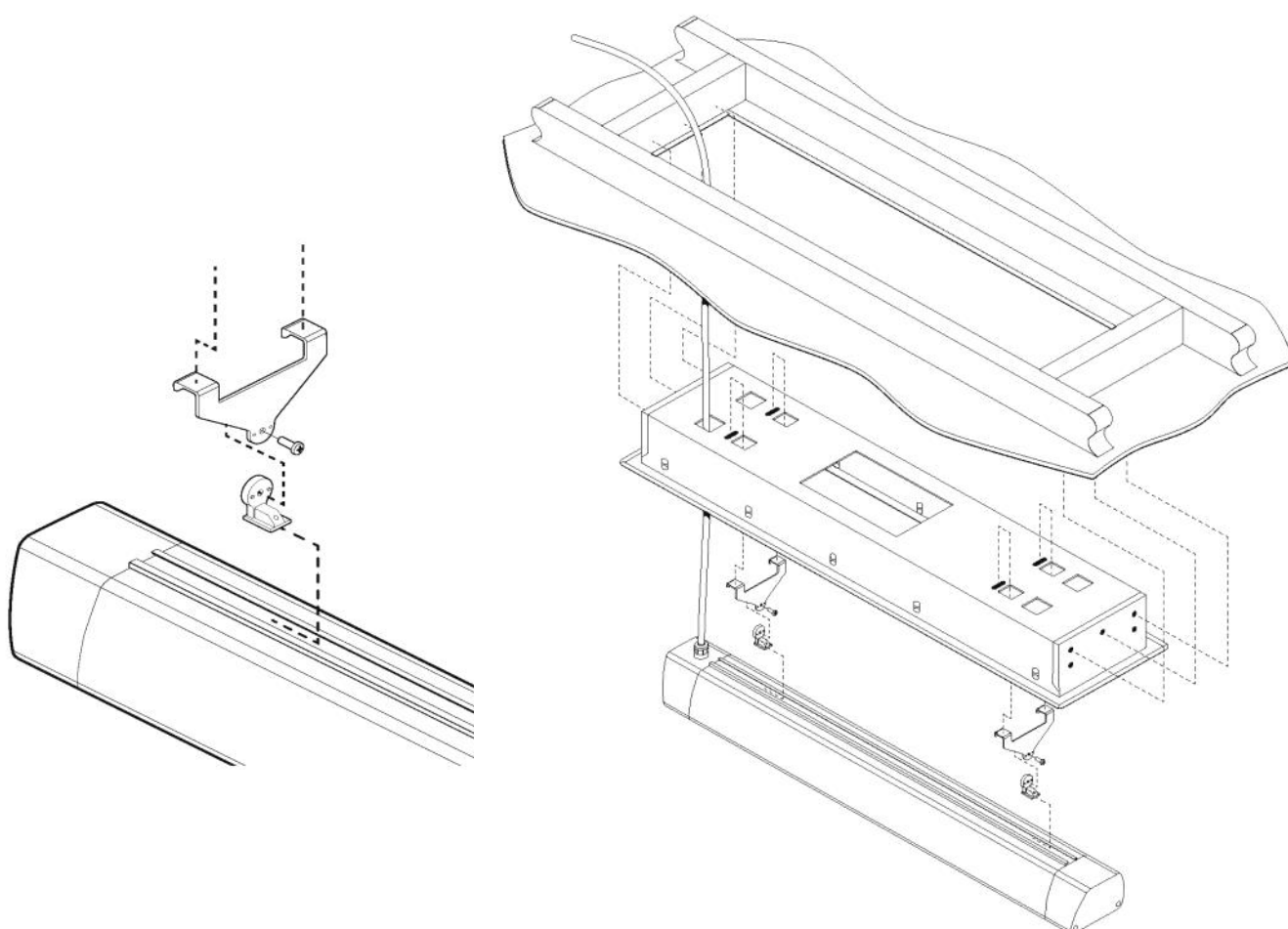
The Flush Mount Enclosure is an ideal way to neatly install the HEATSTRIP® into a ceiling. They are available for the HEATSTRIP® *Intense* model, and are supplied as a one-piece unit suitable for mounting individual heaters. Flush mounting can be used with plaster or timber lined ceiling materials.

An ideal mounting height is 2.3m - 2.5m, with a maximum ceiling height of 2.8m 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 200mm behind the enclosure must be provided.

The enclosure for the THY2200 & THY3200 is manufactured from black powder coated steel, with a black fascia.

The enclosure for the THY2200W & THY3200W is manufactured from black powder coated steel, with an off-white fascia.



SUITABLE FOR MODEL	PART No	HOLE CUTOUT DIMENSIONS (mm)	OVERALL DIMENSIONS (mm)	WEIGHT (kg)
THY2200	THYAC - 051	1152(L) x 205(W)	1208(L) x 258(W) x 201(D)	5
THY3200	THYAC-052	1302(L) x 205(W)	1358(L) x 258(W) x 201(D)	7
THY2200W	THYAC-053	1152(L) x 205(W)	1208(L) x 258(W) x 201(D)	5
THY3200W	THYAC-054	1302(L) x 205(W)	1358(L) x 258(W) x 201(D)	7



HEATSTRIP® TT-MTR-PLUG Controller

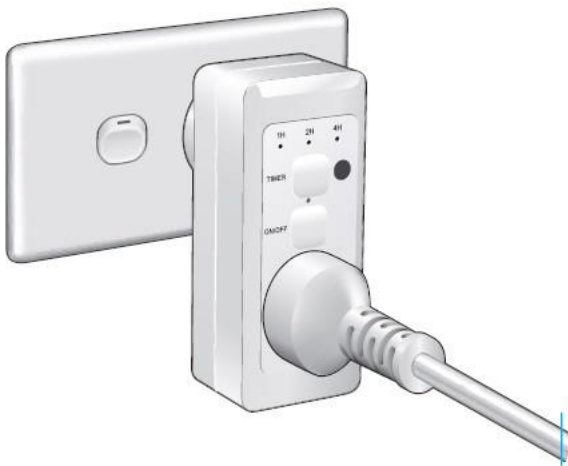
TT-MTR-PLUG Controller

The TT-MTR-PLUG controller consists of a remote control and a plug-in wall socket timer unit to provide easy wireless timer operation of wall plug connected appliances.

The TT-MTR-PLUG has been designed to provide easy remote control timer functionality to wall socket powered HEATSTRIP heaters. The unit can however be used to remotely operate with timer functionality any device powered by a standard 10A Australian wall socket outlet.

Design Features

- The TT-MTR-PLUG provides an easy means of remotely turning on appliances that are normally permanently connected to a standard wall socket.
- An easily selected 1 hour, 2 hour and 4 hour timer function accessible on both the wall unit and re-mote
- Programmable remote control unit capable of controlling multiple units.



Specification

Remote battery	CR2025, 3V, Lithium
Remote range	10m+
Wall socket supply	220V - 240V, 50Hz
Max Load	10A (2400W)
Standby consumption	<1W
Remote Frequency	38KHz IR
Dimensions (mm)	105 (H) x 55 (W) x 60 (D)
Approvals	Australian Standards AS/NZ 3105, 3112, 3100

NOTE: Optional Controller (Not Included with heater)

Only Suitable for THY2200 & THY2200W.

HEATSTRIP® Wall Controller with Remote

TT-MTM2 Wall Controller

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

The timer function has 4 settings: 1 hour, 2 hours, 4 hours or constantly on. This feature is ideal for applications such as BBQ areas, 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 control the heat output of the heater. The controller has 3 settings, they are High, Medium and Low.

The controller allows a combination of the multiple timer (1/2/4 hour) and heat outputs (High/Medium/Low)

Controlling multiple heaters

It is possible to use one wall controller to control multiple heaters. The wall controller is rated at 16 Amps and 240 volts.

Remote Pairing

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

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



MODEL	MAXIMUM VOLTAGE (Volts)	MAXIMUM CURRENT (Amps)	PACKAGED DIMENSIONS (mm)	UNIT WEIGHT (kg)
TT-MTM	240	16	150 x 95 x 55	0.3

HEATSTRIP[®]



Operation

Press “On/Off” button to turn power on and off.

Once turned on, the controller will default to High power setting and will be permanently on (no timer function). Press “POWER” button to select the desired power setting by cycling through HIGH—MEDIUM-LOW. When power setting is at high the controller will provide continuous power. When power setting is at “MEDIUM” or “LOW” the output alternates between being on and off so that it delivers a lower output to the heater. Press “TIMER” button to set the timer to 1,2,4 hours or permanently on. When permanently on, one of the TIMER LED’s will be illuminated. Once the timer is selected, the timer will be started immediately. When the timer has ended, power will turn off and all LED’s will also turn off.

Thermal Cut-Out Protection

This controller is protected by a thermal cut-out switch. This switch is activated when the temperature of the controller is too high. The controller will cut all power until it has sufficiently cooled. Once it cools the unit will continue working as usual.

Warm Up Mode

The controller is programmed to operate continuously (High setting) for the first 15 minutes of operation regarding less of the selected power setting, this is to allow time for the heater to warm up. After this time it will operate as selected.

Safety

The TT-MTM controller is to be mounted indoors it needs to be away from wet conditions. Ensure the connections are properly connected. The controller needs to be installed according to your local wiring guidelines and regulations . Do not allow any cables, furnishings, flammable materials or other items to obstruct the vents of the controller. Never block the air vents of the controller.

Never block the air vents of the controller. Do not put anything in the vents of the controller. The 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 person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.

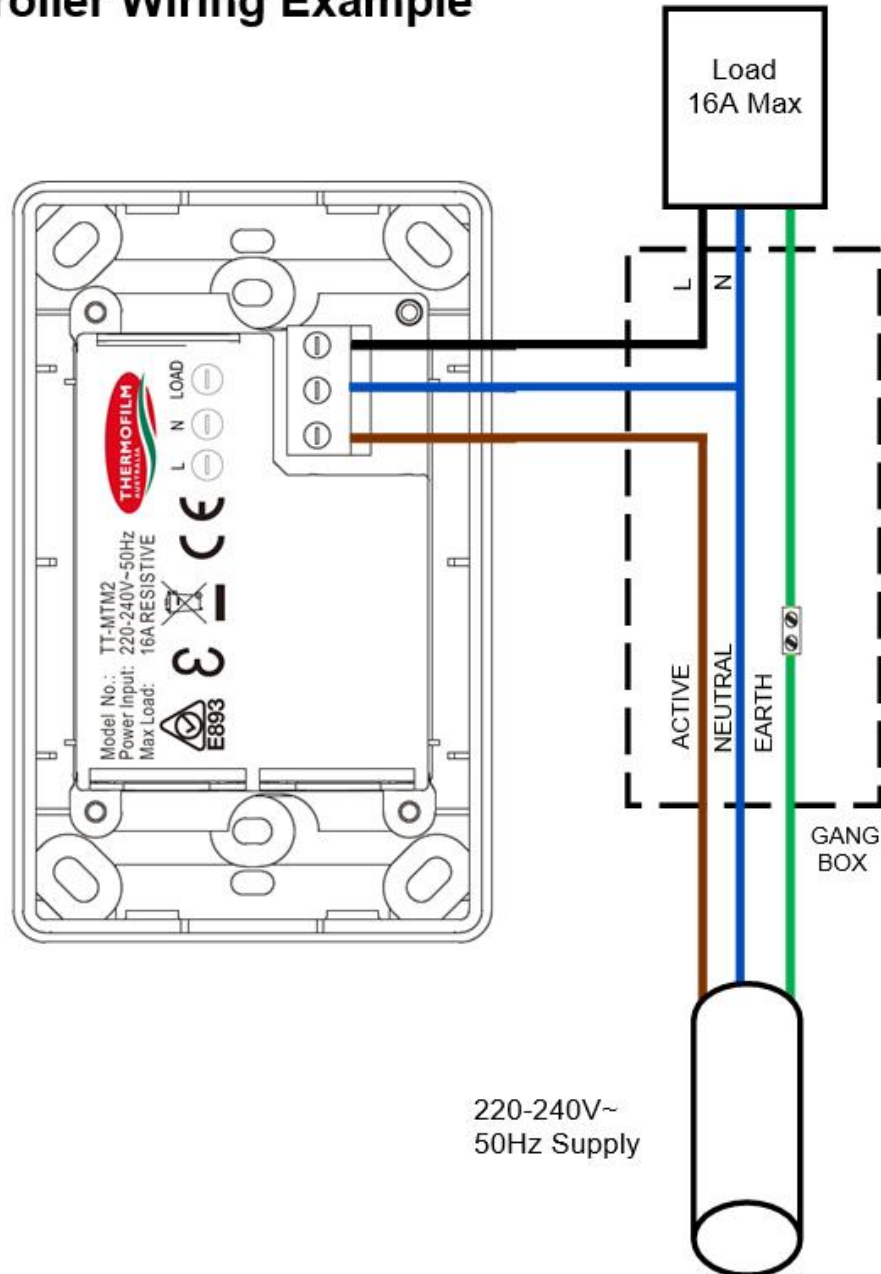
Maintenance

The TT-MTM Controller is made from durable materials, however regular care and maintenance of your controller will help prolong the life of the product. It is recommended that you dust the controller to keep the surface clean. Cleaning at least every three months will reduce the amount of dust build up and keep it looking at its best. Do not use any abrasive materials or products to clean the controller, this includes solvents, citrus based cleaners or other harsh cleaning products. Do not use water or a damp cloth to clean the controller. The remote uses a CR2025 3V lithium battery. If the red light on the remote stops working then change the battery.



TT-MTM2 Controller Installation Guide

Controller Wiring Example



The TT-MTM2 Controller required sufficient air circulation in order to provide continuous operation on the high power load setting. The vents must always remain clear; never block or cover the vents. An ideal controller installation will provide significant space around the back of the controller. Installing into restricted spaces, such as brick walls, may result in overheating if adequate ventilation is not provided.



Heater wiring schematic diagrams

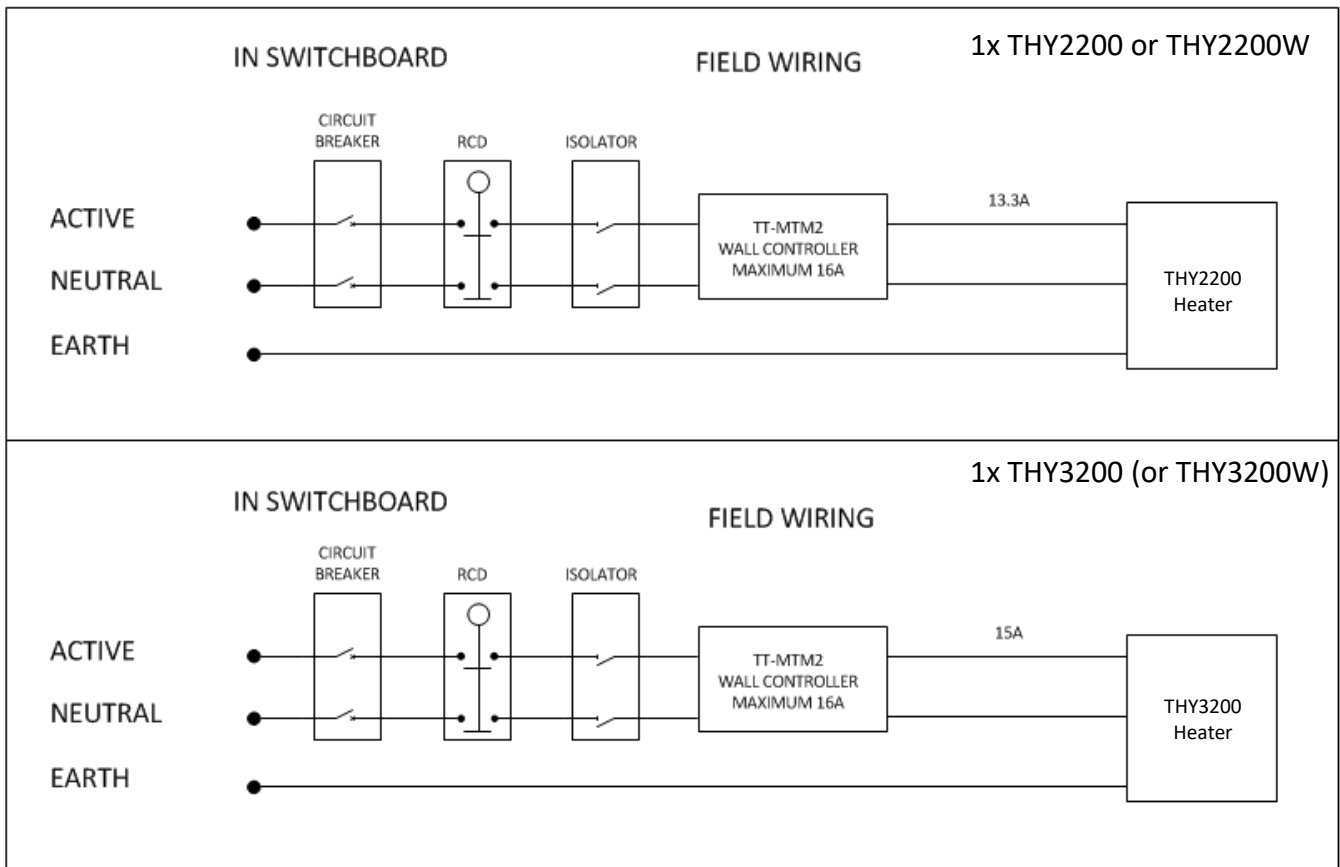
It is recommended to install an ON/OFF isolation switch before the controller and ensure the unit is turned OFF after use.

Multiple heaters can be operated using a single controller, however the maximum current rating of 16A must not be exceeded.

For direct wiring to the controller, the maximum is generally on heater unit unless the combined maximum current is less than 16A. For example, 2x THH1800A can be connected directly to the controller.

Below are example circuits indicating potential installation configurations.

Always check with your electrician and ensure all wiring is in accordance with local regulations.





Safety

HEATSTRIP[®] *Intense* has an IP rating of X5. 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 assembly facility in Melbourne and field trials in Australia and overseas. It has been 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. This includes CE, AS/ANZ, UL/CSE

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.

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.

In case of a heater fault or damaged supply lead, the appliance should be returned to the point of purchase for return to Thermofilm for repair.

Maintenance

The HEATSTRIP[®] 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. The cleaning process at least every three months will reduce the amount of build up and keep it looking as best it can. 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, light water spray only.



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® *Intense* products will be free from defects in materials and workmanship for a period of 24 months for residential applications (and 12 months for commercial applications) from the date of purchase in accordance with the following warranty terms and conditions.

Provision of this warranty is subject to:

- The HEATSTRIP® product must be installed in accordance with the Installation Instructions and relevant electrical standards and codes.
- The HEATSTRIP® product 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.
- Discolouration of the surface may occur after a period of time, this does not constitute a warrantable event.
- Twisting and bending of the heaters may occur, this does not constitute a warrantable event.
- 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

Thermofilm Australia Pty Ltd
 17 Johnston Court, Dandenong South, Victoria 3175, Australia
 Telephone: (03) 9562 3455,
 Email: info@thermofilm.com.au