HEATSTRIP™

OUTDOOR ELECTRIC RADIANT HEATERS

PRODUCT OVERVIEW

The HEATSTRIP is a high intensity, over head mounted, electric radiant heater which provides an effective and efficient solution for outdoor and indoor heating applications.

The HEATSTRIP design incorporates an exclusive, extruded black anodised aluminium profile with a high surface area to radiate heat efficiently and effectively at minimal operating costs.

The special design of this radiation surface ensures rapid, even heat dispersion to provide an ideal comfort heat environment.

In fact, the high performance of the HEATSTRIP means that they can be mounted from 2.1m to over 6m from the floor.

Also incorporating a water protection rating of IPX-5, the HEATSTRIP has been specifically engineered for use within undercover outdoor and indoor open areas.

Ideal outdoor undercover applications for the HEATSTRIP would include outdoor smoking or alfresco dining areas, outdoor patios and balconies, or sidewalk cafes.

Ideal indoor applications for the HEATSTRIP would include spot heating in factories, showrooms, animal enclosures and other indoor open areas.

How does the HEATSTRIP work?

Similar to the radiant heat rays emitted by the Sun, a unique electric heating element emits rapid, even radiant warmth from above.

Unlike traditional outdoor gas heaters, which heat the surrounding air and can result in high temperatures close to the heat source and lower temperatures further away, the radiant heat emitted by the HEATSTRIP penetrates through the air to provide a comfortable, even temperature directly to people and surfaces.

HEATSTRIP

OUTDOOR RADIANT HEATERS - THH SERIES

THH HEATSTRIP SPECIFICATION DATA SHEET

Type: High Intensity, Ceiling Mounted, Radiant Outdoor Heaters

Approvals: Australian Standards 2250-2-30 (full test)
RoHS Compliant, CE Approved

Electrical Approval No: Q97268 (Australia)

Manufacture Location: Melbourne Australia

Element Type: Stainless Steel with high efficiency, extended surface area, extruded aluminium heat exchange system.

Design Voltage: 240V 50Hz a.c. Australia
230V 50Hz a.c. Europe / NZ
120V 60Hz a.c. USA / Canada (THH 1500SS)
240V 60Hz a.c. USA / Canada (THH 3200SS)

Electrical Circuit: Refer to Electrical Wattage.

Casing Finish:
1. High temperature baked enamel paint.
2. Stainless Steel

Connection Cord: 3-coreflex – 1200mm long

Mounting System: Stainless Steel ceiling / angle mounting brackets are supplied as standard. Note: Screws fixing bracket to ceiling / wall structure are not included. Umbrella mounting brackets are also available.

Minimum Mounting Height: 2.1 metres above floor level
(Refer installation instructions for recommended mounting height)

MODEL	WATTS	DIMENSIONS (mm)	IPX RATING	WEIGHT	COUNTRY
Standard Models – Silver powder coated casing					
THH 1200(EU)	1200	750 x 165 x 45	IPX-5	4.5kg	Australia / (Europe)
THH 1800(EU)	1800	1120 x 165 x 45	IPX-5	7.0kg	Australia / (Europe)
THH 2400(EU)	2400	1475 x 165 x 45	IPX-5	9.0kg	Australia / (Europe)
THH 3200(EU)	3200	1950 x 165 x 45	1PX-5	12.2kg	Australia / (Europe)
SS Models – Stainless Steel casing					
THH 1200SS(EU)	1200	750 x 165 x 45	IPX-5	5.0kg	Australia / (Europe)
THH 1800SS(EU)	1800	1120 x 165 x 45	IPX-5	7.5kg	Australia / (Europe)
THH 2400SS(EU)	2400	1475 x 165 x 45	IPX-5	9.0kg	Australia / (Europe)
THH 3200SS(EU)	3200	1950 x 165 x 45	1PX-5	12.5kg	Australia / (Europe)
SS Models – Stainless Steel casing					
THH 1500SS	1400	850 x 170 x 40	IPX-5	5.0kg	USA / Canada
THH 3200SS	3200	1950 x 170 x 40	IPX-5	12.5kg	USA / Canada

Notes:
- These models have been given an International Protection (IPX) Ratings as defined by Australian Standards AS 1939-1991 'Classification of degrees of Protection against Liquids' provided by enclosures for electrical equipment.
- IPX-5 rating states these models are protected against jets of water from all directions.

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FEATURES AND BENEFITS

Radiant Heat = Gentle, Comfortable Heat
Gentle, comfortable and even radiant warmth is felt from a HEATSTRIP mounted up to 6m above, creating the ideal comfort heat environment for outdoor undercover or open indoor applications.

IPX-5 Water Protection Rating = Outdoor Heating
Specifically engineered for undercover, outdoor applications, the HEATSTRIP is waterproof to the point where you could actually use a hose on them.

Efficient, Cost Effective Electric Heating
The unique design of the elements' extruded aluminium profile has a high surface area ensuring the HEATSTRIP provides rapid, even heat dispersion at minimal operating costs.

Subtle, Unobtrusive Design = No Distractions or Wasted Space
The slim line, black anodised aluminium radiation panels of the HEATSTRIP do not emit light or glow when in use.

Ceiling, wall or umbrella mounting options for the HEATSTRIP ensure that your valuable floor and table space is not wasted.

No Internal Moving Parts = Silent Operation
Avoid the distracting background noises that accompany alternative outdoor heating solutions. The HEATSTRIP operates in complete silence.

Assured Reliability and Safety
The outer casing of the HEATSTRIP is made from tough, durable, silver powder-coated Steel.

The ceiling / wall mounting brackets that accompany the HEATSTRIP are made from tough, durable Stainless Steel.

Maintenance free operation is assured from the HEATSTRIP, which incorporates no internal moving parts.

The HEATSTRIP currently complies with Australian and New Zealand Electrical Standards, and has European CE Approval.

UL approval for the HEATSTRIP is currently in progress and will be completed in the very near future.

Australian Quality Product
The HEATSTRIP has proved to be a big success for many Australian sidewalk cafes and restaurants, allowing these venues to utilise their outdoor dining areas day and night, through all seasons.

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OUTDOOR ELECTRIC RADIANT HEATERS

FREQUENTLY ASKED QUESTIONS

Is the HEATSTRIP easy to install and operate?
The HEATSTRIP can be installed at a minimum height of 2.1m up to 6m of more.

Each HEATSTRIP is supplied with Stainless Steel ceiling / wall mounting brackets, a 1.2m power cord fitted with plug, and user friendly installation and operation instructions.

Does the HEATSTRIP have options for control and operation?
Like many standard electrical devices, the HEATSTRIP may be controlled with timers, or electronic regulators.

Are there additional mounting options for the HEATSTRIP?
Each HEATSTRIP is supplied with Stainless Steel ceiling / wall mounting brackets as standard.

Umbrella mounting brackets should be custom made to suit your individual requirements

Does the HEATSTRIP come in different colours or styles?
Form following function has been the basis for the subtle, slim line design of the HEATSTRIP, which features black anodised aluminium radiation panels and stainless steel casing.

Although there are no additional style or colour options for the HEATSTRIP heater, the various mounting options offered provide the flexibility to create a stylish heating solution for just about any situation.

Does the HEATSTRIP come in different sizes?
A choice of four HEATSTRIP models is available, the 1200W, 1800W, 2400W and 3200W model, ensuring the heating requirements of any undercover outdoor or open indoor area is covered.

Please refer to the HEATSTRIP Selection Calculation Guidelines for more details.

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OUTDOOR ELECTRIC RADIANT HEATERS

TARGET MARKETS

Residential (Outdoor Comfort Heating Applications)

- Patios
- Verandas
- Balconies
- Courtyards
- Outdoor Gazebos / Rotundas
- Pool House
- Outdoor BBQ areas
- Alfresco Dining areas

Commercial (Outdoor Comfort Heating Applications)

- Sidewalk Cafes
- Pubs, Clubs & Bars
- Beer Gardens
- Wineries
- Restaurants
- Hotels
- Schools
- Fun Parks
- Offices / Corporations / Business Parks
- Bus / Train Stations
- Designated outdoor smoking areas
- Animal Enclosures

Commercial (Indoor Spot / Comfort Heating Applications)

- Factories
- Workstation Spot Heating in Factories
- Warehouses
- Showrooms
- Conference Centres / Auditoriums / Lecture Halls
- Large Function Rooms / Halls (any room with high ceiling)
- Churches
- Cafeterias
- Indoor Pools / Gymnasiums
- Stadiums

Possible Resellers

- Landscape Gardeners / Architects
- Architects / Specifiers / Builders
- Party Hire / Marquee Hire outlets
- Outdoor Blind / Outdoor Furniture Specialists
- Home Hardware Retailers
- Electrical Product Wholesalers
- Electrical Product Retailers
- Electrical Trade Outlets
- Heating Trade Outlets

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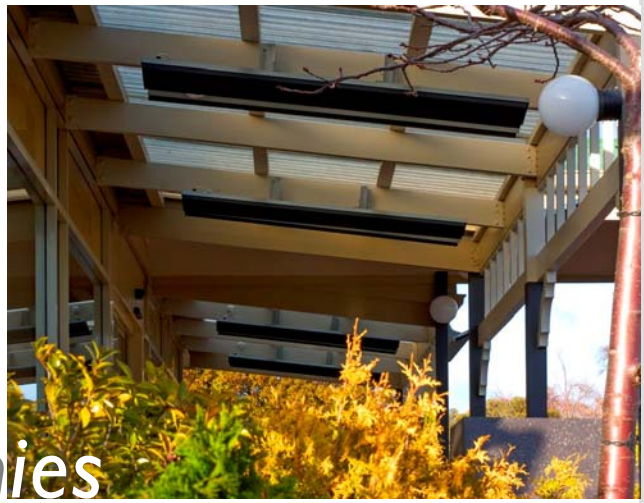
OUTDOOR ELECTRIC RADIANT HEATERS

RESIDENTIAL INSTALLATION EXAMPLES

deal heating solution for

Patios and Balconies



standard ceiling mount example under pergola

umbrella mounting brackets used with shade sail

Alfresco Dining

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OUTDOOR ELECTRIC RADIANT HEATERS

COMMERCIAL INSTALLATION EXAMPLES

Designated Outdoor Smoking Areas

example in waterfront café

example in pier resturant

Restaurants

Sidewalk Cafés

ceiling mount example in sidewalk cafe

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OUTDOOR ELECTRIC RADIANT HEATERS

INDOOR INSTALLATION EXAMPLES

Cafés and Restaurants

standard ceiling mount example in café

Factories and Warehouses

Individual workstation spot heating example in factory

THH HEATSTRIP: ELECTRIC RADIANT OUTDOOR HEATER

INSTALLATION, OPERATION & MAINTENANCE MANUAL

(EUROPE / UNITED KINGDOM)

THH HEATSTRIP MODEL CODES

MODELS	WATTS	DIMENSIONS	RATING
THH 1200, THH 1200SS	1200	750 x 170 x 40mm	230V 50Hz a.c
THH 1800, THH 1800SS	1800	1120 x 170 x 40mm	230V 50Hz a.c
THH 2400, THH 2400SS	2400	1475 x 170 x 40mm	230V 50Hz a.c
THH 3200, THH 3200SS	3200	1950 x 170 x 40mm	230V 50Hz a.c

Note: THH series HEATSTRIPS have an IPX5 rating for protection against water ingress.
Prior to installing and operating the heater, read these instructions carefully and retain for future reference.

PREPARATION

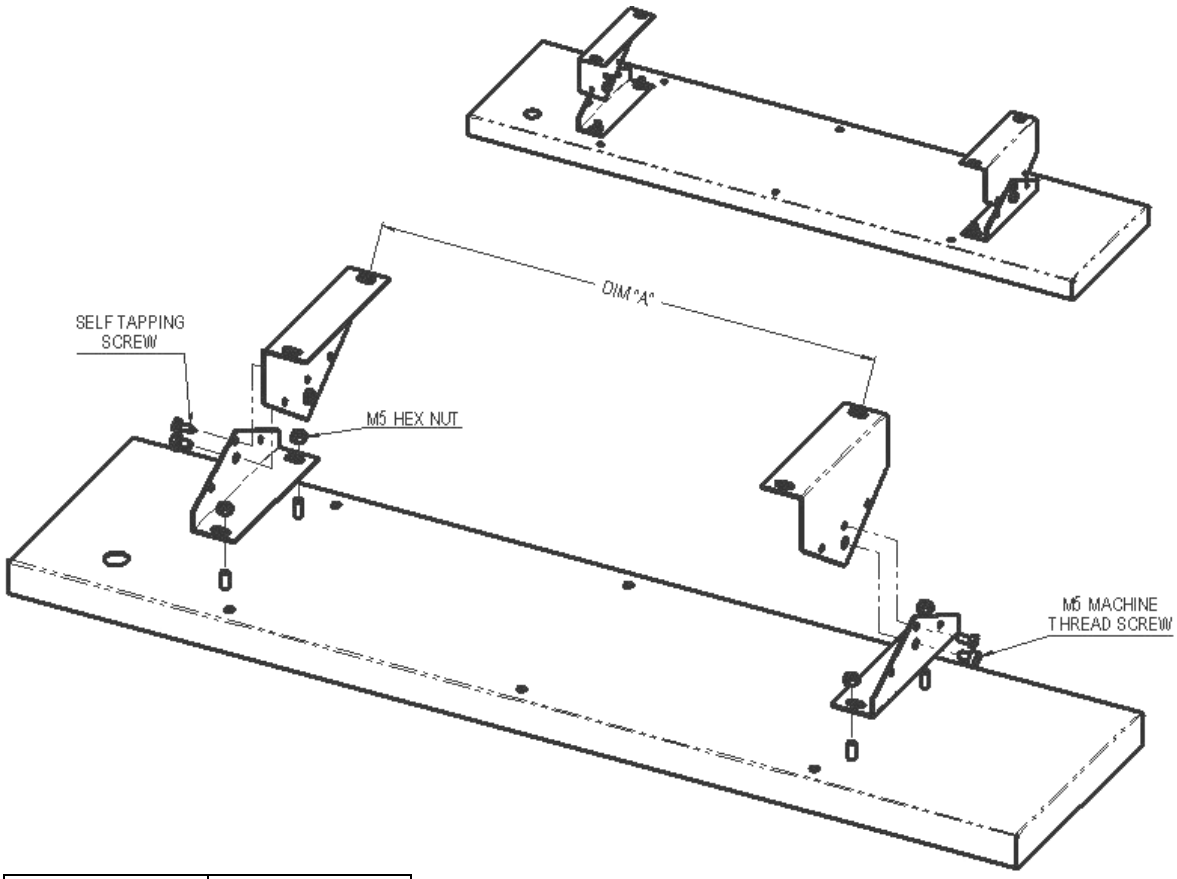
1. The THH Series HEATSTRIPS are high intensity Radiant Strip Heaters designed for Domestic / Commercial heating applications within indoor or outdoor undercover areas, and should not be used for any other purpose.
2. Before commencing installation, make sure the electrical supply voltage is the same as that shown on the rating plate of the heater.
3. The heater is fitted with a length of flexible cable for electrical connection. The heater should be connected as a fixed installation by a licensed electrical person, according to the relevant electrical standards.
4. All pole disconnection from the supply mains must be provided in fixed wiring in accordance with the wiring rules.
5. This appliance must be earthed.
6. The heater is required to be fitted with an "ON/OFF isolation switch and can also be controlled via thermostat, timer or dimmer type control. A wall switch should be installed on fixed wire installations. Optional connection to a R.C.D is recommended.
7. If the supply lead is damaged, the appliance should be scrapped. In case of heater fault, the appliance must be returned to the distributor / manufacturer for repair.

INSTALLATION LOCATION

For both wall and ceiling mounting, the lowest part of the heater must be located a minimum of 2100mm above floor level.
The heater must not be closer than 1000mm to adjacent walls, with a minimum of 60mm between back of heater and any surface.
Allow 1000mm from the bottom of the heater to any surface below.
Do not allow thermal insulation, cables, flammable materials or any other items to come into contact with any surface of the heater; purpose design brackets excluded.
The heater must not be located immediately below a socket outlet.
If installed in wet areas, the heater must be installed so that switches and other controls cannot be touched by persons in the bath or shower.

MOUNTING INSTRUCTIONS

- Using the centre distances shown in DIM "A", mount the brackets to the ceiling or wall.
- Ensure fixing method will adequately support weight of heater.
- Then, fix brackets to heater using the nuts provided on the studs at rear of heater.
- Ensure screw fixing two halves of bracket is fully tightened.
- Use the two small self tapping screws to lock the two halves of the bracket at the desired angle.
- The heating surface must never be directed toward the ceiling.
- The power cable must be at the lower end of the heater if the heater is installed at an angle.



MODEL	DIM "A"
THH 1200	450mm
THH 1800	600mm
THH 2400	800mm
THH 3200	1000mm

OPERATION INSTRUCTIONS
TO BE KEPT BY THE USER OF THIS APPLIANCE

The heater is required to be fitted with an "ON/OFF" isolation switch and can also be controlled via thermostat, timer or dimmer type control.
Once the unit is turned On via a switch or other control device, it will take approximately 10 minutes to warm up to normal operating temperature.
Make sure the unit is turned OFF after use.
Note: THH series HEATSTRIPS have an IPX5 rating for protection against water ingress.

CAUTION

- The front panel of the heater can reach temperatures of up to 380°c.
- Do not touch any part of the heater while in operation or for 30 minutes after turning off.
- This appliance is not intended for use by young children or infirm persons.
- Caution must be exercised when operating this appliance.
- Do not allow any cables, furnishings, flammable materials or other items to come into contact with any surface of the heater.
- The heater must have a minimum 1000mm clearance to adjacent walls and minimum 60mm clearance from the back of the heater to any mounted surface.
- Do not operate heater unless there is a clearance of 1000mm or more from bottom of the heater to any surface below.
- The heater should be connected as a fixed installation by a licensed electrical person, according to the relevant electrical standards.
- All pole disconnection from the supply mains must be provided in fixed wiring in accordance with the wiring rules.
- The heater must not be located immediately below a socket outlet.
- If installed in wet areas, the heater must be installed so that switches and other controls cannot be touched by persons in the bath or shower.
- If the supply lead is damaged, the appliance should be scrapped.
- In case of heater fault, the appliance must be returned to the distributor / manufacturer for repair.

CLEANING & GENERAL MAINTENANCE

It is important that THH HEATSTRIP units installed in outdoor locations are regularly cleaned to ensure a long and efficient operating life.
In coastal locations in particular, salt in the air can cause rusting and staining of metal. Even in city locations, pollution in the air can also contaminate surfaces and will affect the ability of the coatings and material of your THH HEATSTRIP to protect from rust and stains. This applies to both the painted and stainless steel models.
As the THH HEATSTRIP has a protection rating for water ingress of IPX-5, they can be safely washed and cleaned with water.
The heater can be lightly sprayed with a hose, but the preferred method of cleaning is to rinse the heaters using a soft cloth with warm water and a mild detergent. Ensure any soap residue is rinsed off after cleaning.

CAUTION:

- Before any cleaning activity, the heater must be switched off and cooled down completely. (The heaters can be turned on briefly after washing to dry them off quickly.)
- **DO NOT** use a high pressure hose or high pressure water equipment to clean the heaters.
- As a guide, THH HEATSTRIP units should be cleaned whenever you are cleaning the outdoor furniture in the same area. In coastal areas, an additional rinsing on a fortnightly basis with a light spray from a hose will provide extra protection.

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OUTDOOR RADIANT HEATERS - THH SERIES

'THH SERIES' SELECTION GUIDELINES

HEATSTRIP panels should be selected to provide the required heating effect in the area to be heated. To determine the kilowatts of heating required. A heat loss calculation should be made and HEATSTRIP units selected to meet this load.

As a quick selection guide for standard application the following factors can be applied:

THH SERIES SELECTION CALCULATION GUIDELINES

MOUNTING HEIGHT	THH3200 sqm	THH2400 sqm	THH1800 sqm	THH1200 sqm
Outdoor undercover part open areas (sidewalk café annex etc)				
2.4	6.1	4.4	3.3	2.2
3.0	5.5	4.0	3.0	2.0
3.5	5.0	3.6		
4.0	4.7			
Outdoor undercover enclosed area (restaurant annex/patio etc)				
2.4	8.8	6.6	5.0	3.3
3.0	8.0	6.0	4.5	3.0
3.5	7.2	5.4	4.1	2.7
4.0	6.8	5.1	3.8	
5.0	5.2	3.9		
Indoor spot heating (factories, above restaurant tables etc)				
2.4	11.8	8.8	6.6	4.4
3.0	10.7	8.0	6.0	4.0
3.5	9.6	7.2	5.4	3.6
4.0	9.1	6.8	5.1	3.4
5.0	7.0	5.2	3.9	
Indoor open areas (factories, sports facilities etc)				
2.4	17.6	13.2	9.9	6.6
3.0	16.0	12.0	9.0	6.0
3.5	14.4	10.8	8.1	5.4
4.0	13.6	10.2	7.7	5.1
5.0	10.4	7.8	5.9	
Indoor normally insulated areas (school rooms, offices etc)				
2.4	35.2	26.4	19.8	13.2
3.0	32.0	24.0	18.0	12.0
3.5	28.8	21.6	16.2	10.8
4.0	27.2	20.4	15.3	10.2
5.0	20.8	15.6	11.7	7.8

To select the required heaters you need to know total square metre area to be heated, mounting height of heater from floor to bottom surface of heater and the type of application.

Example 1
A 40sqm area with heater height of 3m for an outdoor restaurant annex with enclosed blinds.
From chart above select "Outdoor undercover enclosed area" table. At a mounting height of 3m, the THH3200 has an 8sqm coverage area. Dividing the total 40sqm area by 8 indicates 5 x THH3200 would be selected. Alternatively, 7 x THH2400 could be selected (40 ÷ 6 = 6.66)

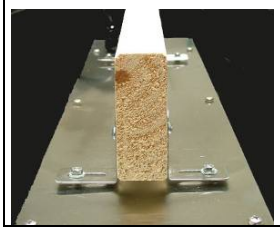
HEATSTRIP

RADIANT OUTDOOR HEATERS

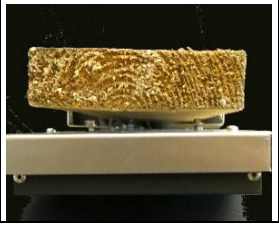
THH-PMBSS: MOUNTING BRACKETS

The unique design of these Stainless Steel Mounting Brackets allow secure mounting of the THH Heatstrip models to timber or metal beams and umbrella struts. The pictures and diagrams below show some of the many mounting possibilities utilising the THH-PMBSS mounting brackets.

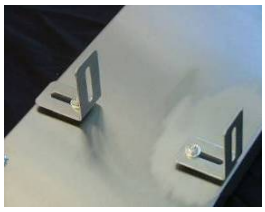
Picture 1

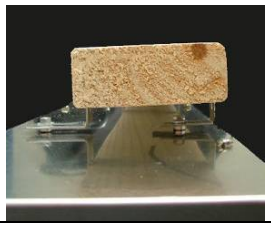


Picture 2



Picture 3





Picture 4

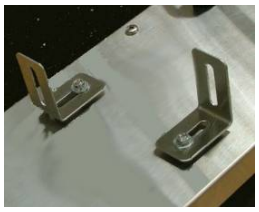
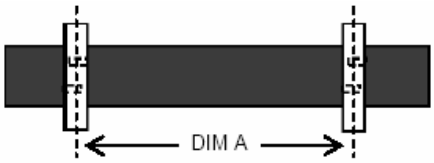


Diagram 1

Diagram 2



By adjusting the location of the brackets, mounting to narrow or wide metal or timber beams can be accommodated. *(Pictures 1 – 3)* Minimum beam width is 25mm (0.98inch) and maximum beam width is 170mm (6.68inch).

Note:

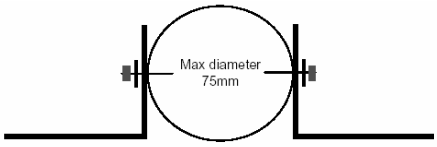
- When mounting to timber beams, allow a minimum of 15mm (0.59inch) between back of heater and timber beams.

The brackets can be adjusted to mount to beams parallel *(Diagram 1 & Pictures 1 - 3*) or right angles to the heater. *(Diagram 2 &, Picture 4)*

Where beams are at right angles to the heater, the centre of the beams should ideally match the stud centres on the heater. The stud centres for each heater model, represented by DIM A on *Diagram 2* are as follows: THH1200 - 450mm (17.73inch), THH1500 – 450mm (17.73inch), THH1800 – 600mm (23.64inch), THH2400 – 800mm (31.52inch), THH3200 – 1,000mm (39.4inch).

To utilise THH-PMBSS brackets with circular beams or umbrella struts / poles, the minimum pole diameter is 25mm (0.98inch) and maximum diameter 75mm (2.95inch). *(Diagram 3)*

Diagram 3



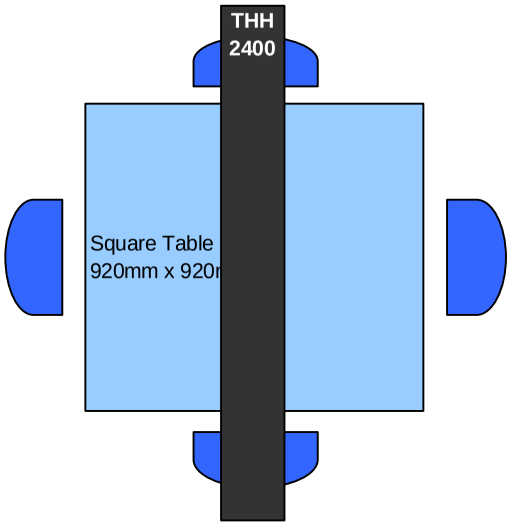
MOUNTING INSTRUCTIONS

Fix THH-PMBSS brackets to heater using the nuts provided on the studs at rear of heater.
Lift heater into desired mounting position.
Using suitable fixing screws (not provided), screw bracket onto beam or pole.
If bolts are to be used, mark position of holes on beam or pole, then drill suitable hole before mounting heater with bolts or other fixing devices (not provided).

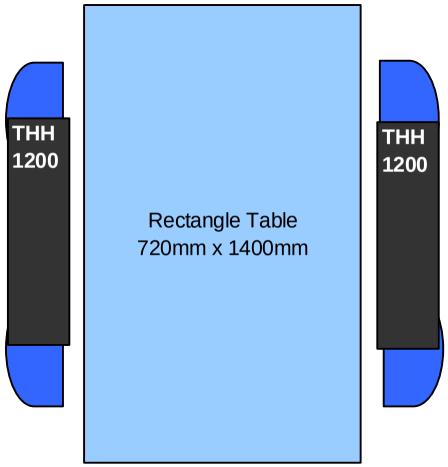
Note:

- Ensure fixing method will adequately support weight of heater, allowing for additional strength on mounting system where high wind can be a factor.
- Ensure all fixings, including nuts securing bracket to heater, are tight and secure.

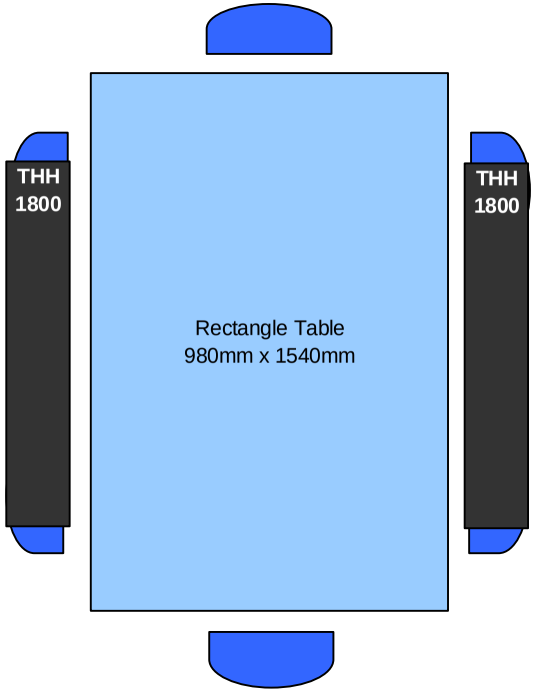
Square, 4 Seater Setting



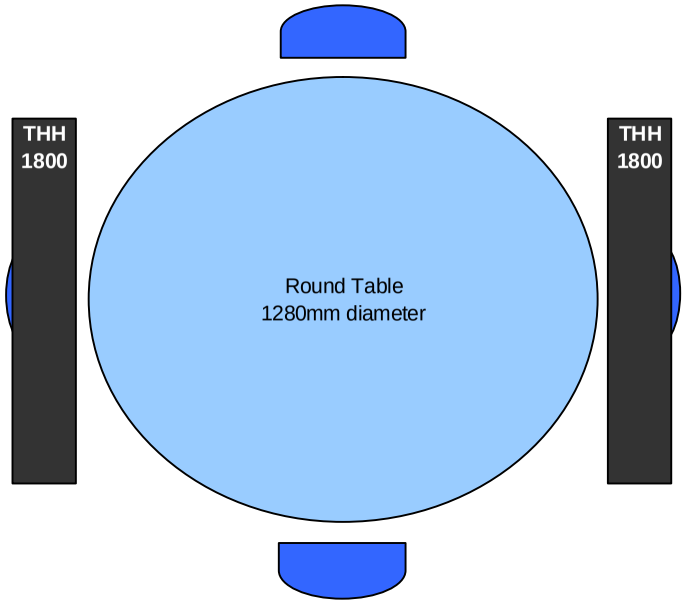
Rectangle 4 Seater Setting



Rectangle 6 Seater Setting



Round, 4 Seater Setting



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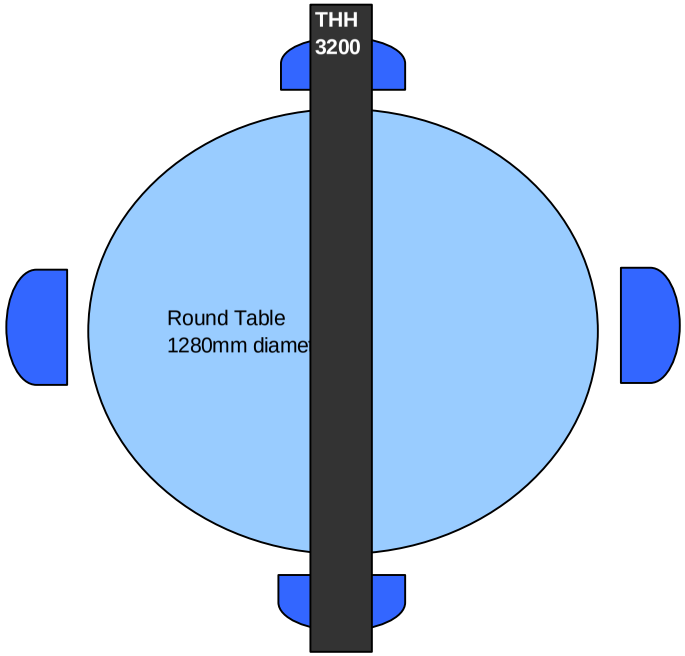
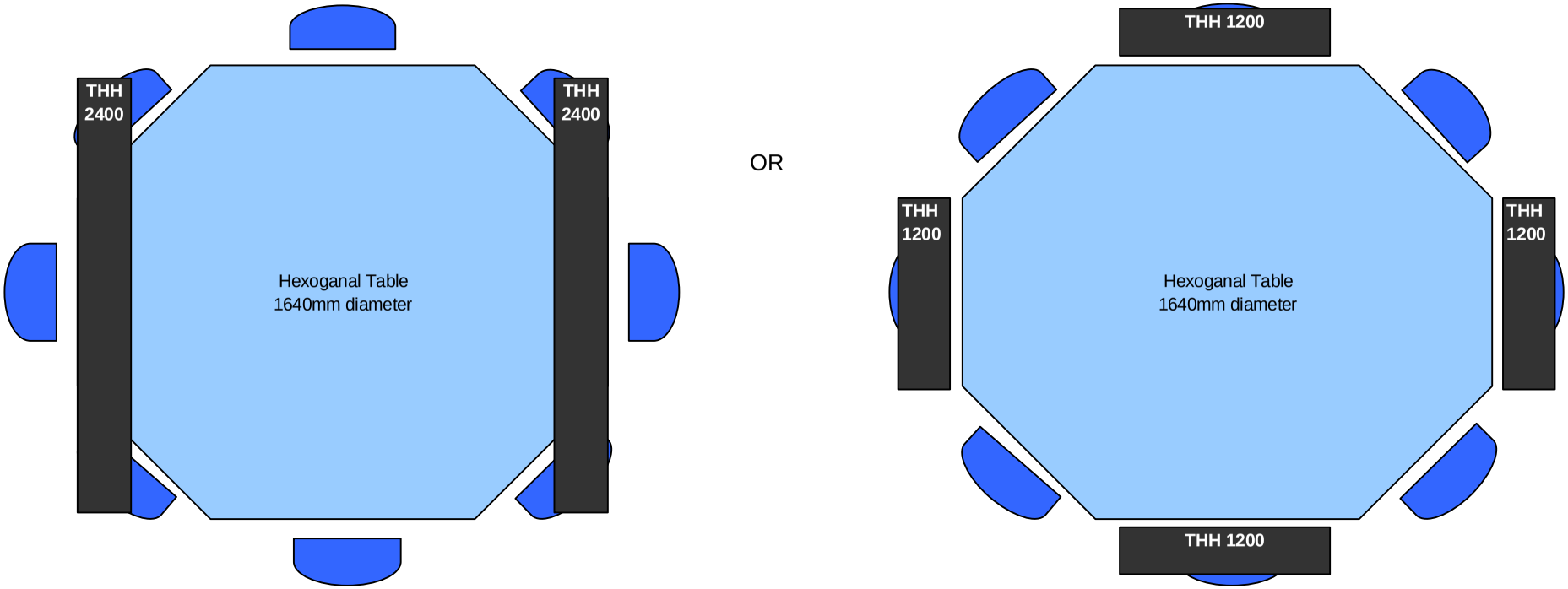
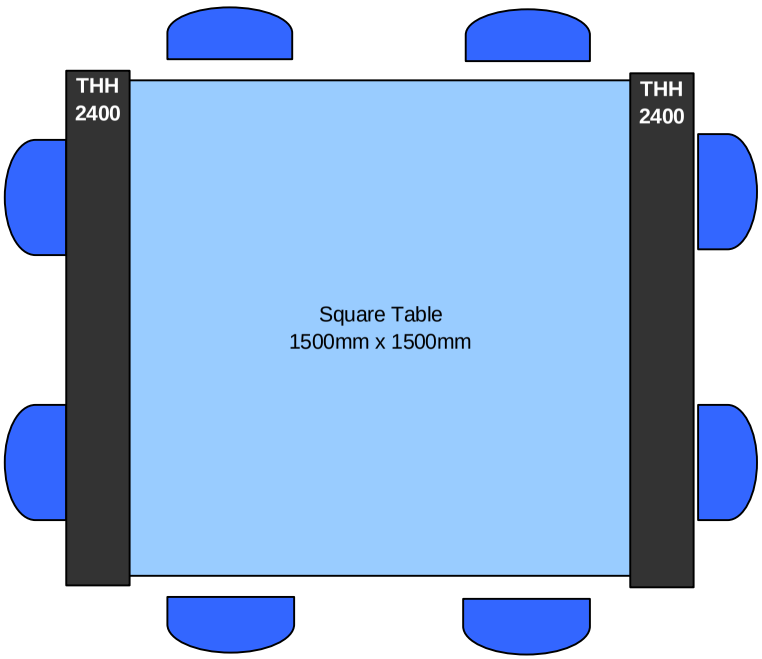


Hexoganal, 8 Seater Setting



Square, 8 Seater Setting



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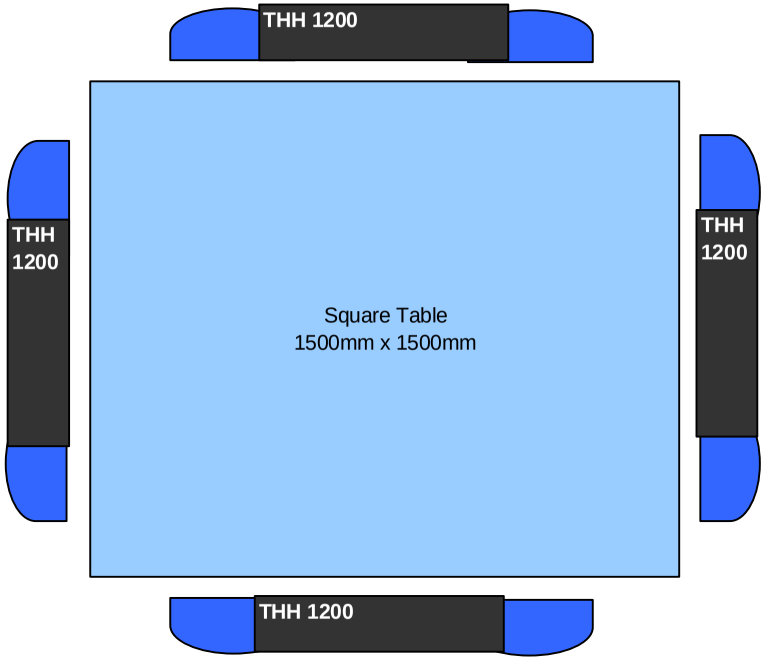
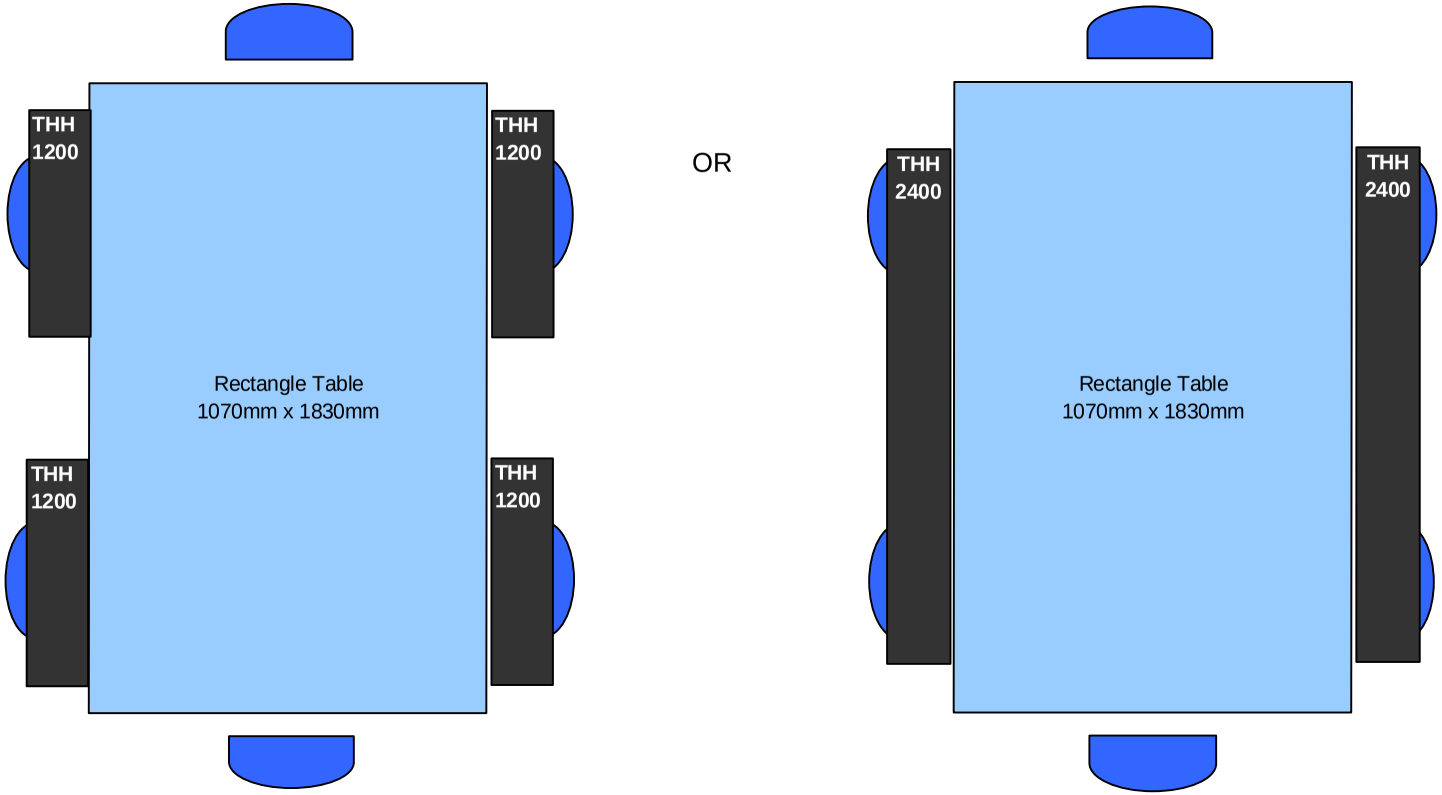
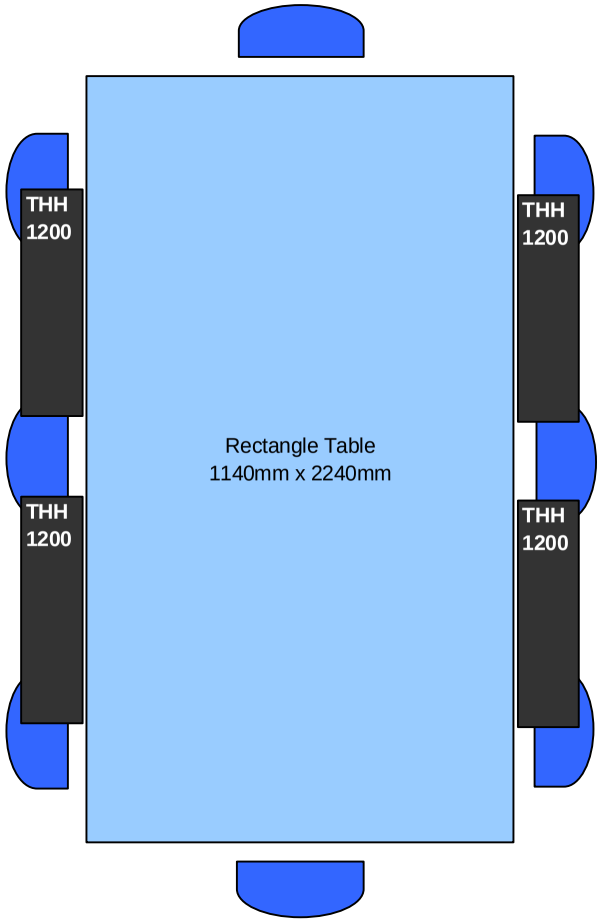


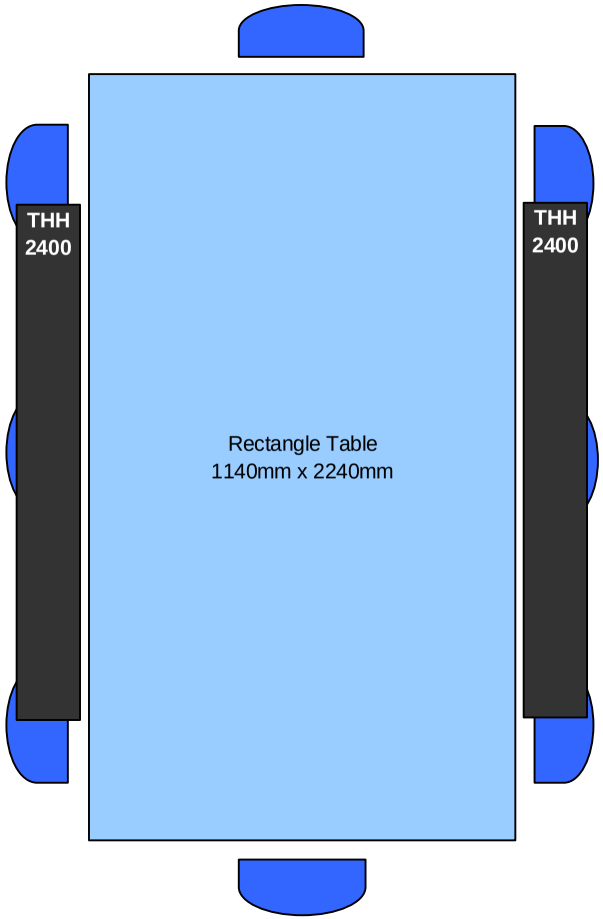
Rectangle, 6 Seater Setting



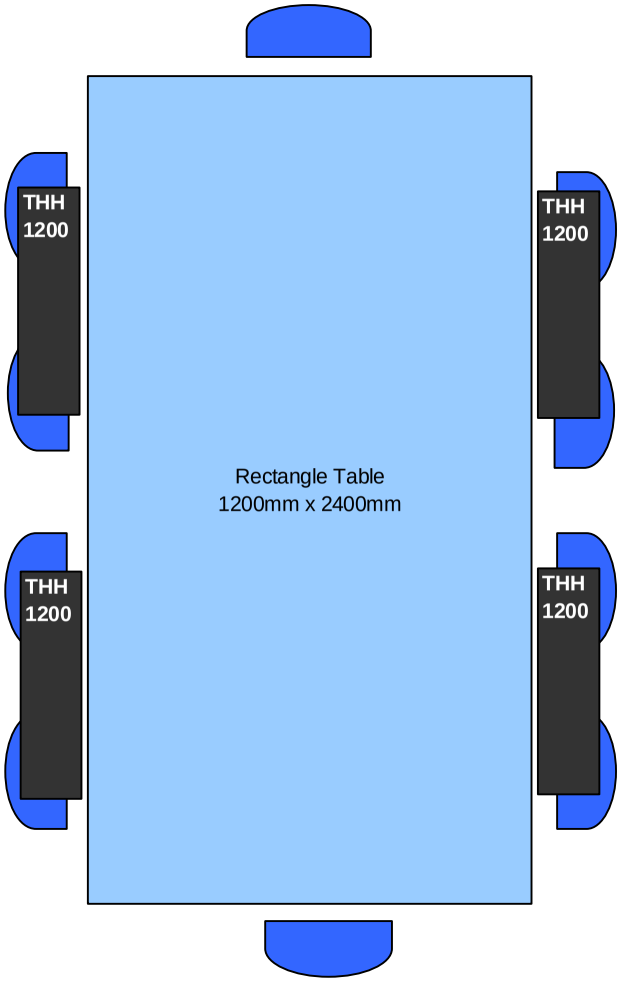
Rectangle, 8 Seater Setting



OR



Rectangle, 10 Seater Setting



HEATSTRIP

RADIANT OUTDOOR HEATERS

COST COMPARISON :

OUTDOOR GAS HEATER v OUTDOOR ELECTRIC HEATSTRIP

PRODUCT IMAGE				
PRODUCT DESCRIPTION	**OUTDOOR GAS HEATER WITH 9kg GAS BOTTLE**	**ELECTRIC OUTDOOR RADIANT HEATSTRIP**		
		THH 1200 (1200W)	**THH 1800 (1800W)**	**THH2400 (2400W)**
Effective Heating Area	4 Sq M (Average)	2.2 Sq M	3.3 Sq M	4.4 Sq M
Rec. Retail Purchase Price	$450.00 (Average price of Heater + Gas Bottle)	$485.00 (Heater)	$599.00 (Heater)	$699.00 (Heater)
Yearly Running Cost (Based on 180hrs usage per year)	$458.00 (Based on $28 average to fill a 9kg bottle)	$30.24 (Based on 14¢ per kw electrical tariff)	$45.36 (Based on 14¢ per kw electrical tariff)	$60.48 (Based on 14¢ per kw electrical tariff)
TOTAL COST Year 1 (Purchase Price + 1 year running cost)	**$908.00**	**$515.24**	**$644.36**	**$759.48**
TOTAL COST Year 2 (Purchase Price + 2 year running cost)	**$1,366.00**	**$545.48**	**$689.72**	**$819.96**
TOTAL COST Year 3 (Purchase Price + 3 year running cost)	**$1,824.00**	**$575.72**	**$735.08**	**$880.44**
TOTAL COST Year 4 (Purchase Price + 4 year running cost)	**$2,282.00**	**$605.96**	**$780.44**	**$940.92**

HEATSTRIP

Your energy efficient, low cost outdoor heating solution.

PLEASE NOTE: Cost comparison chart created & calculated in Australia
Using Australian fuel prices & Australian Dollars
Please use this as a guide only in the UK to determine the % difference of fuels over the terms stated.