

HEATSTRIP

OUTDOOR RADIANT HEATERS

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: Australia

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

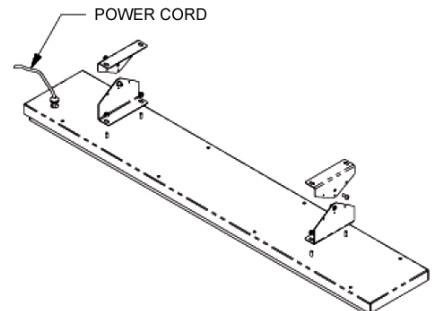
Design Voltage: 240V 50Hz a.c. Australia

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.
Pole and extended 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 1500 AUS	1500	850 x 172 x 45	IPX-5	5.0kg	Australia
THH 1800 AUS	1800	1010 x 172 x 45	IPX-5	7.0kg	Australia
THH 2400 AUS	2400	1330 x 172 x 45	IPX-5	9.0kg	Australia
THH 3200 AUS	3200	1770 x 172 x 45	IPX-5	12.2kg	Australia
SS Models – Stainless Steel casing					
THH 1500SS AUS	1500	850 x 172 x 45	IPX-5	5.0kg	Australia
THH 1800SS AUS	1800	1010 x 172 x 45	IPX-5	7.5kg	Australia
THH 2400SS AUS	2400	1330 x 172 x 45	IPX-5	9.0kg	Australia
THH 3200SS AUS	3200	1770 x 172 x 45	IPX-5	12.5kg	Australia

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.

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

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 ($40 \div 6 = 6.66$)

HEATSTRIP

INDOOR RADIANT HEATERS

THS HEATSTRIP SPECIFICATION DATA SHEET

Type: Medium Intensity, Ceiling Mounted, Radiant Indoor Heaters

Approvals: Australian Standards 2250-2-30 (full test)

Electrical Approval No: Q97268

Manufacture Location: Australia

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

Design Voltage: 230-240V, 50Hz a.c.

Electrical Circuit: Refer to Electrical Wattage.

Paint Finish: High temperature baked enamel paint.

Connection Cord: 3-coreflex – 400mm long

Mounting System: Ceiling mounting brackets are supplied as standard. Other options include – flush mounting, angle mounting, T-bar ceiling mounting, suspended mounting.

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



MODEL	WATTS	DIMENSIONS (mm)	IPX RATING	WEIGHT
THS 800	800	695 x 270 x 50	IPX-3	5.5kg
THS 1200	1200	955 x 270 x 50	IPX-3	7.0kg
THS 1800	1800	1405 x 270 x 50	IPX-3	10.0kg
THS 2400	2400	1820 x 270 x 50	IPX-3	12.5kg
THS 3600	3600	1820 x 400 x 50	IPX-3	18.0kg

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-3 rating states these models are protected against spraying water at up to 60° from vertical.

**'THS 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:

APPLICATION	W/M ²
Indoor normal insulated areas (schoolrooms/offices etc)*	100w/m ²
Indoor open areas (Factories/ sports facilities etc)	200w/m ²
Indoor spot heating (factories/ warehouses etc)	300w/m ²

* If window area exceeds 15% of floor area, use 120w/m²

RECOMMENDED MOUNTING HEIGHTS FOR THS SERIES HEATSTRIP

MODEL	WATTS	INDOOR COMFORT HEATING		INDOOR SPOT HEATING	
		MIN	MAX	MIN	MAX
THS 800	800	2.4m	3.2m	-	-
THS 1200	1200	2.4m	3.6m	2.4m	3.0m
THS 1800	1800	2.4m	4.0m	2.4m	3.0m
THS 2400	2400	3.0m	5.0m	2.4m	3.6m
THS 3600	3600	3.6m	8.0m	3.0m	5.0m

Example – What HEATSTRIP models would be recommended to heat a standard office area of 60m² with a ceiling height of 3.2m?

Refer to the Application guide:

The 60m² office area would be classified as an "Indoor normal insulated area". The recommended wattage required to heat this type of area is 100w/m².

Therefore: $60m^2 \times 100w/m^2 = 6000w$.
6000w is required to heat the office of 60m²

Refer to the Recommended Mounting Heights table, specifically the Indoor Comfort Heating options: The ceiling height for the office area is 3.2m, making the THS 800, THS 1200, THS 1800 and THS 2400 possible options. The THS 3600 model would not be a possible option, as the recommended minimum mounting height for this model is 3.6m.

Also refer to the watts specified for each HEATSTRIP model.

Using this guide, we calculate how many heaters are required to heat the office requiring 6000w

- Option 1 = THS 800 (800w) 8 x 800w = 6400w.
- Option 2 = THS 1200 (1200w) 6 x 1200w = 6000w.
- Option 3 = THS 1800 (1800w) 4 x 1800w = 7200w.
- Option 4 = THS 2400 (2400w) 3 x 2400w = 7200w.

Therefore Option 2 using 6 x THS 1200 HEATSTRIP heaters, producing 6000w would be the most appropriate selection.


Notes:

- THS series are a medium intensity radiant panel heater with an IPX3 rating. They are suitable for indoor or outdoor enclosed applications.
- For comfort heating applications, HEATSTRIP units should be thermostatically controlled. To reduce energy use, a timer system such as the Comfortwise Magic Touch controller may also be used.
- Minimum mounting height is 2.1m
- Contact your HEATSTRIP supplier or Thermofilm for exact load & layout requirements where non- standard applications are involved.

HEATSTAR

RADIANT PANEL HEATERS

HEATSTAR SPECIFICATION DATA SHEET

Product Code:	THP 750S (Surface or T-Bar Mounting) THP 450S (Surface Mounting)	
Type:	Low intensity radiant heating panel.	
Output:	750 watts @ 240V 450 watts @ 240V	
Approvals:	Australian Standards 3350-2-30 (full test)	
Electrical Approval:	V93240	
Manufacture Location:	Australia	
Element Type:	Resistance foil type	
Design Voltage:	240V (Specifically designed for Australian 240V conditions- Imported heaters are generally designed for European 220/230V supply.)	
Safety Cutout:	Snap action bi-metallic type fitted.	
Control:	All heaters need to be controlled by a suitable thermostat and or time switch to prevent continuous running of heater.	
Mounting Bracket:	Complete with surface mounting bracket.	
Operating Temperature:	At ambient temperature of 20°C, the front of the heater operates at an average temperature of 90°C and a maximum spot temperature of 120°C. Rear and side of panel operate at below 40°C.	
Minimum Mounting Height:	THP 750S Bottom of heater must be installed at minimum of 2.2m, unless heat guard is installed in front of heater.	





HEATSTAR SELECTION GUIDELINES

HEATSTAR units should be selected to provide the required heating effect in the area to be heated.

For comfort heating application a heat load calculation should be made and HEATSTAR units selected to meet the heating requirement. As a guideline for normally insulated areas with ceiling height from 2.4m to 3.6m, allow 15 square metres of floor space for each HEATSTAR 750 watt panel. For example a room of 45 square metres would require 3 HEATSTAR units. Allow 9 square metres of floor space for each HEATSTAR unit per person.

For zone heating applications allow one HEATSTAR unit per person.

Because HEATSTAR units are low intensity they are not suitable for spot heating in high ceilings areas or drafty locations.

Model THP 750S is designed for surface mounting, and is supplied with surface mounting brackets.

Model THP 750S is also designed for T-Bar ceiling mounting and fits into a standard 600mm x 1200mm T-Bar ceiling grid.

Model	Watts	Amps	Dimensions (mm)	Mounting Options					Heating Calc	Mounting Height	Approx Heating Area
				S	T	F	SU	A			
THP 750S	750	3.13	1190 x 590 x 30	X	X	X	X	X	50W/sqm	2.4 – 3.6m	15 sqm

- S** = Surface Mounting
- T** = T-Bar Ceiling Mounting
- F** = Flush Mounting (Bracket Required)
- SU** = Suspended Mounting
- A** = Angle Mounting (Bracket Required)

INSTALLATION & OPERATING INSTRUCTIONS

The HEATSTAR THP 750S is designed to mount directly onto ceilings or walls, suspend from high ceilings or fit into T-Bar ceilings.

Heaters must be controlled by a suitable thermostat or time switch to prevent continuous running of heater.

CEILING AND WALL MOUNTING

- Fix mounting bracket in the desired location with suitable fixing devices capable of safely supporting the heater. The fixing devices should be suitable for the type of mounting surface.
- Position the heater over the mounting bracket and locate the bracket protrusions into the heater slots.
- Slide the heater onto the bracket
- Using the 2 screws provided, screw through the mounting bracket to lock the bracket onto the heater.

Note: when wall mounting the heater, the fixing bracket must be positioned so the bracket is fixed on the bottom side of the heater.

SUSPENSION MOUNTING

- Slide the fixing bracket into the slots at the back of the heater and fix the bracket to the heater using the 2 screws provided.
- Secure the jack chain or other suitable suspension system. (Make sure the suspension system is sufficiently secure to support the weight of the heater plus addition stresses that may occur)
- Secure the heater to the suspension system using the slots provided in the mounting bracket.

T-BAR CEILING MOUNTING

- Simply remove a ceiling tile from a standard 600mm x 1200 T-Bar ceiling grid and replace with the HEATSTAR Radiant Panel heater THP750S


SECURITY MOUNTING

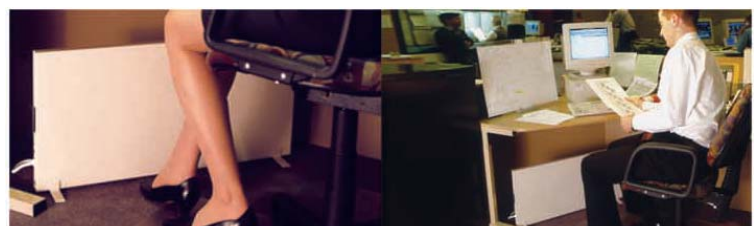
Special mounting systems are available for high security and other applications. (Prisons etc.) Please refer to you supplier for details.

BLISS

RADIANT PERSONAL HEATERS

SPECIFICATION DATA SHEET

Product Codes:	THD 160, THD 240, THD 320	
Type:	Low intensity radiant heating panel.	
Output:	THD 160: 160watts @ 240V THD 240: 240watts @ 240V THD 320: 320watts @ 240V	
Approvals:	AS/NZ S3350.2.30 (full test)	
Electrical Approval:	Q03474	
Degrees of Protection:	IP X4 Rating (Full compliance with AS 60529:2004)	
Manufacture Location:	Australia	
Element Type:	Resistance foil type	
Design Voltage:	240V (Specifically designed for Australian 240V conditions- imported heaters are generally designed for European 220/230V supply.)	
Safety Cutout:	Snap action bi-metallic type fitted.	
Mounting:	THD 160 & THD 240 – Mounting Feet supplied. THD 320: Wall Mounting and Mounting Feet supplied.	
Operating Temperature:	At ambient temperature of 20°C, the front of the heater operates at an average temperature of 80°C. Rear and side of panel operate at below 40°C	
Casing:	Zinc chrome 0.8mm sheet metal with baked enamel finish.	



HLX RANGE

With the flick of a switch the HLX modular heating system provides instant warmth with the flexibility of a modern lighting system.

Simple to install in virtually any configuration, complete with guards and wall mounting brackets, and with far less pre-heating and wasted heat than other forms of heating, running costs are generously competitive.



Using a conventional heating system large work areas with high unused roof space results in wasted heat and money also small concentrated work areas in large complexes result in wasted heat and money.

With the HLX modular heating system any working area can be heated instantly when and where you really need it.

Model No - **HLX15**
220/240v 1500w 6.25amps



Model No – **HLX30**
(Consists of 2x HLX15 + 1 x HLB2 Bracket)
Each fitting is 220/240v 1500w 6.25amps

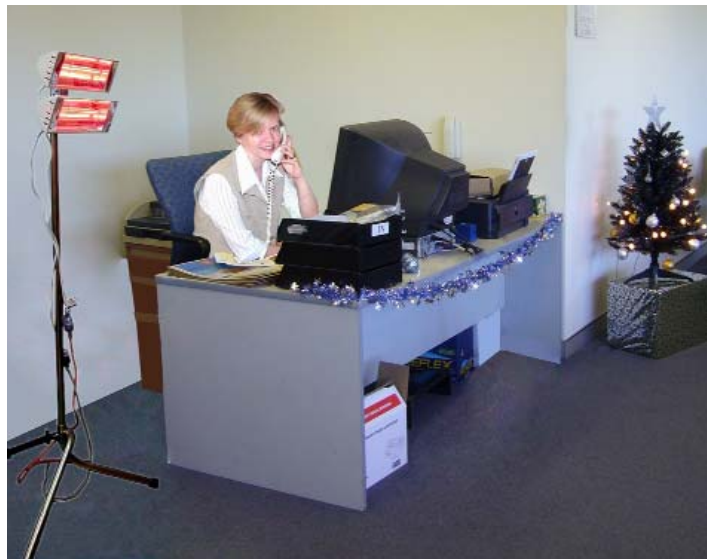


Model No – **HLX45**
(Consists of 3x HLX15 + 1 x HLB3 Bracket)
Each fitting is 220/240v 1500w 6.25amps

HLX Models are the inexpensive answer to spot heating, offering a cost effective way to provide instant heat to the smaller or localised area requiring comfort heating. Ideal for workshops, garages, church halls, shops, warehouses and small factories.

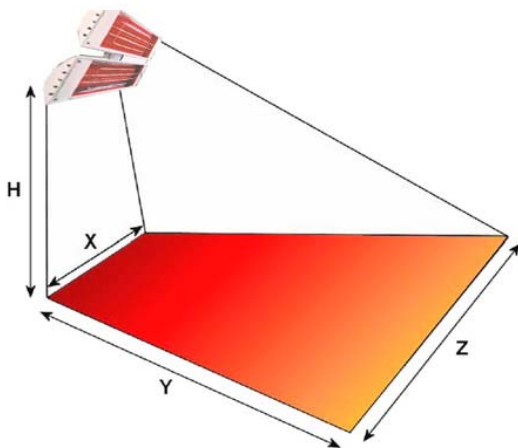
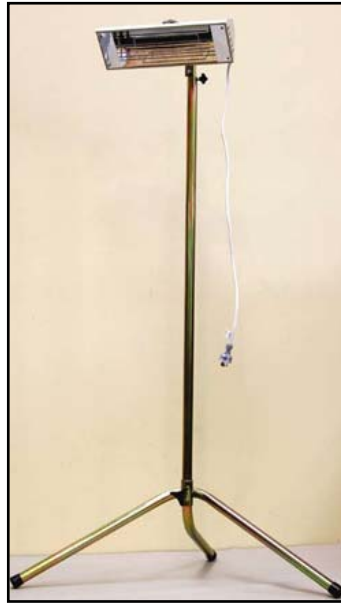
Other ideal applications areas:

- Night Security
- Offices
- Packing Rooms
- Process Lines
- School Halls
- Sports Halls
- Squash Courts
- Studios
- Workshops
- Restaurants



Benefits of using quartz heating systems:

- Partial, spot and full heating provided instantly - no unnecessary heating of unwanted areas
- Instant heat - expensive pre-heating reduced - warmth is felt instantly
- Ideal for clean air environments
- Silent - no air movement noise - ideal for schools, churches and libraries
- Negligible heat loss by convection or conduction to the atmosphere even in areas of high humidity or pollution
- Installation does not require the use of valuable floor space
- Minimal maintenance
- Can be mounted overhead to save floor space
- Competitive prices
- Technical support
- Design and planning advice



Wall Mounting

Fix bracket at recommended height for each model. Fasteners and plugs **MUST** be suitable for the type of wall surface and weight of the heater. Leave a minimum air gap of 45cm (18 ins) between top of heater and ceiling or roof.

Recommended mounting heights

Model HLX 15 min 2.2 metres max 3.0 metres
 Model HLX 30 min 2.2 metres max 3.5 metres
 Model HLX 45 min 3.0 metres max 4.5 metres

The size and type of heaters can then be compared with the table below to find the most suitable models. A 10 – 15% overlap is recommended to ensure even coverage of the area.

Model	Wall Mounting				Area Covered
	H	X	Y	Z	
HLX15	2.5m	3.2m	2.6m	6.0m	11.9m ²
	3.0m	3.4m	3.6m	6.7m	18.2m ²
HLX30	3.0m	3.7m	3.6m	7.0m	19.2m ²
	3.5	4.0m	4.2m	7.9m	25.0m ²
HLX45	3.5	4.0m	4.2m	8.1m	25.4m ²
	4.0m	4.3m	4.5m	8.4m	28.6m ²

Spot Heating

As an additional guide to spot Heating, we would also recommend heating from two directions, to cover the area from opposite sides. This will ensure an overall feeling of comfort and warmth.

HLX models are supplied pre-wired in 1.5KW modules, complete with guards and wall mounting brackets. They can be linked in single, twin and triple formats. Not suitable for overhead suspension mounting.

Replacement Ruby Lamps - HLX1500R - 350mm end to end 1.5Kw

OUTDOOR HEATING SOLUTIONS

Models:

HLO12WB

HLO15WB



Key Features:

Infrared Technology: Instant heat using quartz halogen emitters with a tungsten filament

- Body formed from aluminium and heat resistant thermoplastic
- Anti-shock emitter mounting system
- Designed and manufactured to comply with IP65
- Unique and patented design
- The thermal effect is significantly improved over existing products due to the revolutionary design combining a very effective reflector with a glass free front face
- Weighing only 0.8Kg it is one of the lightest waterproof fittings available



Technical Specifications:

HLO12WB:

- 1200 watt output
- Power Supply 240v/50Hz - 220v/60Hz
- Heater complete with twin wall brackets
- L 715mm x W 115mm x D 85mm
- Weight 0.8 Kg

HLO15WB:

- 1500 watt output
- Power Supply 240v/50Hz - 220v/60Hz
- Heater complete with twin wall brackets.
- L 715mm x W 115mm x D 85mm
- Weight 0.8 Kg