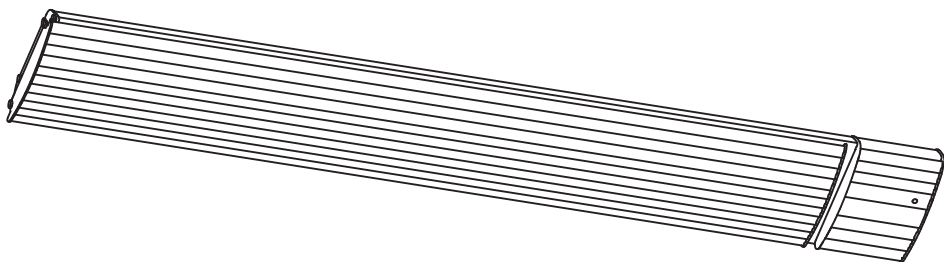




THE AIR MOVEMENT SPECIALISTS

Instruction Manual



Heatwave Pro

RADIANT OUTDOOR STRIP HEATER

VSH1800/VSH1800-R

VSH2400/VSH2400-R

VSH3200/VSH3200-R

IMPORTANT INFORMATION

Please carefully read the Instruction Manual before using the infrared heater. This Instruction Manual contains the important information on your safety, as well as some recommendations on proper use of the appliance and its maintenance. Keep the Instruction Manual along with the warranty card, sales receipt, and if possible, cardboard package and packing material. The purchased infrared heater may somewhat differ from the one described in the Manual, but this does not affect the heater methods of use and operation. Important precautions and instructions given in this Manual do not include all possible modes and situations which can be encountered. It is necessary to understand that common sense, cautiousness, and carefulness are the factors which cannot be "integrated" to any product.

WHAT'S IN THE BOX

The package should contain:

Heater fitted with flexible cord and plug.

Installation Instructions.

One small box contain one pair of mounting Brackets.

One remote control (batteries not included), only for models of R series.

SAFETY INSTRUCTIONS

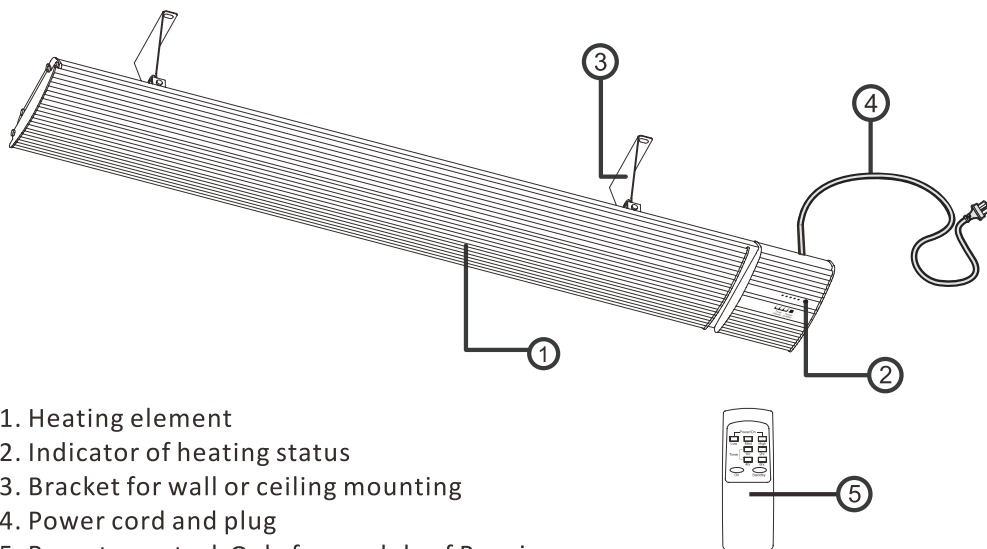
- **Read the instruction before using.** During use of the infrared heater, it is necessary to observe some precautions. Improper operation with disregard of precautions may result infliction of harm to health of the user and other people, as well as infliction of damage to their property.
- Use only the voltage specified on the rating sticker on the heater.
- **ONLY** connect the appliance to a properly installed socket-outlet with earth contact.
- The heater should be connected to the electric mains equipped with an automatic circuit breaker.
- The unit must be handled with care, and avoid vibration or hitting.
- **WARNING: FIRE RISK EXISTS IF THE HEATER IS COVERED BY OR POSITIONED CLOSE TO CURTAINS OR OTHER COMBUSTIBLE MATERIALS.**
- Do not use the appliance in areas where gasoline, paint or other flammable liquids are used or stored.
- Do not use the appliance in particularly dusty and explosive areas.
- Do not use the appliance in a building site, green house, barn or stable where there's flammable dust.
- Do not use the appliance as a sauna heater.

- **WARNING:** Do not touch the radiating plate. Temperature of radiating boards during operation of the heater may reach 380°C. To avoid burns, do not touch the appliance surface by hand and other body parts. It is also necessary to exclude the possibility of touching the heater radiating boards by a person (including accidental) via proper instructions and allocation of the heater in an inaccessible place. It stays hot for a period after shut down. Potential danger would occur when touching it during this period.
- Do not place any items of clothing, hand towels or similar over the heater to dry. This will cause risk of overheating and fire hazard.
- Do not leave the heater unattended whilst in use.
- Do not use this heater on a wet surface, or where it can fall or be pushed into water.
- Do not reach for an appliance that has fallen into water. Switch off at supply and unplug immediately.
- If the supply cord is damaged, it must be checked and repaired or replaced by the manufacturer.
- Do not operate appliance with wet hands.
- Use this appliance only as described in this manual. Any other use is not recommended by the manufacturer and may cause fire, electric shock or injury.
- Do not use abrasive cleaning products on this appliance. Clean with a dry rag. Always remove plug from the mains supply before cleaning.
- The heater must be installed at least 2.1 m above the floor.
- The heater must not be located immediately below a socket outlet. Socket outlet should not be located at the back of the heater. It should be located outside the physical footprint of the unit to minimise heat build-up behind the heater.
- The installation must be equipped with an all-pole disconnection mechanism with a break contact distance of at least 3mm. The all-pole disconnection mechanism must be installed on the height less than 2.1m from the floor.
- The heater is to be installed so that switches and other controls cannot be touched by a person in the bath or shower.
- If the heater is to be mounted on an incline (eg. Vaulted ceiling), ensure the electrical connection is located at that lowest point of the heater.
- Do not connect the appliance to the mains source until it has been installed in its final location and adjusted to the position it will be used in.
- Do not operate with the cord coiled up as this could cause a build up of heat, which could pose a hazard.

- The use of an extension cord with this appliance is not recommended.
- Do not allow cord to come in contact with heated surfaces during operation.
- Do not run cord under carpeting, throw rugs or runners etc. Arrange cord away from areas where it is likely to be tripped over.
- Children should be kept away unless continuously supervised.
- Children should only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children should not plug in, regulate and clean the appliance or perform user maintenance.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- The appliance is only intended for the purpose described in user manual.
- Do not use appliance or any part of the appliance out of the intended use to avoid risk.
- The use of attachments which are not recommended or sold by the appliance manufacturer may cause a risk of injury to persons.
- CAUTION — some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.
- Install and operate the heater in strictly horizontal position on the ceiling/wall or ceiling structural elements. At that, thermal resistance of the ceiling coating material should be at least 80 °C.
- 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.
- If the customer would like to have soft copy of the IM, please kindly contact our customer service.

HOW TO OPERATE THE HEATER

General design layout



1. Heating element
2. Indicator of heating status
3. Bracket for wall or ceiling mounting
4. Power cord and plug
5. Remote control. Only for models of R series

OPERATION PRINCIPLE

The infrared heater is an appliance with an electric heating element and extruded aluminum plate, which upon heating emits heat to the environment via direct infrared radiation. Radiant energy is absorbed by the surrounding surfaces and it heats them, then being transformed to thermal energy. Surface temperature of objects can be different depending on their absorbing properties (surface color, material), incidence angle of infrared beams, surface shape and area. Surfaces also release some heat to air. At that, heated air flows up to the ceiling and gradually cools down.

MAIN FEATURES

- Capability of local heating only for those areas in the room, where it is necessary, without heating of the whole room volume.
- Low convection (thermal movement of air volumes) reduces amount of dust kicked up from the floor.

AREA OF APPLICATION

Infrared heaters are designed for general, additional, and local heating of residential, industrial, production, utility, and similar rooms (flats, offices, trade enterprises, exercise rooms, educational institutions, public catering enterprises, storage facilities, hangars, agricultural facilities, outdoor areas, patios, alfresco areas, beer gardens etc).

When these heaters are used in day-care services they can be used only for additional heating.

TECHNICAL SPECIFICATION

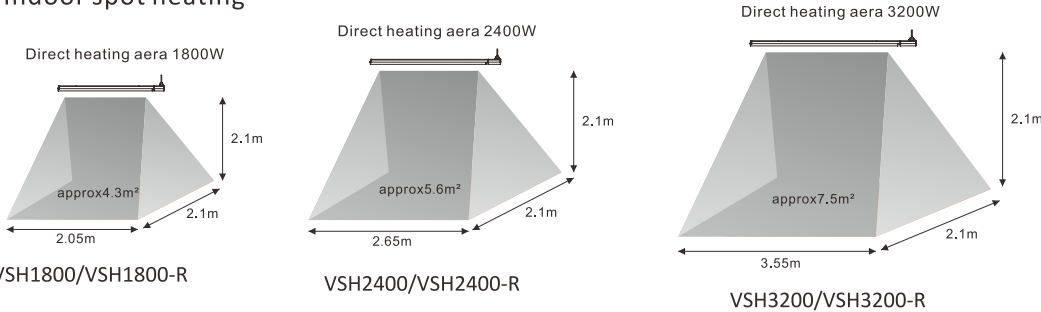
MODEL NAME	VSH1800	VSH2400	VSH3200
	VSH1800-R	VSH2400-R	VSH3200-R
Voltage	240V~ 50Hz	240V~ 50Hz	240V~ 50Hz
Rated power (W)	1800	2400	3200
Ideal mounting height (M)	2.3	2.5	2.7
Electric protection class	I	I	I
Water splash proof rate	IP65	IP65	IP65
Unit size L*W*H(mm)	1225*177*60	1505*177*60	1915*177*60

DIRECT HEATING AREA

The infrared strip heater produces radiant heat which heats objects rather than the air. Therefore, it is imperative that objects to be heated (i.e. People), are within the direct radiant footprint of the heater.

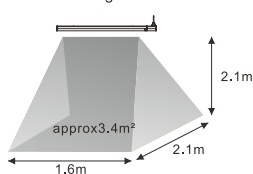
The below diagrams show the approximate heating area for each model based on an indoor and outdoor enclosed environment. The diagram shows that the maximum heat output is found directly under the heater, and the temperature decreases as the user move away from the heater.

Indoor spot heating



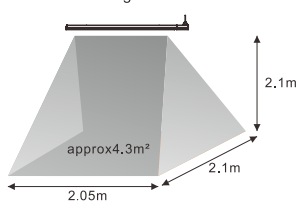
Outdoor enclosed area

Direct heating area 1800W



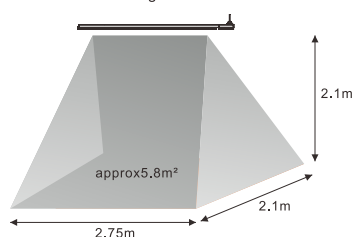
VSH1800/VSH1800-R

Direct heating area 2400W



VSH2400/VSH2400-R

Direct heating area 3200W



VSH3200/VSH3200-R

OPERATION

WARNING!

Slight crackles may be heard during operation at the moment of heating or cooling, which disappears when the heater reaches the working mode.

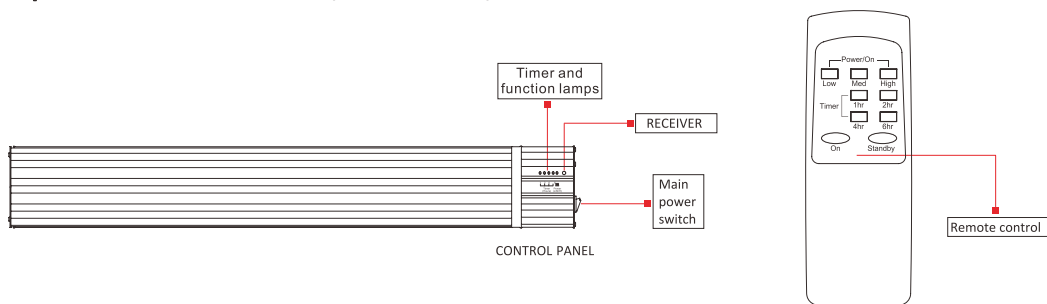
NOTE:

- ✓ Discoloration of paint on the heater body wall directed to the ceiling during operation is not a defect. Changing of color for heating plates is not a defect.
- ✓ After switching on the appliance for the first time and following extended periods on non-use, the appliance may smell for a short time. It will not affect the use of the heater.
- ✓ The heater may take up to 15 minutes to reach maximum heat, depending on the area being heated and the conditions.
- ✓ The heater may take up to 60 minutes to fully cool down, depending on the area being heated and the conditions.
- ✓ Before switching the heater on, it is necessary to thoroughly wipe the surface of the radiating boards first with a dry rag.
- ✓ To exclude unpleasant burnt odor, it is recommended to keep the heater clean preventing accumulation of dust on it.
- ✓ The distance between the heater and the remote control should be less than 3 metres and the remote control must directly point to the receiver on the front panel during the operation.

Operation of VSH1800,VSH2400,VSH3200

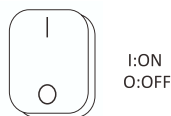
- Connect the unit to the main power, the red operation indicator will light to indicate the heater is on and the heater will begin to radiate infrared heat.

Operation of VSH1800-R,VSH2400-R,VSH3200-R

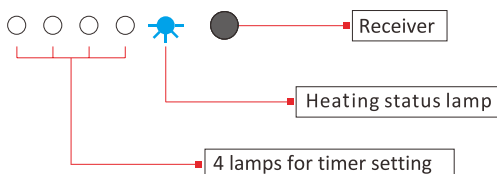


Operations:

1. Plug in the device, and press the switch to the position of I:ON (Please refer to Picture 1), the device will sound 1 beep, heating status lamp turns to blue and twinkles (Please refer to picture 2). The device is in standby mode and doesn't heat now.



Picture 1



Picture 2

2. Point the remote control directly at the receiver, press the button "ON" , the device will sound 1 beep and the heating status lamp will turn to red, the device starts to heat in high power mode(100%) .



Press the button "Standby", the device will sound 1 beep and revert to Standby Mode,with blue twinkling lamp.



3. When the device is in heating or stand-by status, point the remote control directly at the receiver and press the button "LOW" , the device will sound 1 beep, and heat to 33% of the total rated power . The heating status lamp will turn to blue.



- When the device is in heating or stand-by status, point the remote control directly at the receiver and press the button “Med” , the device will sound 1 beep, and heat to 66% of the total rated power . The heating status lamp turns to Green.

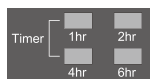


- When the device is in heating status or stand-by status, Point the remote control directly at the receiver and press the button “High” , the device will sound 1 beep, and heat up to 100% of the total rated power . The heating status lamp turns to Red.



Timer function:

Choose 1, 2, 4 or 6 hour timer button (see picture 3) to set the heater into run on timer mode from 1 to 13 hours (see below). IE: Press "1hr" and unit will operate for 1 hour before switching back to standby status. Press 1,2,4 and 6 and the unit will operate for 13 hours before switching back to standby mode. Lamps will illuminate as per below diagram in accordance with timer buttons selected.



Picture 3 : Timer setting button



Picture 4 : 1 hour timer

Accordingly, the timer can be set in 2 hours , 4 hours , 6 hours , by pressing the key of “2” , “4” and “6” separately. Please refer to picture below.



Press the button “1” and “2” , the delay off timer can be set in 3 hours as below.



Accordingly, the maximum timer can be set is 13 hours by pressing keys as below.
 $1+2+4+6=13$ hours,



TURN OFF: Press the STANDBY button and then set the ON/OFF switch to the OFF(O) position to turn off the heater completely.

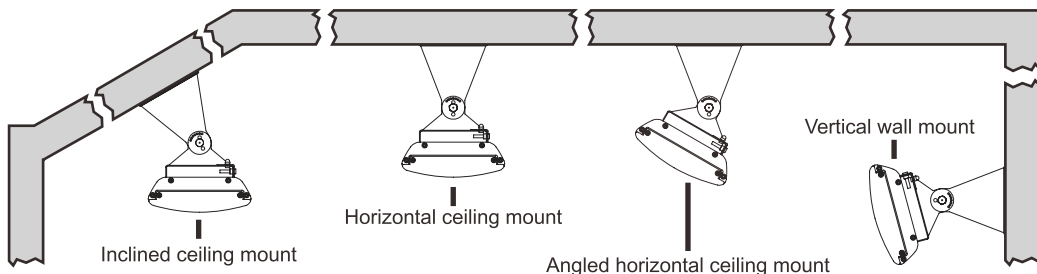
INSTALLATION

Before installation, read the manual carefully.

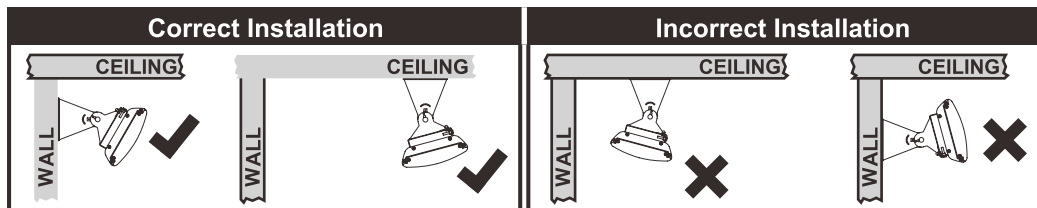
The heater must be installed in accordance with the manufacturer's installation instructions.

This heater comes with a pair of stainless steel adjustable angle mounting brackets.

The adjustable angle enables the heater to be installed on vertical, horizontal and inclined surfaces.



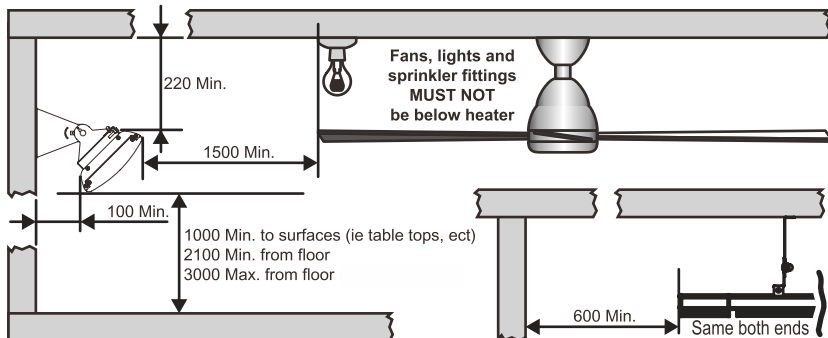
The ideal mounting position is directly above the area to be heated with a longitudinal orientation and facing vertically downwards. If this is not possible, the heater(s) can be mounted on a wall and angled downwards. For this application ensure the mounting height is between 2.1m and 3m.



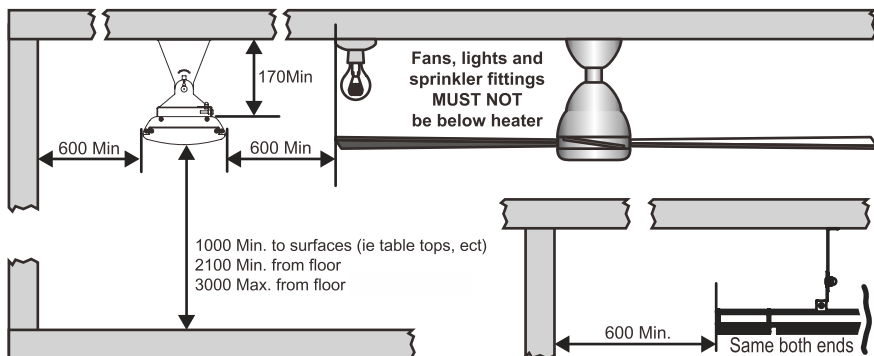
Warning: The heater must never be installed in the upwards or inwards facing position, the heating surface must always be positioned to direct the heat in a downwards or outwards direction.

CLEARANCES

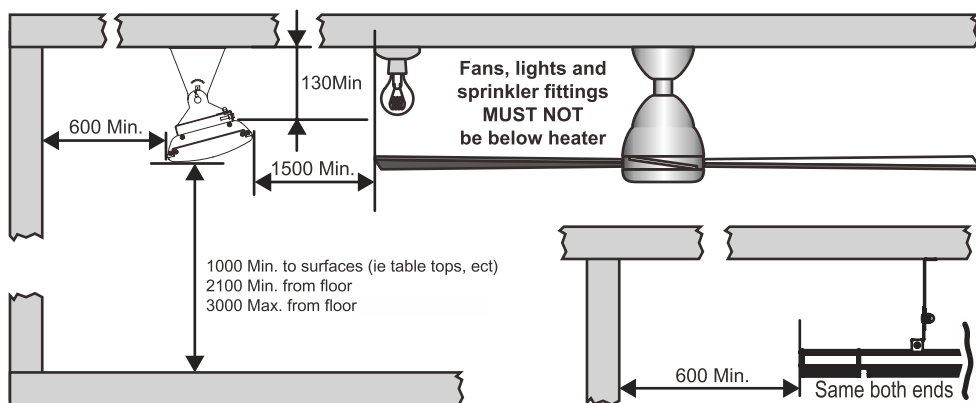
Minimum clearances(mm) when mounting the heater on A VERTICAL WALL.



Minimum clearances(mm) when mounting the heater parallel with A CEILING.



Minimum clearances(mm) when mounting the heater at an ANGLE TO A CEILING.

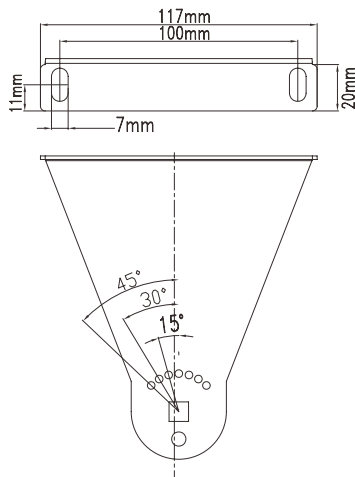
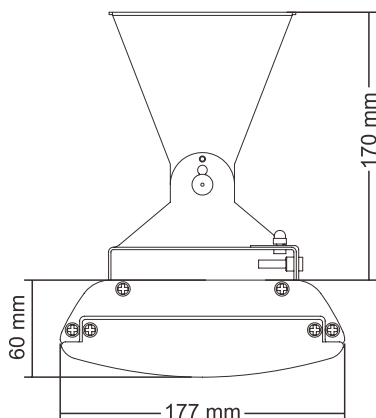


INSTALLATION PROCESS

WARNING! Mounting of the infrared heater and its connection to the electric mains should be carried out only by qualified specialists according to the Electrical Installation Regulations and Power System Safety Standards.

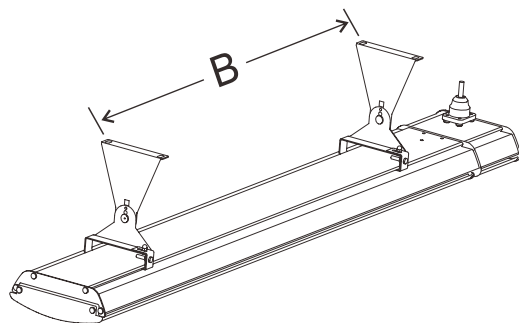
1. Open the package and carefully take the heater out.
2. Take out the packing paper sheet from the end of heater.
3. Take out one pair of mounting brackets. These adjustable brackets allow direct ceiling or wall mount, and come with preset angle options of parallel, 15° , 30° , 45° and height 170mm.

*See next page for diagram



4. According to terms of installation process above, select the heater installation place on the ceiling/wall or ceiling structural elements with observation of minimum clearances from the floor and other object.

5. Install two brackets on the ceiling or wall with the following minimum recommended bracket distance “B”.



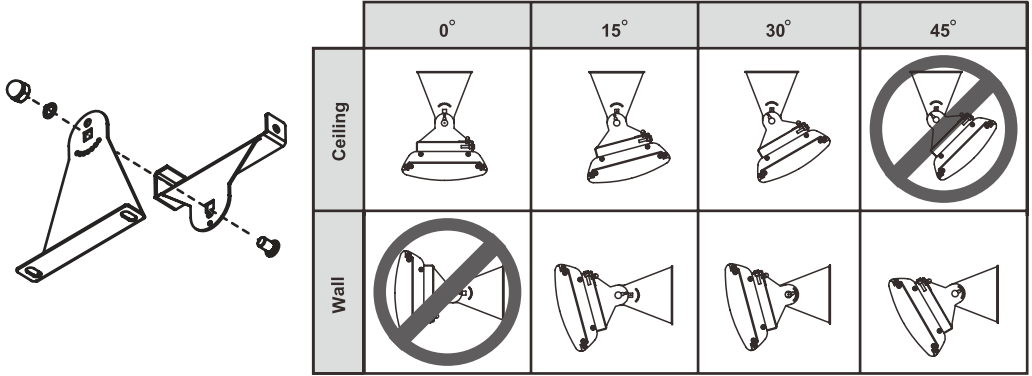
Model No	“B” MINIMUM DISTANCE (mm)
VSH1800	710 ± 50
VSH1800-R	710 ± 50
VSH2400	990 ± 50
VSH2400-R	990 ± 50
VSH3200	1400 ± 50
VSH3200-R	1400 ± 50

6. Set the adjustable angle mounting brackets to desired angle and fasten brackets by spanner.

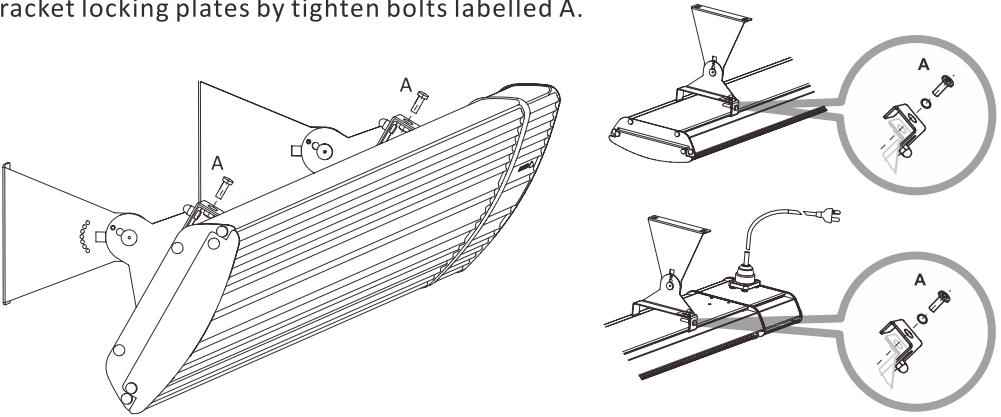
For ceiling mounted installations the available mount angles are restricted to 0°, 15° and 30° only.

For wall mounted installations the available mount angles are restricted to 15°, 30° and 45° only.

*See next page for diagram



7. Hang the heater on the brackets and firmly secure in place with the mounting bracket locking plates by tighten bolts labelled A.



NOTE:

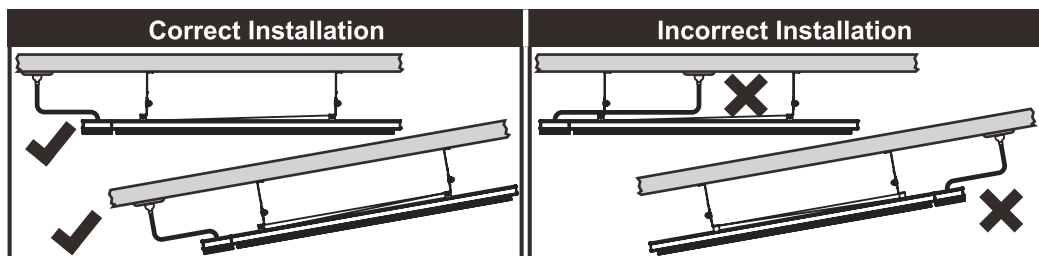
✓ Depending on material and design of ceiling structural elements, the heater is secured onto appropriate fasteners chosen on basis of the strength condition. Strength of the ceiling or structural elements, to which the heater is secured, should be sufficient to endure 5-fold weight of the heater.

Model	VSH1800	VSH2400	VSH3200
	VSH1800-R	VSH2400-R	VSH3200-R
Weight(kg)	6	7.4	9.4

CONNECTION TO ELECTRIC MAINS

After installation of the heater and before switching on for the first time, it is necessary to wipe the radiating board with a dry rag. After that, DO NOT touch the radiating board.

- The heater is designed for connection to the single-phase 240V~ 50Hz electric mains equipped with a grounding loop.
- Before connection, make sure that specifications of the electric mains at the connection point meet the parameters indicated on the appliance rating label. Models VSH1800,VSH1800-R, VSH2400,VSH2400-R,VSH3200, VSH3200-R with plug to connect to supply mains.
- The electric mains should be equipped with an automatic circuit breaker with rated current not less than 16A and height less than 2.1m from the floor.
- The installation must be equipped with an all-pole disconnection mechanism with a break contact distance of at least 3mm.
- **When the electrical connection is outside, it is recommended that a waterproof socket is used for the connection. Otherwise, the plug should be connected to a socket indoors.**
- The heater must not be located immediately below a socket-outlet. Socket-outlet should not be located at the back of the heater. They should be located outside the physical footprint of the unit to minimise heat build-up behind the heater.
- If the heater is to be mounted on an incline (eg. Vaulted ceiling), ensure the electrical connection is located at that lowest point of the heater.



MAINTENANCE

- All electrical work and maintenance shall only be carried out by a qualified electrician.
- During operation, it is necessary to periodically (once a year) check the electric cable contacts and terminal connectors to make sure it is still tight enough.
- If the body becomes dirty, wipe off dust with a towel. Radiating boards should be wiped in cold condition with dry rag.

WARNING!

- ✓ Never immerse the appliance in water!

TROUBLESHOOTING

Possible malfunctions are given in Table below.

SYMPTOM	CAUSE
Will not heat / No operation indicator	Check that power is connected and switched on
Heater smells when first used.	This is caused by oil or dust left over from the manufacturing process and will stop after a short time
Faint smell for short periods after turning on the heater	This is normal and should stop after a short time
Heater smells when turned on after periods of no use	Build up of debris and dust on the heater, Switch the heater off and allow it to cool down and then clean
Clinking noises when heater is turned on and after being turned off	This is expansion and contraction noises of the heaters metal components and is normal
Poor heating performance	Exposure to extreme ambient conditions such as high winds / excessively cold temperatures can lower the heating performance of an outdoor installation Unit is not installed in correct position, possibly too high or heater is too small for recommended area.

When to contact the authorized service or manufacturer

There are no user serviceable parts in this appliance, only an authorised person such as a qualified electrician can service or maintain this appliance.

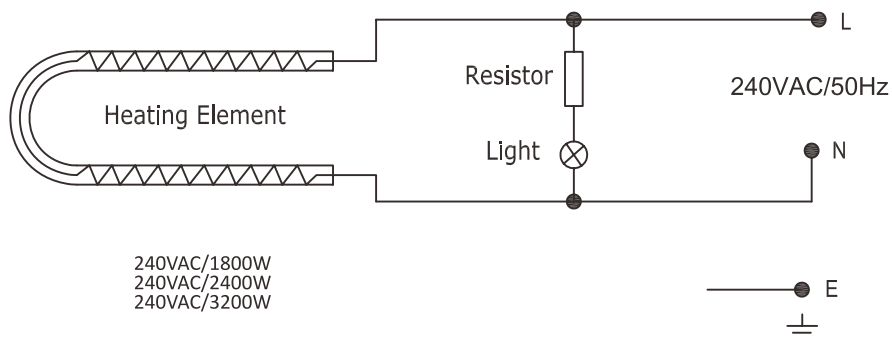
SYMPTOM	CAUSE
There is a burning smell and or strange sounds (other than normal expansion and contraction noises) coming from the unit	Turn off the heater, and contact manufacturer
When associated circuit breaker (safety, ground) is thrown or a fuse is blown	Turn off the heater, and contact your manufacturer for advice or your installing electrician
Poor heating performance	Incorrectly sized installation, contact manufacturer for advice or your installing electrician Faulty heater element, turn off the heater, and contact manufacturer
Will not heat / No operation indicator	Check that power is connected and switched on, if still faulty, turn off the heater, and contact manufacturer for advice or your installing electrician

Ventair's Details:

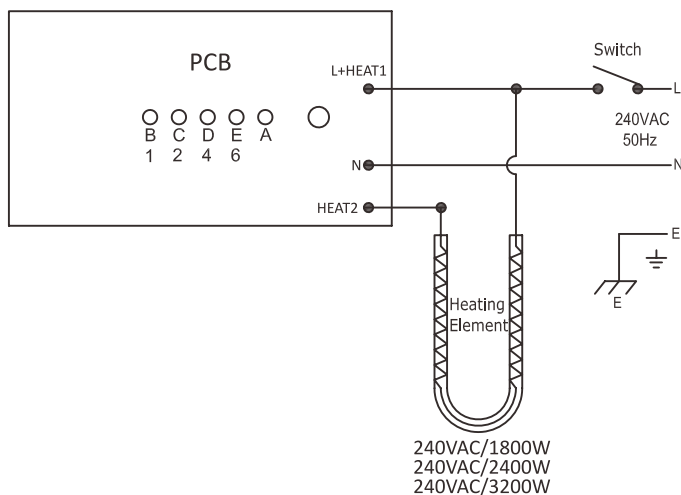
4 Capital Place, Carrum Downs VIC 3201
PHONE: (03) 9775 0556
FAX: (03) 9775 0775

WIRING SCHEMATIC DIAGRAM

VSH1800,VSH2400,VSH3200



VSH1800-R,VSH2400-R,VSH3200-R



CORRECT DISPOSAL OF THIS PRODUCT

If you do not plan to use the heater for extended periods of time, clean the heater and store it (preferably in its original packaging) in a cool, dry place.



Do not dispose of electrical products with household waste. Please check with your local council for advice on disposal or recycling. If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.