

# **RAD**tec

The Source for Outdoor Heating



## OWNER'S MANUAL

READ AND SAVE THESE INSTRUCTIONS

- *Read all instructions carefully before setting up and operating this unit.*
- *This manual is designed to provide you with the information needed to set up, operate, and maintain your radiant heater.*
- *Failure to follow these instructions may damage and / or impair its operation.*

## 1. INTRODUCTION

Thank you for your trust and support in choosing the RADtec Radiant Heater. Please read the instructions carefully before operating this product.

You have purchased one of the most advanced heating systems for indoor and outdoor areas. The infrared radiant heater is characterized by a focused distribution of heat, which transports heat evenly to where it is needed.

Keep these instructions for future reference and make sure to pass on the operating instructions to any subsequent owner of the unit and ensure that any supplements received are included with the instructions.

## 2. HOW FAR-INFRARED HEATING WORKS

At RADtec, our far-infrared radiant heaters' energy output is best compared to the warmth of the sun. To be more specific, our heaters operate just outside of "visible light" on the electromagnetic spectrum. Infrared light has the lowest frequency of all and therefore also the lowest energy level. Because of its wavelength, far-infrared "light" waves pass through the air, traveling around air molecules with virtually no ability to collide with and "excite" (heat) them. Instead, far infrared waves collide with the surfaces they encounter, gradually warming the surface (people/objects) within the space. It is what makes infrared heating the most efficient and healthiest way to heat any indoor or outdoor living space.

### **RADtec is the choice in electric radiant heaters for your outdoor or indoor areas**

Our far-infrared radiant heaters are produced through our unique design and manufacturing techniques. When finished, this production process delivers our unique aluminum alloy radiant panels. We at RADtec refer to this as "slimline" technology. The surface of each panel is prepared with a special coating. Inside, each heater is an embedded heating element. When supplied with electrical power (turned on), this heating element generates and transfers heat to people and objects.

## 3. PRODUCT OVERVIEW

### **Discrete, stylish heating for outdoor and indoor areas**

RADtec can provide effective and energy efficient comfort heating for outdoor and indoor areas. RADtec has successfully enabled many entertainment venues such as restaurants, pubs, and clubs to utilize their outdoor dining areas day and night, all year long. Within your workplace or business, RADtec can provide heating for designated outdoor smoking and leisure areas, as well as for workstation spot heating in factories, warehouses, and showrooms. Within your home, RADtec can provide comfort heating for covered alfresco dining and BBQ areas, patios, verandas, courtyards, and balconies.

### **Subtle, Slimline, No-Glow design**

The stylish, slimline black face of the RADtec radiant heater does not emit light or glow when in use, blending elegantly into your décor. Ceiling and wall mounting options ensure that your valuable floor, lounge and table space is not wasted.

### **Efficient cost effective electric heating**

The innovative design of the RADtec radiant heater enables comfortable and even heat dispersion from the surfaces with minimal operating costs.

### **Design flexibility**

Three RADtec models are available, ensuring the heating requirements of any outdoor or indoor area is possible. Brackets for direct ceiling/wall mounting are supplied with the unit.

### **Virtually maintenance-free**

The RADtec radiant heater incorporates no internal moving parts, ensuring quiet and virtually maintenance-free operation.

### **Easy to use**

The standard RADtec radiant heater is controlled with a simple on/off operation, and is either plugged directly into a power supply, or hard-wired via a wall mounted on/off switch. The unit takes approximately 10 minutes to heat up to maximum temperature and about 30 minutes to cool down, depending upon the ambient temperature. The higher end units come supplied with a remote control and a timed automatic shut-off function, giving you the convenience of remote operation.

### **Environmentally Friendly**

RADtec radiant heaters have no byproducts such as carbon or gas while operating.

## 4. PERFORMANCE FEATURES

**Coverage Area Table**

| Model No.   | Indoors                                 | Outdoor Enclosed                      | Outdoor Exposed                       |
|-------------|---|---------------------------------------|---------------------------------------|
| <i>X15R</i> | 50ft <sup>2</sup> ~ 4.6m <sup>2</sup>   | 40ft <sup>2</sup> ~ 3.7m <sup>2</sup> | 30ft <sup>2</sup> ~ 2.8m <sup>2</sup> |
| <i>X24R</i> | 80ft <sup>2</sup> ~ 7.4m <sup>2</sup>   | 65ft <sup>2</sup> ~ 6m <sup>2</sup>   | 50ft <sup>2</sup> ~ 4.6m <sup>2</sup> |
| <i>X33R</i> | 110ft <sup>2</sup> ~ 10.2m <sup>2</sup> | 90ft <sup>2</sup> ~ 8.4m <sup>2</sup> | 70ft <sup>2</sup> ~ 6.5m <sup>2</sup> |

### **Comfortable:**

No wind, light or odor produced while operating this product. Indoor air remains free of floating dust or allergens as a result.

### **Energy-Saving:**

Heat generated efficiently with low-power input. Controlling temperature in this manner allows you to save power and energy. Heating elements have a useful life of at least 20,000 hours of operation.

### **Physical Therapy:**

Heat therapy is most commonly used for rehabilitation purposes. The therapeutic effects of heat include increasing the extensibility of collagen tissues; decreasing joint stiffness; reducing pain; relieving muscle spasms; reducing inflammation and increasing blood flow. The increased blood flow to the affected area provides proteins, nutrients, and oxygen for better healing. Infrared heating technology is a convenient way to heat parts of our body. It has the advantage over direct-contact in that radiant energy can heat directly the area where the blood capillaries and neuron terminals are. When the heat comes from a direct contact source, it has to heat the external layer of the skin, and heat is transferred to the deeper layer by conduction.

## 5. OPERATING CONDITIONS

### **Ambient (surrounding) Temperature:**

- -30°C ~ +30°C
- -22°F ~ +86°F

### **Rated Voltage:**

- 220-240V (X24R, X33R);
- 110-120V (X15R)

**Rated Frequency:** 50Hz/60Hz

**Relative Humidity:** less than 95%

## 6. INSTALLATION REQUIREMENTS

### 1. Qualified Installer:

A licensed electrician should be consulted for installation, and electrical installation should be made in accordance with the national electrical code.

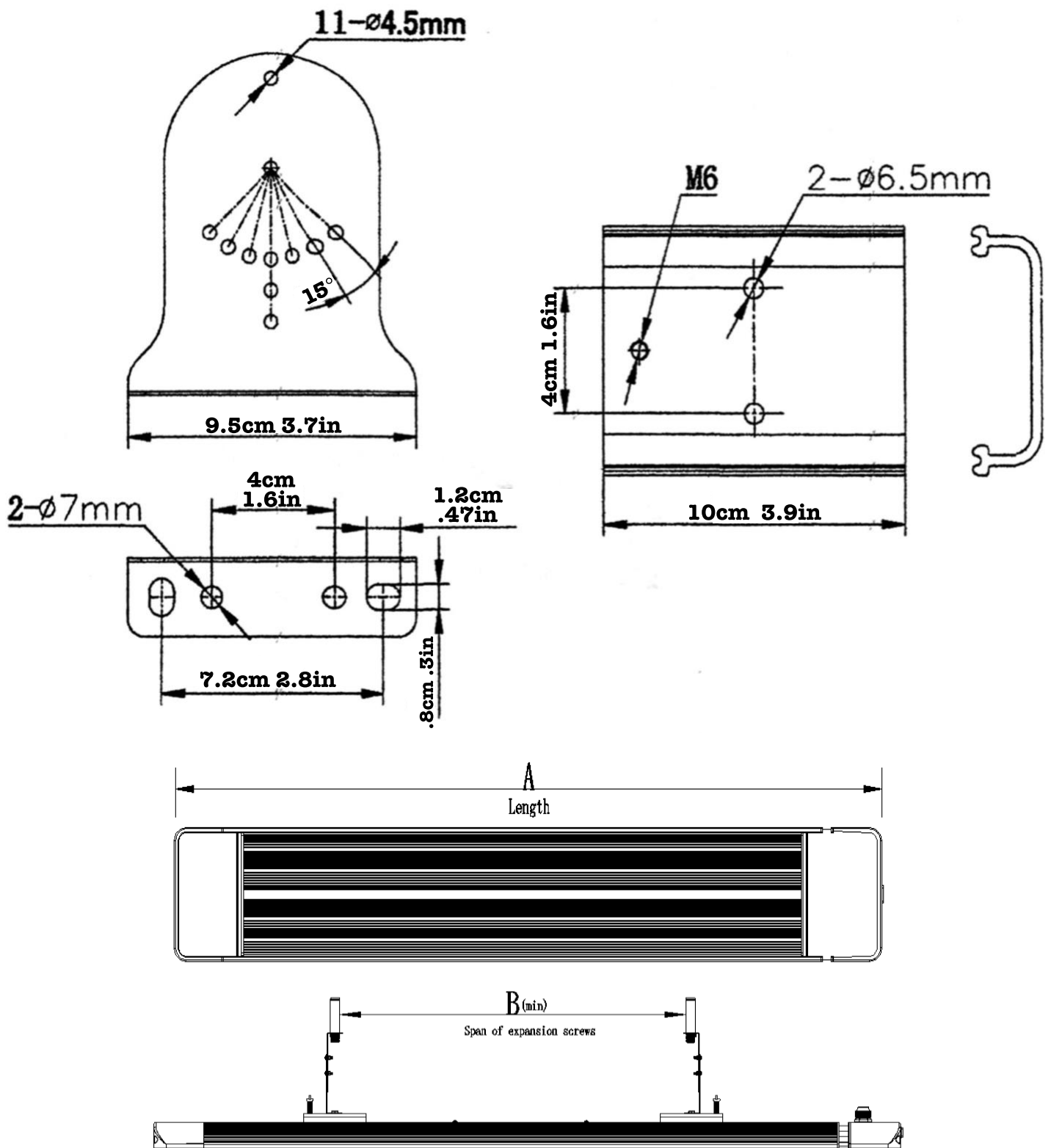
### 2. Installation Conditions:

- a. Before starting the installation, you must ensure that the operating voltage corresponds to that stated on the RADtec specifications label located on the side-panel of the heater. Supply Voltage fluctuation range should be within  $\pm 10\%$ . If condition not met, it must be resolved before installation
- b. If there is a severe security risk in users' electricity environment, the installation should be halted until the security risks are eliminated.
- c. Power lines should be equipped with earth/water leakage protection devices and a master switch.
- d. The ground wire needs to be connected to the grounding device in the building. If not, please consult with a professional installer. DO NOT put ground wire to/near a gas pipe, water pipe, lightning rod or telephone grounding wire.
- e. RADtec recommends an installation height of no less than 6ft (1.8m) above the ground.
- f. Never locate the heater where it may fall into a bathtub, pool, spa, or other wet area.

**Electrical Parameters Table**

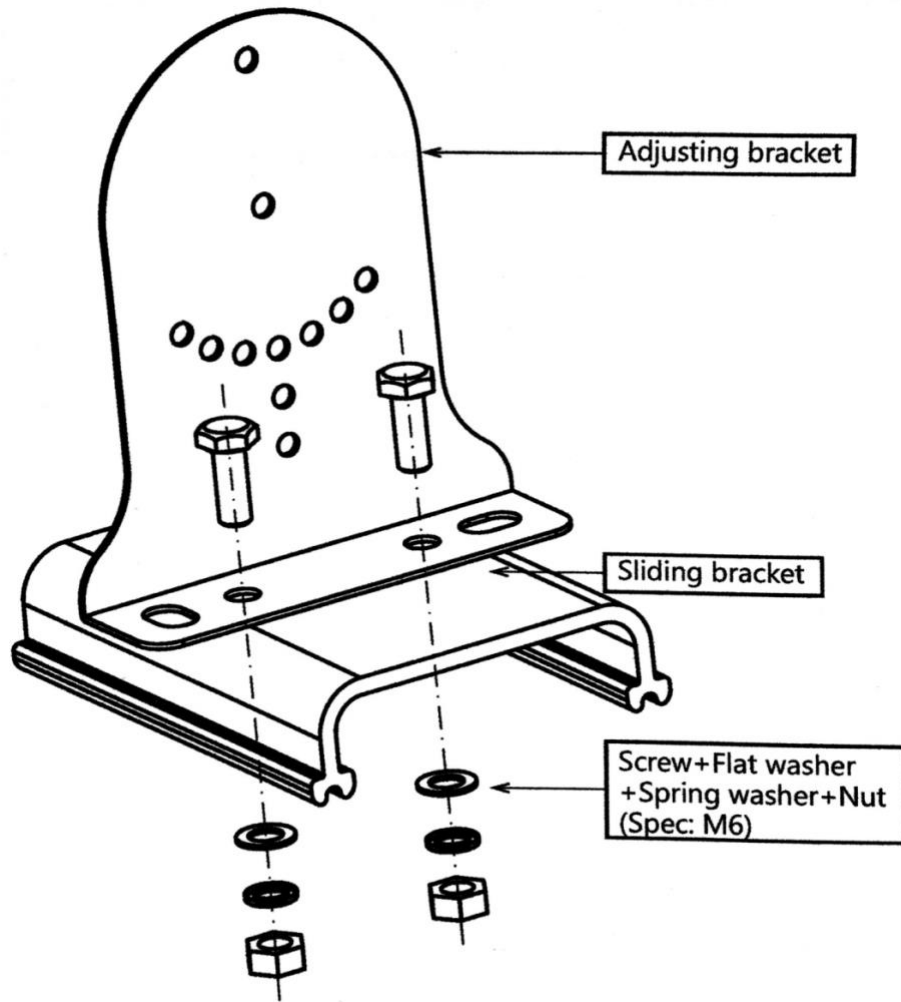
| Model No.   | Wattage(W) | Amperage(A) | Voltage(V) |
|-------------|------------|-------------|------------|
| <i>X15R</i> | 1500       | 13.6        | 110-120    |
| <i>X24R</i> | 2400       | 10.4        | 220-240    |
| <i>X33R</i> | 3300       | 13.9        | 220-240    |

# 7. INSTALLATION INSTRUCTIONS

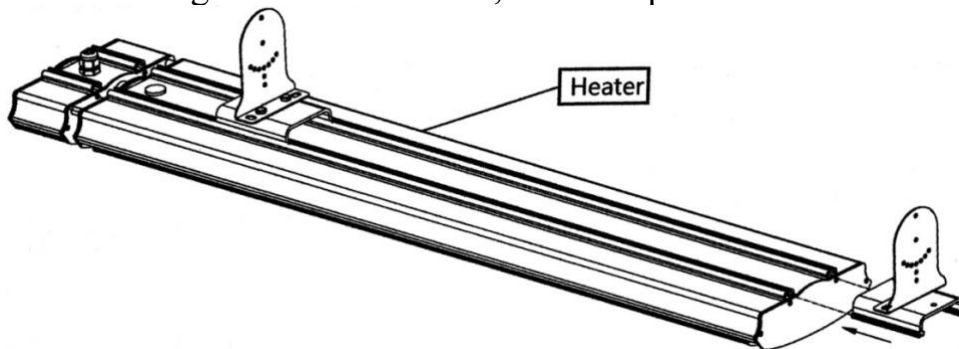


| Model No. | Dimension A (in) | Dimension B (in) |
|-----------|------------------|------------------|
| X15R      | 47               | 22               |
| X24R      | 57.5             | 31.5             |
| X33R      | 71.5             | 43.3             |

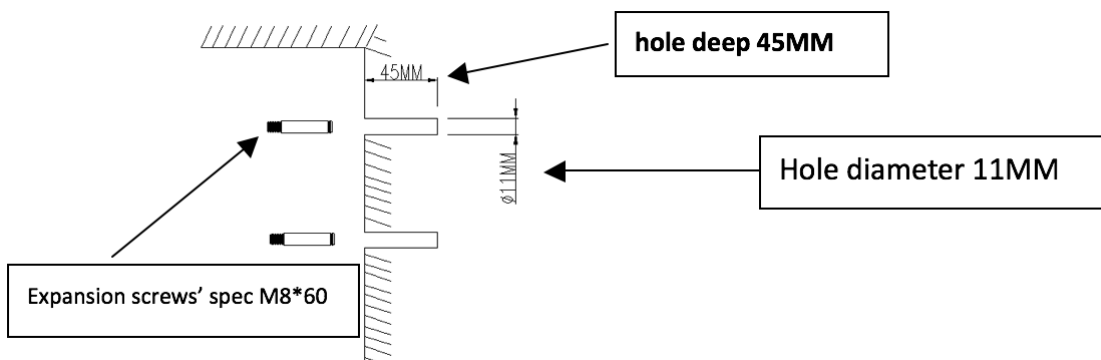
Step 1: Installation of adjusting bracket and sliding bracket.



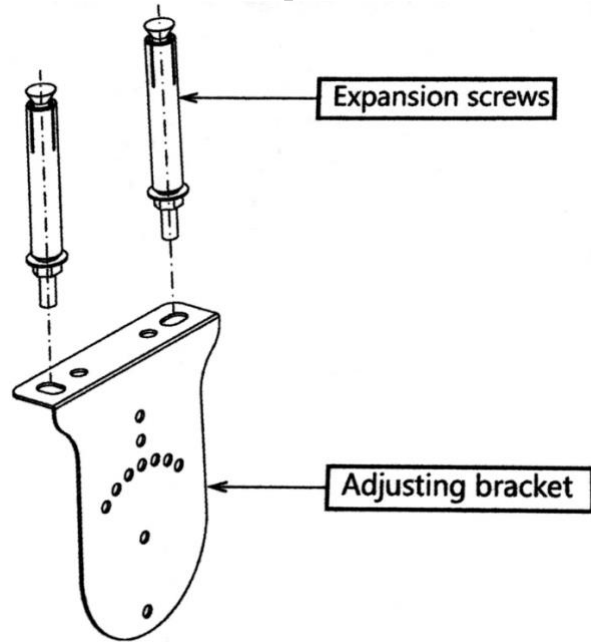
Step 2: Installation of sliding bracket and heater, as arrow points.



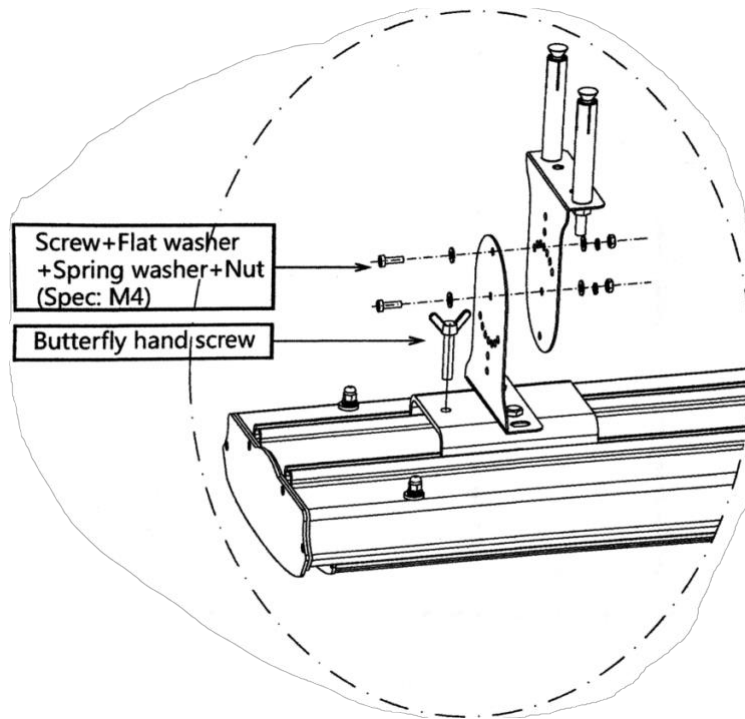
Step 3: 4 holes in wall and 4 expansion screws.



Step 4: Fix adjusting bracket into wall with expansion screws.

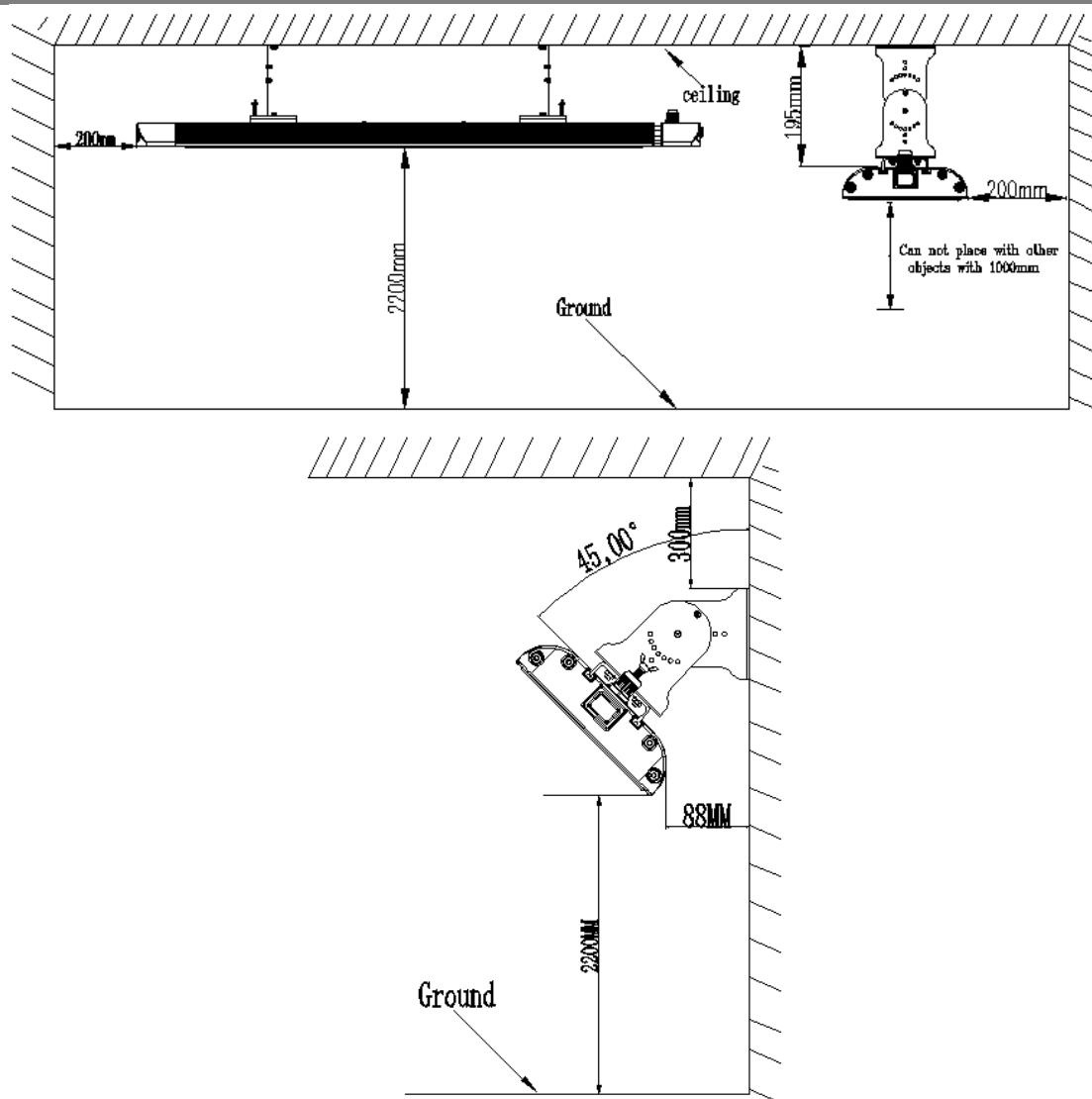


Step 5: Installation of two adjusting brackets. Make sure to lock brackets tightly by using the butterfly hand screw.





## 8. INSTALLATION DIAGRAM



## 9. REMOTE CONTROL INSTRUCTIONS



| ModelNO. | POWER(W) | P1(W) | P2(W) | P3(W) | TIME(H) |
|----------|----------|-------|-------|-------|---------|
| X15R     | 1500     | 495   | 990   | 1500  | 24      |
| X24R     | 2400     | 800   | 1600  | 2400  | 24      |
| X33R     | 3300     | 1089  | 2178  | 3300  | 24      |

## 10. INSPECTION ITEMS AFTER INSTALLATION

| Items to be checked  | Improper installation               |
|--|-------------------------------------|
| Is the unit stable?  | The equipment may fall off or shake |
| Is heat insulation adequate?                                     | May damage objects close to unit    |
| Is power voltage the same as voltage shown on product nameplate? | Equipment failure                   |
| Is the wired connection correct?                                 | Equipment failure                   |
| Is grounded electrical connection safe?                          | Risk of electrical leakage          |
| Does wiring conform to standards?                                | Equipment failure or circuit        |

## 11. ATTENTION

Due to thermal expansion and contraction, the heater will make noise when turning on and off. This is a normal phenomenon and will not affect unit performance.

## 12. STARTING HEATER FOR THE FIRST TIME

1. Do not turn on power before finishing all installation work.
2. Make sure all wired connections are correct and firm.
3. All objects must be removed from heater vicinity.
4. Power-up heater and observe working status.

## 13. SAFETY PRECAUTIONS

1. Do not use the same power outlet together with other appliances. Doing so may cause current overload.
2. Stop power supply immediately if heater fails or if wires are broken. Users should not repair heaters themselves. Contact authorized servicer if heater fails.
3. The radiant heater should not be placed directly above the power outlet.
4. The radiant heater shouldn't be installed lower than 1.8 meters (6 feet) from the ceiling.
5. The heater's surface cannot be covered.
6. Do not hang objects from the heater.
7. Distance from back of heater to ceiling/roof should not be closer than 150mm (3 inches). Distance from front of the heater and any object should not be within 1000mm (3 feet). Distance from a side of the heater and any object should not be within 200mm (7 inches).
8. For cleaning, turn the unit off and wait for a minimum of 1 hour. Then use a damp cloth to wipe exterior of the unit. Never use any cleaning products/chemicals on the heater itself. **DO NOT FLUSH OR SPRAY UNIT WITH WATER.**
9. Do not install or operate heater in areas with flammable or explosive objects or in areas where users are susceptible to electric shock (wet areas).
10. Do not insert any metal or foreign objects inside of heater.

11. Do not touch the surface of the heater when powered on. Surface temperature can reach 250°F ~ 380°F (121~193°C).
12. Do not splash water onto the heater to avoid accidents.
13. Wait for a minimum of 1 hour after powering heater OFF to touch the surface.
14. Make sure no cables, furniture, flammable materials or other items come into contact with the surface of the heater.
15. The local building and fire safety regulations must be observed concerning this product.

## 14. PRODUCT SPECIFICATIONS

| Model No.   | Dimensions (in) | Weight (lbs) |
|-------------|-----------------|--------------|
| <i>X15R</i> | 47 x 8 x 2      | 21           |
| <i>X24R</i> | 58 x 8 x 2      | 27           |
| <i>X33R</i> | 72 x 8 x 2      | 30           |

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