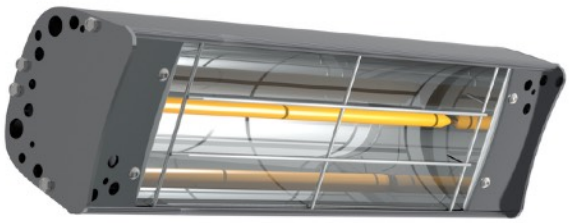
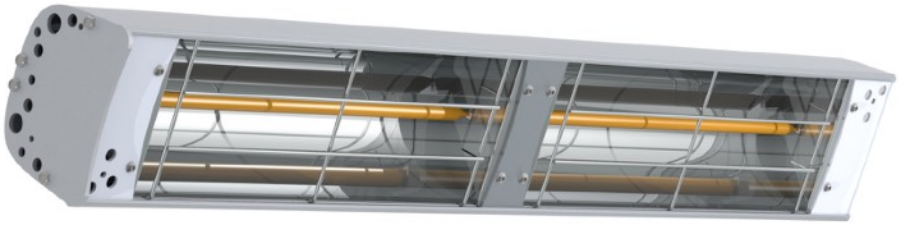
striking energy

Generation 4
Instruction manual





REV 2.1

Introduction

Congratulations on purchasing South Africa's leading quality infrared heater. It will provide you with years of economical and effective heating. Our heaters are virtually maintenance free and easy to install.

Reading this instruction manual will assist you to properly install and operate your new infrared heater.

Features

- Miro reflector (96% electricity converted to heat)
- Completely rust free: units are constructed from high grade aluminium and stainless steel
- Elements are quick and easy to replace
- Manufactured in South Africa
- Parts available locally
- Dimmable to control heat and save electricity (dimmer sold separately)

Generation 4 Models

The table below lists the heaters that is available in our Generation 4 range.

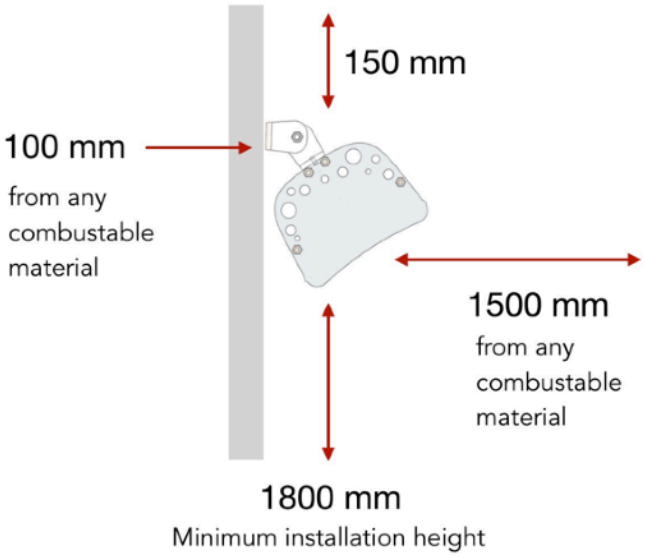
	Short Wave – Quartz Halogen Elements	
Power	**Ultimate (Amber) Range**	**Ruby Range**
1000 watt	G4 1000 Gold	G4 1000 R
1500 watt	G4 1500 A	G4 1500 R
2000 watt	G4 2000 A	G4 2000 R
3000 watt	G4 3000 A	G4 3000 R

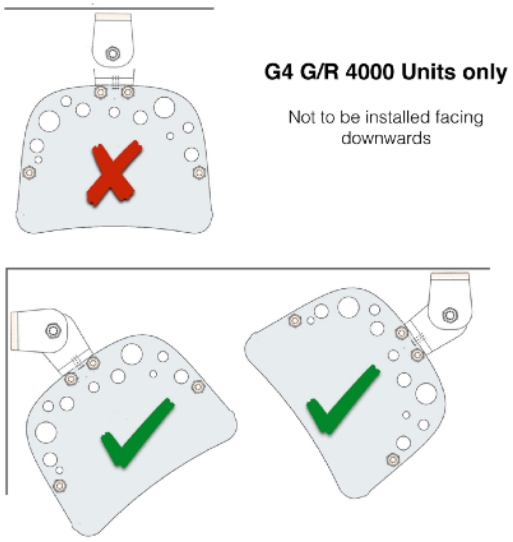
Safety instructions

- **NEVER touch the Quartz Halogen elements. It will cause premature element failure.** If anyone did touch the element, please refer to the paragraph titled "**Cleaning the heater**" on page 8 and follow the instructions carefully **before switching on the heater.**
- The appliances must be installed by a qualified electrician according to the legal regulations as published.
- The heater must always be earthed.
- DO NOT cover the heater with anything.
- The heater must be installed at an angle to allow for sufficient airflow.
- If the heater is installed without a plug, or with other means for disconnection from the supply, a double pole isolator should be used.
- The heater must not be installed in an enclosed area. It must always be surface-mounted and allow for proper ventilation. Do not allow any heat build-up.
- Do not install on any plastic or surface other than cement, steel or concrete.
- Ensure proper insulation when installing on a wooden surface.
- The minimum ventilation openings around the heater, after installation, must be between 100 and 200 mm from the top and sides and at least 1500 mm away from any combustible materials or flammable items (chemicals, furniture, carpets, clothes, curtains, etc.).
- Remove the foam that protects the lamp during transit before operating the heater.
- The heater MUST be installed above 1.8 m from the floor surface.
- Ensure that the heater is properly fixed using the supplied swivel brackets.
- Permanent wall plugs and/or screws should be used.
- Do not use any form of adhesive tape or temporary fixing.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons to avoid any hazards.
- When installed in a bathroom/jacuzzi area, install it in such a way that the heater, switches and other controls are out of reach of anyone in the bath/jacuzzi.

Safety installation distances

Always ensure that heaters are mounted on **non-combustable** material.





Unpacking

- Carefully remove the heater from the box.
- Remove all plastic, white polystyrene and/or any other packing aids.
- Remove the protective foam or any other packaging material from behind the element.
- Ensure that all parts (see **Included in the box** below) are retrieved from the box.
- Never touch the Quartz Halogen elements. If you do need to clean the element before switching the heater on for the first time, please refer to the paragraph titled "**Cleaning the heater**" on page 8 and follow the instructions carefully.

Included in the box

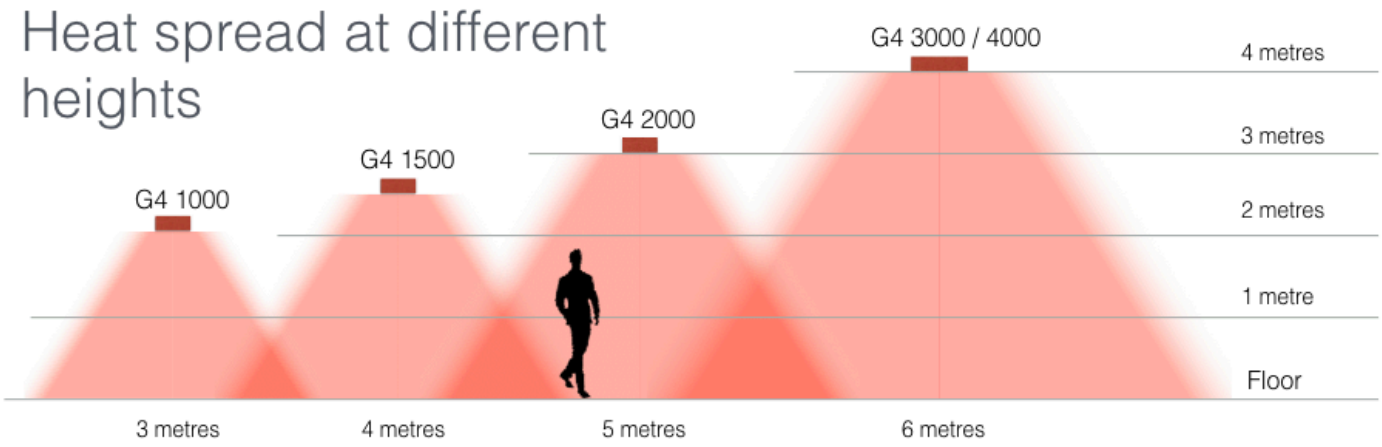
- Your new Striking Energy Generation 4 infrared heater (two 4 mm hex screws already located in the bracket slot on the heater).
- Sealed packet with the following items:
  - Two Stainless Steel wall brackets
  - Two 6 mm Nail-in anchor screws (to mount brackets to the wall)
  - Two 4 mm hex nuts
  - Instruction Manual

Choosing position to install

Understanding the characteristics of infrared heat will help you select your ideal position. This is not an exact science and this discussion can serve as a guideline..

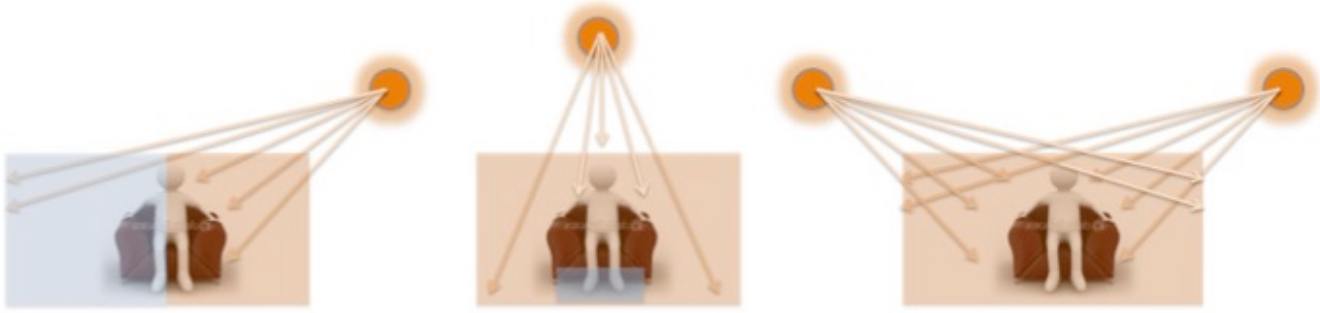
Height vs wattage: The heater has an 80-85° spread angle, meaning that the higher the installation, the less heat reaches the target. The ideal height for a 1500 watt heater is between 1.8 m and 2.5 m. If installation is only possible higher than 3 m, then consider the 3000 watt heater. Sometimes it is more economical in terms of cost to rather use a 3000 watt heater at a height of 3.5 m, than two 1500 watt heaters at the same height.

Position the heater according to the heat spread. You can use the diagram below to decide on the optimal height to mount your new heater. It is based on an average level of optimal comfort for each heater and is generally the optimal heigh you could choose.



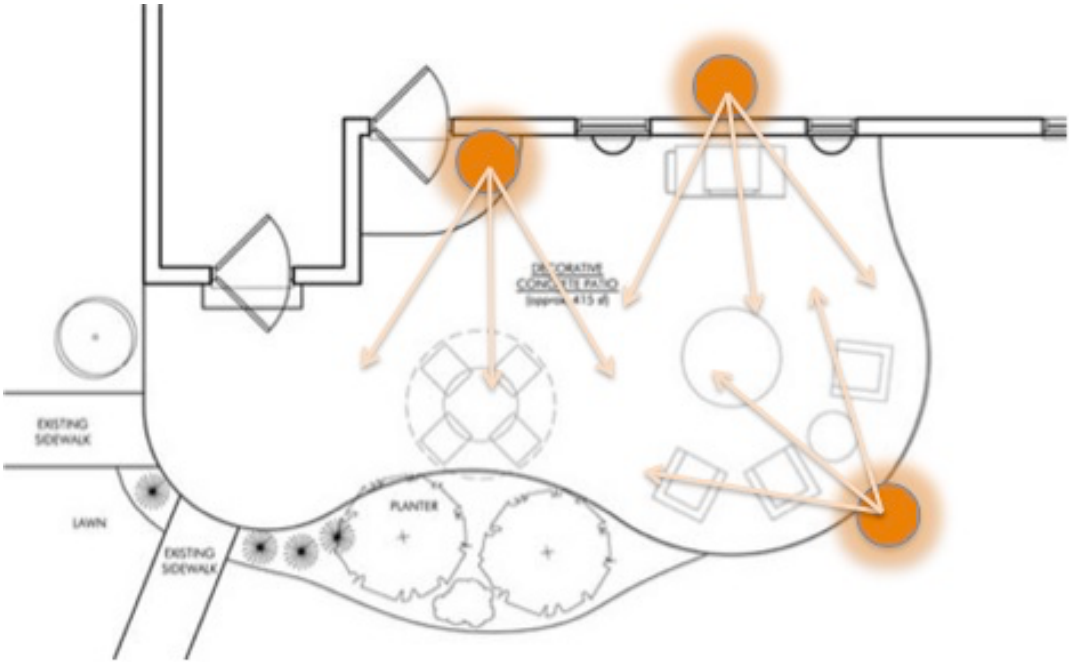
The reflector determine the heat spread. The higher the heater the wider the spread.

Shade: Think of infrared heat as being similar to light rays, which means it can cast shadows. Imagine your heater is a light. The shaded areas will not receive direct heat, although it receives a lower level of "scattered" light. The more heaters you install in an area, the higher the "scattered heat" will be. If you use more than one heater in a specific area, try and position them either in a zig-zag pattern or opposite each other.



Direction: At 12 o'clock (noon) the sun shines almost directly from above and is warmer than during early morning, because there are less shaded areas. This is the same with infrared. The larger the angle of installation (when wall mounted) the more shade there is. For safety reasons, units connected to sensors and/or dimmers must not be installed facing downwards.

Current available: Each 1500 watt heater draws about 8 ampere, while a 3000 watt heater draws about 16 ampere. A typical residential "trip switch" can accommodate two 1500 watt heaters or one 3000 watt heater. If you require more than that, you will have to run a separate supply from the distribution box. Industrial clients must ensure that they have sufficient amperes available for larger installations. **To be legally complaint, all installations must be done by an electrician.**



Location: Always keep the area that you are living in, as well as the positioning of the installation (e.g. south) in mind. You will have to compensate for this when choosing the optimal place and angle of installation. You can either install more heaters by moving them closer together, or use the double element heaters.

Installation

New Fixed Mounting bracket - We have replaced the standard swivel brackets with a new design Stainless Steel bracket . This bracket is more accurate to align horizontal, easier to install and have fixed angles for either wall or ceiling mount*

Wall Mount

This angle will ensure that heating zone is from straight under the heater four meter to the front

Roof Mount (* Only Single Element heaters)

* Alternative position for downward positioning.
* This position not Suitable for G4 3000

Installation

Ensure that you adhere to all safety distances and measures discussed in this manual.

1 . Decide on the position / location (See page 5 and 6)
2. Mark two holes on the wall, indicating the position where you want to install the heater. These holes must be between 100 and 300mm apart and LEVEL
3. Drill a 6 mm hole about 70 mm deep on both positions
4. Fix Both Wall brackets using the supplied 6 mm anchor screws (plastic inserts)
5. Fix the heater to the wall brackets using the supplied M4 hex bolt.
6. Connect the electrical wire to the supply as per building regulations.

Operating the heater

- This appliance is not intended for use by any children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless under supervision or if they have been given instruction concerning the use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- Do not cover or obstruct the heater at any time.
- Never use the heater with a programmer or timer that switches the heater on automatically, since a fire risk exists if the heater is accidentally covered or positioned incorrectly.
- The safety grid does not give full protection. Never touch the Quartz Halogen elements.
- Do not insert any object through the front grid or opening in the heater.
- Do not leave the heater unattended. Always switch it off before leaving the room/area.
- Do not stare at the element while it is switched on. Prolonged staring at the element may cause damage to the eyes.
- The heater can be used outside, but must be sheltered from any rain or water.
- The heater is NOT waterproof, but is safe for using in a humid environment.
- Disconnect the unit from the mains during installation, when cleaning, or when replacing the element.
- To avoid risk of burns, always ensure that the element and heater body had sufficient time to cool down before cleaning.
- Do not handle the element with bare hands. If it is inadvertently touched, remove any and all finger marks with a soft cloth or paper towel and methylated spirit or alcohol. Otherwise, the marks will burn into the element causing premature heater failure.
- Do not touch the element with any object (including cigarettes).

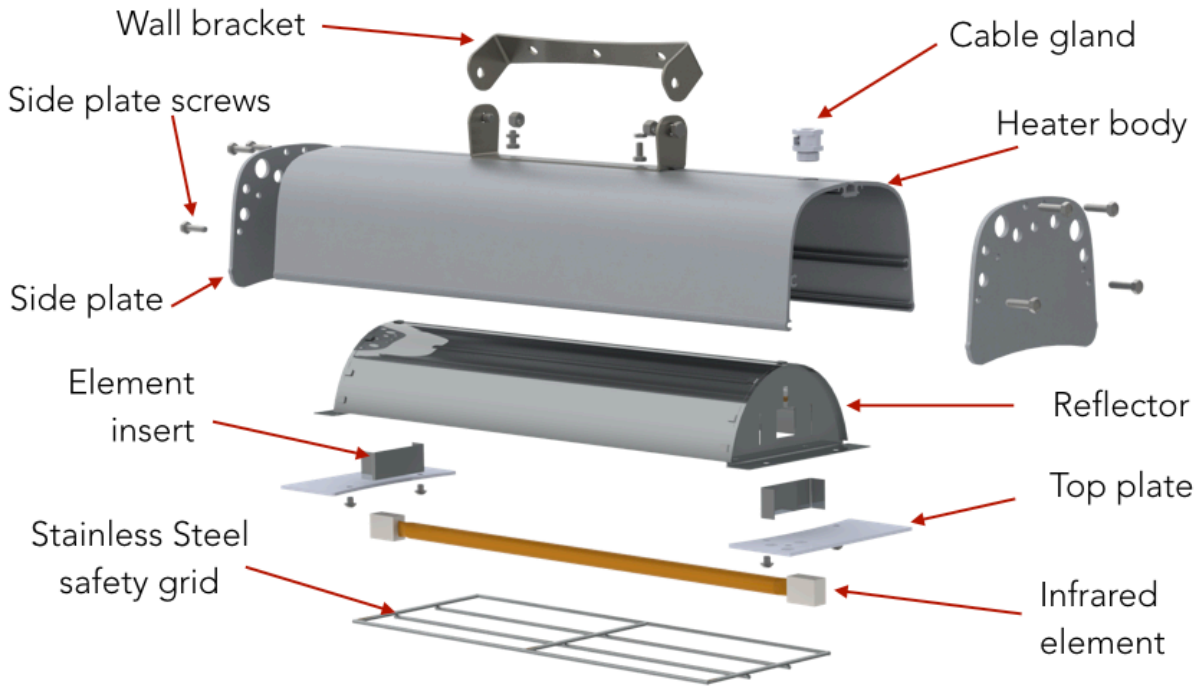
Cleaning the heater

Your heater should be cleaned once a year. Installations in coastal areas will require more frequent cleaning, possibly once a quarter.

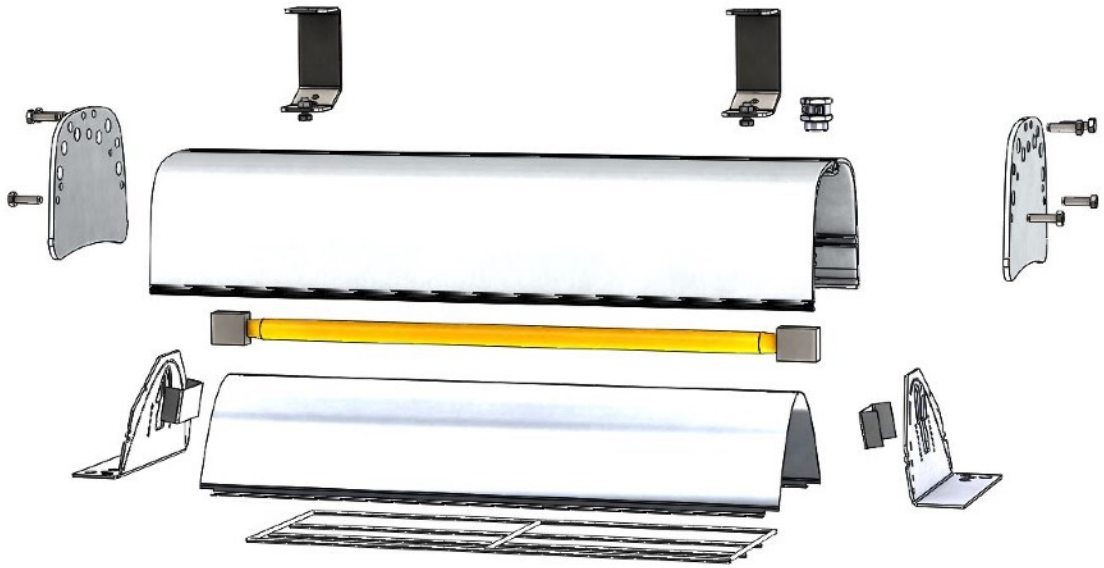
- Ensure that you have disconnected the heater from the electrical supply and that the unit has sufficiently cooled down.
- If there is only dust on the inside, clean it by blowing compressed air over the surface.
- Remove the fire grid in front of the heater by pulling it carefully to the front.
- Unclip one side first then the other.
- General dishwasher soap and water will clean the inside and outside of the body.
- Be sure not to touch the element with bare hands.
- Should you accidentally touch the element, very carefully wipe it with a paper towel or clean, soft cloth dipped in either alcohol, acetone (like Cutex remover) or methylated spirits. Never use soap to clean the element, as any fatty/soapy marks on the element will permanently damage the element when switched on.
- Clean the inside of the heater at least once a year to remove any dust and dirt build-up. This will ensure optimal reflection of the infrared beams and prolong the life of the heater.

Gen 4 Parts diagram and exploded view

Quartz Halogen models

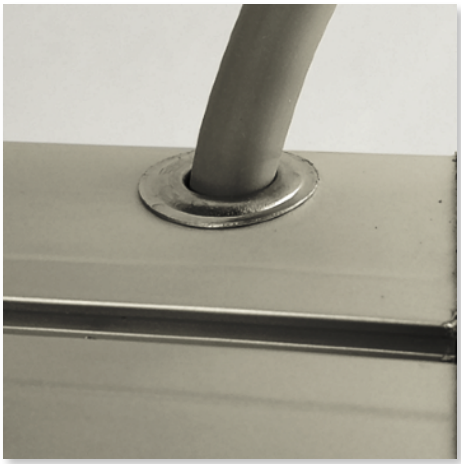


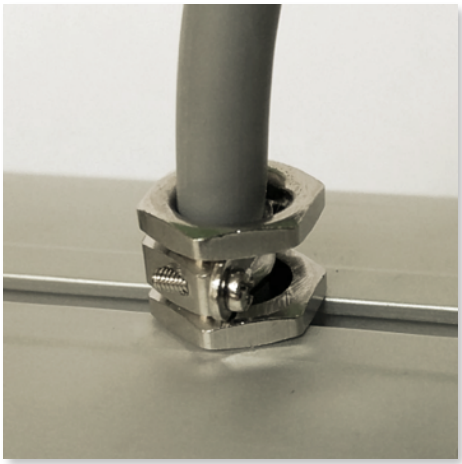
G4 Models 2019 and later



Replacing the element

The following two images shows the types of fasteners. The cable gland secures the cable on its own. The Eyelet ring, coupled with a P-Clamp fastener secures the cable inside the body.





Refer to the images on page 9 when you need to identify any heater parts that you are not familiar with. The following sections will walk you through replacing either the Quartz Halogen element or the Ceramic element. Please follow the steps applicable to your heater type.

Replacing the Quartz Halogen element

Note: Throughout the entire process never touch the glass part of the new Quartz Halogen element. You can easily replace the element by carefully holding the ceramic caps at the ends of the element.

Tools required
Pliers, small screw driver (flat/Philips)
Number 7 spanner (optional)

To watch an instructional video:
- Scan the 3D Barcode or
- Go to http://youtu.be/6uEf6qXCxdY

These instructions apply to both single and double body heaters. Please note special instructions for your type of heater when indicated.

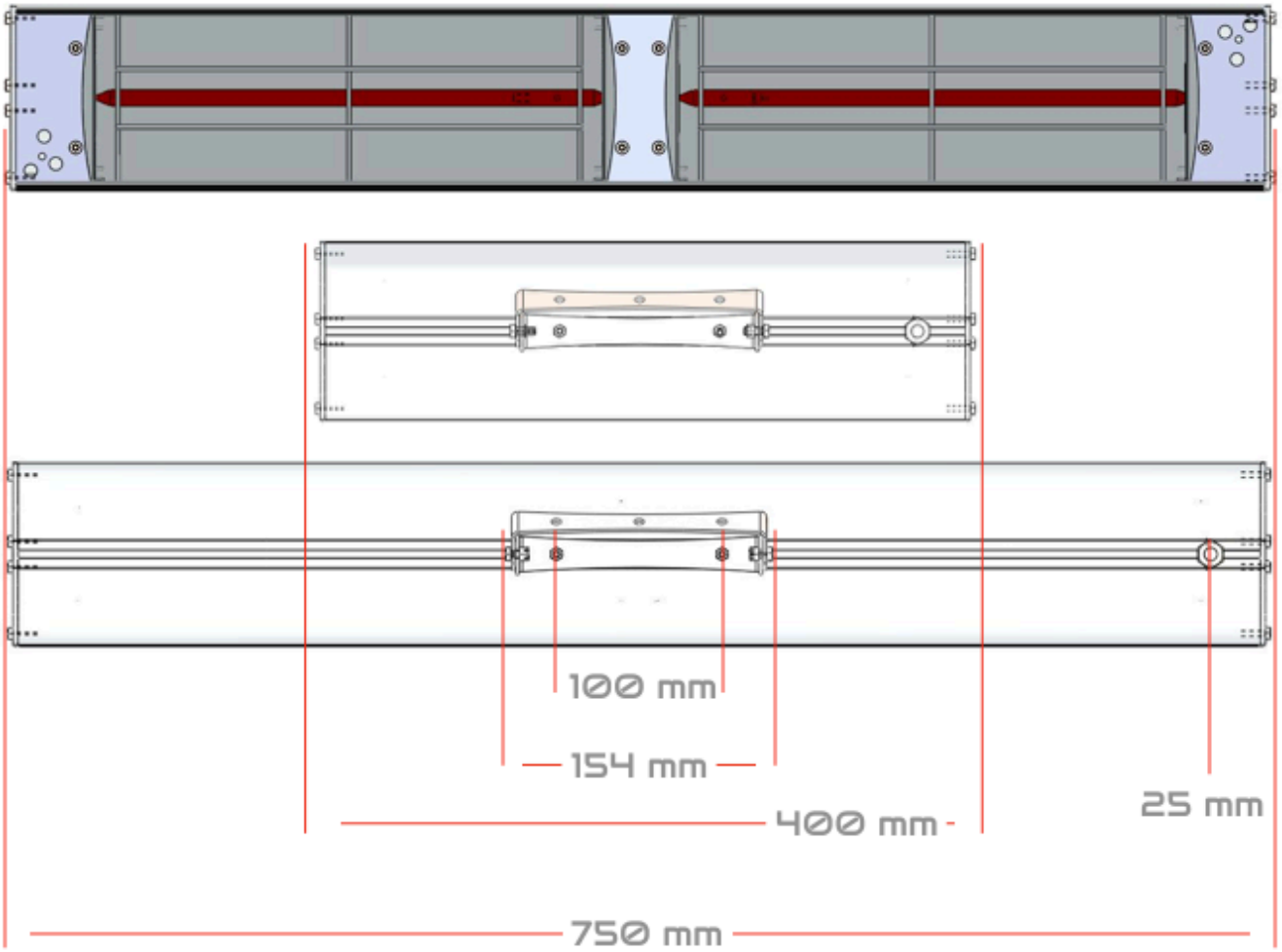
Dismantling

1. Disconnect the power supply completely. Ensure that the element is not illuminated and that both the heater and element are cool.
2. Remove the grid by pulling it carefully to the front. It should pop out of the grooves. It will help pulling on the centre part while keeping the sides down with your thumbs/hands.
3. Remove the four hex screws and side plates on both sides.
4. **For the double element heater models: carefully slide the complete reflector unit out of the body, taking note of the slots running down the heater body as it will be inserted the same way later**.
5. Locate the two reusable white ceramic connectors linking the brown and blue electrical wires coming from the element. Unscrew them without damaging the wires or connectors.
6. **For the double element heater models: unscrew the third ceramic connector located between the two elements**.
7. Unbend the small reflective inserts back to 90° and push them out carefully.
8. Lift the element so that you can slide it through the large openings. Proceed to carefully slide the element out one side and remove from the heater.
9. Remove your new element from its box. Tear the box open rather than pulling by the white ceramic caps on the element, as it may easily break and render the element useless.

Assembly

1. Proceed to insert the element from the front of the heater. Feed one of the cables through the opening and follow with the ceramic cap. Carefully push the element through so that the other side can be inserted.
2. Lower the element into the smaller parts of the openings.
3. Replace the small reflective inserts carefully. Bend them back towards each other, but only about ¾ of the way in order to allow for easy removal in the future. For double element heaters, repeat steps 1 to 3 for the second element.
4. Reconnect the wires by first sufficiently merging the metal wires (twist together tightly with pliers) and then tightly connecting the small ceramic connector blocks. Take special care that no metal parts of the wires are exposed when finished as it may cause heater failure.
5. **For double element heater models: the wires from the elements meeting in the middle of the reflector unit need to be shortened to about 100 mm in length and connected together with the wire present in the middle of the reflector (the three wires will be merged and connected with the small ceramic connector)**.
6. **For double element heater models: carefully slide the reflector unit into the heater body**.
7. Reconnect the side plates. If possible, ensure that the wires do not directly touch the reflector, as this will help to prolong the life of all the parts.
8. Clip the safety grid back into place, taking special care not to push it too far and damaging the reflector.
9. Reconnect the electricity.

Gen 4 dimensions

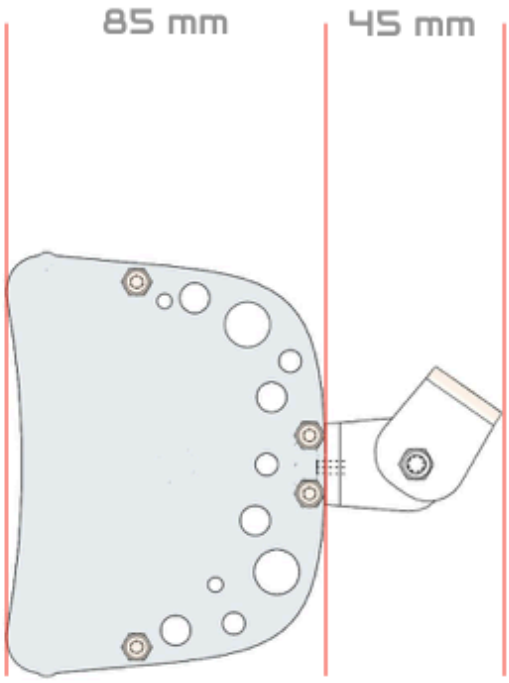


Generation 4

Infrared Heaters
Single and Double

1000, 1500, 2000 watt
3000, 4000 watt
230 volt
50Hz

striking energy

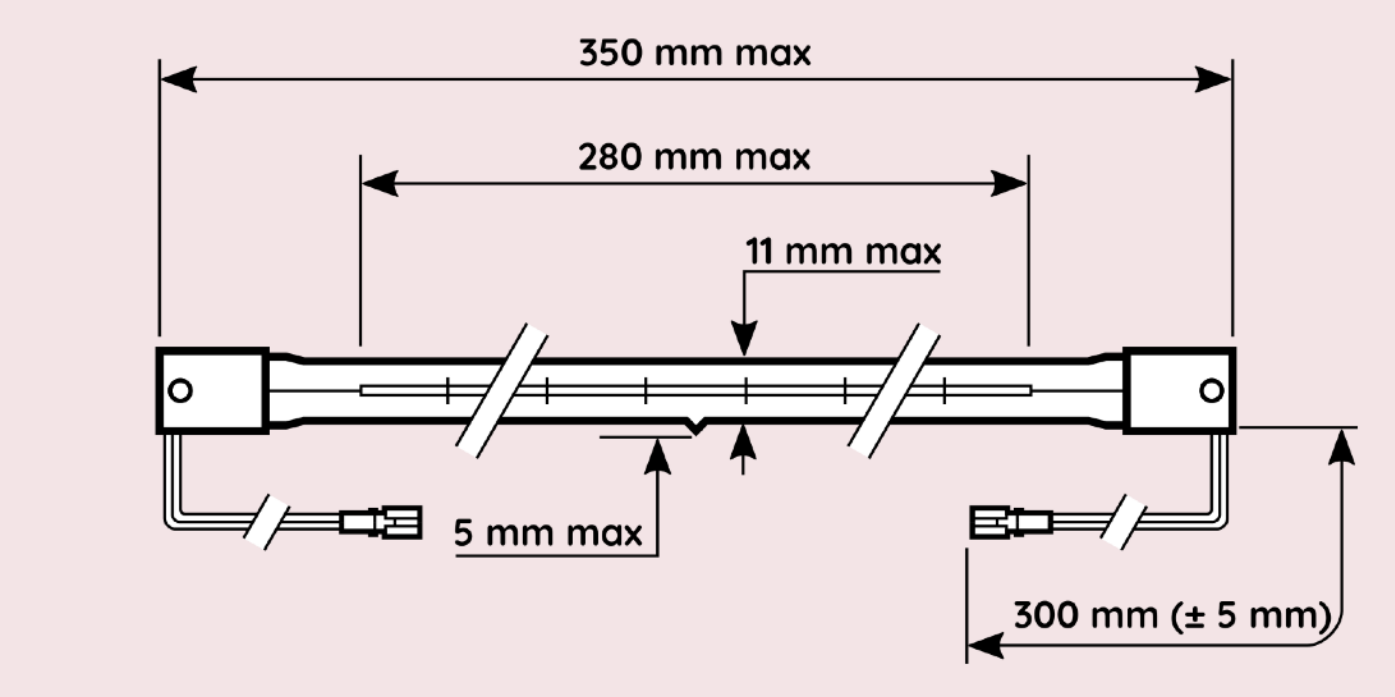


Technical specifications

Short Wave heaters with Quartz Halogen elements

Lamp type / wattage	Single element	Double element
Amber/Gold range	1000/1500/2000 watt	3000/4000 watt
Ruby range	1000/1500/2000 watt	3000/4000 watt
Material	Aluminium (6063,1200H4), Stainless Steel 304 Safety grid: Electro polished Stainless Steel.	
Electrical requirements	1000 watt – 5 Amp 1500 watt – 7 Amp 2000 watt – 9 Amp All heaters: 230 Volt, 50 Hz	3000 watt – 14 Amp 4000 watt – 18 Amp All heaters: 230 Volt, 50 Hz
Overall dimensions	380 x 110 x 105 mm	760 x 110 x 105 mm
Preferred burning position	Horizontal as well as vertical position.	
Element life	Half life of 5000 hrs for Ruby and Gold.	
Electrical cable	Three-core 1.5 mm silicone. Open ended.	Three-core 2.5 mm silicone Open ended.
Warranty	5 Years on body, 1 year on electronics.	

Quartz Halogen elements



Striking Energy. - STANDARD EQUIPMENT WARRANTY

Striking Energy warrants that all Striking Energy. manufactured equipment will be free of any defect in materials or workmanship for the following period: Space Heaters (G ranges) - 2 years, Gx Range - 2 years, All electronic components - 1 year.
Warranty begins from the date of shipment from a Striking Energy facility. The warranty is extended to customers and applies to all Striking Energy manufactured equipment purchased, installed, and used for the purpose for which such equipment was originally designed. The above warranties cover only defects arising under normal use and do not include malfunctions or failures resulting from misuse, abuse, neglect, alteration, problems with electrical power, usage not in accordance with product instructions, acts of nature, or improper installation or repairs made by anyone other than Striking Energy or a Striking Energy authorised third-party service provider. Striking Energy reserves the right to substitute functionally equivalent new or serviceable used parts.

WARRANTY CLAIMS AND PROCEDURES

1. During the applicable Standard Equipment Warranty Period outlined above, customer's sole and exclusive remedy for any breach of the Standard Equipment Warranty will be, at Striking Energy's sole discretion and option, the repair or replacement of the defective product. Components that customer claims to be defective must be available to Striking Energy for inspection and evaluation. To be entitled to rights under the Standard Equipment Warranty, the customer must notify Striking Energy in writing within thirty (30) days after discovering a suspected defect in any product, but in any event prior to the expiration of the applicable Standard Equipment Warranty Period. Notice to a Striking Energy dealer, systems integrator, sales representative or other third party is not notice to Striking Energy. Following its receipt of any such customer notice, Striking Energy will determine whether the reported problem is covered by this Standard Equipment Warranty. If Striking Energy determines that the problem is covered, Striking Energy will authorise repair or replacement of the defective product, as deemed appropriate by Striking Energy in its sole discretion.
2. Before shipping any product to Striking Energy, the customer must obtain a written return authorization from Striking Energy, and provide any proof of warranty eligibility requested by Striking Energy. Any product received by Striking Energy without a return authorization may, at Striking Energy's option, be returned to the customer collect. If a warranty replacement part is required, customer shall provide Purchase Order to Striking Energy prior to shipment of the replacement, to guarantee the return of the rejected unit. Purchase Order is valid until suspected part is received and warranty is confirmed by assessment. Once a return authorization is obtained, the customer is responsible for packing and shipping the product/component to which its warranty claim relates to a service facility designated by Striking Energy, within thirty (30) days after receipt of the return authorization. Upon receipt of replacement equipment (or part thereof), customer has thirty (30) days to tender the defective equipment (or part thereof) to the return carrier for shipment to the service center designated by Striking Energy. If customer does not timely return the defective equipment (or part thereof), Striking Energy shall invoice customer for the list price of such equipment (or part thereof), plus applicable shipping. Such failure to return the equipment (or part thereof) may, in Striking Energy's discretion, be grounds for termination of the warranty and/or suspension of any future advance exchange privileges until such outstanding defective equipment has been returned.
3. Striking Energy will provide customer with new, rebuilt, refurbished or alternate equipment (or part thereof) of equal or improved quality, as exchange equipment (or part thereof) to replace eligible defective equipment (or part thereof). Any alternate equipment (or part thereof) will meet or exceed the specifications of the replaced equipment (or part thereof). Rebuilt or refurbished equipment may bear cosmetic blemishes that do not affect performance. Unless otherwise specified by Striking Energy in writing, repaired or replaced equipment (or parts thereof) are covered only for the remainder of the term of the applicable Standard Equipment Warranty. All defective equipment (or parts thereof) replaced by Striking Energy become the property of Striking Energy. Striking Energy has no obligation to (i) service, exchange or otherwise replace any equipment (or part thereof) that has been damaged, modified, abused, misused or over-used as determined by Striking Energy or has been used with non-Striking Energy supplies or products that have caused damage or malfunction; (ii) paint, refinish, refurbish, restore or exchange any equipment (or part thereof) with cosmetic blemishes; (iii) service, exchange or otherwise replace any equipment (or part thereof) if the same would interfere with, impede or be redundant with normal or scheduled maintenance of such equipment (or part thereof); (iv) service, exchange or otherwise replace any equipment (or part thereof) that is within sixty (60) days of the end of its production life; or (v) provide any 3rd party application software

support or service involving application hardware or replace any accessories. If Striking Energy elects to perform any such services at customer's request, then such services will be deemed a service call and all labor, parts and materials used for the service call will be charged at Striking Energy's then- prevailing rates.

EQUIPMENT WARRANTY EXCLUSIONS

Striking Energy does not warrant or guarantee, and is not responsible for:

1. Any heating element.
2. Defects, failures, damages or performance limitations caused in whole or in part by (A) power failures, surges, fires, floods, snow, ice, lightning, excessive environmental heat or cold, highly corrosive environments, salt deposit from sea spray, accidents, actions of third parties, or other events outside of Striking Energy's control, or (B) customer's abuse, mishandling, misuse, negligence, improper storage, servicing or operation, or unauthorised attempts to repair or alter the equipment in any way. Customer must provide qualified technical personnel to maintain and repair the equipment.
3. Alterations and/or Modifications to any part of Striking Energy's product, without Striking Energy's written authorization unconditionally VOIDS the Striking Energy Standard Warranty. Equipment built to customer's specifications that are later found not to meet customer's needs or expectations.
4. The performance of the equipment when used in combination with equipment not purchased, specified, or approved by Striking Energy.
5. Batteries and other consumable goods.
6. Wearable items, such as elements, tooling, cables, part harnesses, contacts etc.

ADDITIONAL WARRANTY NOTES

1. OEM or third-party equipment that is incorporated into Striking Energy equipment is covered under the applicable Striking Energy Standard Equipment Warranty unless the OEM or Third-Party equipment carries its own limited warranty, in which event the OEM or third-party warranty will apply to such equipment incorporated into Striking Energy equipment. For example and not limitation, PCs, LCDs, PLCs, motors and drives are OEM products that have a limited 1 year manufacturer's warranty.
2. Items Sold As Resale. Items sold as resale are such items that are not manufactured by Striking Energy but may be utilised in conjunction with or independently of Striking Energy manufactured equipment (such as computers, printers and network adapters) and shall be covered only by the specific warranty terms of the supplier or original equipment manufacturer of those items.
3. The Striking Energy Warranty applies to the original purchaser, and is not transferrable. Used Equipment.

DO NOT COVER

HOT SURFACE

IF THE EQUIPMENT SPECIFIED IN AN ORDER IS DESCRIBED AS USED, UNLESS OTHERWISE AGREED IN WRITING BY THE PARTIES, IT IS SOLD "AS IS" AND WITH NO WARRANTY.

Updates to these instructions are available from our website: visit www.striking.co.za

VERSION 3 July 2020