

# INSTALLATION GUIDE



Bath and shower water is 40-45°C. Geysers should heat water to above 55°C to kill bacteria. The water in the geyser is hottest at the top and coldest at the bottom.

Setting the thermostat depends on multiple factors, but the goal is to set it to the lowest acceptable temperature in order to minimise energy consumption.

The set temperature on a stat can vary by up to 10°C from stat to stat. If the water is too hot or cold, the stat may need to be adjusted.

## 50MM FLANGE MOUNT MODEL FITMENT

A standard element has the thermostat in the middle of the element. Thus heat is constantly passing the stat. With LEDars elements, the thermostat is not only lower in the geyser, it is below the element. As heat rises, the thermostat gets the heat later than with a standard element.

The stat setting will vary by geyser, but we recommend setting the stat 10°C lower than for a standard element.

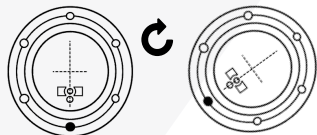
1. Ensure **NO WATER** gets inside the grub screw hole during fitment.
2. For Kwikot geysers turn the base plate clockwise by one screw fitting as below



**\*\* TURN THE THERMOSTAT DOWN BY +/- 10°C \*\***

If this step is not followed the water may be too hot for the customer and then require an additional site visit to adjust the thermostat down.

We recommend replacing the thermostat as the element is new and it is good practice to install a new thermostat at the same time. This can prevent additional site visits to replace old and faulty thermostats.



3. Turn thermostat down 10°C from original setting.

## 35MM BOSS SCREW-IN MODEL FITMENT

- Some of the screw-in spiral elements have the thermostat pocket in the center of the element.
- This is not possible with the PTC design.
- When the LEDars screw-in element is installed, the thermostat pocket needs to be separate.
  - Some geysers have a separate pocket.
  - Some have a spare port that can be used as a pocket. This requires some additional parts.
- The thermostat setting will depend on the position relative to the element.

# TROUBLESHOOTING



## Problem

## Possible reasons and suggestions

### Water not hot or lukewarm



If the geyser is not heating up, the following could be the cause:

1. Faulty mixing valve
2. Reverse thermosiphoning
3. Hot water leak
4. Ring main
5. Faulty timer or controller
6. Faulty thermostat
7. Faulty wiring or circuit breaker
8. Faulty element.

Please check all of the above before assuming it is the LEDars element.

We also advise that you connect the element to the power to ensure it is drawing current and to test the thermostat physically by turning the thermostat down to switch the element off and then up again to ensure that the thermostat is functioning correctly.

### Tripping the earth leakage or circuit breaker



LEDars elements require a high current on start-up, due to the ceramic chips inside needing more power upon start up than standard resistive elements. If the element is tripping it could be due to any of the following:

1. Circuit breaker is faulty or very old
2. Wiring is loose around circuit breaker
3. Connecting wires are too small or loose
4. Thermostat is faulty
5. Circuit breaker is too small
6. Dead short in the cable
7. Water inside the element will cause a short (This can trip the entire DB)
8. Tripping element.

Please therefore always check the entire electric pathway for any potential faults before returning the LEDars element as faulty. In most cases, it is not LEDars elements causing the problem.

### Setting the thermostat correctly



LEDars elements:

1. are at least 25% more efficient
  2. locate the thermostat at the bottom of the geyser
- For this reason, it is important to adjust the thermostat setting down to prevent overheating and to maximise savings. Most houses set thermostats around 60°C, some at 65°C, others at 55°C. With LEDars elements it is possible to set the thermostat 10°C to 15°C lower than standard, depending on the number of hot water users.

The following thermostat settings are recommended:

Family of 1-2 : 40°C      Family of 4 : 50°C  
Family of 3 : 45°C      Family of 5 : 55°C

Installers can contact our Hotline for on site assistance **064 503 3846**

# WARRANTY Terms & Conditions

## 1. Our Goods and Services

We (RS Energy Solutions (Pty) Ltd) supply the LEDars PTC heating elements (the "Product").

## 2. Read the Instructions

Please carefully read and follow all instructions that come with our Product. Please also read our website at [www.rsenergy.co.za](http://www.rsenergy.co.za) for instructions on installing and using our Product.

## 3. Content and Scope of the Warranty

We warrant that the Product is free from manufacturing defect, for a period of three years from the date of purchase, subject to the following conditions:

- 3.1. This warranty covers the LEDars PTC heating elements only, and does not cover any other part or parts of the installation which may become damaged as a result of the failure or defect of our Product.
- 3.2. In the event of you notifying us of a Product defect, we (at our own discretion) shall elect to either:
  - 3.2.1. repair or replace our Product with a new or re-manufactured one; or
  - 3.2.2. refund the purchase price of our Product.
- 3.3. If we elect to refund the purchase price, such refund shall be calculated with reference to the original Product purchase price, reduced pro rata in relation to the expired period of the warranty.
- 3.4. We shall not be liable for any costs associated with the removal, disassembly, shipment of and re-installation of our Product/s.
- 3.5. Our liability for the installation cost is limited to the installation of our Product and does not extend to any costs for the reinstatement of the surrounding areas, which were required to be removed or disassembled, in order to obtain access to repair or replace our Product.
- 3.6. We shall not be liable for any claims, losses, liabilities, damages, costs or expenses arising in connection with the use, functioning or malfunctioning of our Product or any defects.
- 3.7. We shall not in any circumstances be liable for any inconsequential or indirect damages, loss of profits or punitive damages.
- 3.8. This warranty will be invalidated if any repairs are effected on our Product at any time by any other party.
- 3.9. The original invoice and/or proof of installation must be provided to ourselves in the event that the serial number is removed from the Product. Failure to provide same will render this warranty null and void.
- 3.10. We do not make any warranties or representations in respect of the installation of our Product. Claims in respect of the installation of our Product must be referred to the applicable installer, who shall be solely liable under any installation warranties provided.

## 4. Term and Period of Warranty

- 4.1. The period of warranty shall begin from the date of invoice.
- 4.2. The delivery of new or replacement Product/s, in fulfilment of warranty commitments, shall not have as a consequence an extension of the original warranty period nor a recommencement of said warranty period from the time of said delivery of new Product/s.

## 5. Necessary Preconditions for Claims Made Under Warranty

- 5.1. Present the original invoice.
- 5.2. Notification of any claims to be made under warranty must be sent to our Customer Service Dept. in writing, within the warranty period, but no later than 7 (seven) days after your discovery of the fault or defect in question.  
Email: [info@rsenergy.co.za](mailto:info@rsenergy.co.za)  
RS Energy Solutions (Pty) Limited  
[www.rsenergy.co.za](http://www.rsenergy.co.za)
- 5.3. The notification of any claims must include:
  - 5.3.1. customer name, address and contact details;
  - 5.3.2. location of installed Product/s;
  - 5.3.3. original invoice from Product purchase; and
  - 5.3.4. a brief description of the alleged defect/s.
- 5.4. You shall allow the return of the defective Product for replacement and repair or arrange, at our discretion, the inspection of the defective Product at the location specified above.
- 5.5. Any defective Product which you return to us under this warranty must be suitably packaged and the related freight and transportation is for your account. You shall bear the full responsibility for any risks associated with the return of our Product

# WARRANTY Terms & Conditions

5.6. Unless mutually agreed to by both of us, our inspection of the defective Product shall take place during normal working hours.

5.7. In the event that our inspection of the defective Product results in our determination that there is no valid warranty claim, you shall be liable for and pay the costs of the associated inspection fee.

## 6. Cases Not Covered by the Warranty

- 6.1. In cases where the following examples are found, or where signs are detectable on the Product that one or more of the following might have been the case, no rights or claims exist under the present warranty:
- 6.1.1. The use of the Product for a purpose contrary to its intended purpose.
  - 6.1.2. External influences exerted on the Product, such as vandalism, natural catastrophes, environmental influences, fire, weather-related influences, or other natural phenomena.
  - 6.1.3. Our Product's burnout due to excessive water hardness or improper settings during commissioning. This also includes commissioning without water.
  - 6.1.4. Water quality and conditions not being equivalent to SANS 241.
  - 6.1.5. Insufficient maintenance.
  - 6.1.6. The carrying-out of installations, repairs, or refurbishing on the Product in question by a third party who fails to follow the installation instructions.
  - 6.1.7. For safety and performance reasons, you are required to ensure that the installation, repairs and replacement of geysers conform respectively to SANS 10254, SANS 10106 and SANS 1352.
  - 6.1.8. Upon completion of installation, the third party who attended to the installation is required to issue a PIRB Certificate of Compliance which is certified by a PIRB Licensed and registered plumber. For further details visit [www.pirb.co.za](http://www.pirb.co.za).
  - 6.1.9. Fair wear and tear.
  - 6.1.10. Improper voltage, sudden voltage spikes or power fluctuations in the electrical supply.

## 7. Disputes

- 7.1. In the event of any dispute of any nature whatsoever arising between ourselves, and not resolved through our Customer Relations Department, then
  - 7.1.1. such a dispute shall be submitted to Tokiso (Pty) Ltd, that the dispute remains unresolved following the negotiations of clause 7.1, the parties will submit to mediation in terms of their mediation procedures.
  - 7.1.2. Unless otherwise agreed between the parties, Tokiso will nominate the mediator.
  - 7.1.3. The first mediation meeting will be convened to start not later than 7 (seven) days after the date of the written notice.
  - 7.1.4. The mediation shall be held in Johannesburg.
- 7.2. No party may commence any court proceedings /arbitration in relation to any dispute arising out of this agreement until it has attempted to settle the dispute by mediation and either the mediation has terminated or the other party has failed to participate in the mediation, provided that the right to issue proceedings is not prejudiced by a delay.
- 7.3. Any warranty claim shall be governed by the laws of the Republic of South Africa, and you consent to the jurisdiction of the South African courts in the event of any unresolved dispute.
- 7.4. If any of the provisions of this warranty is found by a court of competent jurisdiction to be invalid or unenforceable, that provision shall be deemed null and void and the remainder of the warranty shall continue in full force and effect.

## 8. Proprietary Rights

- 8.1. You acknowledge and agree that the Product you have purchased is protected by intellectual property laws and international intellectual property treaties. Our Product's intellectual property protection extends, but is not limited, to copyright, trademarks, service marks, design rights and patents. You are authorized to utilize the Product for its intended purpose.
- 8.2. Our Product may not be sold, reproduced or distributed without our written permission. Any further rights not specifically granted herein are reserved.
- 8.3. All Intellectual Property Rights belonging to ourselves shall remain vested in us.
- 8.4. None of our Intellectual Property Rights shall be used by yourself for any purpose without our prior written consent