



SIOGREEN

INFRARED TANKLESS WATER HEATERS

OPERATION & INSTALLATION MANUAL



IR-30, IR-234, IR-245, IR-260, IR-288, IR-14K220, IR-18K220

Electric Tankless Hot Water Heater

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Thank you for choosing SioGreen products. The most advanced tankless water heaters in the world today using quartz technology and true modulation. All of our products are made with the highest-grade materials and professionally assembled.

We strive to satisfy each customer with our unit's superior quality, longevity, and the modern design of all our products.

Before use of the unit, please carefully read and understand the manual.

It contains important information regarding the correct use and care of the unit.

SAFETY INFORMATION

IT IS IMPORTANT TO COMPLETELY READ AND UNDERSTAND THE INSTALLATION PROCEDURES BEFORE CONTINUING THE INSTALLATION.

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, SERIOUS BODILY INJURY, OR DEATH.

THIS PRODUCT SHOULD BE INSTALLED BY A LICENSED ELECTRICIAN AND PLUMBER IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ELECTRICAL & PLUMBING CODES.

Keep this manual in a convenient place for future reference.

Check our website,
www.SioGreenusa.com for the
latest version of the Installation &
User Manual.



DANGER! WATER TEMPERATURE SAFETY SETTING

Safety is our primary goal when selecting the water temperature. Any temperature above 120°F can cause serious scalding or death. Energy conservation is a factor to be considered when selecting the water temperature. Setting the water heater's thermostat to a lower setting will allow a higher flow rate and use less energy.



CAUTION: Breaker must remain off until installation is complete.

INTRODUCTION

SioGreen Tankless hot water heaters do not store water like a conventional tank-type water heater. It contains multiple high powered quartz heating tube elements that are capable of heating water “on-demand”.

The unit’s working principle and designs are simple. When the power is turned on, the microprocessor will check the temperature sensor and current leakage sensor, if there are no errors, the hot water generator is ready to work.

The performance of the products listed are dependent on incoming water temp, water flow rate, and set temperature of the thermostat. In order for it to function properly it must be matched by location, application, and unit size. As it requires no venting, all units can be installed literally anywhere that is convenient for the owner.

This product should be installed indoors only. An outdoor installation is permitted as long as it is mounted in a suitable enclosure that protects it from all-weather elements including freezing. Freezing of the unit may result in permanent damage and will void the warranty.

Unit Operation:

When you open the hot water valve, the flow sensor activates at a minimum water flow. The flow sensor sends the information to the temperature controller to begin modulating the heating elements to heat the water as it passes through the quartz heating tubes and to maximize efficiency.

If the water flow rate exceeds the maximum heating capacity of the unit, the unit will reach a maximum achievable temperature based on flow rate and unit size. When a reduction in the excessive flow rate is made, the unit will achieve the set point temperature.

When the fixture is closed, the demand stops, the flow sensor sends information to the controller to turn off the power to the quartz heating elements. The unit remains in it standby mode until the demand for the hot water is needed.

Unit Freezing:

In case of freezing, please wait for the complete defrosting of the unit before using. Verify this by running water through it before turning on the power. Activating unit while still frozen will damage the heaters internal components and void the warranty.

Maintenance:

This unit requires no maintenance. To extend unit service life, it is recommended to use an inlet pre filter, check and clean it periodically. This is an additional part from the internal screen included with the unit. Do not attempt to open the case to make adjustments, repairs, or for any reason. Opening of unit will void all warranties and could result in serious injury or property damage.

Included Parts List:

- Electric water heater
- Water (adjust) valve
- Wall Mount bracket
- Screws
- Internal screen

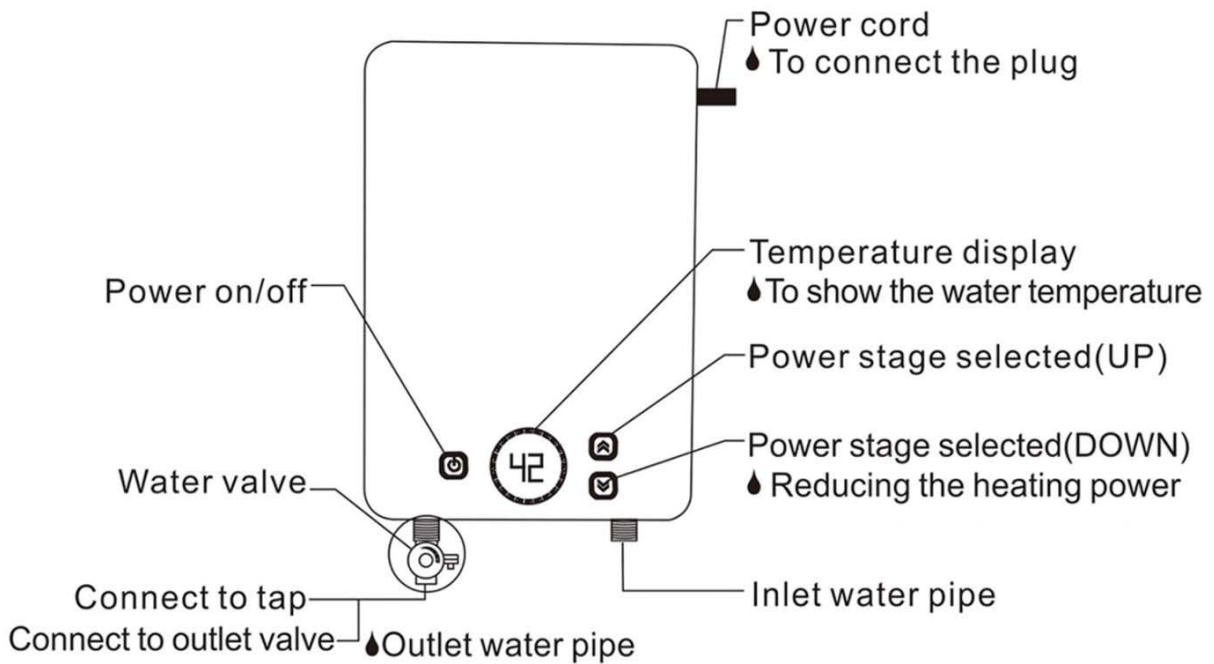
INTERFACE

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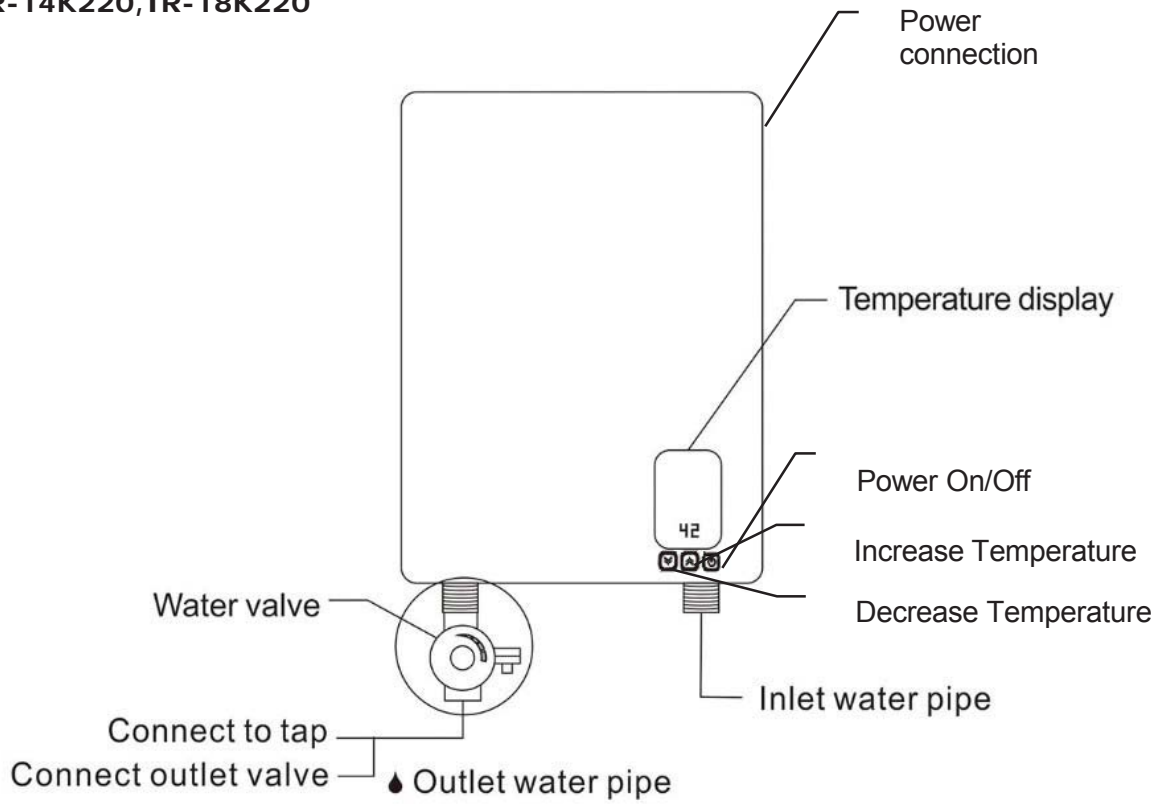
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IR-30, IR-234, IR-245, IR-260, IR-288

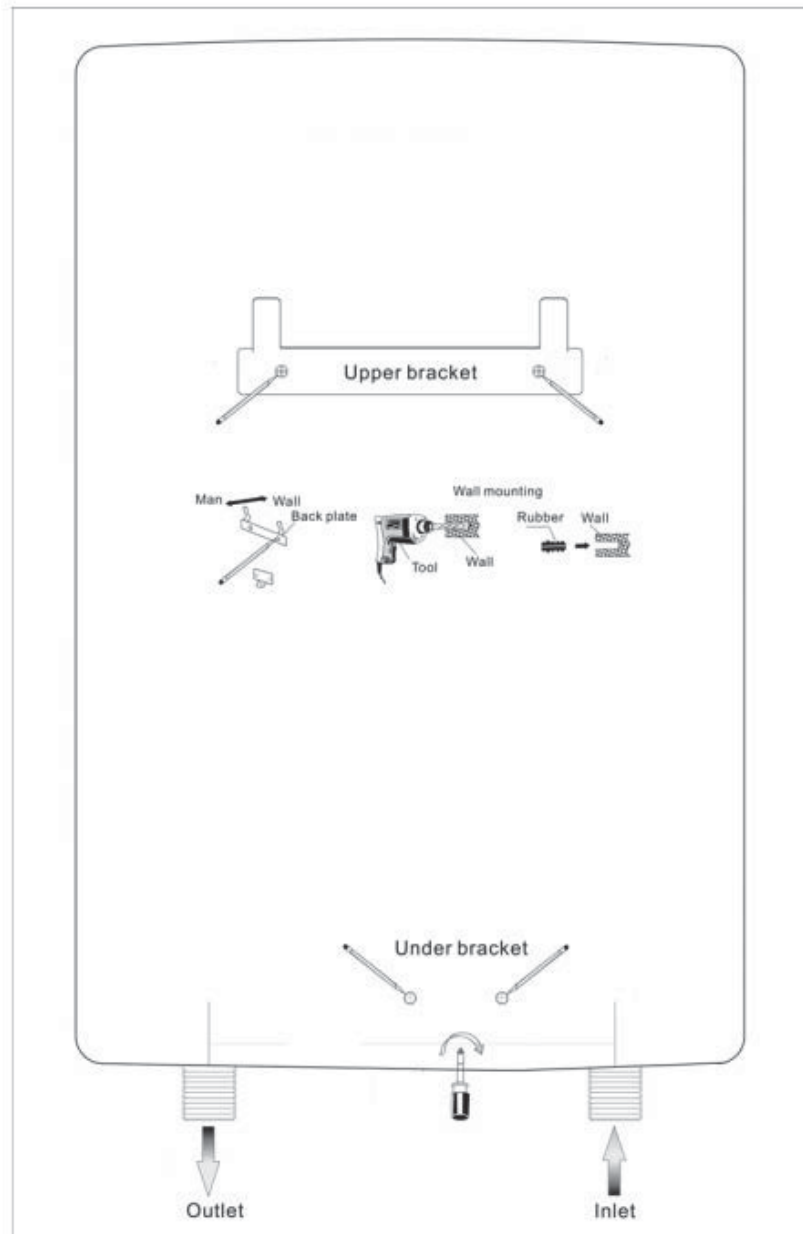


IR-14K220, IR-18K220



MOUNTING YOUR WATER HEATER

1. Affix mounting plate to wall. Mark holes with pencil.
2. Drill screw holes.
3. Install plastic inserts into holes for appropriate fastening.
4. Mount the back panel to wall using supplied screws.
5. Install unit on mounting bracket and fix with 4 screw.



PLUMBING INSTALLATION



CAUTION: Breaker must remain off until installation is complete.

Step 1: Flush cold water line to clear any debris before connecting to unit.

Step 2: Install a shut off valve and pre filter (Not Supplied) to prevent any particles entering the unit that may clog or damage the internal parts.

Step 3: Using flexible lines only, connect the Cold Water line to the water heater inlet labeled with a blue ring. Connect furnished Water Valve to the water heater outlet labeled with a red ring. Connect the HOT WATER outlet line to the Water Valve. DO NOT Solder any fittings to unit. This will damage internal sensors and components and void the warranty. Use flexible lines and screw fittings only to unit. A TP valve is not required in most jurisdictions. Verify your local codes accordingly and if required install on outlet side only.

Step 4: Verify all fittings are tight and secure. Open hot water source and allow water to run through the water heater for at least 1 to 2 minutes. This will purge the air from the water lines and must be performed prior to turning on the power at the unit. This is a Mandatory step to prevent Damage to Heating Elements.

Verify all connections are free of leaks.

Model	Maximum Flow Rate	Connection Size
IR-30	1.0 GPM	1/2" NPST
IR-234	1.0 GPM	1/2" NPST
IR-245	1.5 GPM	1/2" NPST
IR-260	3.0 GPM	1/2" NPST
IR-288	3.0 GPM	1/2" NPST
IR-14K220	3.6 GPM	1/2" NPST
IR-18K220	4.0 GPM	3/4" NPT



CAUTION: Breaker must remain off until installation is complete.

ELECTRICAL INSTALLATION



CAUTION: Breaker must remain off until installation is complete. **SERIOUS BODILY INJURY OR DEATH COULD OCCUR IF YOU IGNORE THIS WARNING.**

SioGreen products must be installed by a licensed and qualified electrician in accordance with all applicable national, state, and local electrical codes depending on country.

Before installing this product, ensure that the home has sufficient electrical power available to handle the maximum amperage load of the applicable model.

Specifications by Model					
MODEL NUMBER	MAX KW	VOLTS	MINIMUM BREAKER	MAX POWER (AMP)	MINIMUM WIRE
IR-30	3.4	120	30 AMP Single Pole	29	1 x 10 AWG
IR-234	3.4	240	20 AMP 2 Pole	15	2 x 12 AWG
IR-245	4.5	240	20 AMP 2 Pole	19	2 x 12 AWG
IR-260	6.0	240	30 AMP 2 Pole	25	2 x 10 AWG
IR-288	8.8	240	40 AMP 2 Pole	37	2 x 8 AWG
IR-14K220	14.0	240	60 AMP 2 Pole	59	2 x 6 AWG
IR-18K220	18.0	240	80 AMP 2 Pole	75	2 x 4 AWG

Step 1: Remove cover of the water heater carefully and locate the electrical supply on the top right hand corner facing the unit.

Step 2: Use the correct wire gauge that meets all NEC or country of installation guidelines based on the size of the breakers used and the length of the run. Then run the set of wires from the home's main panel to the tankless water heater. A separate ground conductor is required. (See above chart for minimum wire size) This minimum wire size is based on maximum of 50' of length.

Step 3: Connect the wires to one two pole breaker (see wiring diagram). Use a green wire for the ground ONLY.

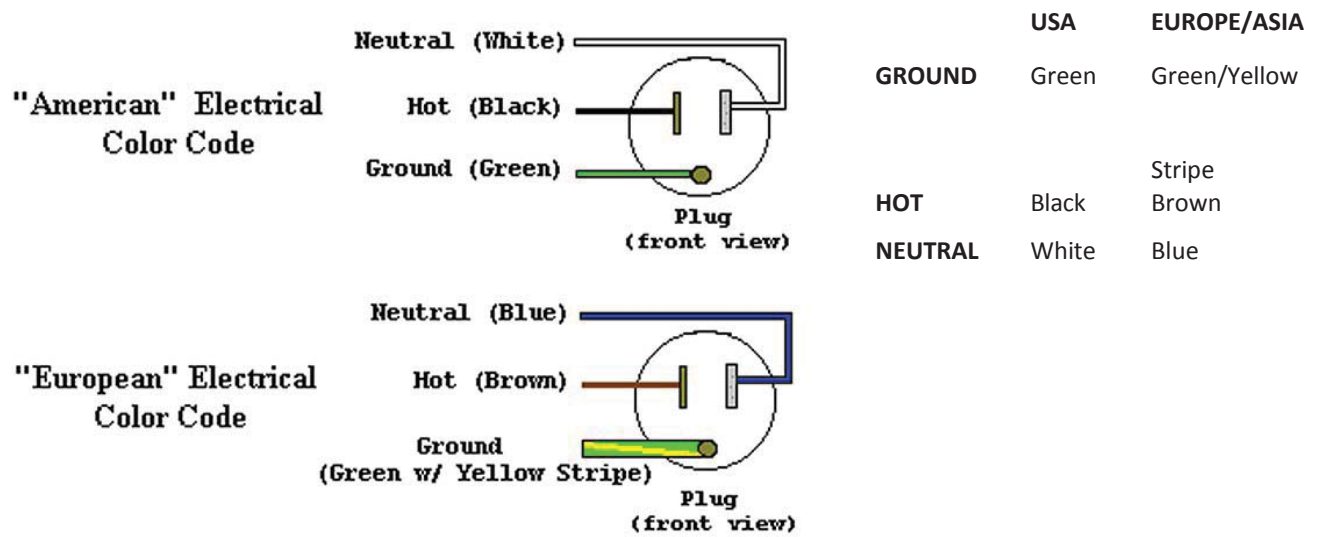
Step 4: Verify all connections are tight and secure. Verify the correct breaker size. Verify the ground conductor size and connection with applicable codes.

IR-30, IR-234, IR-245, IR-260, IR-288, IR14k220, and IR18k220 Wiring Diagram: (Pictured Requirement is for EXAMPLE only) Verify all requirements with each unit.

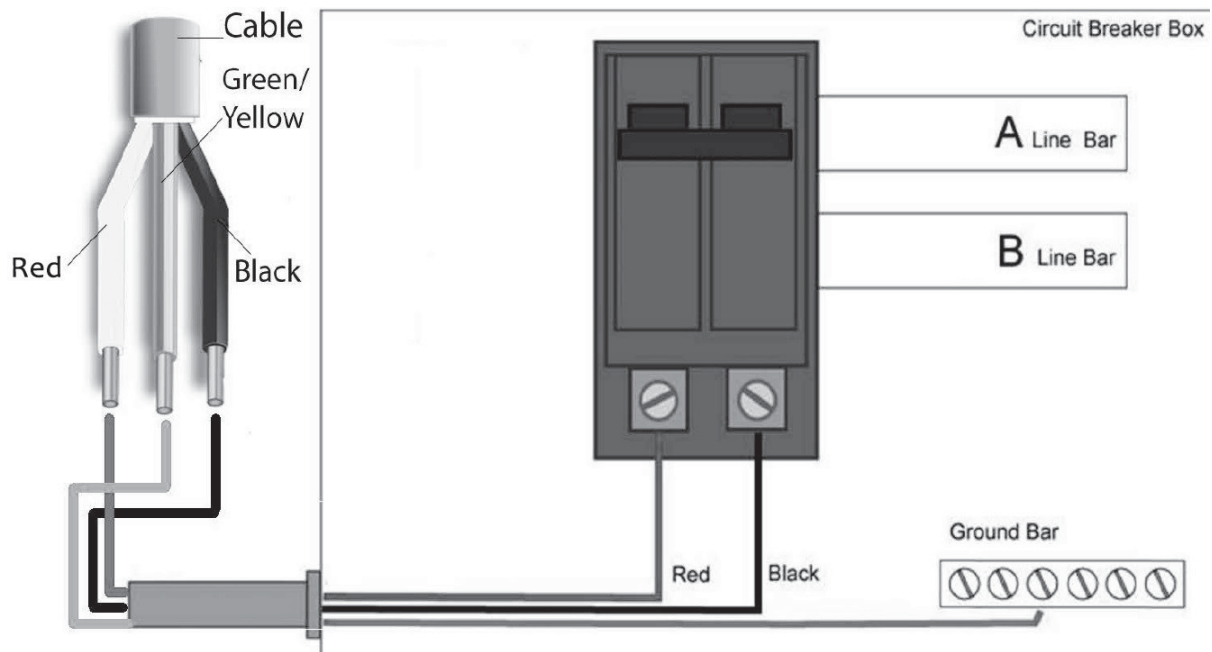


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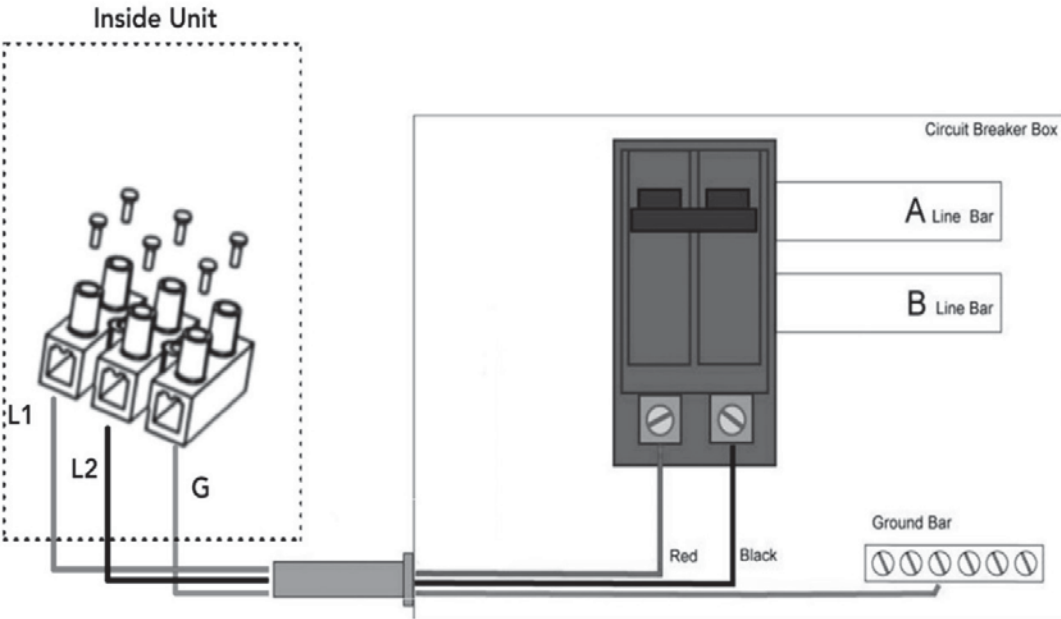
IR-30 Wiring Diagram:




IR-234, IR-245, IR-260, and IR-288 Wiring Diagram:



14K220 and 18K220 Wiring Diagram:



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How to calibrate your hot water using water valve

1. Make sure all electrical wires and water pipes are properly installed. Check the power requirement for each model. Before start up, check that all connections are secure and fittings are tight. Confirm that all air has been purged from the system.
2. With the water running, use the lower heating mode button to turn on the unit and turn to maximum mode (or set temp). The water begins to heat and the current temperature is shown in the display. Dial the Gate Valve on the Hot Side Only to calibrate your hot water vs the flow rate. Ideally, you will gain a higher flow rate by lowering the set temp as water moves through the water heaters quartz elements faster. If hotter water is required, simply raise the set temp and slow the water flow rate to meet your temperature needs.
3. Calibrate using Gate Valve (water valve) at hot outlet and choose a desirable temperature by pressing the mode buttons and adjusting the gate valve until you have a comfortable water temperature and flow rate. Never use the cold inlet valve to adjust flow. This will restrict water from flowing in and cause damage to the heating elements.
4. Turn off water and unit is set.

SIZING GUIDE

MODEL NUMBER	MAX KW	35 F	45 F	55 F	65 F	75 F
IR-30	3.4	-	0.50	0.60	0.70	0.90
IR-234	3.4	-	0.50	0.60	0.70	0.90
IR-245	4.5	-	0.60	0.70	0.90	1.20
IR-260	6.0	0.50	0.80	1.00	1.20	1.50
IR-288	8.8	1.00	1.30	1.50	1.70	2.30
IR-14K220	14.0	1.50	2.00	2.30	2.60	3.30
IR-18K220	18.0	2.00	2.50	3.00	3.40	4.30

GALLONS PER MIN OUTPUT BASED ON WATER TEMP.



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TROUBLE SHOOTING

If you are having any problems getting your unit to work after going through the check list, please call our technical support team for any help.

TOLL FREE 1-888-270-8452

You can also email us at:

Support@siogreenusa.com

Problem	Possible Cause	Solution
E3 Error Code	The water flow is too restricted. This causes overheating on the unit.	Allow time to cool down, Increase water flow, or reduce power.
B1 or E1 Error Code	Temperature sensor problem	Contact support for part replacement
E5 Error Code	Electric current leakage	Contact support
Water heater is not heating at all (water is flowing but the unit is not heating - the outgoing water temperature is the same as the cold water supply) or the digital display does NOT light up.	No power or incorrect wiring.	Make sure the breakers at main electrical panel are ON. You may have a faulty breaker or unit may be wired incorrectly.
	Flow sensor is not activating	Open up the system and check to see if anything is stuck in the flow sensor. Verify screen is clean. Contact support.
Water heater is heating, but the water temperature is not hot enough.	Flow rate is too high.	Adjust the water valve to decrease the water flow. This should increase the temperature.
	The unit is under sized for the application	Check map sizing guide to confirm if the correct unit is installed

WARRANTY

Manufacturer only warrants to the original purchaser at the original installation address of purchaser (collectively, the "Buyer") the hot water generator and its components as manufactured by the Manufacturer (the "Product") to be free from defects in materials and workmanship, under normal use and service for the period of time identified below beginning from the date of Purchase. Manufacturer Warranty is only offered if the Manufacturer products are installed by a licensed contractor in accordance with National and Local Codes having jurisdiction governing the installing area, and installed to Manufacturer Specifications using all included components supplied by Manufacturer and other parts that may be required to protect equipment.

Warranty for the following units:

MODEL NUMBER	WARRANTY
IR-30	2 Years
IR-234	2 Years
IR-245	2 Years
IR-260	2 Years
IR-288	2 Years
IR-14K220	5 Years Heating Element/3 Years Parts
IR-18K220	5 Years Heating Element/3 Years Parts

This warranty will replace the unit in its entirety should it be defective without repair determined by Manufacturer for the period above and warranty shall remain in effect from the original purchase date only. A repair fee will be in place depending on the unit. If faster shipping service is desired, the Buyer must select and pay.

SUCH WARRANTIES DO NOT COVER:

- Product misuse, tampering or misapplication, accidental damage, or improper installation.
- Product failure caused by chemical corrosion, or freezing.
- Product failure due to lightning, flood or other natural or manmade calamities.
- Costs incurred for shipping, delivery, handling, and/or administrative charges.
- Labor charges of any kind.

Manufacturer shall not be liable for incidental, consequential, special or contingent damages or expenses arising, directly or indirectly, from any defect in the hot water generator or the use of the hot water heater.

Manufacturer shall not be liable for any water damage arising, directly or indirectly, from any defect in the hot water heater component part(s) or from its use.

IMPORTANT! REGISTER YOUR PRODUCT – WARRANTY REGISTRATION

Buyer obligation under the terms of purchase and sale require that **Warranty Registration must be returned within the prescribed timeframe (within 30 calendar days).**

Register your product on SioGreen Inc. website:

<https://www.SioGreenusa.com/support/warranty-registration/>



CAUTION: Breaker must remain off until installation is complete.

Please fill out product and contractor information completely on SioGreen Inc. website. Send or attach the following items (scan or copy) for Warranty Registration:

- Proof of Purchase
- Installer Receipts by licensed Contractor for Warranty in order to protect Buyer's rights and obtain Manufacturer's Warranty benefits

The Warranty resides with the Buyer with proof of purchase; not simply with an individual in possession of a Product.

NOTE: WE RECOMMEND NOT TO INSTALL THIS PRODUCT WITHOUT A LICENSED CONTRACTOR/PLUMBER. OWNER INSTALLATION VOIDS ALL PRODUCT WARRANTIES.

The Warranty resides with the Buyer with proof of purchase; not simply with an individual in possession of a Product.

AFTER (30) CALENDAR DAYS FROM RECEIPT OF PRODUCT THERE WILL BE NO RETURNS OR WARRANTY WITHOUT RECEIPT OF WARRANTY REGISTRATION BY SIOGREEN. BUYER ACCEPTS ALL SALES AS FINAL. ANY ALTERATION TO THE PRODUCT VOIDS ALL WARRANTIES. SIOGREEN PRODUCTS IS NOT RESPONSIBLE FOR ANY OTHER CHARGE OR EXPENSE INCURRED, OTHER THAN THE ORIGINAL PURCHASE PRICE OF THE PRODUCT.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Manufacturer Contact:

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888-270-8452

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Customer Support: support@SioGreenusa.com

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.