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Briidea 1500W Titanium Immersion Heater

MODEL: MK-230 USER MANUAL

1. Introduction

This manual provides essential information for the safe and efficient operation of your Briidea 1500W Titanium Immersion Heater, Model MK-230. Please read these instructions carefully before installation and use to ensure proper function and longevity of the product.

2. Safety Instructions

- **Always ensure the heater is fully submerged in liquid before connecting to power.** Operating the heater out of water will cause damage and poses a fire hazard.
- Do not touch the heating element while it is powered on or immediately after use, as it will be extremely hot.
- Ensure the power outlet matches the heater's voltage requirements (120V AC).
- Do not use the heater with damaged cords or plugs. Inspect regularly for wear.
- Keep children and pets away from the heater during operation.
- Disconnect power before performing any maintenance or moving the heater.
- The product includes leakage protection for enhanced safety. If leakage protection activates, disconnect power immediately and inspect the unit.
- Do not use in flammable liquids or in environments with explosive gases.

3. Product Overview

The Briidea 1500W Titanium Immersion Heater is designed for rapid and efficient liquid heating. It features a robust titanium heating element, a sensitive temperature sensor, and a digital controller with an LCD display.



Titanium Fully Immersion Portable Water Heater

- Designed for Any Liquids
- High Temperature Resistance
- Anti-Rust & Corrosion
- Longer Service Life
- Controller Waterproof Design



Figure 3.1: Overview of the Briidea Titanium Immersion Heater, highlighting its durable titanium construction, suitability for various liquids, high temperature resistance, anti-rust and corrosion properties, extended service life, and waterproof controller design.



Figure 3.2: Detailed view of the sensitive anti-corrosion temperature sensor (accuracy 0.1°C), the LCD screen displaying set and current temperatures, and the memory function that retains settings during power interruptions.

Key Features:

- **1500W Rapid Heating:** Delivers quick and efficient temperature increase.
- **Titanium Construction:** Provides superior anti-rust and corrosion resistance, extending product lifespan. Suitable for fresh water, salt water, groundwater, solutions, and mild chemicals.
- **Thermostat Control:** Automatically maintains desired temperature (32–240°F / 0–120°C) with an external sensor.
- **LCD Display:** Shows both set and current temperatures for easy monitoring.
- **Memory Function:** Retains temperature settings even after power loss.
- **Leakage Protection:** Integrated safety feature for user protection.
- **UL-Listed Power Cables:** Ensures safe electrical operation.



Figure 3.3: Dimensional diagram of the Briidea Immersion Heater, showing the heater length (15.7 inches), controller dimensions (5.6 x 4 inches), power cord length (6.6 feet), and cable lengths from heater to controller (4.6 feet) and sensor to controller (4.6 feet).

4. Setup and Installation

- 1. Unpack:** Carefully remove all components from the packaging. Inspect for any damage.
- 2. Placement:** Position the heater in the liquid container. Ensure the entire titanium heating element is fully submerged. The water level must be above the minimum immersion line marked on the heater.
- 3. Sensor Placement:** Place the temperature sensor into the liquid. For accurate readings, ensure the sensor is also fully submerged and not directly touching the heating element or the container walls.
- 4. Controller Mounting:** Mount the digital controller in a dry, accessible location, away from direct splashes.
- 5. Power Connection:** Plug the heater's power cord into a standard 120V AC grounded electrical outlet. Ensure the outlet is suitable for the 1500W power draw.

5. Operation

Built-in Thermostat, Auto Shutoff, Save Your Time and Energy



Figure 5.1: The Briidea Immersion Heater operating in a bathtub, demonstrating its built-in thermostat for automatic shut-off, which helps save time and energy by maintaining a set temperature.

- 1. Power On:** Once plugged in, the LCD screen on the controller will illuminate, displaying the current liquid temperature and the previously set temperature.
- 2. Set Temperature:** Use the '+' and '-' buttons on the controller to adjust the desired temperature. The temperature range is 32°F to 240°F (0°C to 120°C).
- 3. Automatic Heating:** The heater will automatically begin heating the liquid until the set temperature is reached. Once the target temperature is achieved, the heater will automatically shut off.
- 4. Temperature Maintenance:** The heater will monitor the liquid temperature via the submerged sensor. If the temperature drops below the set point, the heater will automatically reactivate to maintain the desired temperature.
- 5. Memory Function:** The controller features a power-off memory function, retaining your last set temperature even if power is interrupted.

6. Maintenance

- Cleaning:** Disconnect the heater from power and allow it to cool completely before cleaning. Wipe the titanium heating element with a soft cloth to remove any mineral deposits or residue. Do not use abrasive cleaners or harsh chemicals.

- **Inspection:** Regularly inspect the power cord, plug, and heating element for any signs of damage, wear, or corrosion.
- **Storage:** When not in use, clean the heater thoroughly, dry it, and store it in a cool, dry place away from direct sunlight and extreme temperatures.

7. Troubleshooting

- **Heater Not Turning On:** Check if the power cord is securely plugged into a functional outlet. Verify that the leakage protection has not been triggered.
- **Liquid Not Heating:** Ensure the heating element is fully submerged. Check if the set temperature is higher than the current liquid temperature.
- **Inaccurate Temperature Reading:** Ensure the temperature sensor is fully submerged and not obstructed or touching the heating element directly.
- **Leakage Protection Activated:** If the leakage protection trips, immediately unplug the heater. Inspect the unit for any visible damage or water ingress into the electrical components. Do not use if damage is found.

8. Specifications

Feature	Specification
Model Number	MK-230
Wattage	1500W
Material	Titanium
Voltage	120V AC
Temperature Range	32–240°F (0–120°C)
Heater Length	15.7 inches
Controller Dimensions	5.6 x 4 inches
Power Cord Length	6.6 feet
Heater to Controller Cable Length	4.6 feet
Sensor to Controller Cable Length	4.6 feet

9. Wide Application

The Briidea Immersion Heater is versatile and suitable for various liquid heating applications:

- Dishwashing tanks
- Bathtubs and spa tubs
- Baptismal fonts
- Livestock drinking tanks
- Storage tanks
- Ponds and aquariums
- Heating various solutions and mild chemicals



Wide Application



Figure 9.1: A visual representation of the wide range of applications for the Briidea Immersion Heater, including hot tubs, ponds, livestock tanks, and industrial liquid heating.

10. Warranty and Support

For warranty information or technical support, please refer to the contact details provided with your purchase or visit the official Briidea website. Please have your model number (MK-230) and purchase date available when contacting support.