VEVOR GF1100ND1-3KG

VEVOR GF1100ND1-3KG Digital Electric Gold Melting Furnace User Manual

Model: GF1100ND1-3KG | Brand: VEVOR

1. Product Overview

The VEVOR GF1100ND1-3KG Digital Electric Gold Melting Furnace is designed for efficient and precise melting of various metals, including gold, silver, aluminum, and copper. It features a 3 kg capacity, a high-temperature ceramic chamber, a quartz lid, and a ceramic crucible. The furnace can reach a maximum temperature of 2102 ℉ (1150 ℃) within approximately 45 minutes. An advanced PID module and digital control system ensure accurate and stable temperature monitoring and control.

Image: VEVOR Digital Electric Gold Melting Furnace with various metal samples and accessories.

2. Safety Instructions

WARNING: Operating a melting furnace involves extreme temperatures and molten metals. Failure to follow safety precautions can result in severe injury or property damage. Always prioritize safety.

- Always wear appropriate personal protective equipment (PPE), including heat-resistant gloves, eye protection, and a face shield, when operating the furnace or handling hot materials.
- Ensure the furnace is placed on a stable, non-combustible surface in a well-ventilated area.
- Keep flammable materials away from the furnace.
- Do not touch hot surfaces. The furnace and its components reach extremely high temperatures.
- Never leave the furnace unattended during operation.
- Ensure the power supply matches the furnace's requirements and use a circuit with adequate amperage (e.g., at least a 16A breaker).

- Avoid using damaged crucibles. Inspect crucibles for cracks or damage before each use.
- Do not overload the crucible.
- Exercise extreme caution when pouring molten metal. Use appropriate tongs and molds.
- Allow the furnace and molten metal to cool completely before handling without PPE.
- Do not move the machine during copper melting; vibrations can break the heating element.
- Avoid heating metals other than copper or those with higher melting points than the furnace's maximum temperature, as this can damage the crucible.

3. Package Contents

The VEVOR GF1100ND1-3KG Digital Electric Gold Melting Furnace kit includes the following items:

- 1 x Digital Electric Melting Furnace Unit
- 1 x 1 kg Ceramic Crucible
- 1 x 3 kg Ceramic Crucible
- 1 x Ingot Die (Ceramic)
- 1 x Crucible Tongs
- 1 x Power Cable
- 1 x High-Temperature Gloves

Image: All accessories included with the VEVOR Gold Melting Furnace.

4. Setup

1. **Unpack:** Carefully remove all components from the packaging. Inspect for any damage during transit.
2. **Placement:** Place the furnace on a stable, level, heat-resistant, and non-combustible surface. Ensure there is adequate clearance around the unit for ventilation and safe operation.
3. **Crucible Installation:** Open the furnace lid. Place the desired ceramic crucible (1kg or 3kg) into the heating chamber. Ensure it sits securely.
4. **Power Connection:** Connect the power cable to the furnace and then to a grounded electrical outlet. Ensure the outlet meets the power requirements of the furnace (1350W).

Image: Side view of the furnace, illustrating its stable design and power connection point.

5. Operating Instructions

Follow these steps for safe and effective operation of your VEVOR Gold Melting Furnace:

1. **Prepare Materials:** Ensure the metal to be melted is clean and free of contaminants. For aluminum, polish the oxide layer on the surface before melting.
2. **Load Crucible:** Using the crucible tongs and high-temperature gloves, carefully place the metal into the ceramic crucible inside the furnace. Do not overfill.
3. **Power On:** Close the furnace lid. Turn on the main power switch located on the front panel.
4. **Set Temperature:** Use the digital control panel (PID module) to set the desired melting temperature. The furnace can reach up to 2102 °F (1150 °C). The PID controller monitors the actual temperature every 2 seconds for precision.
5. **Melting Process:** The furnace will begin heating. The heating process typically takes about 40-48 minutes to reach maximum temperature. Monitor the melting process through the lid opening, but avoid direct eye contact with the intense heat.
6. **Stirring (Optional):** If necessary, carefully stir the molten metal using a suitable heat-resistant stirring rod to ensure even melting.
7. **Pouring Molten Metal:** Once the metal is fully molten, carefully open the furnace lid. Using the crucible tongs, securely grip the hot crucible and carefully pour the molten metal into your preheated ingot mold. **Beware of high temperature burns.**
8. **Cool Down:** After pouring, return the empty crucible to the furnace or a safe, heat-resistant surface to cool. Turn off the furnace power switch. Allow the furnace and molds to cool completely before handling.

Image: PID Digital Temperature Controller for precise temperature management.

Image: Illustration of the furnace's high heating rate and molten metal pouring.

Operation Video

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Video: Demonstrates the process of melting metal using the VEVOR Gold Melting Furnace, including loading, heating, and pouring.

Your browser does not support the video tag.

Video: Overview of the Gold Melting Furnace Kit, showing its use for gold, silver, copper, and aluminum.

6. Maintenance

- **Cleaning:** Ensure the furnace is completely cool and unplugged before cleaning. Use a soft, dry cloth to wipe

down the exterior. Do not use abrasive cleaners or solvents.

- **Crucible Inspection:** Regularly inspect the ceramic crucibles for cracks, chips, or excessive wear. Replace crucibles after approximately 10 uses or if any damage is observed to ensure safety and optimal performance.
- **Heating Element:** If the furnace is not heating sufficiently (e.g., set to 900°C but only reaches 300-500°C), the heating element may be faulty and require replacement. Refer to the troubleshooting section for replacement steps.
- **Temperature Sensor:** If the temperature controller displays "HHHH", it indicates a faulty temperature sensor. Refer to the troubleshooting section for replacement steps.

Image: High-quality ceramic crucible with good thermal conductivity and premium quartz insulation.

7. Troubleshooting

Refer to the following common issues and their solutions:

Problem	Solution
Temperature Controller Displays HHHH	This indicates a faulty temperature sensor. Open the base cover, locate the temperature sensor, and replace it. Ensure correct wiring; if heating/cooling is abnormal, switch wire connections.
Temperature Controller Displays Error / No Power / Not Turning On	Open the base cover and check for loose or disconnected wires. Use a multimeter to check voltage/current. If the temperature controller is faulty, replace it.
Not Heating Up (Controller Normal, No Heat)	Test the heating element with a multimeter. Set the multimeter to continuity mode. No beep means the heating element is faulty. Replace the heating element. Replacement steps: Remove net cover and screws, separate barrel from base, and replace the element.
Heating Insufficiently (e.g., Set to 900°C, only reaches 300-500°C)	If the temperature stabilizes at 300-500°C, the temperature controller and relay can work, so the heating element is faulty. Replace the heating element following the same steps as above.
Temperature Drops Suddenly / Cannot Reheat After Initial Heating	If the temperature drops and cannot rise again, the heating element is faulty. Replace the heating element following the same steps as above.
Power Trips When Turning On	Use a circuit with at least a 16A breaker. Avoid using other high-power devices simultaneously. If using an extension cord, ensure it is 16AWG or thicker. Check grounding wire connection inside the base; improper grounding can cause power trips.
Crucible Breakage / Metal Leaks into Machine	If the crucible breaks, cool and remove solidified metal. Inspect the furnace for cracks. If fragmented, replace the lining. Check the temperature probe for damage. If an HHHH error appears, replace the probe.
Crucible Lifespan - Use for 10 Times?	**Recommendation:** Replace the crucible after 10 uses for safety and performance.**Important Precautions:** Do not move the machine during copper melting; vibrations can break the heating element. Avoid heating metals other than copper or those with higher melting points; high temperatures can damage the crucible. For detailed instructions, refer to your user manual.

Troubleshooting Video

Your browser does not support the video tag.

Video: Detailed troubleshooting guide for common issues with the TRF3000 Digital Resistance Furnace, including sensor and heating element replacement.

8. Specifications

Feature	Detail
Brand	VEVOR
Model Number	GF1100ND1-3KG
Max Temperature	2102 ℉ / 1150 ℃
Capacity	3 kg
Power	1350W
Product Dimensions	32.59 x 26.49 x 38 cm
Weight	9.5 kg
Country of Origin	China

PRODUCT SPECIFICATIONS: VEVOR®

Weight:6.6lbs / 3kg

Size: 9.45 in × 8.27 in × 14.96 in / 24 cm×21 cm × 38 cm

Image: Product dimensions and weight details.

9. Warranty and Support

For warranty information, technical support, or replacement parts, please contact VEVOR customer service. Keep your purchase receipt and model number (GF1100ND1-3KG) handy for faster service.