



Upgrade · The Home Creator Way

ELECTRIC MELTING FURNACE

MODEL:KD-Z6651A / KD-Z6651B / KD-Z6652B

VEVOR Support Center

1	KD-Z6651B		2	KD-Z6652B	
3	KD-Z6651A(US)		4	KD-Z6651A(EU)	

MODEL:KD-Z6651A / KD-Z6651B / KD-Z6652B



NOTE: Periodically check the intactness of the inwall, to avoid damages of the heating coil !

NOTE: The liner is constructed from high-temperature-resistant material. Under extreme heat, minor surface cracking may occur. This is normal and will not impact functionality.

This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

	Warning - To reduce the risk of injury, the user must read the instructions manual carefully.
	CORRECT DISPOSAL This product is subject to the provision of european Directive 2012/19/EU. The symbol showing a wheelie bin crossed through indicates that the product requires separate refuse collection in the European Union. This applies to the product and all accessories marked with this symbol. Products marked as such may not be discarded with normal domestic waste, but must be taken to a collection point for recycling electrical and electronic devices.
	FCC Information: CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment! This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: 1) This product may cause harmful interference. 2) This product must accept any interference received, including interference that may cause undesired operation. WARNING: Changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the product. Note: This product has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules, These limits are designed to provide reasonable protection against harmful interference in a residential installation. This product generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures. · Reorient or relocate the receiving antenna.

- Increase the distance between the product and receiver.
- Connect the product to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

SAFETY INSTRUCTIONS

Safety Warnings

Read this manual carefully before use. Improper operation may cause high-temperature burns, fire, explosion, electric shock, metal splashing injury, poisoning, or serious personal injury and property damage.

EXTREME HIGH TEMPERATURE & METAL SPLASH FATAL HAZARD

Furnace temperature reaches over 1000°C during melting. Molten metal is extremely hot.

DO NOT touch the furnace body, crucible, molten metal, or any hot components.

Always wear heat-resistant gloves, face shield, fire-resistant clothing, and safety goggles to prevent burns from molten metal splashes and thermal radiation.

Molten metal will explode violently and splash when contacting water, damp materials, or substances containing moisture/grease. **NEVER** add any wet, damp, oily, or impure materials into molten metal.

Add materials, stir, and pour slowly and steadily to avoid molten metal splashing.

ELECTRIC SHOCK & ELECTRICAL SAFETY

This is a high-voltage, high-power device. It must be wired by a professional electrician with reliable grounding (PE); grounding resistance must meet safety standards.

Disconnect main power and lockout/tagout before cleaning, maintenance, repair, or moving the machine. Ensure power is off before operation.

If power cords, plugs, sockets, thermostats, heating elements are damaged, worn, or leaking current, stop operation immediately for replacement. Do not operate with faults.

Do not operate electrical switches or components with wet hands to prevent electric shock.

FIRE & EXPLOSION HAZARD

Place the machine in a fireproof, explosion-proof, dust-free, well-ventilated area, away from all flammable materials (paper, cloth, plastic, solvents, gasoline, LPG). Keep a $\geq 1\text{m}$ safety clearance.

Place heat-resistant fireproof mats/refractory bricks under the furnace to prevent fire from molten metal leakage.

Do not use in enclosed or poorly ventilated spaces to avoid flammable gas accumulation and explosion. Force ventilation for fumes to prevent poisoning and suffocation. Prepare dry powder fire extinguisher and fire sand. Never use water on metal or electrical fires.

OPERATION & MAINTENANCE PROHIBITIONS

DO NOT heat empty for a long time. Continuous heating without materials will burn out heating elements and damage the furnace.

Crucible must be dry, crack-free, and clean. Preheat to remove moisture before use. Never use damaged or damp crucibles to prevent cracking.

Operate strictly within rated power, temperature, and capacity. Do not overheat, overpressure, or overload.

Do not disassemble, modify, or use non-original heating elements, thermostats, or electrical components without authorization to avoid uncontrolled hazards.

Regularly inspect furnace body, heating elements, temperature control, and exhaust systems. In case of abnormalities (smoke, odor, noise, temperature runaway, leakage), cut power immediately and have professional repairs.

PERSONNEL & ENVIRONMENT SAFETY

Only trained and qualified personnel may operate. Keep children, pets, unauthorized, and untrained personnel away. Install warning barriers around the operating area.

Stay focused during operation. Do not operate under the influence of alcohol, fatigue, or distraction.

When melting toxic metals (mercury, lead, cadmium), operate in a closed fume hood with a gas mask to avoid toxic fume inhalation.

Allow the machine to cool to room temperature before cleaning or moving to prevent residual heat burns.

EMERGENCY RESPONSE

Metal splash/burn: Flush affected area with plenty of running cold water for at least 15 minutes. Seek medical attention for severe burns.

Fire: Cut power immediately. Extinguish with dry powder extinguisher or fire sand. Do not use water.

Electric shock: Cut power immediately or use insulated tools to separate the victim. Perform CPR if needed and call emergency services.

Poisoning: Move victim to fresh air. Keep airway open. Seek medical help immediately for severe cases.

1.1 ELECTRICAL SAFETY - CRITICAL RULES

WARNING: Failure to follow these instructions may cause electric shock or severe injury.

READ FIRST: Thoroughly review all instructions before operation. Keep this manual accessible near the workstation.

POWER REQUIREMENTS:

- ✓ Always use grounded current sources.
- ✓ Verify proper grounding by a licensed electrician if uncertain.
- ✓ Never operate with damaged power cords.

OPERATING ENVIRONMENT:

- ✓ Keep unit indoors away from direct sunlight.
- ✓ Maintain 12-inch clearance from heat sources.
- ✓ Allow 3-hour cooldown after continuous operation.

CLEANING PROCEDURE:

Disconnect power before cleaning.

Wipe surfaces with damp microfiber cloth only.

NEVER use chemical cleaners or allow moisture ingress.

CHEMICAL WARNING:



Acid/alkali materials may corrode heating elements.

➡ Always keep the heat dissipation hole open during melting.

USER MAINTENANCE PROHIBITION:

- ✗ Do not disassemble any internal components.
- ✗ Unauthorized repairs void warranty.

1.2 MELTING FURNACE SAFETY PROTOCOLS

WARNING: Failure to comply may cause severe burns or fire hazards.

MANUAL ACCESSIBILITY:

- ✓ Keep this manual within arm's reach of the workstation.
- ✓ Train all operators using OSHA 1910.147 standards.

WORK AREA REQUIREMENTS:

- ✓ Maintain continuous ventilation (min. 4 air changes/hour).
- ✓ Keep emergency exits clear of obstructions.

FIRE PREVENTION:

- ✓ Keep ABC-type fire extinguisher visible and accessible.
- ✓ NO combustible materials within 36 inches.

PERSONAL PROTECTION:

- ✓ Wear ASTM F2675-certified gloves at all times.

OPERATIONAL SAFETY:

- ✓ Never leave unattended during operation.
- ✓ Fill crucible ≤80% capacity to prevent overflow.

MATERIAL HANDLING:

- ✓ Add solid materials slowly to avoid splatter.

1.3 MELTING FURNACE OPERATIONAL SAFETY

CRITICAL WARNINGS

OPERATION DURATION

- ✓ MUST cease operation after 2 hours of continuous use.
- ✓ Allow minimum 30-minute cooldown before restarting.

TEMPERATURE LIMITS



NEVER exceed 1200°C (2192°F) maximum rated temperature.

- ✓ Verify with calibrated thermocouple during operation.

RECYCLED METAL PROCESSING

- ✓ Acidic/alkaline residues in recycled precious metals cause heating element corrosion.
- ✓ Mandatory ventilation protocol:

Fully open the hole on the top of chamber cover during melting.

Maintain minimum 4 air changes/hour workspace ventilation.

FCC Information

FCC REGULATORY NOTICE

WARNING:

Unauthorized modifications void FCC operating authorization per 47 CFR §15.21.

COMPLIANCE STATEMENT

This device complies with FCC Part 15 Subpart B. Operation requires:

1. Acceptance of all interference (including undesired operation).
2. Non-interference with licensed services.

CLASS B DEVICE CERTIFICATION

Tested to comply with Class B digital device limits under 47 CFR §15.107/109. These limits:

- ✓ Provide residential interference protection.
- ✓ Do not guarantee interference-free operation.

INTERFERENCE MITIGATION

If causing RF interference to communications:

1. Power cycle to confirm source
2. Implement all corrective measures:
 - Reposition antenna.
 - Increase device-receiver separation.
 - Use isolated circuit (NEC 210.11 compliant).
 - Contact certified RF technician.

WARNING:

Changes or modifications to this product not expressly approved by the party responsible for compliance could void the user's authority to operate the product.

Note:

This product has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

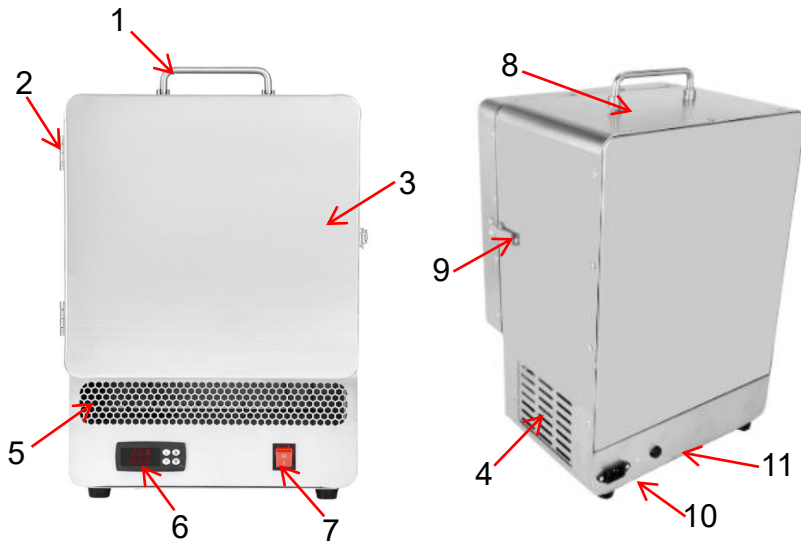
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- Reorient or relocate the receiving antenna.
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- Consult the dealer or an experienced radio/TV technician for assistance.

MODEL AND PARAMETERS

Model	KD-Z6651A	KD-Z6651B	KD-Z6652B
Input	AC 120V 60Hz(US) AC 230V 50Hz(EUR/AUS)	AC 120V 60Hz	AC 230V 50Hz
Max. Power	1500W	1650W	1650W
Cavity Size	6*6*5.5inch	8*5*6inch	8*5*6inch
Max. Temperature	1200±5℃		
Working Temperature	0-50℃		
Material	Stainless Steel(Shell)		

STRUCTURE DIAGRAM



1.Handle	2.Door hinge
3.Door	4.Heat dissipation fan
5.Heat dissipation holes	6.Temperature control meter
7.Power switch	8.Internal ventilation hole
9.Lock latch	10.Electrical outlets
11.Safety seat	

PARTS LIST

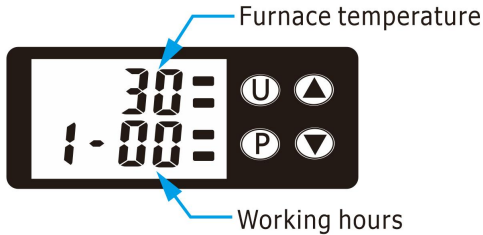
	
Melting Furnace x1	Crucible Tong x1
	
Power Cord x1	Insulated Gloves x1
	
User Manual x1	

PROCEDURE FOR TEMPERATURE CONTROL

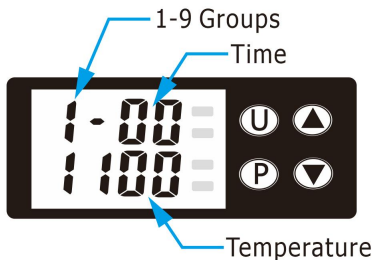
NOTE: The panel displays temperature in Celsius.

Temperature conversion: $B(^{\circ}\text{F}) = A(^{\circ}\text{C}) \times 1.8 + 32$

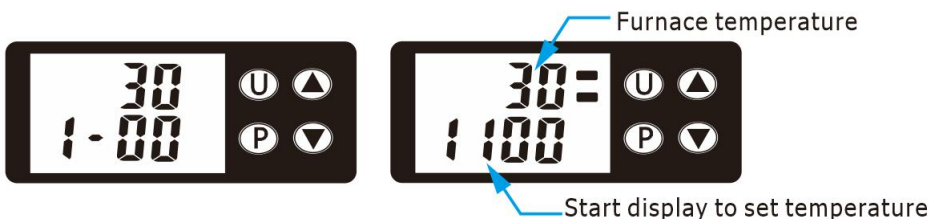
1. Main Interface



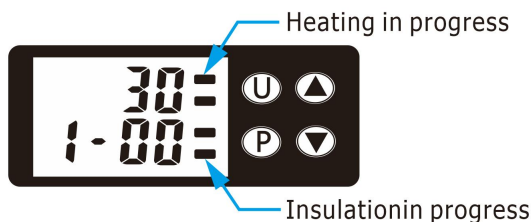
2. To set continuous temperature operation without a timer, press and hold the U key to enter settings, set the timer value to 0 on the first screen, input your desired temperature, then press and hold P to confirm - this activates non-timed mode where the machine maintains your selected temperature indefinitely with no automatic shutoff.



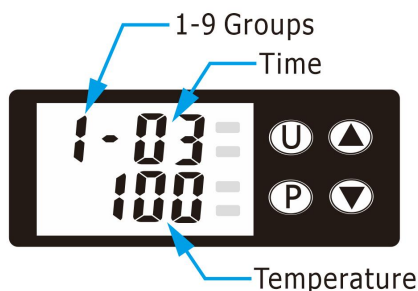
3. When the timer is set to 0, the display will automatically switch to show the current operating temperature. The unit will maintain this temperature continuously until manually powered off. (Manual intervention is required to stop heating.)



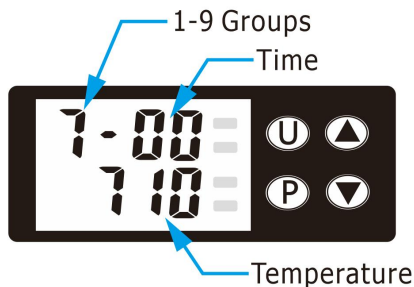
- 4.(1) A short press of the "P" key activates heating mode, indicated by the upper "=" icon blinking.
- (2) When the lower "=" icon blinks, this signifies heating has paused and the unit is in temperature maintenance phase.



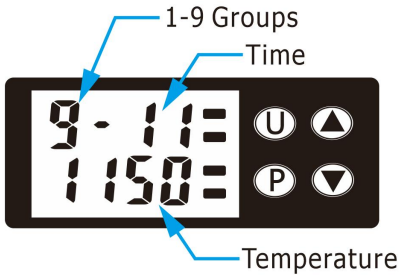
5. To configure settings, long-press "U" to enter programming mode. Short-press "U" to toggle between parameters (blinking indicates active field), then press ▲ ▼ to adjust values. Advance through parameter groups with short presses of "P". Confirm and exit settings via long-press of "P", supporting 9 programmable profiles with timer ranges (1-60 minutes) and temperature ranges (30-1200°C).



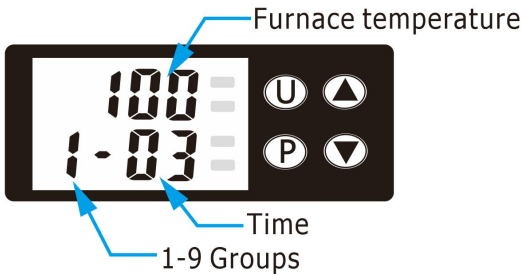
6. When navigating between profiles 2-9 with timer set to 0 minutes, the system automatically bypasses the inactive profile and advances to the next operational group.



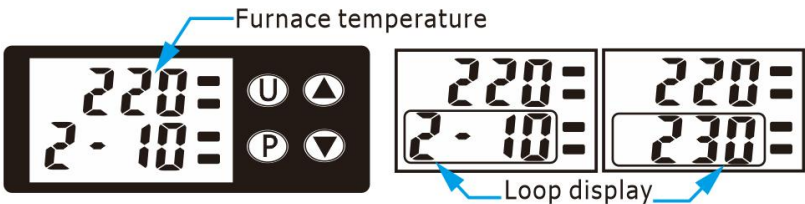
7. To initiate sequential processing, press “P” to activate Profile 1. Upon completing all programmed profiles (1-9), the system will automatically cycle back to Profile 1 and disengage heating. Note: The countdown timer for each profile commences only after thermal stabilization at the set temperature is achieved.



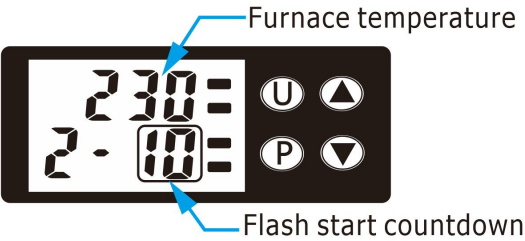
8. During active operation, pressing “P” at any stage immediately halts the process. To cancel programmed time/temperature parameters, long-press “P” for 3-4 seconds to revert to the starter profile.



During operation initiation, the display interface simultaneously shows real-time furnace temperature, active profile number with countdown timer, and programmed temperature cycle parameters in rotating display mode.



Upon reaching the programmed furnace temperature, the cycle halts automatically. The display identifies the active profile with extendable timer functionality, where elapsed time initiates flashing countdown sequencing. Upon timer completion, the system advances to the next profile without operator intervention.



USE

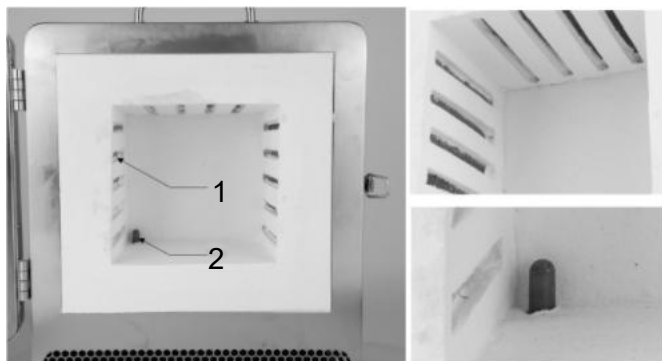
 First, place fire-resistant bricks inside, and then put the items on the fire-resistant bricks for heating.



Internal high temperature vents



Buckle opening mode diagram



1. Integrated fiber cotton heating wire

2. Temperature sensor

NOTE: Periodically check the intactness of the inwall, to avoid damage to the heating coil !

INSTRUCTIONS FOR METALS MELTING

IMPORTANT: The crucible is only adapted to melt gold, Silver, copper and other noble metals!

List of the metal types which can be molten in the crucible provided with the device:

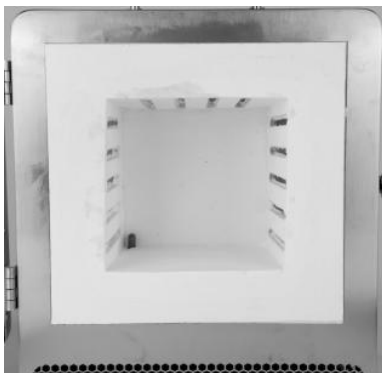
Metal	Symbol	Density	Density Fusion Point
Copper	Cu	8.92g/cm ³	1084.62°C(1984°F)
Silver	Ag	10.49g/cm ³	962.78°C(1763.2°F)
Gold	Au	19.3g/cm ³	1064.18°C(1947.52°F)
Aluminum	Al	2.7g/cm ³	660.32°C(1220.58°F)
Magnesium	Mg	1.74g/cm ³	650°C(1202°F)
Zinc	Zn	7.14g/cm ³	419.53°C(787.15°F)
Lead	Pb	11.34g/cm ³	327.5°C(621.5°F)
Tin	Sn	7.28g/cm ³	231.93°C(449.47°F)
Calcium	Ca	1.55g/cm ³	842°C(1548°F)

Please consider that the crucible shouldn't be completely filled to reach an optimal result. If you overfill the crucible, the device won't be able to produce the heat needed to let the metal melt. Moreover, the melting process often produces vapors. If you overfill the crucible, it can lead to over pressure and the use of the device gets dangerous for the user, at the latest by opening the cover. Please buy an adapted crucible to melt other metals. Always inform yourself about the production of vapors during the melting process to check the compatibility of the device with your intentions.

MATTERS NEEDING ATTENTION

Display error codes to determine machine problems

- ERR1: Mainboard temperature circuit malfunction
- ERR2: Thermocouple circuit open or sensor failure
- ERR3: Thermocouple reading exceeds operational range
- ERR4: Board-mounted temperature sensor detached or damaged
- ERR5: Cooling fan disengaged or inoperative
- ERR6: Thermal control module over-temperature condition



NOTE:

Metallic Ingredient Incursion

- Contact between fallen metal debris and heating cartridge causes dead short
- Crucible failure may lead to molten metal infiltration, resulting in catastrophic heating element burnout
- ▶ Corrective Action: Replace heating wire cylinder

Heating System Diagnostics

- Activate process initialization by pressing “P” key
- If chamber temperature rise $\leq 5^{\circ}\text{F}$ (2.8°C) within 60 seconds:
→ Confirm heating element failure

MAINTENANCE

1. Clean the exterior and interior regularly to avoid impurities and metal residues.
2. Before and after use, you need to check whether the device is normal.

