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› Kingroon 3D Printer Filament Dryer Box (Model sku-lzw) Instruction Manual

Kingroon sku-lzw

Kingroon 3D Printer Filament Dryer Box (Model sku-lzw) Instruction Manual

Comprehensive guide for setup, operation, maintenance, and troubleshooting.

1. PRODUCT OVERVIEW

The Kingroon Filament Dryer Box is designed to remove moisture from 3D printer filaments, improving print quality and preventing common issues such as stringing, clogging, and poor adhesion. This device features 360° surround heating, an integrated fan for efficient moisture discharge, and adjustable temperature and time settings.



Image 1.1: Front view of the Kingroon Filament Dryer Box. The unit is white with a translucent grey lid, featuring a digital display and three control buttons on the front panel.



Image 1.2: Diagram illustrating the main components of the filament dryer box, including the translucent upper lid, wet gas outlet, wire disc, display, silk outlet, function keys, temperature-resistant bottom shell, and door mat.

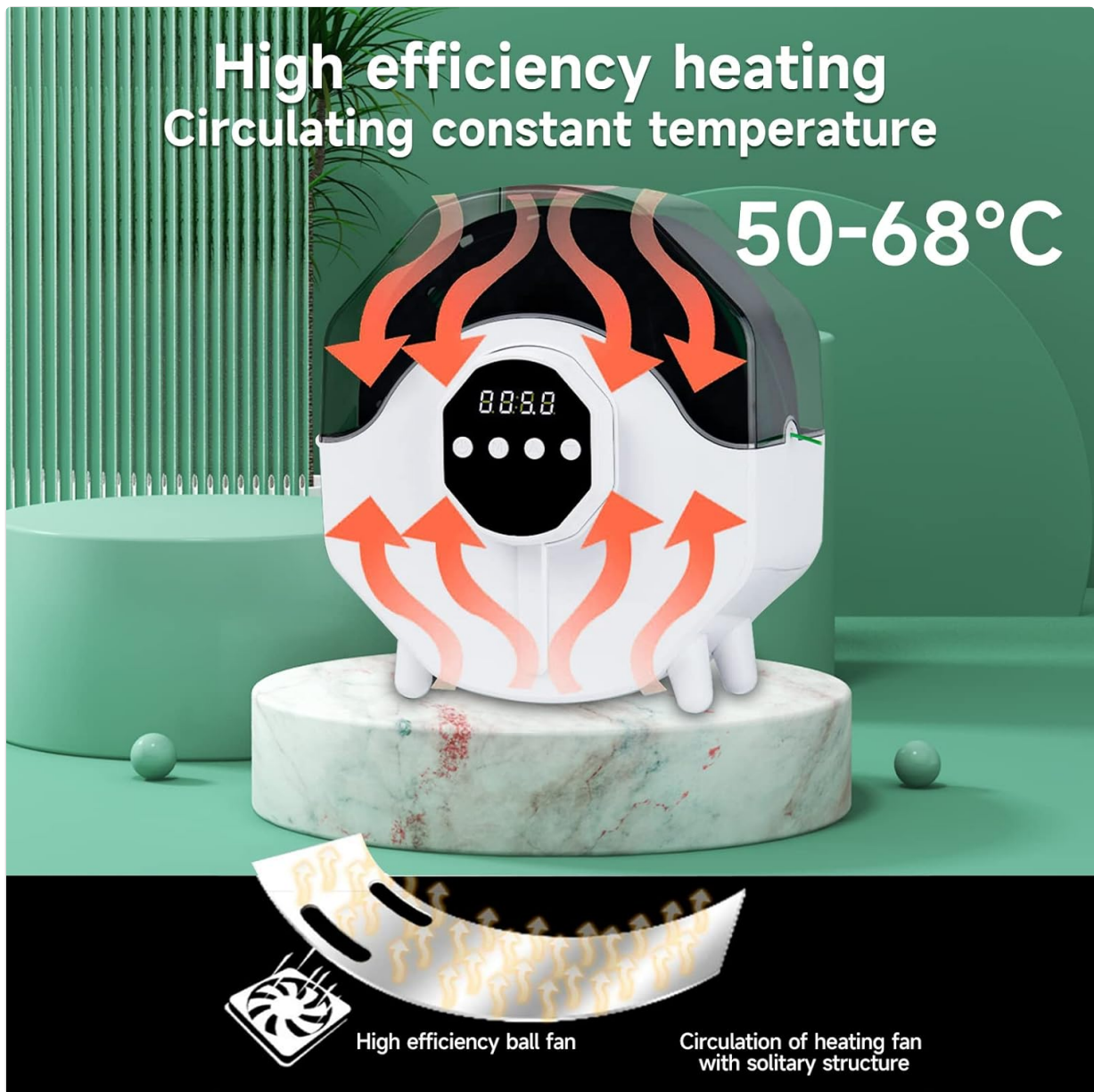


Image 1.3: Illustration demonstrating the 360-degree circulating constant temperature heating system within the dryer box, showing heat distribution from 50-68°C and the high-efficiency ball fan.

2. SAFETY INSTRUCTIONS

- Ensure the device is placed on a stable, flat, and heat-resistant surface.
- Do not block the ventilation openings during operation.
- Keep the device away from water or other liquids.
- Do not touch the heating elements during or immediately after operation.
- Unplug the device from the power outlet when not in use or before cleaning.
- This device is intended for drying 3D printer filaments only. Do not use it for other purposes.
- Keep out of reach of children.

3. SETUP

1. **Unpacking:** Carefully remove the filament dryer box from its packaging. Inspect for any damage.
2. **Placement:** Place the unit on a stable, level surface near your 3D printer or in a well-ventilated area.

3. **Power Connection:** Connect the provided power adapter to the DC24V input port on the dryer box, then plug the adapter into a standard electrical outlet.

4. **Loading Filament:**

- Open the translucent upper lid.
- Place your filament spool onto the wire disc inside the dryer box. The dryer supports 0.5KG and 1KG filament spools with a maximum tray size of $\varnothing 200 \times 73(H)$ mm.
- If you intend to print directly from the dryer, feed the filament through the silk outlet.
- Close the upper lid securely to ensure a sealed environment.

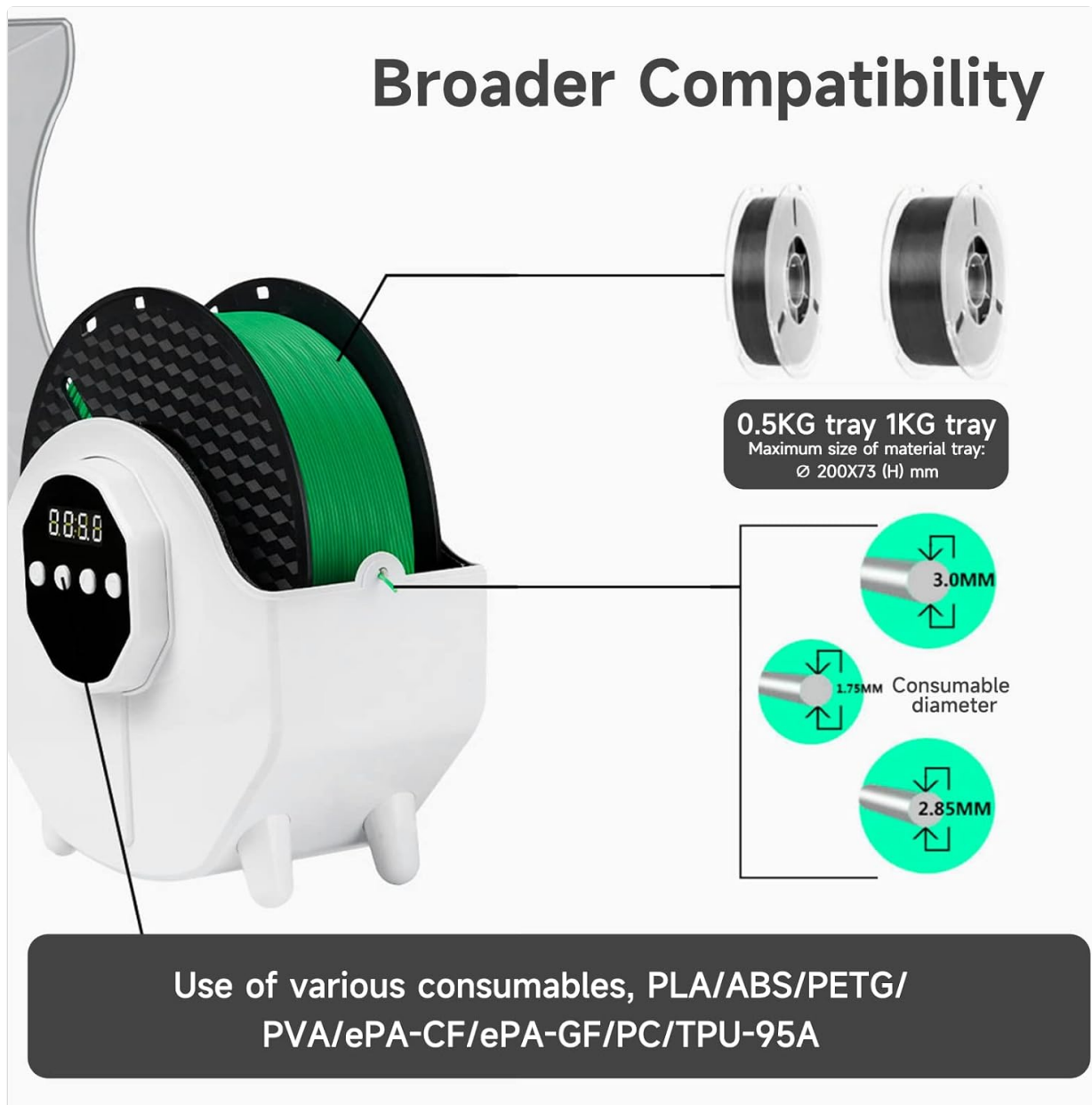


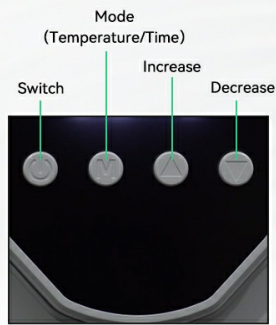
Image 3.1: Illustration showing how to load a filament spool into the dryer box and highlighting compatibility with 1.75mm, 2.85mm, and 3.00mm filament diameters, as well as various material types.

4. OPERATING INSTRUCTIONS

The Kingroon Filament Dryer Box features a digital display and three function keys for control: Mode (Switch), Increase, and Decrease.

REAL TIME MONITORING DATA

Real time observation of humidity and temperature, display of drying time countdown
Keep you informed of the drying situation at all times.



Temperature Display
Time Display




Image 4.1: Close-up of the control panel showing the digital display for temperature and time, along with the three function keys: Mode (Switch), Increase, and Decrease.

- 1. Power On:** After connecting the power, the display will illuminate.
- 2. Setting Temperature:**
 - Press the "Mode" button to cycle through settings. When the temperature indicator is active, use the "Increase" and "Decrease" buttons to adjust the desired drying temperature.
 - Available temperature settings are 50°C, 60°C, and 70°C.
 - Refer to the Recommended Drying Temperature Table below for optimal settings based on filament type.
- 3. Setting Drying Time:**
 - Press the "Mode" button again to switch to the time setting. When the time indicator is active, use the "Increase" and "Decrease" buttons to set the drying duration from 0 to 24 hours.
 - The dryer will automatically begin heating once the time is set.
- 4. Monitoring:** The display shows real-time temperature and a countdown of the drying time.
- 5. Completion:** The device will automatically stop heating once the set time has elapsed.

4.1 Recommended Drying Temperature and Time

The following table provides general guidelines for drying various filament types. Optimal settings may vary based on filament brand, ambient humidity, and desired dryness level.



Recommended drying temperature for filament		
PLA	50°C	≥4h
TPU	55°C	≥4h
PP	55°C	≥6h
ABS	60°C	≥2h
ASA	60°C	≥4h
PETG	65°C	≥2h
PC	65°C	≥8h
PA	65°C	≥12h

Image 4.2: Table displaying recommended drying temperatures and minimum drying times for common 3D printing filaments such as PLA, TPU, PP, ABS, ASA, PETG, PC, and PA.

Table 4.1: Filament Drying Reference

Filament Type	Temperature	Minimum Time
PLA	50°C	≥4h
TPU	55°C	≥4h
PP	55°C	≥6h
ABS	60°C	≥2h
ASA	60°C	≥4h
PETG	65°C	≥2h
PC	65°C	≥8h
PA	65°C	≥12h

Note: The maximum temperature can reach 70°C. The drying degree reaches excellent effect after 2 hours for some filaments under normal temperature test, normal heating for 30 minutes, and humidity drop.

5. MAINTENANCE

- **Cleaning:** Ensure the device is unplugged and cooled down before cleaning. Wipe the exterior with a soft, dry cloth. Do not use abrasive cleaners or immerse the unit in water.
- **Storage:** When not in use for extended periods, store the dryer box in a cool, dry place, away from direct sunlight and dust.
- **Filament Spool:** Regularly check the wire disc for any debris or filament residue and clean as necessary to ensure smooth rotation.

6. TROUBLESHOOTING

Table 6.1: Troubleshooting Guide

Problem	Possible Cause	Solution
Device does not power on.	No power supply.	Check if the power adapter is securely plugged into both the device and the electrical outlet. Ensure the outlet is functional.
Filament is not drying effectively.	Incorrect temperature/time settings; lid not closed properly; extremely high ambient humidity.	Verify temperature and time settings according to the filament type (refer to Table 4.1). Ensure the lid is fully closed. Increase drying time if ambient humidity is very high.
Display shows error or abnormal readings.	Internal malfunction.	Unplug the device, wait 5 minutes, then plug it back in. If the issue persists, contact customer support.
Fan is noisy or not operating.	Fan obstruction or malfunction.	Ensure no foreign objects are obstructing the fan. If the fan is not operating or is excessively noisy, contact customer support.

7. SPECIFICATIONS



Product model:	3D-X2 (3D Printing Filament Dryer Box)
Rated voltage:	DC24V~2A
Rated power:	48W
Heating time setting:	1-24 hours
Heating temperature:	~50-68°C
Product size:	248(L)X125(W)X242(H)mm
Product weight:	~1125g

Image 7.1: Diagram showing the physical dimensions of the dryer box along with a table of key product specifications.

Table 7.1: Product Specifications

Feature	Detail
Product Model	sku-lzw (3D Printing Filament Dryer Box)
Rated Voltage	DC24V~2A
Rated Power	48W
Heating Time Setting	1-24 hours
Heating Temperature	~50-68°C (Max 70°C)
Product Dimensions (L×W×H)	248mm × 125mm × 242mm
Product Weight	~1125g (2.2 pounds)
Filament Diameter Compatibility	1.75mm, 2.85mm, 3.00mm
Max Spool Size	Ø200mm × 73mm (H) for 0.5KG/1KG spools

8. WARRANTY AND SUPPORT

Kingroon provides customer support for this product. If you encounter any issues or have questions regarding the Kingroon Filament Dryer Box, please contact Kingroon customer service.

- For assistance, refer to the contact information provided with your purchase or visit the official Kingroon website.
- Please retain your proof of purchase for warranty claims.

Note: Specific warranty terms and conditions may vary. Please consult the warranty card included with your product or the manufacturer's official channels for detailed information.