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› Sovol SH03 Filament Dryer User Manual

Sovol SH03

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Model: SH03

1. INTRODUCTION

The Sovol SH03 Filament Dryer is designed to remove moisture from 3D printer filaments, improving print quality and preventing common issues such as clogging, bubbling, and poor layer adhesion. This device features dual independent heating chambers, a maximum temperature of 85°C, and an auto dehumidification system. It supports up to four 1KG spools simultaneously and is compatible with various filament types including PLA, PETG, ABS, TPU, ASA, PC, and PA.



Figure 1: Sovol SH03 Filament Dryer main unit.

2. SAFETY INFORMATION

Please read all safety instructions before operating the device to prevent injury or damage. Keep this manual for future reference.

- **Electrical Safety:** Ensure the power supply voltage matches the device requirements. Do not operate with damaged power cords or plugs. Disconnect power before cleaning or maintenance.
- **Heat Safety:** The device operates at high temperatures. Avoid direct contact with internal heating elements during operation. Allow the device to cool down before handling internal components.
- **Ventilation:** Ensure adequate ventilation around the device during operation. Do not block air vents.
- **Placement:** Place the dryer on a stable, heat-resistant surface. Keep away from flammable materials and water.
- **Children and Pets:** Keep the device out of reach of children and pets.

3. PRODUCT OVERVIEW

The Sovol SH03 features a robust design with two independent heating chambers, each capable of holding two 1KG filament spools. The control panel provides real-time monitoring and easy adjustment of drying parameters.

3.1 Components

- Main Drying Unit with Dual Chambers
- Transparent Lids
- Control Panel with Display
- Power Adapter
- PTFE Tubes (for 1.75mm filament feeding)



Figure 2: Sovol SH03 with dual independent heating chambers, showing different temperature settings for PLA and PC.

4. SETUP

1. **Unpack:** Carefully remove the Sovol SH03 from its packaging. Inspect for any damage.
2. **Placement:** Place the dryer on a flat, stable, and heat-resistant surface with adequate space for ventilation.
3. **Power Connection:** Connect the power adapter to the device and then plug it into a suitable power outlet.

4. **Loading Filament:** Open the transparent lids. Place up to two 1KG filament spools in each chamber. Ensure the spools rotate freely on the rollers.
5. **Filament Feeding (Optional):** If printing directly from the dryer, feed the filament through the designated holes on the lid. For 1.75mm filament, use the provided PTFE tubes for smoother feeding and better sealing.



Figure 3: Sovol SH03 demonstrating compatibility with various spool sizes and filament diameters (1.75mm with PTFE tube, 2.85mm without).

5. OPERATION

5.1 Control Panel Overview

The control panel allows you to manage drying settings for each chamber independently.

Real Time Monitoring



Figure 4: Control panel displaying target temperature, real-time temperature, real-time humidity, and set drying time.



Figure 5: Detailed explanation of control panel buttons and display indicators.

- **Relative Humidity:** Displays current humidity.
- **Materials:** Indicates selected filament type.
- **Auto Mode Icon:** Shows if Auto Mode is active.
- **Chamber Switching/Copy Key:** Short press to switch between Chamber 1, Chamber 2, or dual-chamber simultaneous working mode. Long press (2 seconds) to copy parameters from one chamber to another.
- **Setting Selection Key/Auto Mode:** Short press to switch parameters. Long press (2 seconds) to enter/leave Auto Mode.
- **Up/Down Buttons:** Adjust values for temperature and time.
- **Start/End Button:** Initiates or terminates the drying process.
- **Current Temperature:** Displays the actual temperature inside the chamber.

- **Setting Temperature:** Displays the target temperature.
- **Time:** Displays the remaining drying time.
- **Fan, Heating Module Working Status Icon:** Indicates active components.

5.2 Drying Process

1. **Power On:** Press the power button to turn on the device.
2. **Select Chamber:** Short press the Chamber Switching/Copy Key to select Chamber 1, Chamber 2, or both.
3. **Set Filament Type:** Use the Setting Selection Key to navigate to the filament type setting. Use the Up/Down buttons to select the appropriate filament (e.g., PLA, PETG, ABS). The device has pre-set temperatures and times for 10 different filament types.
4. **Adjust Temperature/Time (Optional):** If needed, use the Setting Selection Key to navigate to temperature or time settings and adjust with the Up/Down buttons. Refer to the recommended drying temperatures table below.
5. **Start Drying:** Press the Start/End button to begin the drying process. The display will show real-time temperature and humidity.
6. **Auto Dehumidification:** When the internal temperature reaches the preset target, the moisture vent will automatically open to discharge humidity.
7. **End Drying:** The device will automatically stop after the set time. You can manually stop the process by pressing the Start/End button.

5.3 Auto Mode

In Auto Mode, the device monitors humidity and automatically starts or stops drying.

- If the current humidity exceeds the set threshold, the chamber will automatically start the drying function.
- If the humidity falls below the set threshold, the chamber will enter storage mode after drying for 2 hours.
- To activate/deactivate Auto Mode, long press the Setting Selection Key for 2 seconds.

Auto Mode

- 1.If the current humidity exceeds the threshold you set, the chamber will auto start the drying function.
- 2.If the humidity falls below the threshold you set, the chamber will start storage mode after drying for 2 hours.



Figure 6: Explanation of the Auto Mode functionality.

5.4 Recommended Filament Drying Temperatures and Times

The following table provides general guidelines. Optimal settings may vary based on filament brand and environmental conditions.

Filament Type	Drying Temperature	Drying Time
PLA	50°C	4-12h
PETG	65°C	4-8h
TPU	70°C	4-8h
ABS	80°C	8-12h
PVA	50°C	4-8h

Filament Type	Drying Temperature	Drying Time
ASA	80°C	8-12h
PA	80°C	≥12h
PP	55°C	4-8h
PC	80°C	8-12h
PET	80°C	8-12h

Dry 4 Spools at the same time

Recommended Filament Drying Temperatures										
Filaments	PLA	PETG	TPU	ABS	PET	PC	ASA	PA	PVA	PP
Temperatures	50°C	65°C	70°C	80°C	80°C	80°C	80°C	80°C	50°C	55°C

Figure 7: Sovol SH03 drying four spools at once, illustrating the recommended filament drying temperatures.

Stronger **360°** Circulating Hot Air

Quickly and evenly dry the moisture
of filaments

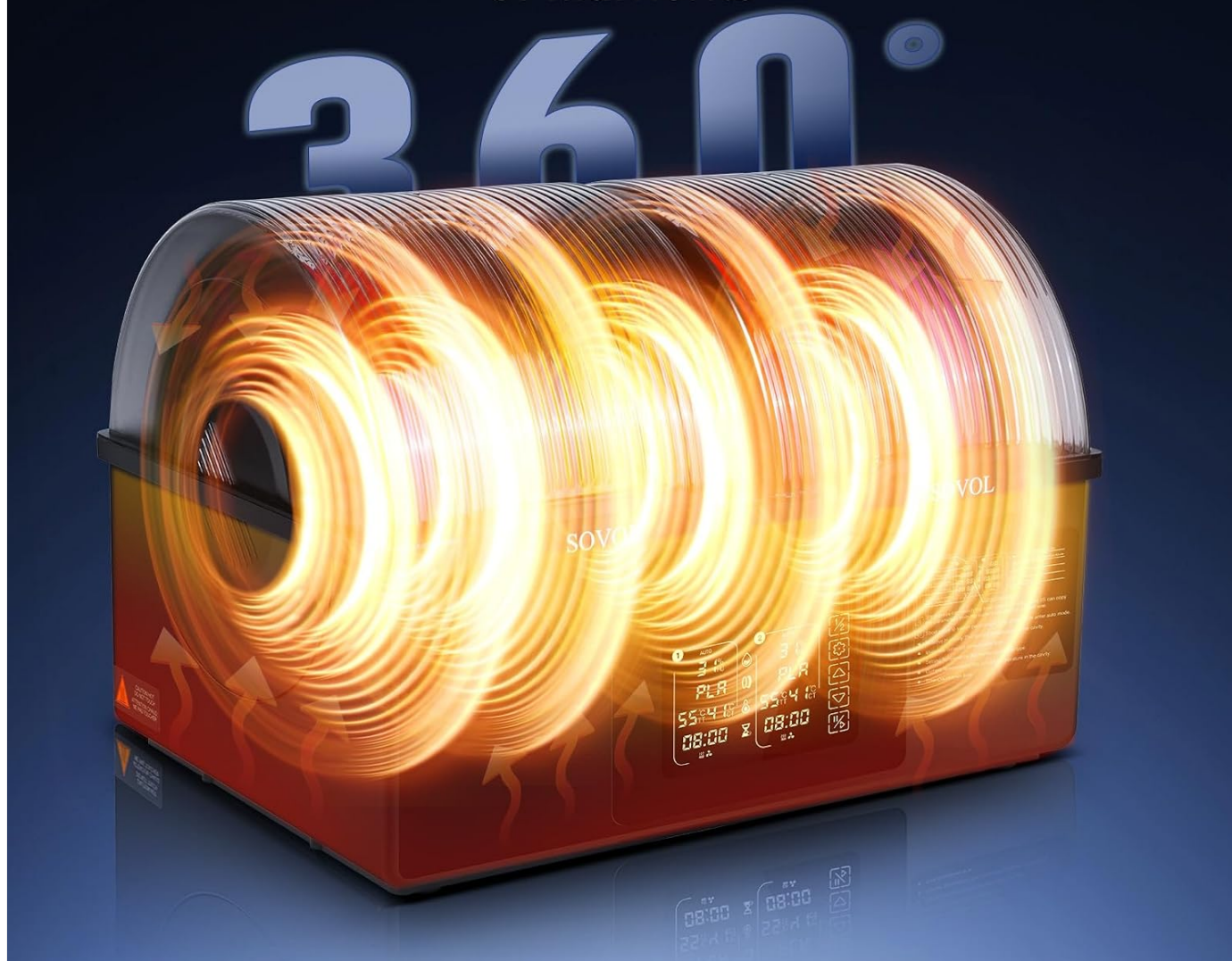


Figure 8: Illustration of the 360° circulating hot air system for even drying.

Auto Dehumidification System

Actively discharge moisture from the chamber by the steam hole

*No more moisture in the chamber

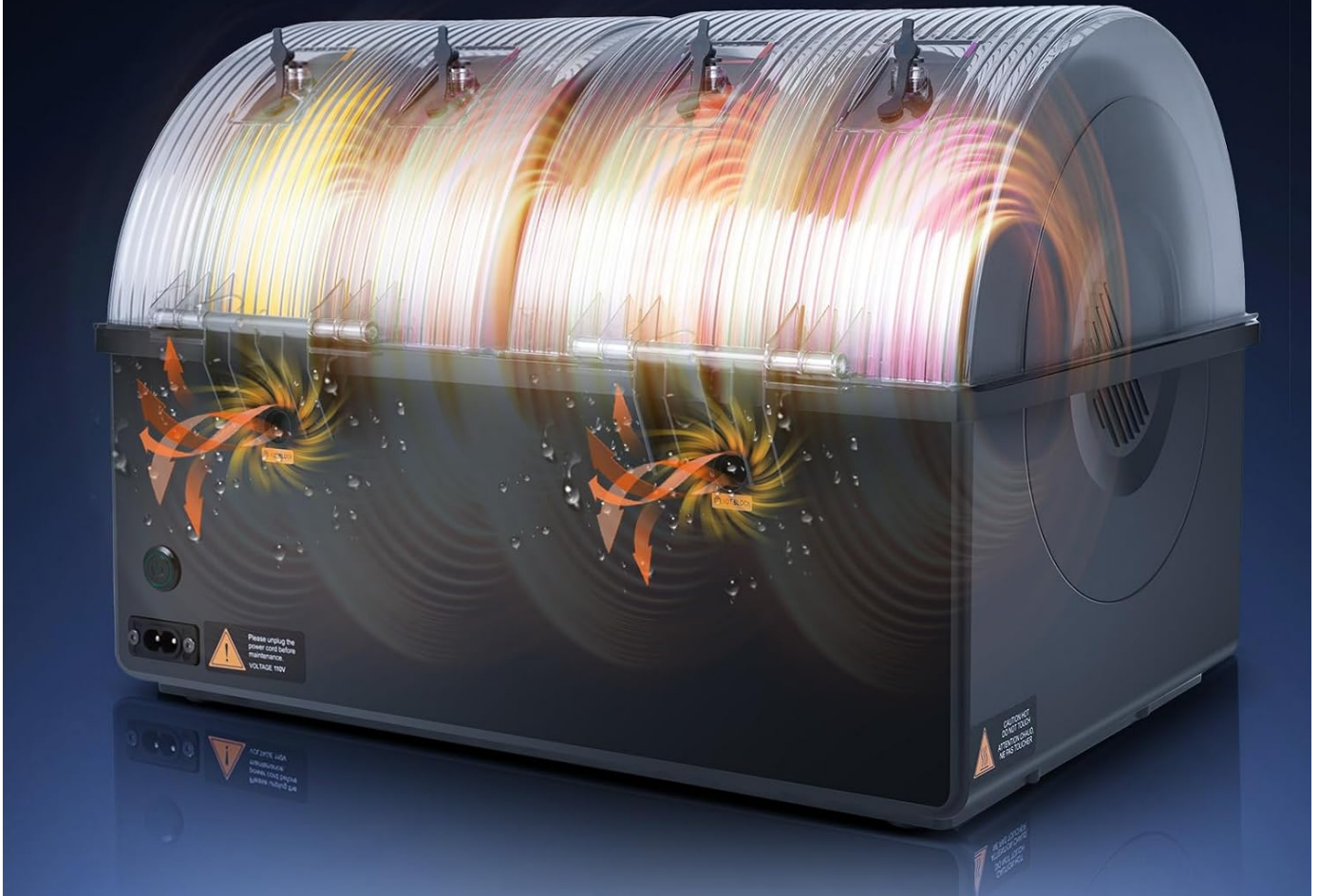


Figure 9: The Auto Dehumidification System actively discharges moisture from the chamber via steam holes.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your Sovol SH03 Filament Dryer.

- **Cleaning:** Ensure the device is unplugged and cooled before cleaning. Wipe the exterior with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Internal Cleaning:** Periodically check the interior for any filament debris. Remove carefully if present.
- **Desiccant (Optional):** For enhanced moisture absorption during storage, desiccant packets can be placed in the designated cavity within the chambers.
- **Storage:** When not in use for extended periods, store the dryer in a dry, dust-free environment.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your Sovol SH03 Filament Dryer.

Problem	Possible Cause	Solution
Device does not power on	Power cable not connected; Power outlet faulty	Check power cable connection; Try a different power outlet.
Filament not drying effectively	Incorrect temperature/time settings; Lids not properly sealed; Overloaded chambers	Adjust settings according to filament type; Ensure lids are securely closed; Do not exceed maximum capacity.
Display shows error message	Internal sensor issue; Overheating protection triggered	Power cycle the device. If error persists, contact support. The device has thermal runaway protection that disconnects heating if temperature exceeds 130°C and resumes below 90°C.
Unusual noise during operation	Fan obstruction; Loose component	Ensure no foreign objects are obstructing the fan. If noise persists, contact support. The operating noise level is typically below 50dB.

8. SPECIFICATIONS

Feature	Specification
Input Voltage	US Regulations: 100-120V 60Hz; European Standard: 200-240V 50Hz
Rated Power	400W (Dual 200W PTC heaters)
Filament Diameter	1.75mm / 2.85mm
Maximum Consumable Capacity	Four rolls of consumables ≤70mm (width) or Two rolls of consumables ≤150mm (width)
Display Humidity Range	0-99%
Display Temperature Range	0-99°C
Work Temperature Range	45°C-85°C
Machine Size (L*W*H)	372mm * 288mm * 263mm
Equipment Weight	3.4 kg
Environmental Parameters	5°C-40°C
Applicable Filament	PLA, ABS, PETG, TPU, PVA, ASA, PA, PP, PC, PET

What Sovol SH03 Can Do?

3D printer filaments moisture would cause printing failure, such as clogging, bubbles or poor layer adhesion etc. issues. Additionally, moist filament becomes brittle and loses its original mechanical properties. Sovol SH03 will remove excess moisture and get smoother surface, bringing you a better prints. SH03 is also equipped with two 200w PTC heater which can heats up to 50°C quickly and reach up to 85°C max, not only solving all the hassle but also saving of your time.



Figure 10: Detailed product specifications for the Sovol SH03 Filament Dryer.

9. WARRANTY AND SUPPORT

The Sovol SH03 Filament Dryer comes with a **1-Year Manufacturer Warranty**.

For technical support, troubleshooting assistance, or warranty claims, please contact Sovol customer service through their official website or the platform where the product was purchased. Please have your model number (SH03) and purchase information ready when contacting support.

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