

# noztek

## dehydrator

### USER MANUAL



## Introduction

To ensure consistent filament quality, it is crucial to thoroughly dry your material in preparation for the extrusion process. When extruding moist filament, the moisture in the material vaporizes, creating steam pockets within, adversely affecting the extruded filament by breaking apart polymer chains and weakening the material.

Keeping this in mind, Noztek has innovatively designed a dual-purpose touchscreen dehydrator capable of drying pellets in a rotating drum and filament spools.

The drum boasts a generous 2kg material capacity and features a baffle insert, agitating the material in a tumble dryer fashion to facilitate even drying. The dehydrator also includes a quick removal system, making it easy to lift out the drum with a slide opening for convenient refilling.

When incorporating spools in the dehydrator, you can utilize the cylinder insert. This insert accommodates up to 4 spools simultaneously. Moreover, you have the option to feed your filament directly into a pelletizer or 3D printer through the feeding tube while it undergoes the drying process. This ensures that you maintain a moisture-free filament throughout the entire processing procedure.

Constructed with a robust 2mm steel sheet, the dehydrator chassis retains heat, ensuring a constant temperature throughout the drying process.

The Noztek pellet and spool dehydrator has a powerful 1000W heater at the rear and a purpose-built heating fan, which again helps to dry the polymer evenly. The unit can maintain a temperature of 80°C, and the built-in timer ensures that the pellets are completely dry before use. The dehydrator uses a high-torque motor, which easily rotates the drum at 1 RPM with a 2kg pellet capacity. It has both a bespoke PCB board and accurate temperature and humidity sensors, allowing you to keep track of both values.

For best results, use the Noztek pellet & spool dehydrator with Noztek desktop filament extruders

## Noztek pellet and spool dehydrator

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## Warranty

We guarantee outstanding quality for our products and services.

Customers who purchase Noztek-manufactured equipment for professional use are guaranteed that they will be free from defects in workmanship and materials for 1 year from date of shipment. If your machine is found to be faulty, we will repair or replace the machine. The warranty and functional guarantee does not cover damages caused by wear and tear or improper use.

**TO INSURE THAT YOUR WARRANTY IS HELD IN EFFECT, PROPER OPERATION PROCEDURES MUST BE OBSERVED.**

**NOTE: READ THE SAFETY PRECAUTIONS BEFORE OPERATING THIS MACHINE.**

For a full breakdown please read our Limitations of Warranty Cover below.

### **Limitations of Warranty Cover:**

- You must own the machine
- The original invoice is decisive as this is your warranty claim (please keep a copy of this)
- Repair or replacement of machine will be determined by Noztek
- Warranty only covers manufacturing or material defects

### **Warranty does not cover:**

- Incorrect use of machine /damage due to misuse
- Damage from force or fall
- Foreign objects inside of machine
- Water damage or dirt
- User failing to follow proper usage instructions
- Normal wear and tear in machine's lifespan
- Unauthorized repairs by consumer

While we stand by the quality of our products, it's important to note that our liability is limited. This warranty represents your sole remedy, and there are no other expressed or implied warranties.

In the rare instance of a covered defect, we offer remedies such as repair or replacement after assessing the reported fault.

Noztek have the right to reject any warranty claim if we feel the request falls outside of our limitations

### **Filing a Claim:**

Need assistance? Our customer support team is ready to help. Refer to the contact information provided in this manual to start the claims process.

## Safety

### **Caution: Injury Risk**

This equipment contains moving parts. To prevent injury, keep hands, fingers, and other body parts clear during operation. Avoid wearing loose clothing or jewellery that may become entangled in moving components. Tie back long hair and secure loose items before using the equipment. Always follow safety instructions provided in the user manual.

### **Caution: Hot Surface**

This equipment can reach high temperatures during operation. Avoid direct contact with exposed surfaces to prevent the risk of burns. Allow the equipment to cool before handling or performing maintenance. Exercise caution and keep out of reach of children. Follow all safety guidelines provided in the user manual.

### **Caution: High Voltage Zone**

This equipment contains high-voltage components. To avoid the risk of electrical shock:

Do not use liquids near the machine: Keep all liquids, including water, away from the equipment. Liquids can conduct electricity and increase the risk of electrical shock.

Do not modify internal wiring: Modifying internal wiring or electronic components poses a serious hazard. Only authorized personnel should perform any maintenance or modifications.

### **Caution: Material guidelines**

Ensure familiarity with the material being dried, including its maximum temperature tolerance and ventilation requirements for the space. Neglecting to do so may result in damage to the machine and pose potential health risks to the user.

## **SAFETY GUIDELINES**

- Before operating, ensure you have a thorough understanding of the equipment. Carefully review the provided instruction manual for complete guidance.
- Understand the proper, safe usage and limitations of the equipment.
- Never use this equipment for any purpose other than its intended use.
- Do not modify the equipment in any way.
- Do not make adjustments or perform maintenance while the system is in operation or energized.
- Non-Flammable Cleaning: Refrain from cleaning the equipment with flammable solvents.

# Product Specification Sheet

## 1. Product Information:

- Product Name/Model: Noztek pellet and spool dehydrator
- Brand/Manufacturer: Noztek
- Serial Number: See invoice
- Date of Manufacture: 2023

## 2. General Description:

To ensure consistent filament quality, it is crucial to thoroughly dry your material in preparation for the extrusion process. When extruding moist filament, the moisture in the material vaporizes, creating steam pockets within, adversely affecting the extruded filament by breaking apart polymer chains and weakening the material. Keeping this in mind, Noztek has innovatively designed a dual-purpose touchscreen dehydrator capable of drying pellets in a rotating drum and filament spools.

## 3. Technical Specifications:

- Voltage Requirements: 220VC or 110VC.
- Power Rating: 10A.
- Frequency (Hz): 50 Hz or 60 Hz.
- Operating Temperature Range: -40°C to 85°C (-40°F to 185°F)
- Dimensions (including weight and size): 80cm x 15cm x 54cm. 10 KG.
- Material Composition: Steel.
- Color/Finish: Yellow powder coat.
- Motor: 1RPM.
- Heater: 1000W heater.
- 2KG pellet drum.

## 4. Key Features:

### 3.5-Inch TFT Touchscreen Control Panel:

The machine features a sophisticated 3.5-inch Thin-Film Transistor (TFT) touchscreen, providing an intuitive and responsive interface for operating and configuring the equipment.

### Touchscreen features:

The dehydrator touchscreen is equipped with several features. It allows you to easily set and monitor the desired temperature, with a maximum setting of 80°C. Additionally, there is a timer function that can be programmed for up to 10 hours, ensuring your dryer operates consistently over an extended period. The screen also provides a humidity readout, allowing you to stay informed about the humidity levels within the dryer.

### **Pellet drum drying:**

The drum boasts a generous 2kg material capacity and features a baffle insert, agitating the material in a tumble dryer fashion to facilitate even drying. The dehydrator also includes a quick removal system, making it easy to lift out the drum with a slide opening for convenient refilling.

### **Filament spool dryer:**

When incorporating spools in the dehydrator, you can utilize the cylinder insert. This insert accommodates up to 4 spools simultaneously. Moreover, you have the option to feed your filament directly into a pelletizer or 3D printer through the feeding tube while it undergoes the drying process. This ensures that you maintain a moisture-free filament throughout the entire processing procedure.

## **5. Safety Information:**

- Warnings: See safety sheet
- Recommended Safety Gear: See safety sheet
- Emergency Shutdown Procedures:

In the event of an emergency, firmly press the red mains switch located at the back of the machine. This action will swiftly deactivate the power supply, bringing all ongoing processes to an immediate halt.

## **6. Operating Instructions:**

- Step-by-step instructions for safe and proper use of the product: See safety sheet and guide
- Start-up and Shutdown Procedures: See guide
- Control Panel Layout: See guide

## **7. Technical Diagrams:**

- Available upon request.

## **8. Performance Data:**

### • Heater:

Equipped with a fan activated heater, capable of reaching temperatures up to 80°C.

### • Drum capacity:

2KG maximum.

## **9. Accessories and Included Items:**

- Mains cable
- Pellet drum
- Spool holder
- Filament guide



**10. Warranty Information:**

- See warranty sheet.

**11. Compliance and Certifications:**

- CE

**12. Technical Support and Contact Information:**

- info@noztek.com
- <https://noztek.com/contact/>
- 44 (0) 203 384 6208

- Noztek Head office  
Unit C3 Dolphin Enterprise Centre  
Evershed Way  
Shoreham  
West Sussex  
BN43 6QB  
ENGLAND

## Set-up Instructions

### 1. Unpacking and Placement:

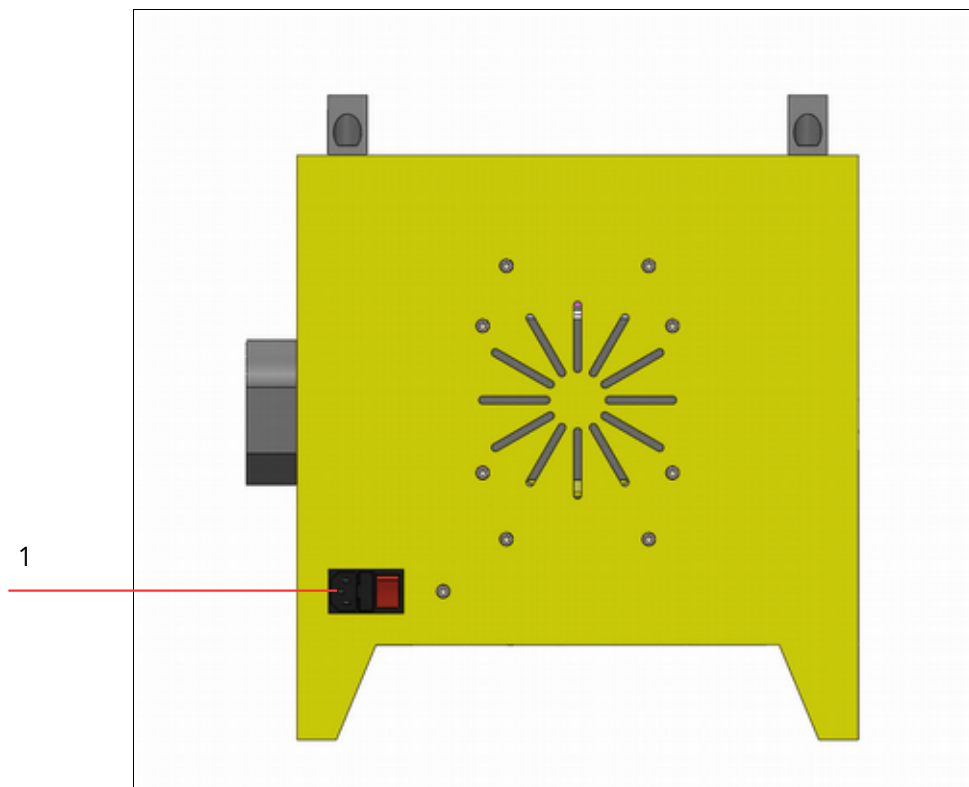
Caution: Do not plug the machine into the mains or turn it on during set-up. Carefully unpack the machine and accessories. Place the machine on an even, stable surface, ensuring there are no flammable materials nearby as the heater can reach temperatures of up to 80°C.

### 2. Power Connection:

Once the initial steps are completed, you can plug in the mains cable into the machine. Before doing so, double-check that the mains voltage (e.g., 220VAC or 110VAC) matches the voltage specified on the machine (refer to the sticker on the machine). **Refer to the image below to locate the mains power inlet.**

Note: Always follow these set-up instructions meticulously to ensure the safe and effective operation of the machine. If you encounter any issues or have questions, refer to the comprehensive user manual for further guidance.

**Image:** Location of main power inlet



### Power Connection

1. Mains socket inlet and power switch. (220VAC or 110VAC).

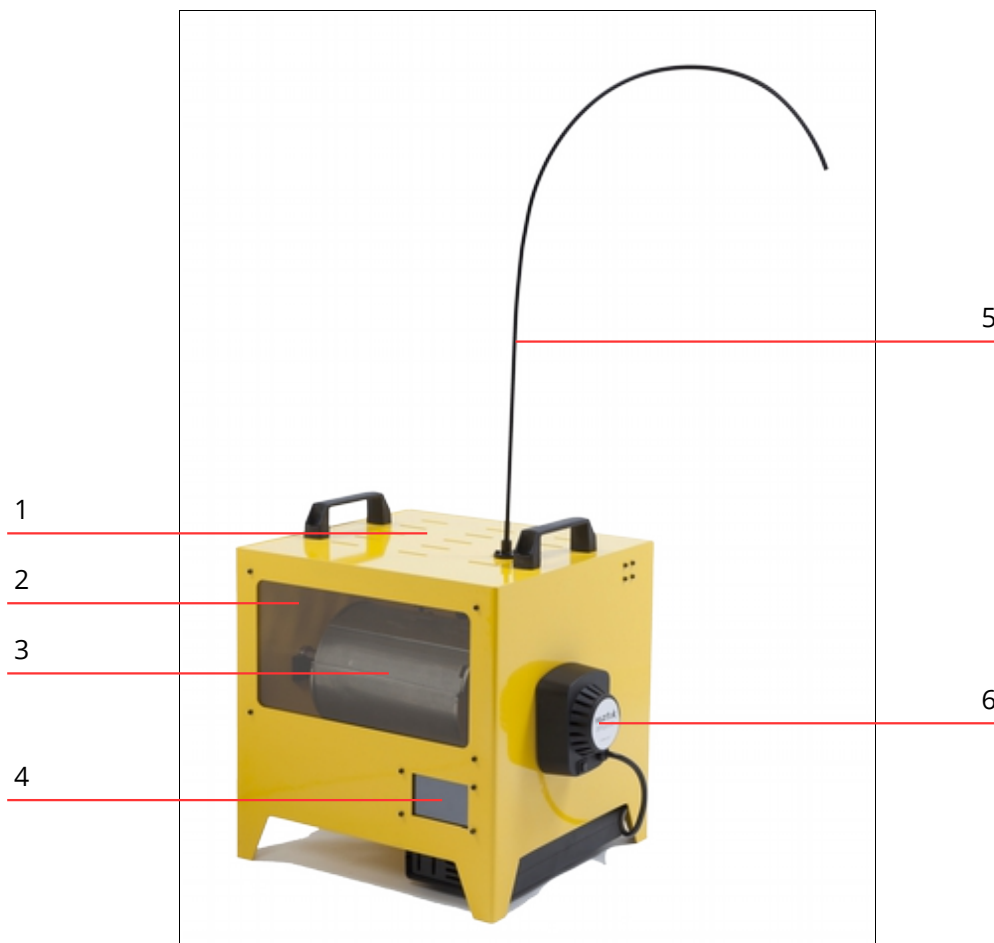
## Operation Instructions

### Important Note:

Ensure that you acquaint yourself with the proper handling guidelines for the material you are using, particularly safe operating temperatures. Neglecting to do so may compromise the functionality and potentially damage the equipment.

### STEP 1. Familiarization:

Familiarize yourself with the with the key features of the Noztek pellet and spool dehydrator as illustrated on the image below.

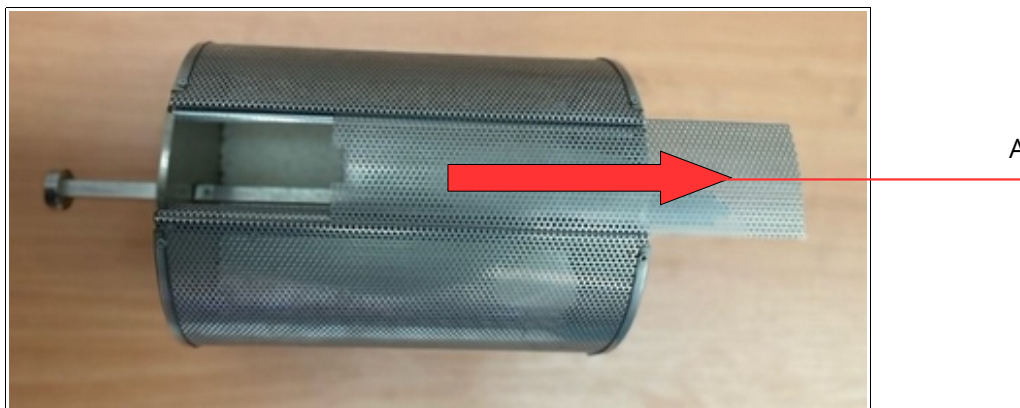


### Overview main features Noztek pellet and spool dehydrator

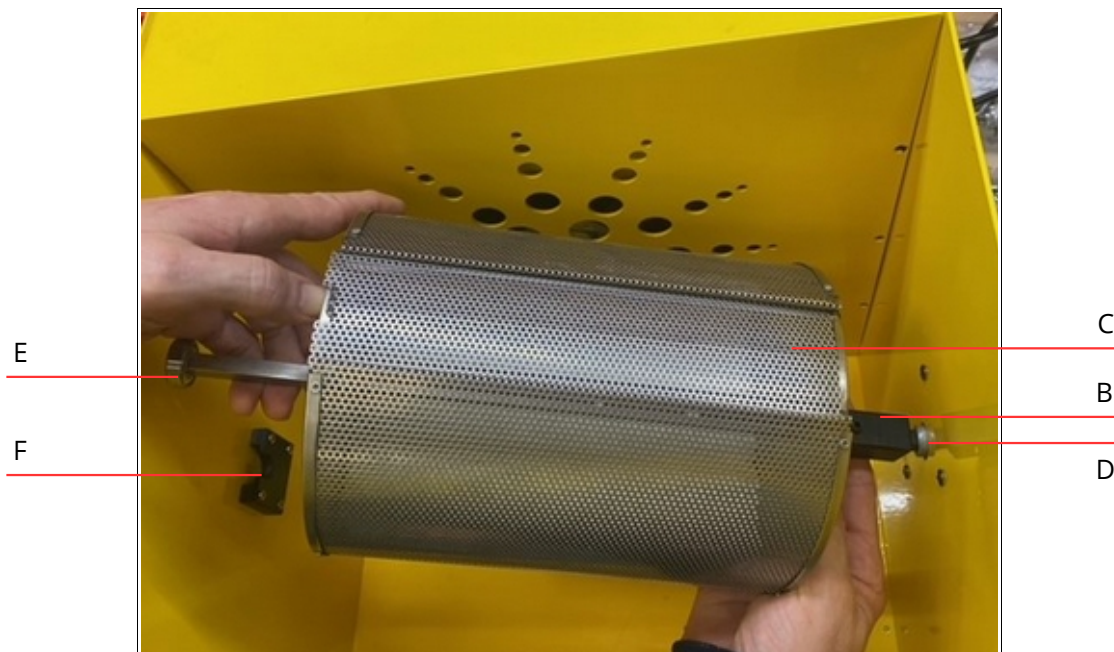
1. Removable top lid.
2. High temperature safety glass.
3. 2 KG pellet drum.
4. TFT interface screen.
5. Filament guide.
6. Motor.

### STEP 2.1. Load pellet drum

It's important to fill and load your drum into the dehydrator before proceeding with the next steps. To fill the drum, open the latch (A) and add your material. Be cautious not to overfill, as this can hinder the rotation of pellets within the drum. Maintain approximately 10% of empty space. Close the latch securely, and now you can load the drum.



To load the drum, shift the black locator (B) to the left, then insert the whole drum assembly (C) into the square hole of the motor (D). Once it's in position, press down the left side of the drum with the bearing (E) into the bearing holder (F).

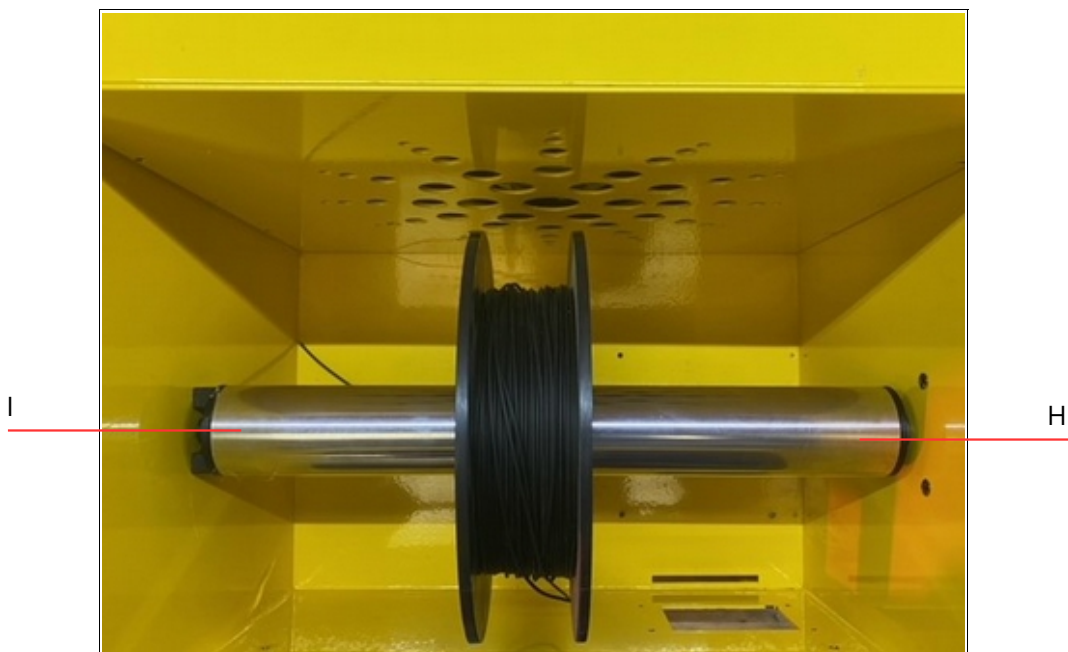


Finally, pull the black locator to the right until it's completely secured in the motor square hole (G). You should feel a slight click when it is correctly in place. Your drum is now loaded, and you can proceed to step 3.



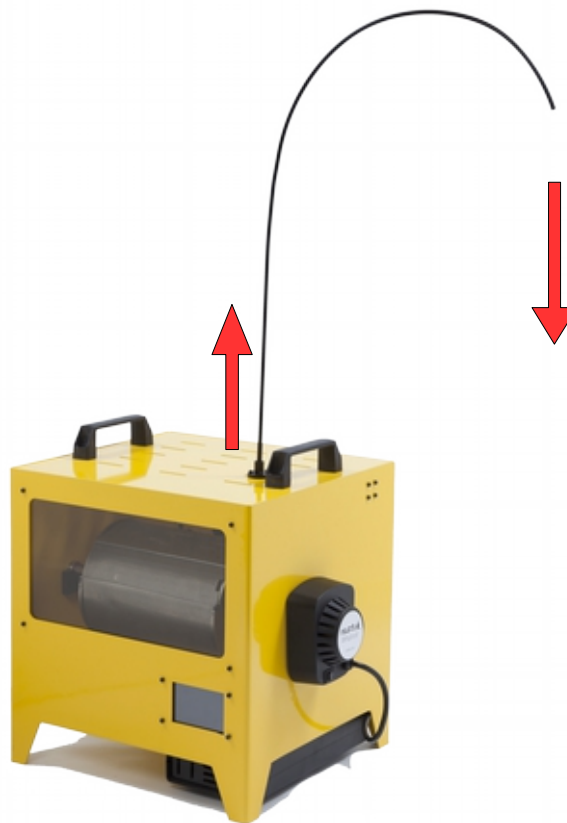
### STEP 2.2. Filament spools

Use the cylinder insert to load your filament spools into the dehydrator. You can load up to four spools at a time, depending on their size. With the spool(s) on the rod, simply push the right side with the black square locator into the square hole of the motor first (H). Once it is securely in place, push the left side down into the holder (I). When using spools in the machine, it is important to switch off the motor. Press the button as shown in the image on the next page to 'O' to turn it off (J).





To feed your spool into a 3D printer or pelletizer while it is drying feed the filament through the guide tube as shown as the image below (K).

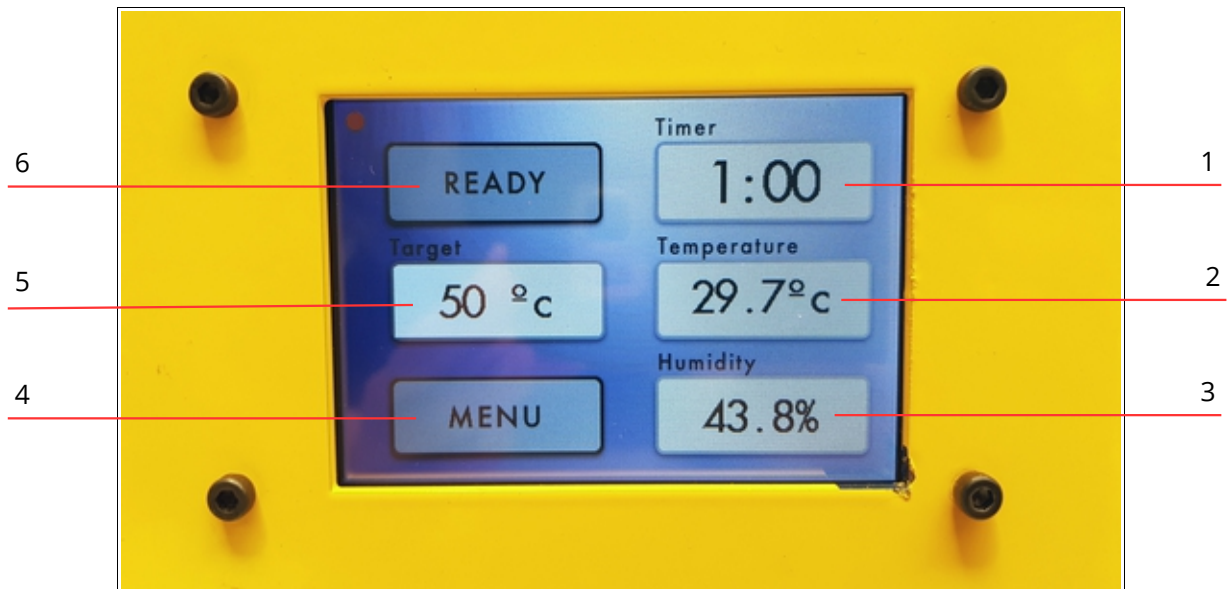


**STEP 3. Start up procedure:**

To turn on the machine, use the illuminated mains power switch located at the back as shown on page 7.

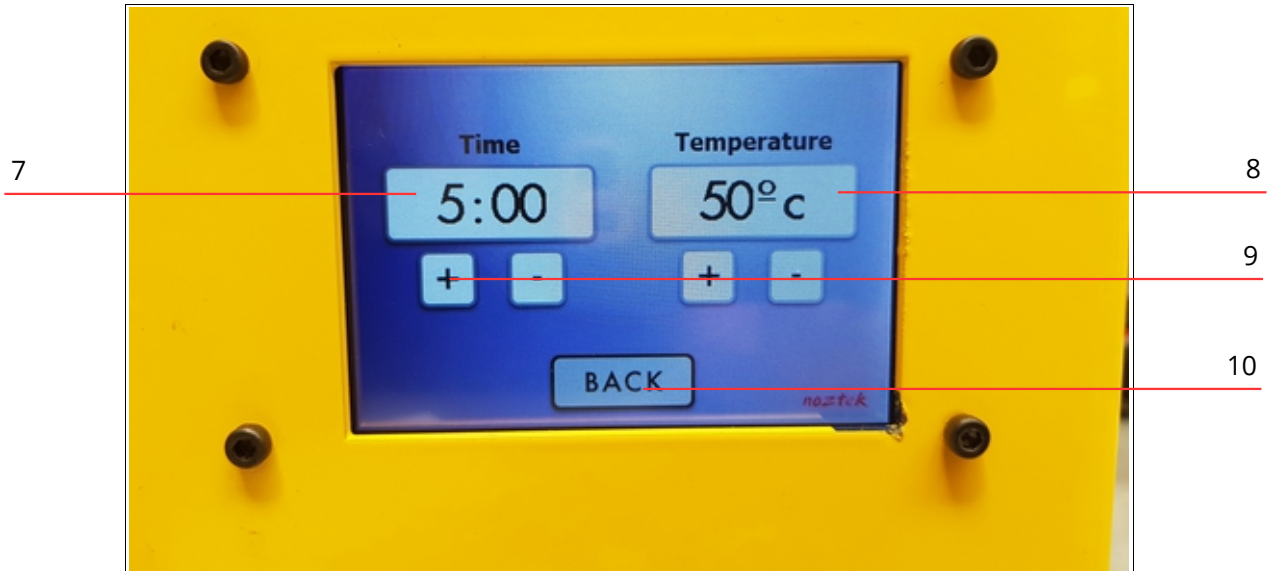
**STEP 4. Main Screen overview:**

After powering on the machine, the touchscreen illuminates, displaying the Noztek logo briefly before transitioning to the main screen. On this screen, you can observe the current timer setting (1), the current temperature read-out (2), and the current humidity read-out (3). Utilize the Menu button to set your target temperature and timer values (4), the target temperature value (5), and the ready button (6) activates the dehydrator operation. Ensure accurate configuration of temperature and timer values before initiating the machine as shown in the next step.



### STEP 5. Temperature and timer set-up.

By pressing the Menu button (4), as indicated above, you can access the timer (7) and temperature (8) target settings. Use the + or - (9) buttons to adjust the time and temperature for each setting. Please note that the maximum operating temperature of the dehydrator is 80 degrees Celsius. Press the back (10) button to save the settings and return to the main screen.



### STEP 6. Activation of drying process.

Press the Ready (6) button to initiate the drying process. The Ready button will turn green, displaying the 'RUNNING' text (11). Now, as the machine operates, the motor will start rotating, and the temperature will gradually increase to reach the target temperature. To stop the process at any time, simply press the 'RUNNING' button (11) again. The machine will cease operation, turning the button red and displaying the text 'STOPPED'.





**STEP 7. Removing the pellet drum or spools.**

After the drying process is complete, wait until the machine has cooled down to room temperature before removing or replacing items. The machine's surface can become hot and may cause injuries.

**STEP 8. Shutdown Procedure:**

When finished, turn off the MAINS POWER SWITCH located at the back of the machine. These instructions ensure safe and efficient operation of the Noztek pellet and spool dehydrator.

## CONTACT NOZTEK

For more in-depth troubleshooting assistance, we encourage you to explore our FAQ help section on our website at [www.noztek.com](http://www.noztek.com). In the event that your specific query is not addressed within this resource, please do not hesitate to reach out to our dedicated Noztek expert team for direct support and guidance.

Noztek Ltd  
Unit C3 Dolphin Industrial Estate Evershed Way,  
Shoreham by Sea,  
West Sussex,  
BN43 6QB, ENGLAND

44 (0) 203 384 6208  
[info@noztek.com](mailto:info@noztek.com)  
[www.noztek.com](http://www.noztek.com)