Noztek Puller Tolerance System

Noztek Puller Tolerance System User Manual

Contents

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WARRANTY

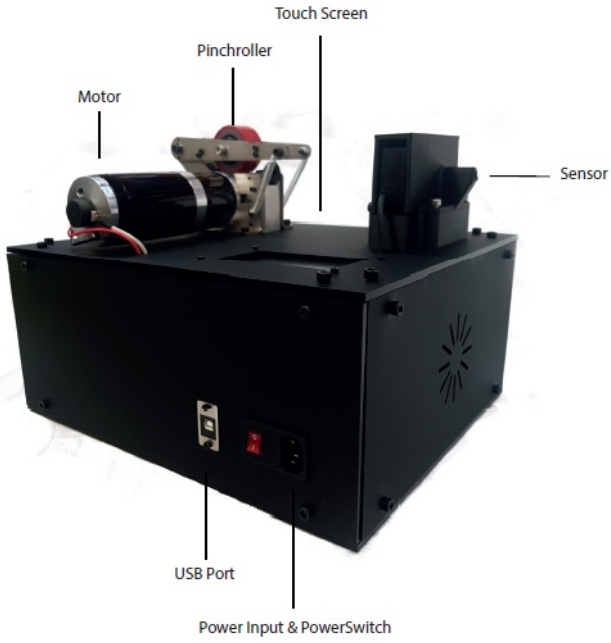
- Equipment manufactured by Noztek carries the standard machine tool guarantee of freedom from defects in

workmanship and material for one year from date of shipment.

- TO INSURE THAT YOUR WARRANTY IS HELD IN EFFECT, PROPER OPERATION PROCEDURES MUST BE OBSERVED.
- **NOTE**: READ THE SAFETY PRECAUTIONS BEFORE OPERATING THIS MACHINE.

SAFETY

1. Know your equipment
2. Carefully read the instruction manual.
3. Learn the use and limitations of the equipment.
    - DO NOT operate or use this equipment for any purpose other than its intended use.
    - DO NOT modify this equipment.
    - DO NOT perform adjustments or maintenance while system is operating
    - DO NOT clean the equipment with flammable solvents.
    - DO NOT wash down the equipment with water. This could cause an electrical hazard.



Noztek Puller introduction
The Noztek Tolerance System has been meticulously engineered to offer enhanced control over filament tolerance. Users gain the ability to precisely define filament diameter, running speed, and error correction ratios. This sophisticated system leverages tension dynamics to yield exceptionally smooth and reliable results. The puller's operational mechanism is centered on the action of pulling filament from a larger extruder nozzle and stretching it to a smaller, predetermined target diameter, effectively preserving tension and upholding a consistent tolerance throughout the process.

This configuration not only optimizes operational efficiency but also yields substantial time and cost savings while drastically reducing material wastage. The system comes complete with Noztek's proprietary integrated software, seamlessly connecting to a laptop to provide real-time performance monitoring, complete with detailed speed and tolerance charts.

Noztek Puller Operations Manual

Section 1: Initial Preparation

Begin the setup of the partnering extruder according to the startup guidelines outlined in the extruder user manual.

Section 2: Powering On
Connect the mains power cable to the designated power outlet.

Section 3: Connecting to Noztek Controller Software (If Applicable)
If you are utilizing the Noztek Controller software, connect the A-B USB cable to the USB port.

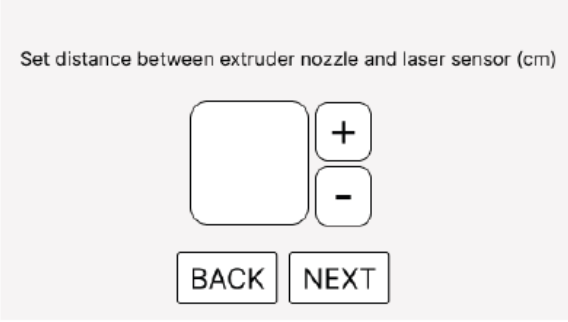
Section 4: Activating the Machine
Power on the machine by utilizing the power switch located on the front panel of the device.

Section 5: Interface Initialization and Tolerance Configuration
With the machine powered on, the interface will become illuminated, allowing you to commence the configuration of tolerance settings. For your initial session, it is recommended to initiate the SETUP function as explained in the subsequent section. The LAST SETUP mode will automatically implement settings from your previous session.

Section 6: Filament Feeding
Direct the extruding filament from the extruder into the tolerance system. Please note that more detailed instructions for the SETUP function can be found in the next section of this manual.

Screen 1 – Choose Mode

- Select either “SETUP” or “LAST PRESET.”
  During your initial use of the machine, it is necessary to choose “SETUP.” As you progress through the process, you will have the opportunity to save a preset for future use.
- Should you have a previously saved preset that you wish to utilize, simply press “LAST PRESET.”



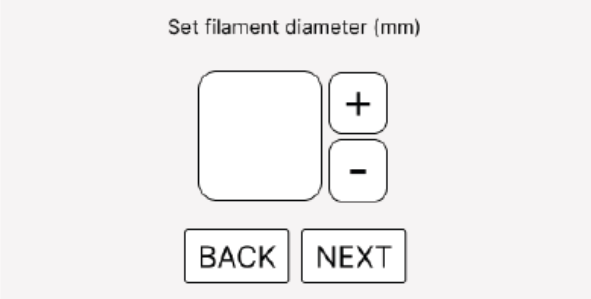
Screen 2 – Set Distance

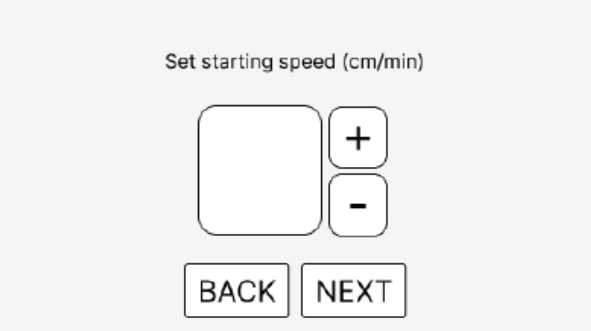
- Measure the distance between the extruder nozzle and the sensor in centimeters. Enter the measured distance value in the designated input box.

- Kindly tap the input box to activate the numerical keypad.
- Once the value is correctly entered, proceed by pressing the “NEXT” button.
- Should you need to make any adjustments to previously entered values, please use the “BACK” button.

Screen 3 – Set Filament Diameter

- Input the desired target diameter of your filament in millimeters into the designated input box.
- Kindly tap the input box to activate the numerical keypad.
- After entering the target diameter, proceed by pressing the “NEXT” button to continue.
- Should you need to make any adjustments to previously entered values, please use the “BACK” button.





Screen 4 – Set Starting Speed

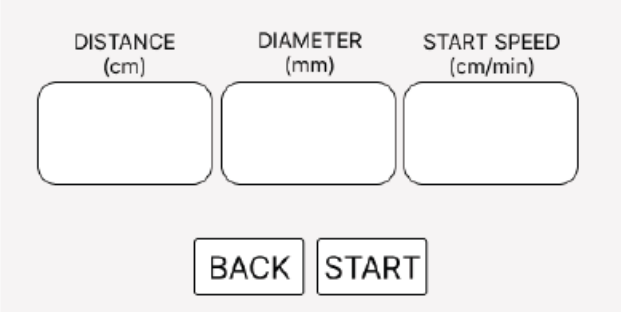
- In this segment, you are prompted to input the desired speed at which the puller should initiate. We suggest a starting point of 300cm/min, if your target diameter is 1.75mm. It’s important to note that this value serves as an initial approximation to initiate the puller; therefore, precise adjustment is not essential during setup. Once the operation commences, the autocorrecting speed algorithm will engage, automatically adjusting the pulling speed of the machine.
- Please be aware that the minimum operating speed is 150 cm/min.
- Kindly tap the input box to activate the numerical keypad.
- After entering the target speed, proceed by pressing the “NEXT” button to continue.
- Should you need to make any adjustments to previously entered values, please use the “BACK”

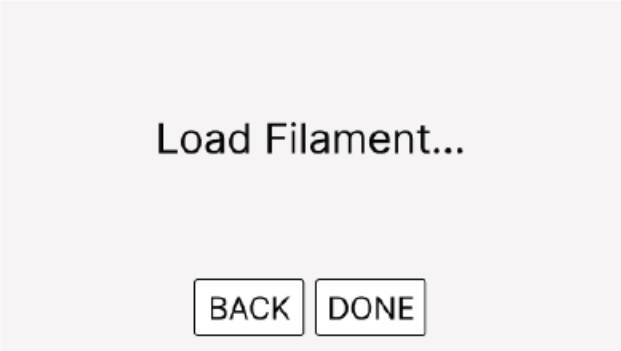
Screen 5 – Review settings

- Review your settings and, if necessary, revisit any parameters that require adjustment by tapping the corresponding box. Alternatively, you can utilize the “BACK” button to make changes to the values you have previously entered.
- Once you are content with your settings, proceed by tapping the “START” button to commence the operation.

Screen 6 – Filament loading

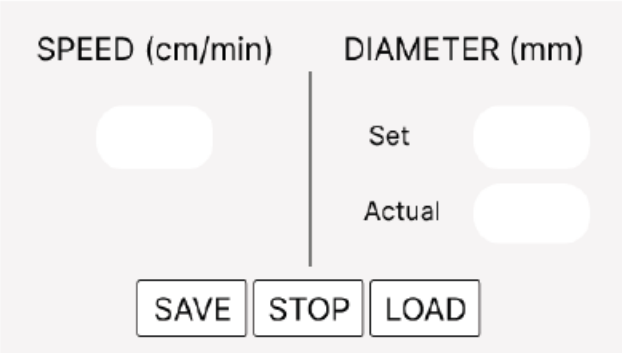
- At this stage, it is essential to physically load the filament into the puller mechanism. The Puller will operate at the minimum speed to facilitate the loading process.
- Upon completion, tapping the “DONE” button will initiate the autocorrecting speed algorithm.





Screen 7 – Auto mode

- Within this interface, you can closely monitor your pulling operations, where you will have visibility of the current speed, set diameter, and actual diameter. If you are utilizing our Noztek Controller software, these values will be displayed and recorded in a graphical diagram for your reference.
- Should you require a filament reload, tap the “LOAD” button, and the machine will decelerate to facilitate the reloading process while temporarily pausing data reading.
- To halt the operations, use the “STOP” button.
- To make any adjustments to setup values, press the “STOP” button to return to the setup screen.



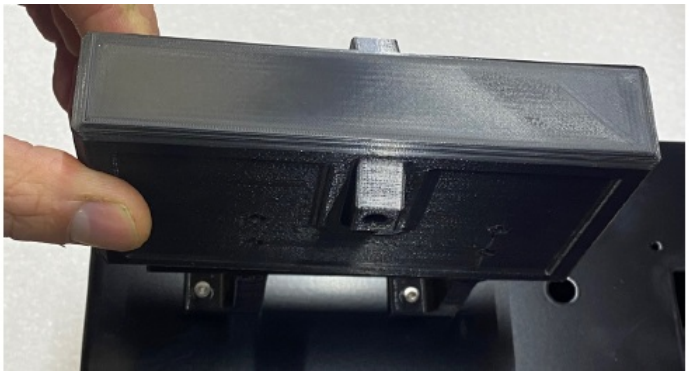
Maximizing Extrusion Quality
In the pursuit of professional outcomes, the choice of equipment is paramount. Our comprehensive selection of professional-grade machinery has been meticulously designed to function in seamless harmony, assuring the highest quality from raw material pellet to the final filament. For optimal results, we recommend integrating this system with a Noztek Filament Winder. Additionally, a Noztek Resin and Filament Dehydrator can be employed to further elevate the quality of the end product by eliminating all residual moisture from the filament. For a comprehensive view of our extensive extrusion systems, kindly visit noztek.com/products.

Maintenance

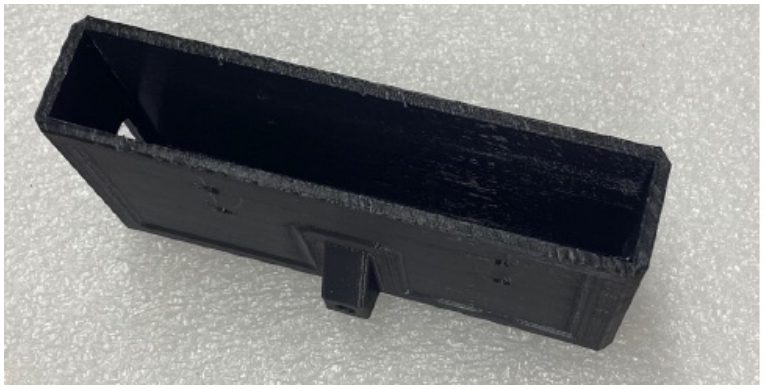
In cases of prolonged and intensive machine operation, there is the possibility of dust or other particulate matter accumulating on the sensor lens. Should you observe deviations in sensor readings, it may be necessary to clean the lens. Detailed instructions for this procedure can be found in the dedicated section below. To ensure the accuracy of your readings, it is advisable to have a reference item with precise dimensions in millimeters (e.g., 1 or 2 mm). As you move the reference item past the lens, it should yield precise measurements. Should you require any further assistance or information, please do not hesitate to contact us.

Sensor cleaning step 1
Undo the 4 cross head Philips screws on the front of the sensor case and the 4 on the back (8 in total).

Sensor cleaning step 2
Gently lift off the sensor casing in an upward motion.



Sensor cleaning step 3
Visually inspect the inside of the sensor casing for any debris, if you find any please use a soft brush to clean it out.



Sensor cleaning step 4
Visually inspect the laser sensor and receiver, if you find any dust or debris please use a microfibre cloth to gently clean it. Do not use any liquids, solvents or cleaning chemicals to clean the sensors as this can cause damage to the sensors, only use a dry microfibre cloth.

Sensor cleaning step 5
Place the sensor case back in position and screw the 8 screws back in place as shown in step 1.

CONTACT NOZTEK
For more in-depth troubleshooting assistance, we encourage you to explore our FAQ help section on our website at 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.

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Documents / Resources

	Noztek Puller Tolerance System [pdf] User Manual Puller Tolerance System, Puller, Tolerance System

References

- User Manual