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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 or energize
   • Do not clean the equipment with flammable solvents.
   • Do not wash down the equipment with water. This could cause an electrical hazard.
   • Do not probe into extruder vent with the machine running. Never Use a metal probe in the vent area. The screw may shear the probe, causing extensive damage to the barrel and screw. A wooden probe is recommended.
   • A face shield, insulated gloves, etc. should be worn around the extruder during operation. They must be worn when adjusting the die, cleaning the screw, etc. The extruder temperatures are extremely hot.
   • The feed hopper must be installed on the extruder feed section at all times when in operation
   • Never put hands in the feed section or vent to remove material.
   • Do not switch on the motor until the recommended temperature has been reached
MAIN FEATURES

4.3-inch Touch screen: HMI Capacitive Touch Display.

Timer: enables you to shutdown the running session by deactivating the heatbands and motor.

Last targets memory: the last target temperature and speed will be remembered after a restart. Last timer settings will also be kept.

PID: The Noztek Touch is using PID for temperature and speed control.

Warm-Up: It's designed to allow the barrel to fully heat after 10 minutes so unmelted materials do not block the motor and avoid damaging it or the machine.

Emergency shutdown: To electrically shutdown the extruder.

Motor blocking management: If the motor cannot run for any reason a message will be prompted and the motor stopped.

Sensor malfunction detection: If the temperature readings are incorrect a message will be prompted.
QUICK START GUIDE

The Noztek Touch has an illuminated on/off switch and a touch screen.

Once powered up, the Touch will take a short period to boot into the main screen (fig.2).

BRACKET

If you are using the 45 degree bracket it is very important that the extruder is secured to a work-bench using the mounting holes in the bottom of the bracket.
OPERATION GUIDE

- Remove the unit from the packaging
- If you are using the 45 degree bracket, secure the extruder to a bench using the mounting holes.
- Plug the extruder into mains power.
- Switch on the heater element and adjust the temperature gauge to the desired setting.
  
For ABS we recommend between 180 – 200 degrees Celsius and PLA between 165 -175c. To adjust the heat setting press the set key once, the temperature LED will then flash, then the click up or down key to adjust. When you reach the desire temperature click the set button to engage. Let the extruder barrel heat fully, this should take about 15 minutes.
- Once the required temperature has been reached, fill the hopper with resin pellets.
- Switch on the screw motor (Do not switch on the motor until the recommended temperature has been reached).
- Switch on the fan
- After a few minutes you will see plastic filament starting to extrude, carefully feed this through the guide. This filament will be hot so use heat resistant gloves
- Extrude approximately 5m of filament, switch off the motor, cut off the excess material then restart the motor. This should help to eliminate any air bubbles and metal particles in the system.
- Adjusting the temperature also affects the tolerance of the filament. The higher the temperature, the thinner the filament. The lower the temperature, the thicker the filament. Make these adjustments in 5 degree Celsius increments.
- If the extruder is left unattended for any period of time we recommend using a mains timer switch.
USER INTERFACE

Main Screen

This screen shows the current temperature of the individual heating bands and the speed of the motor (top row), their set temperature and speed (second row), activation/status switches (third row), and access to the Menu screen (bottom).

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<tr>
<th></th>
<th>TEMP 1</th>
<th>TEMP 2</th>
<th>MOTOR</th>
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<tbody>
<tr>
<td>Act</td>
<td>19</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Set</td>
<td>150</td>
<td>150</td>
<td>30</td>
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To activate the heating bands, touch any of the temperature activation/status switches. Upon activating the heating bands, the Xcalibur display will switch to the “warm up” screen (fig.3). The Xcalibur will not exit this screen until the heating bands are at set temperature, or the user aborts the heating process. The motor switch will activate the warmup to allow the motor to run safely after it.

Warmup Screen

This screen is displayed when you heat for the first time or when the temperature dropped under the target. This warm up is to ensure that the barrel has reached a certain temperature before being able to run the motor safely.
Menu Screen

The menu screen (fig.4) gives the user access to all of the Xcalibur's settings and additional functionality.

SET TEMP: sets the desired temperature of the individual heating bands.
SET SPEED: sets the desired revolutions per minute (rpm) for the D.C. motor drive.
FAN: ON/OFF: activates or deactivates the fan.
TIME LEFT: sets a timer for automatically shutting down the DC motor drive and heating bands.

Setting Temperature
This screen enables the user to set the temperature for each heat band. To do this the user can either use the sliders or the “+” and “-” buttons and then press the “SET” button. If you want to cancel your modifications press “BACK”.
Setting Speed
This screen enables the user to set the speed for the motor. To do this the user can either use the sliders or the “+” and “-” buttons and then press the “SET” button. If you want to cancel your modifications press “BACK”.

Setting Timer
This screen enables the user to set the timer to shutdown the current session. This will not power off the Touch but will stop the heating and the motor. To do this the user has to use the “+” and “-” buttons and then press the “SET” button. If you want to cancel your modifications press “BACK”.

![Image of Speed Setting Screen]

![Image of Timer Setting Screen]
CHANGING THE NOZZLE

Before attempting this operation please use insulated gloves. To switch between nozzle sizes to heat up the unit to 175°C. Unscrew the nozzle, clean off any excess plastic from the internal threads, then screw on new nozzle.

COLOUR MIXING

Adding colours is simple. Mix the natural and the colorant at the given ratio, then pour it into the hopper. It will take 10-20 minutes to see changes in the colour. It is also possible to mix colorants to create new colours. For example, mix blue and yellow make green.

MAINTENANCE

Regular cleaning of your plastic extrusion tooling during the disassembly process lengthens tooling life, helps reduce waste and helps maintain tighter tolerances for your final product. Use a wire brush and fine metal pick to clean the threads and the screw assembly.

LUBRICATION

The thrust bearing assembly will require occasional lubrication; this is a relatively simple operation, simply unscrew the brass grease nipple and squirt a 2 second burst of a lubricant like WD40 Lithium Grease. For optimal performance we recommend this procedure is carried out every 100 hours of operation.

BARREL JAM

Depending on what type of resin you are using, you may experience a barrel jam. If at any time during extrusion the motor starts to labour and slow right down then you should switch off the motor immediately. A good way to free the jam is to turn the temperature up to say 230-240°C and leave this for 15 – 20 minutes, then switch on the motor again; this should allow the screw to rotate again. Also using a blow torch to heat the barrel just past the hopper will usually release any solidified plastic and free the screw.
CONTACT NOZTEK

Please see our FAQ help section on our website at www.noztek.com for further troubleshooting. If the answer to your query is not found here, please contact the Noztek expert team directly.

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