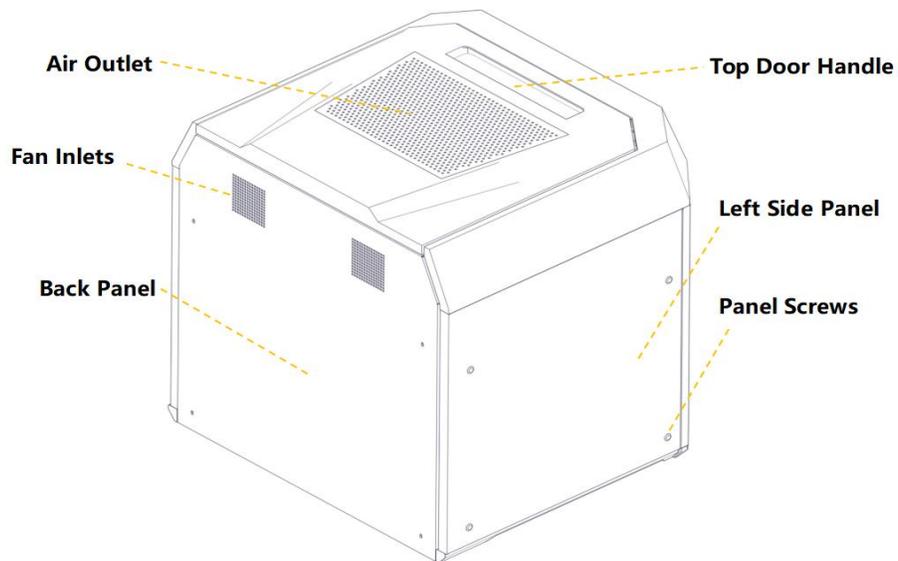# FUNMAT PRO 310 Quick Start Guide

Get to know your new FUNMAT PRO 310

Top Cover

Display

Window

Filament Tube Ports

USB Ports

Power Button

Power Plug Port&
Power Switch

INTAM Filament Box

Build Plate

Front Door Sensor

Electromagnetic Lock

Air Outlet

Fan Inlets

Back Panel

Top Door Handle

Left Side Panel

Panel Screws
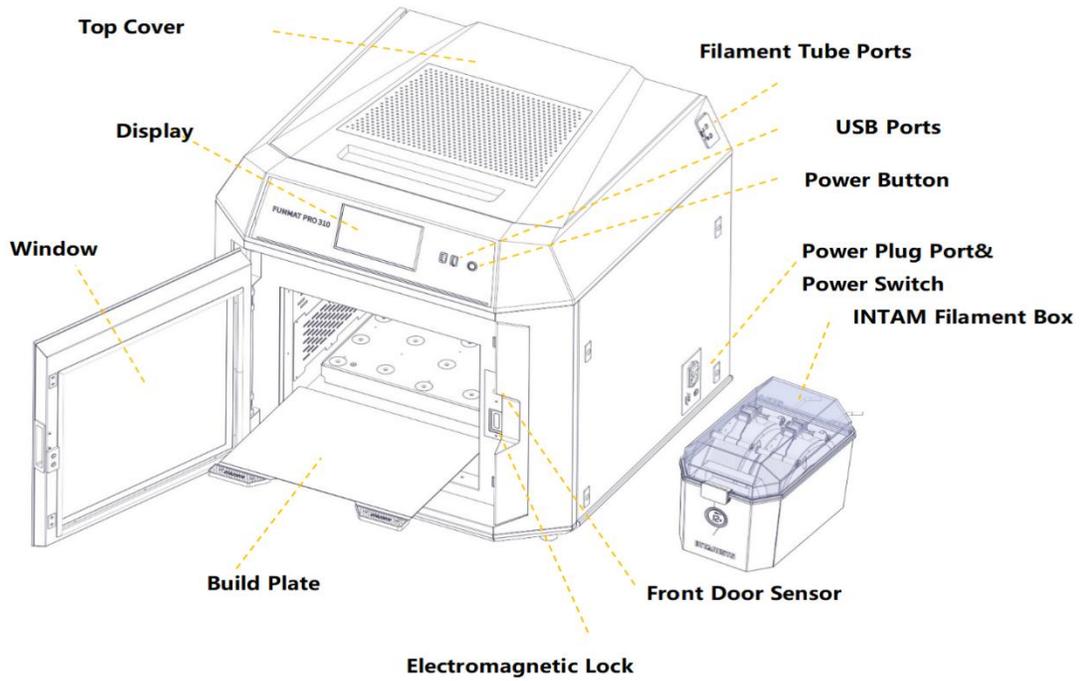
Unpack your new FUNMAT PRO 310

-Cut the yellow straps and remove the plywood top.

-Lift off the top paperboard cover.

-Lift out the top foam packaging material.

-Remove the two build plates packaged in the top foam and set them aside.

-Remove the paperboard sides and additional foam packaging.

-Remove the plastic bag from around the printer.

-Using at least two people lift the printer from underneath onto a stable working surface.

-
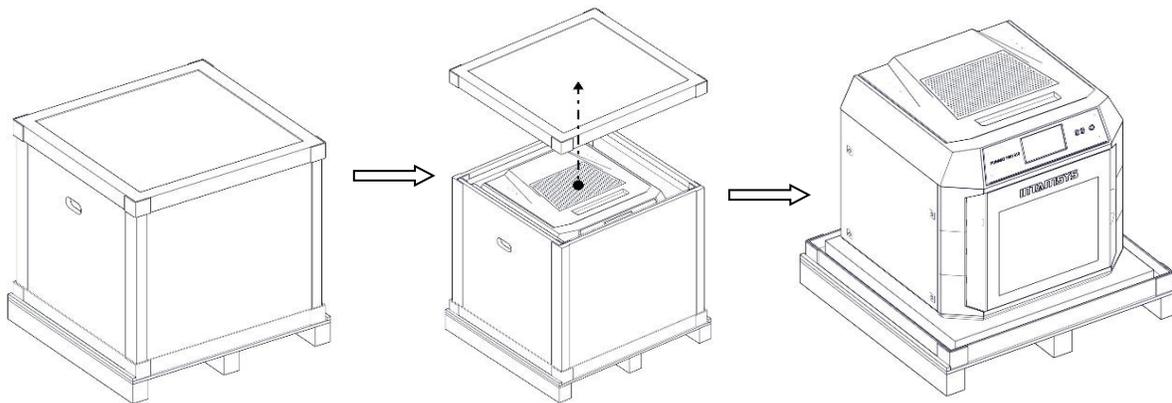
-Open the front door ,the accessories that come with the machine are placed in two parts: the outer side and the inner side .Take out the accessories on the outer side carefully .

-Take out the power cord and hexagonal wrenches from the outer side accessories;

-Note: During transportation, the build plate and the internal accessories may be in a tight compression state. Do not forcefully take out the internal accessories.
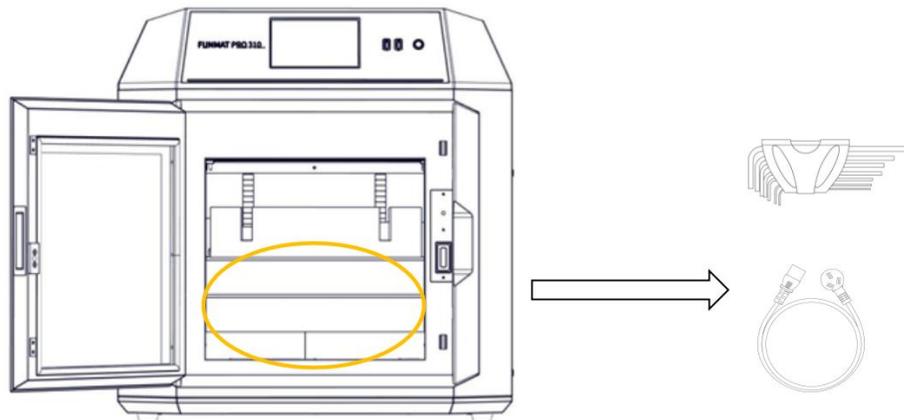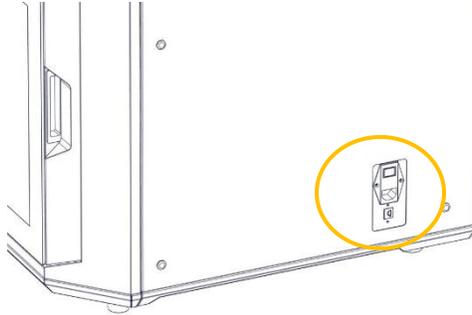
-Open the top cover of the printer to access the X-Y gantry.

-Use an M3 hex wrench to remove the four X-Y gantry locking mechanisms freeing the gantry to move in both the X and Y directions.
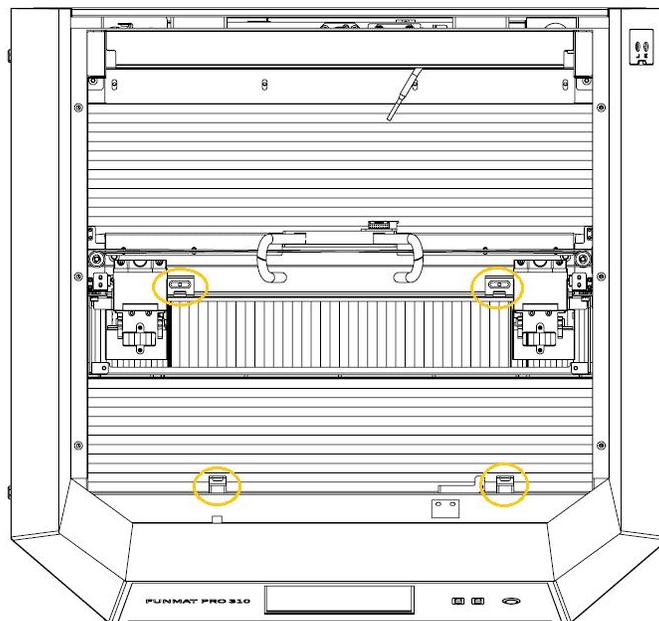
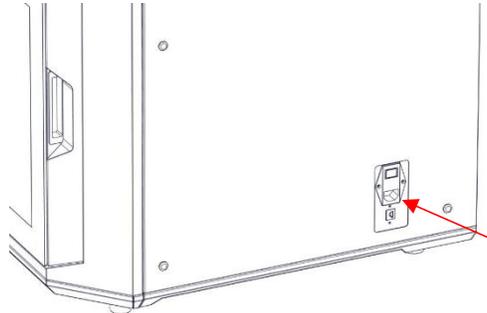**Power on your new FUNMAT PRO 310**

-The power plug port / power switch is located on the lower right side of the printer.
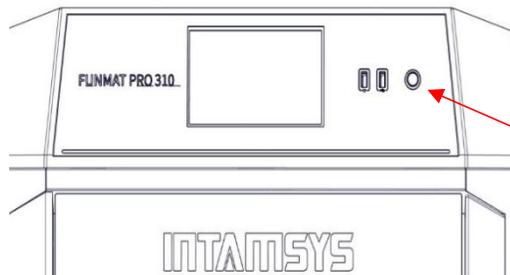

-Plug the female side of the supplied power cord into the printers' power port and the male side plug into a wall socket.

-Turn on the main power switch next to the power port so that it is set to the ON (I) position.
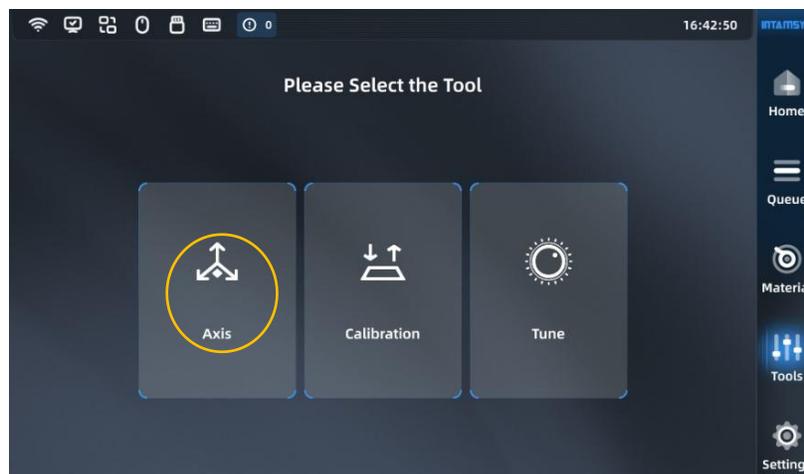

-Push the power button on the upper front right of the printer. The printer will then begin to boot up and the display will come to life.
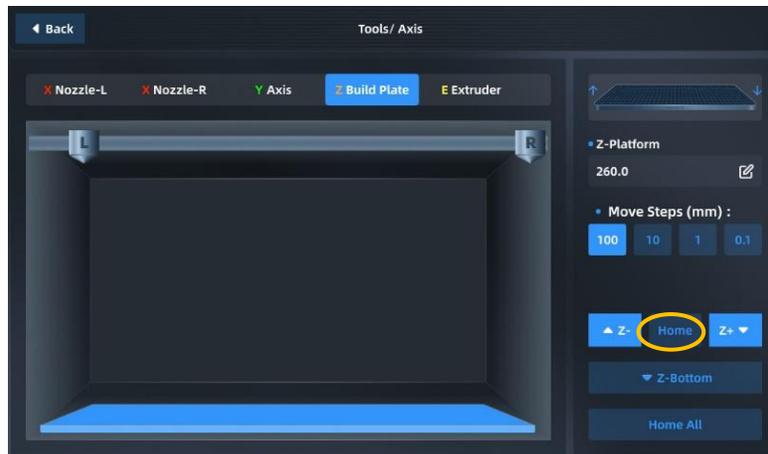

-Click on the Tools icon from the Home menu.

-Click on the "Axis" icon on the Tools menu.

-Select the "Z Build Plate" option and click on "Home", and the build plate will rise;

-Note: To power off the printer first push the power button on the upper front right to shut down the printer. Then turn OFF (O) the main power switch on the lower right side to fully disconnect the printer from the power supply.

## **Install the Left & Right print heads**

-After the build plate rises to top , take out the accessories from the inside of the machine.
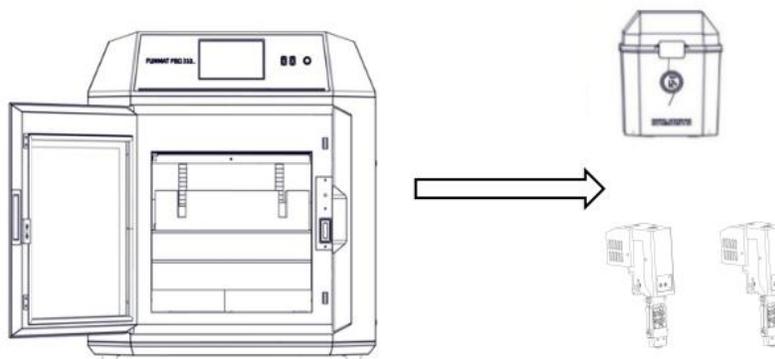
-Move the X-Y gantry by hand so that the two head sockets are positioned near the center of the printer.
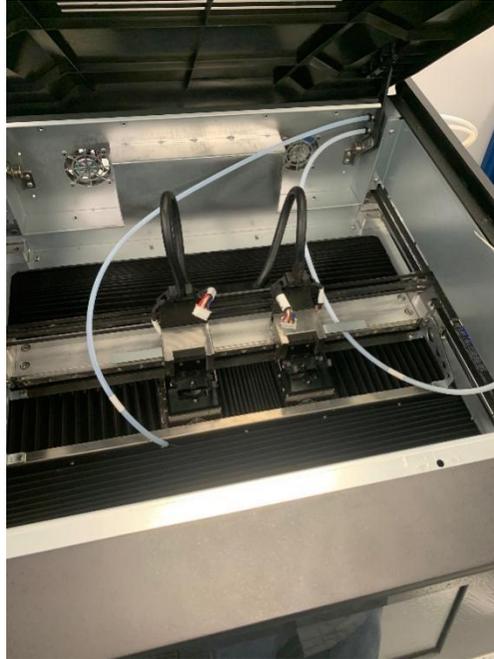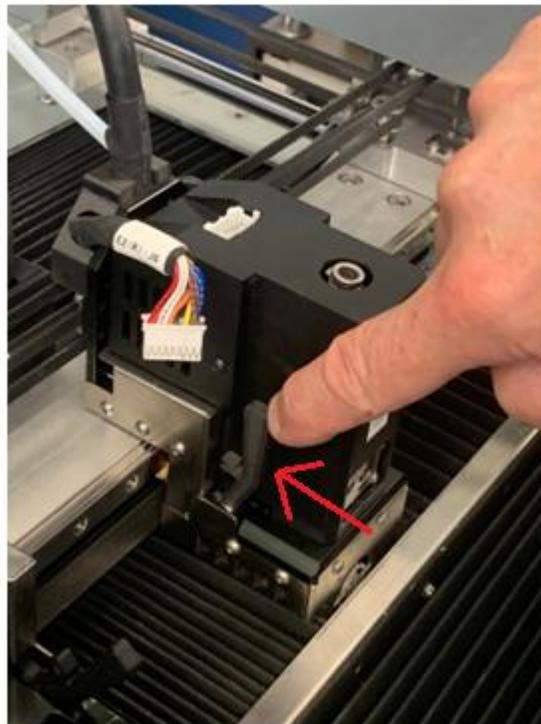
-Install the Left & Right print heads into the respective head sockets so that the nozzle and liquefier pass through the head socket and the nozzle protrudes into the build chamber.
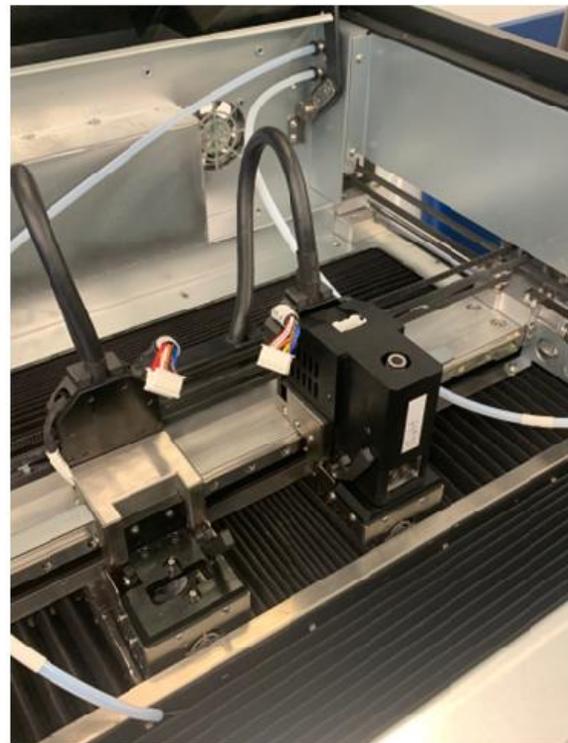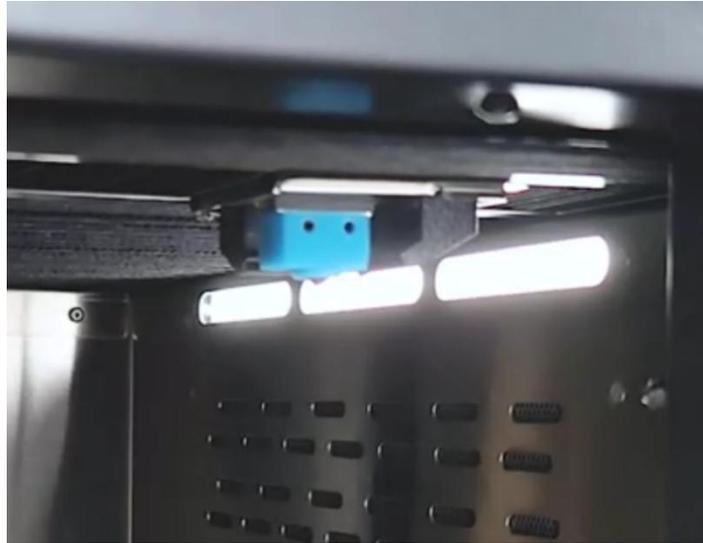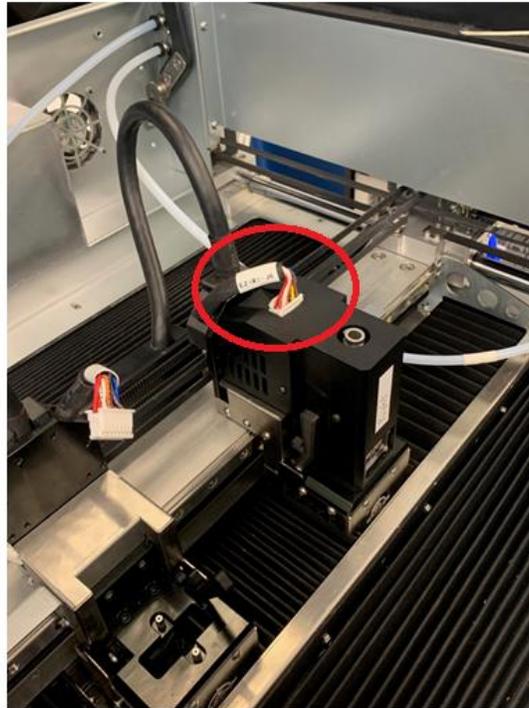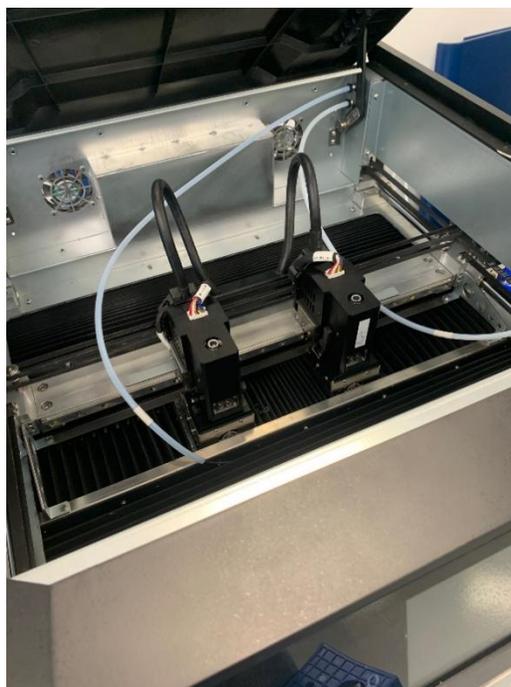
-Fully seat and lock the head into the socket by pushing back and engaging the locking levers on each side of the head.

-Plug the electrical connector into the head.

-Repeat the above steps for the other head socket / head combination so that both heads are seated and connected.

-Insert the filament tubes into the tube ports of the heads.

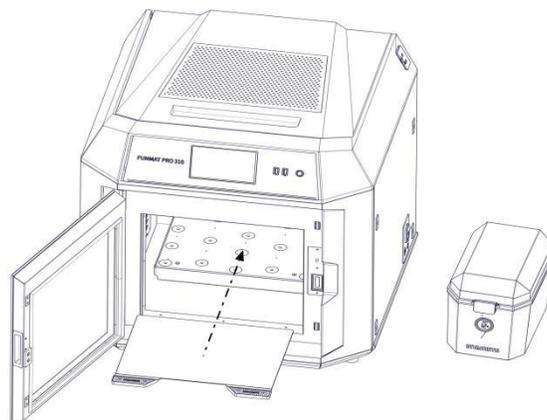**<u>Install the build plate of your new FUNMAT PRO 310</u>**

-Open the front door of the printer and verify that all the items that are shipped with the printer have been removed from the interior.

-On the display enter the "Tools" interface and click the "Home All" button.

-After homing then select the "Z Build Plate" option and click on "Z Bottom".

-The Z stage will move to the bottom of the printer chamber.
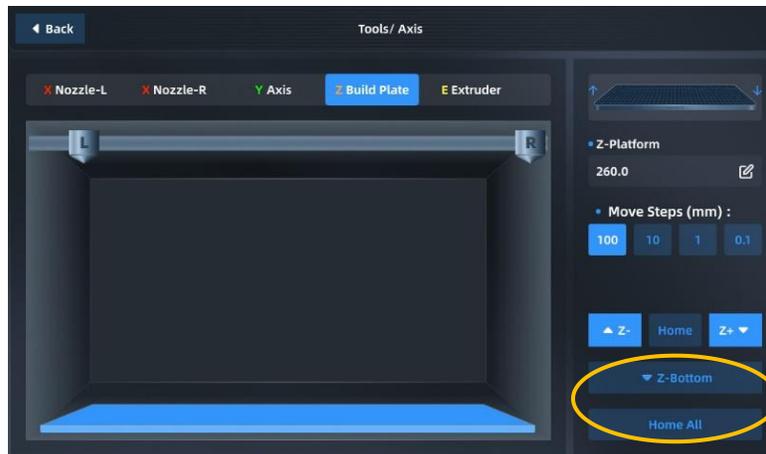
-The Z stage has magnets embedded in it and the build sheet is made of poly coated steel so the magnets will be holding down the build sheet.

-Insert the build sheet in-between the raised edges of the Z stage and slide it towards the back of the printer until the build sheet is seated against the raised back edge.

-Once properly seated, the build sheet will be flat and secure.


Auto Level your new FUNMAT PRO 310

-Make sure the build sheet is installed, level and secure on the Z stage. It also must be clean and free of debris.

-Make sure the nozzles are clean. Clean with the brass bristle brush if necessary.

-Also make sure the print chamber is free of any obstacles above or below the Z stage.

-Open the Tool interface, click the Calibrate button, and then click the leveling button to enter the automatic leveling procedure.
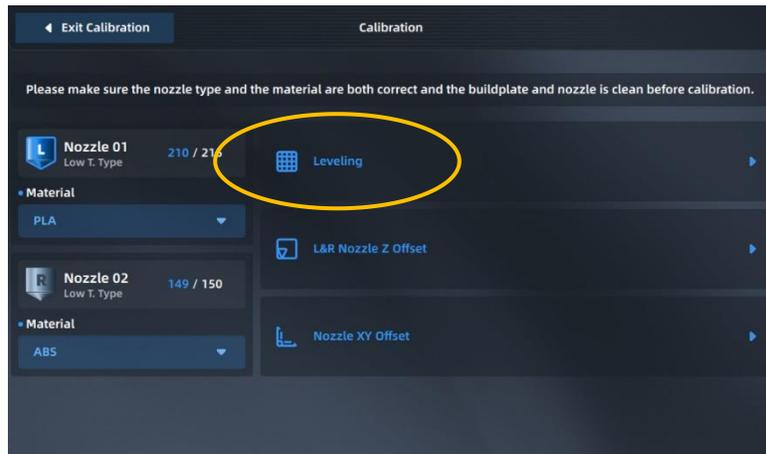
-Once in the automatic leveling interface select the Full mode of leveling with 100 points.
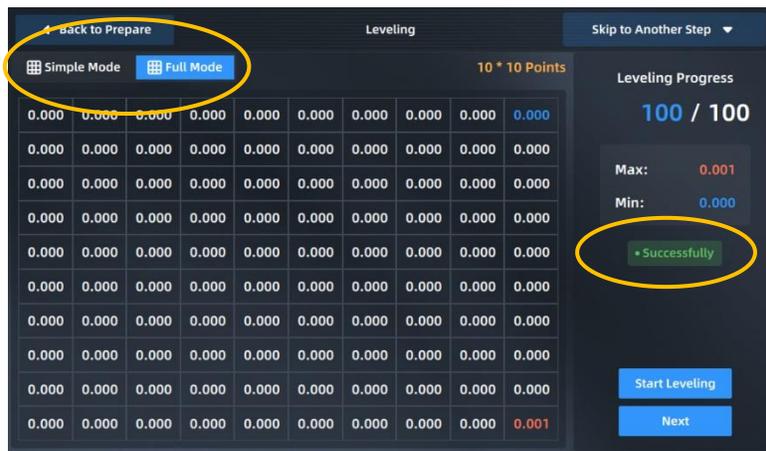
-Click Next once the leveling procedure has been completed.

-If the automatic leveling procedure fails, you will need to perform the manual leveling procedure listed in the user manual in section 6.1.2.
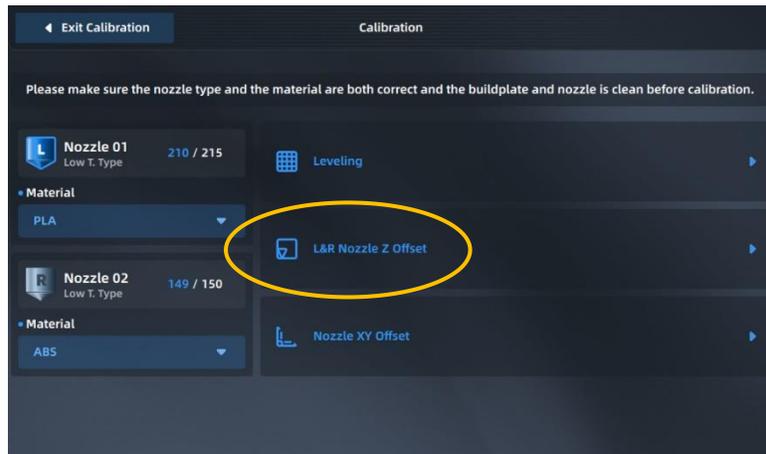
Z Calibrate your new FUNMAT PRO 310

-Click the Z Offset calibration (L&R Z Nozzle Offset) icon to enter the Z offset calibration operation.

-You will be prompted to clean the build plate and nozzles.

-You will be prompted to have the .2mm feller gauge at the ready.

-Once clean then click Finished and you will enter the next screen of the Z calibration procedure.
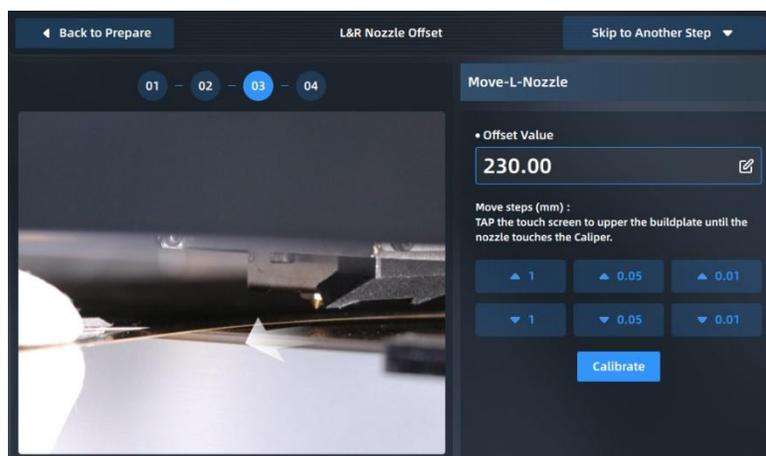

-The next screen will launch, and the nozzles will begin to heat.

-Calibrate the left nozzle first, following the step-by-step prompts on the screen.

-You will be using the .2mm feeler gauge and adjusting the Z height until the thickness of the gauge matches the distance between the tip of the nozzle and the build sheet.

-Click Next once the distance is set correctly.

-Repeat the process for the right printhead then exit out of the process by clicking the Next button and then OK.
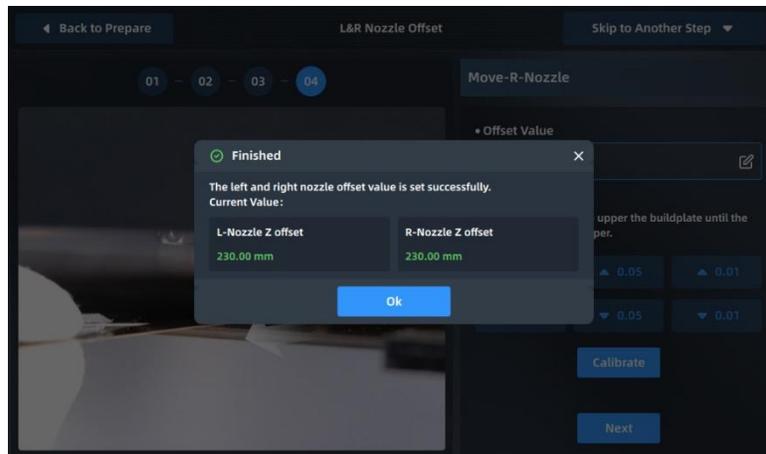
Load material on your new FUNMAT PRO 310

-Unpack the contents of the INTAMBOX filament storage box that was shipped with the printer.

-Set the INTAMBOX filament storage box on a flat surface to the right of the printer.

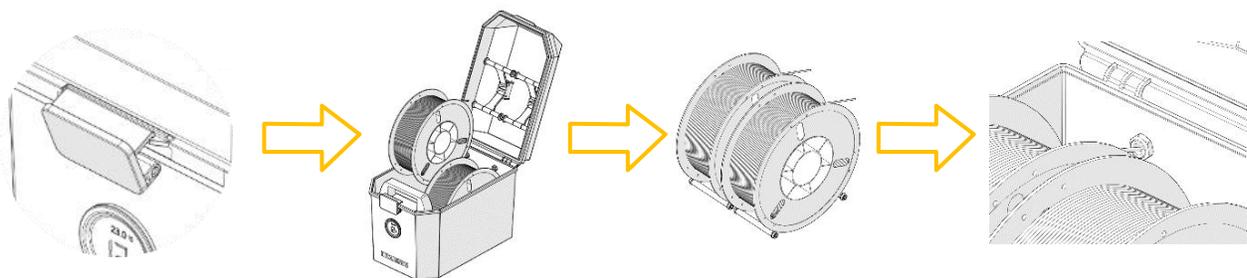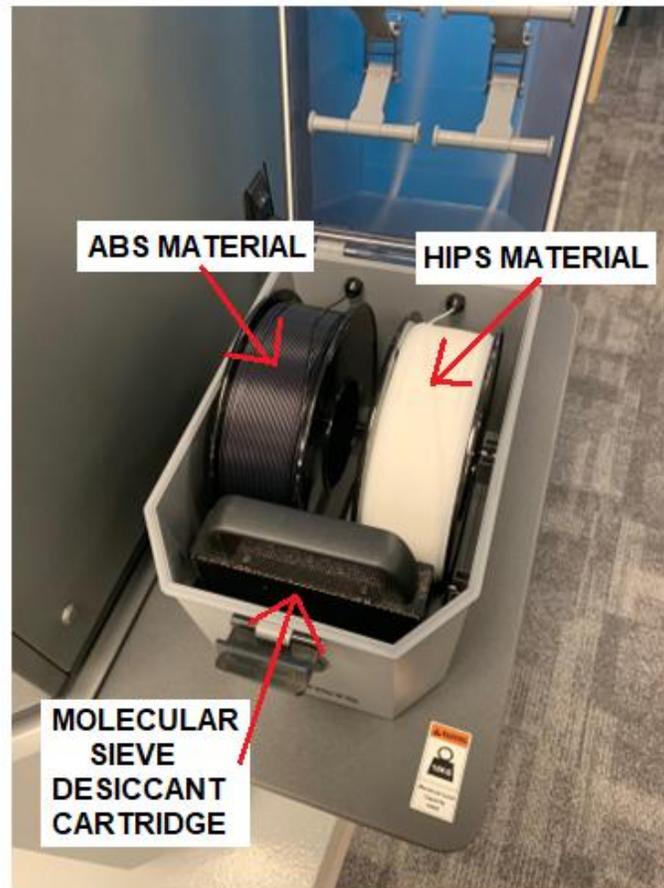-Insert the filament tubes into the quick connectors located on the back of the INTAMBOX.
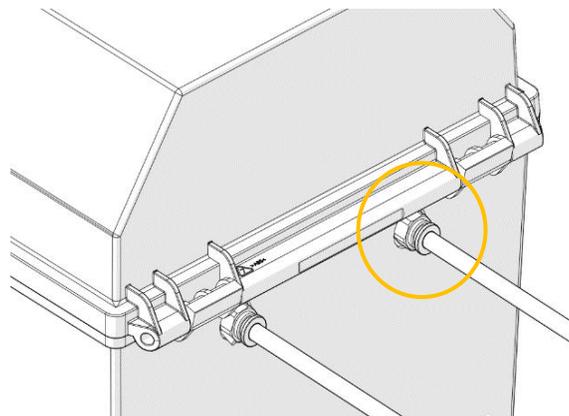
-Insert the other end of the filament tubes into the quick connects of the filament tube ports on the upper right side of the printer. The right tube goes into the lower port and the left into the upper port.
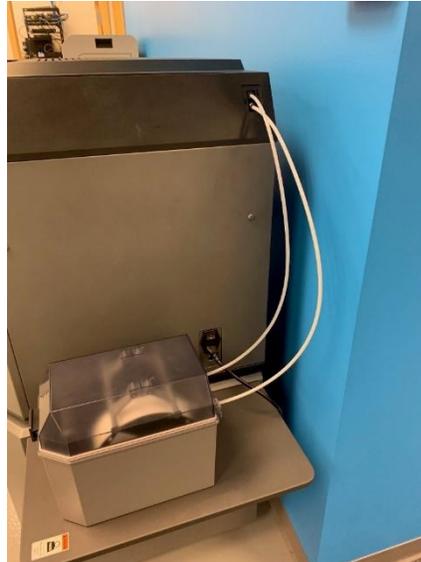
-Open the top cover of the INTAMBOX and insert the molecular sieve desiccant cartridge into the slot in the front of the box.

-Load the spools of material that came with the printer into the box. The ABS spool on the left side and the HIPS spool on the right side.
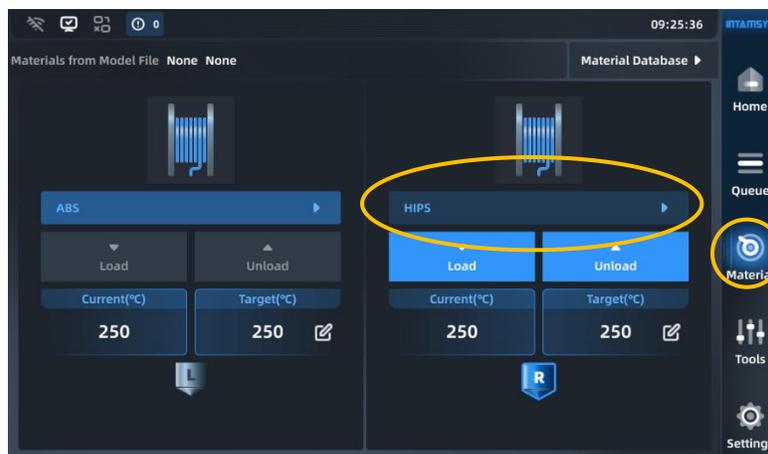
-Feed the filament through the quick connectors in the back of the box and push the filament through the filament tubes until the end of the filament protrudes out the end of the tubes in the printer by the print heads.
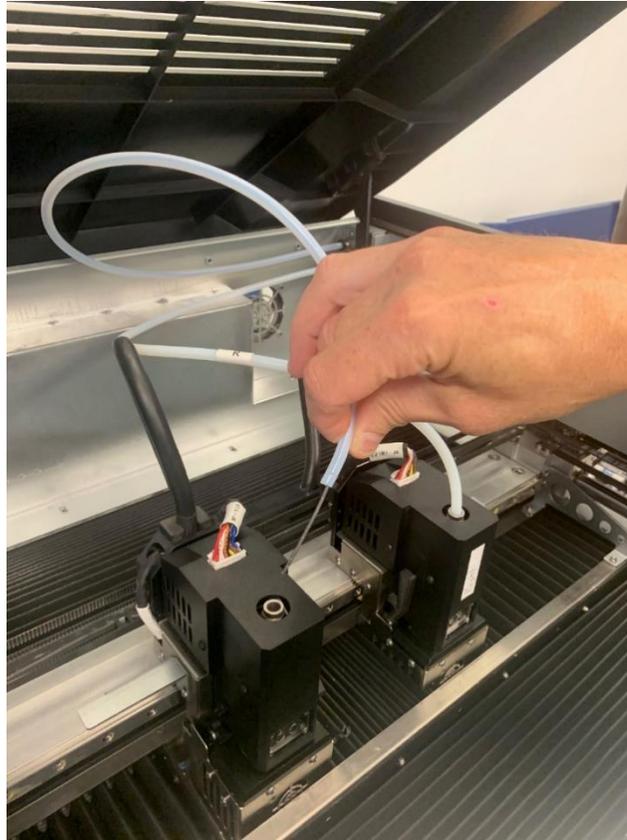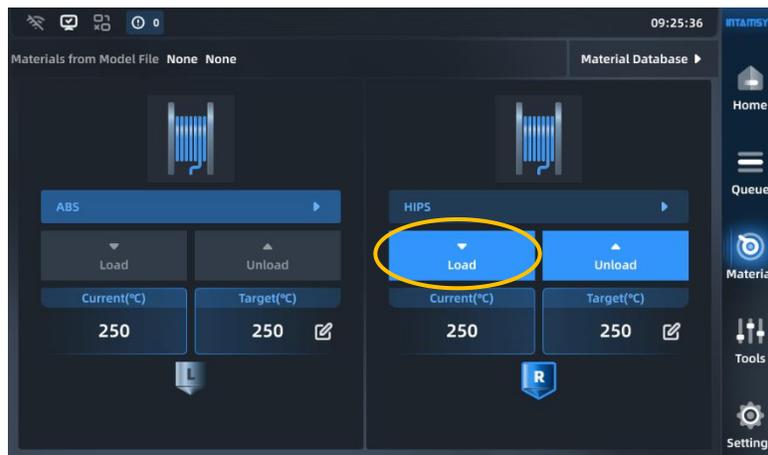
-Select the Material button on the display screen to open the interface which allows you to select material type.

- Click on the right side to open the Choose Material window and select HIPS then click OK.
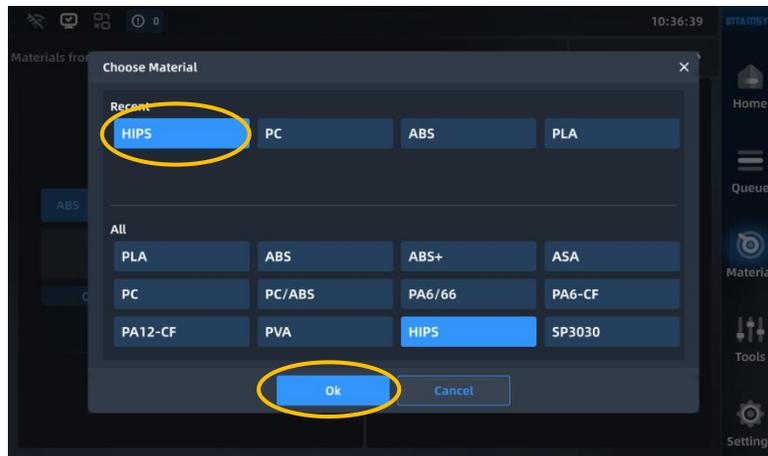
-Click on the Load button to activate the material loading process

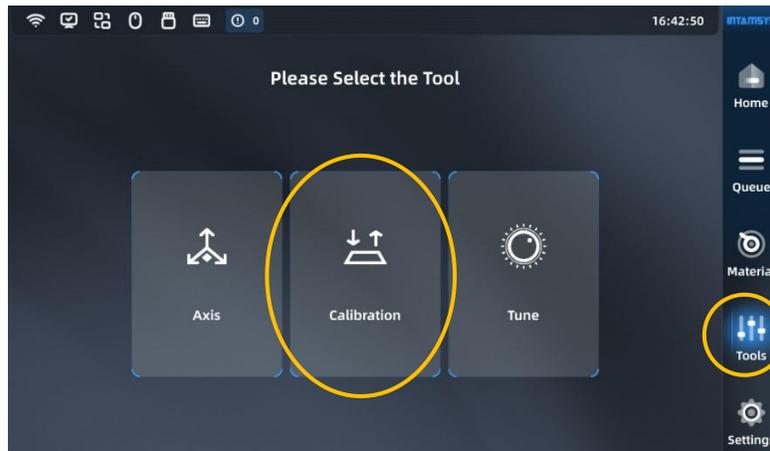-Follow the step by step pop up wizard prompts on the display to complete the loading process.

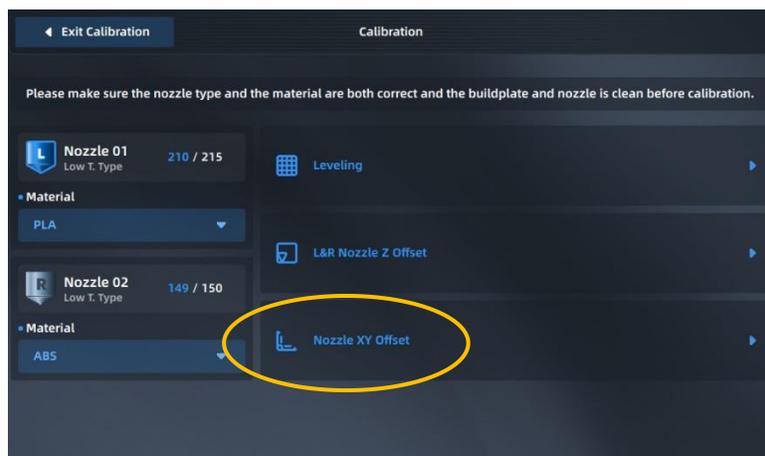-Repeat the process for the left side, selecting ABS as the material.

X-Y Calibrate your new FUNMAT PRO 310

-Click on the Tools icon from the Home menu.

-Click on the Calibration icon on the Tools menu.

-Click the X-Y Offset calibration icon.

-Confirm that the left and right printheads and build plate have been cleaned and the materials have been loaded.

-Click the "Finished" button and the next screen will appear.

- The printheads and build plate will automatically heat to temperature according to the selected material.
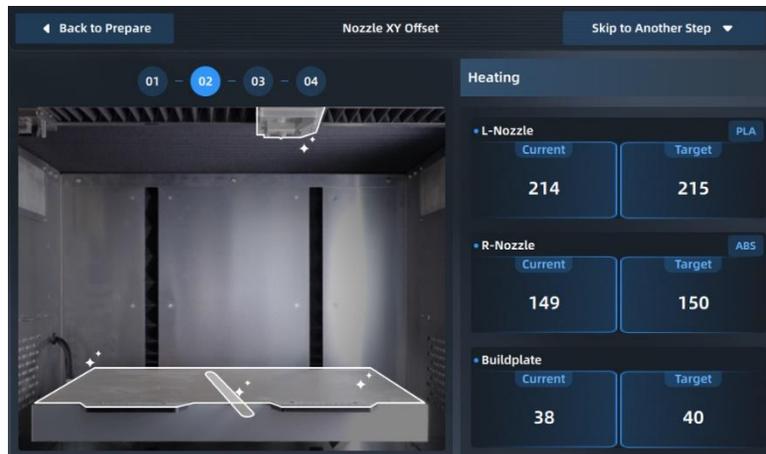
-Once at temperature the printer will begin printing the calibration vernier.

-This vernier print is a visual aid that allows the operator to compare the X-Y position of the left head relative to the X-Y position of the right head.

-Once the print is finished remove the build sheet from the printer and lay on a flat surface.

- Read the calibration by finding the scale line where the two models are most aligned for both the x and Y axis respectively.

-Count from the center (0) line to this scale line in the positive (+) or negative (-) direction and record the respective values.

-In the case pictured below, the X value is +6 and the Y value is -6.

X Offset : +6

Y Offset : -6
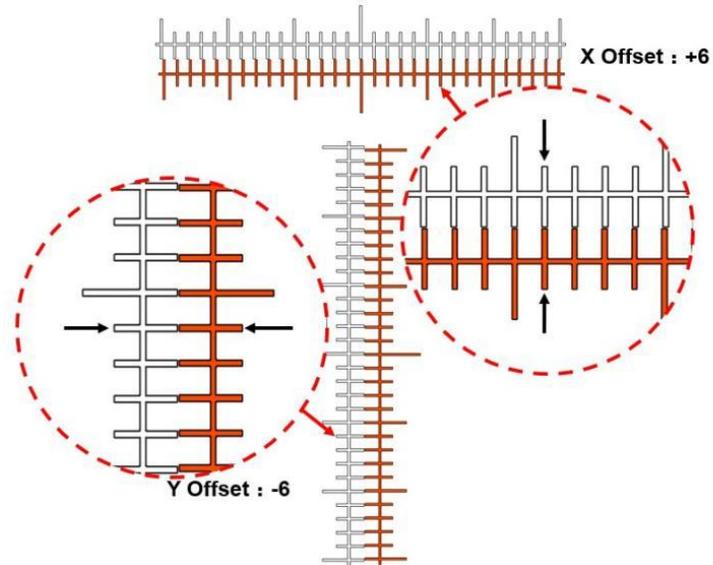
-Enter the values for both X and Y on the screen and click Continue.
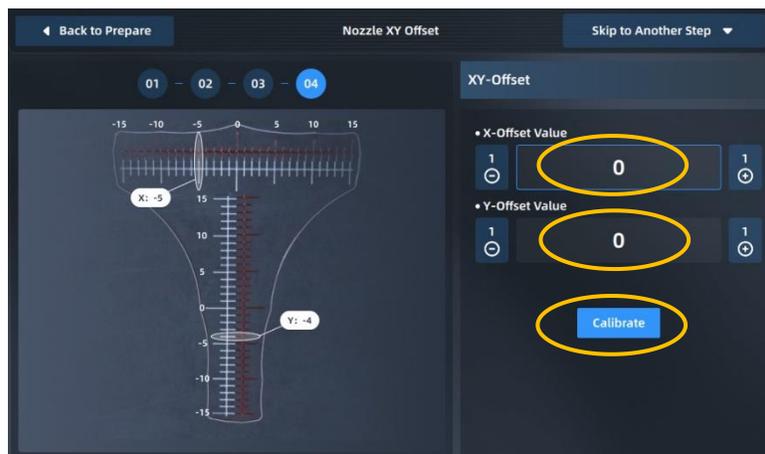
-The X-Y calibration has been successfully completed.