

SMART3D Macro PU

Unboxing procedure

It's important to follow this procedure to ensure a correct start up.



The procedure is divided in two (2) sections:

1. Unboxing
2. Setting up

If there is a problem during any of the provided steps, please let the technical support know before proceeding via email at CSOps@smart3d.tech

Included with each Macro PU:

4x Collet clips
1x Magnetic PEI sheet
1x Power Cord Cable with regional Plug
1x Hex key set for Hotends
1x Thermal Paste
1x Set of M3 Heater and Thermistor
retainer screws
2x spool adapter

1x Pair of thermal protective gloves
1x Adhesive
2x Bottles of Coolant Liquid
2x Teflon tubes
2x DryFeed™
2x USB cables
2x Silica gel packets

Required items:

- Wirecutter or pliers
- Crowbar or a flat screwdriver with a hammer
- 3 to 4 people to lift the Printer (80kg)
- Hex keys

SMART3D Macro PU

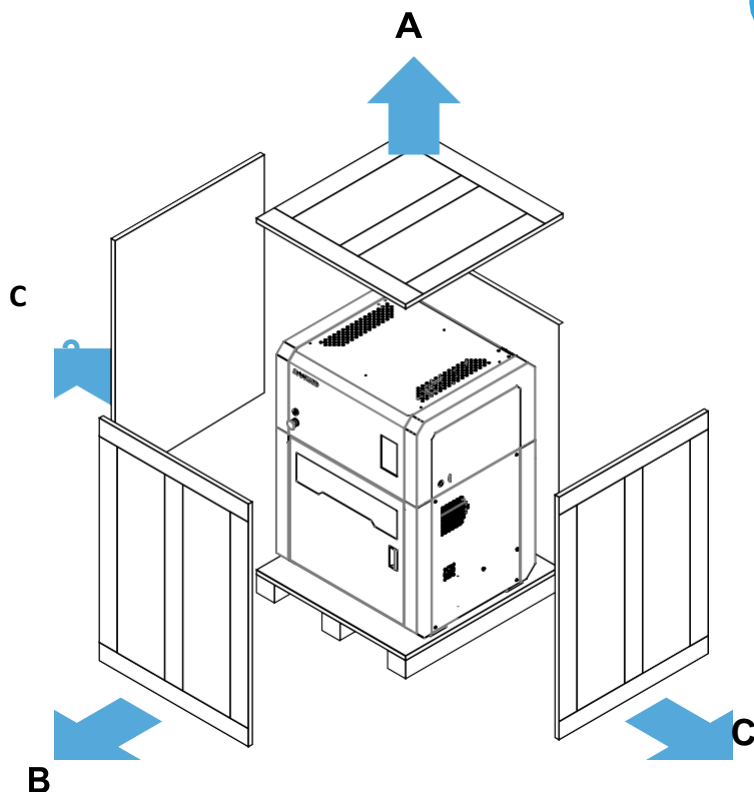
Unboxing procedure

1. Unboxing (25-30 minutes)

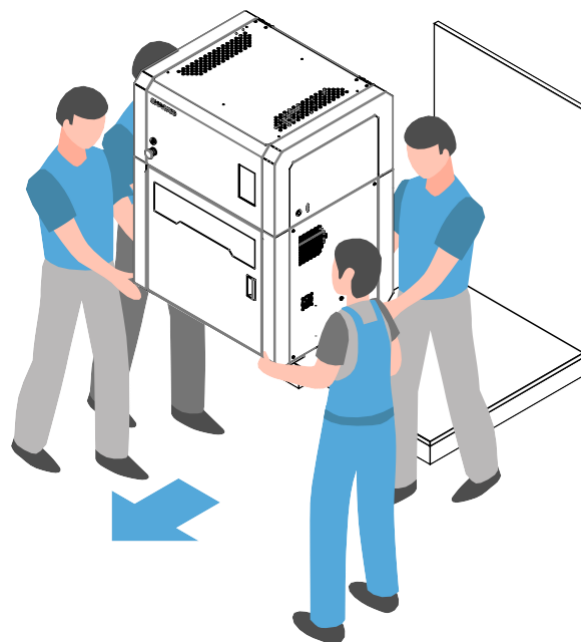
A. With a screwdriver, remove the crate panels in the following order:

- A. Top
- B. Front
- C. Sides

B. Remove the printer carefully from the pallet with a pallet jack/forklift. To ensure the integrity of your printer, the unit should be moved by at least four (4) people.

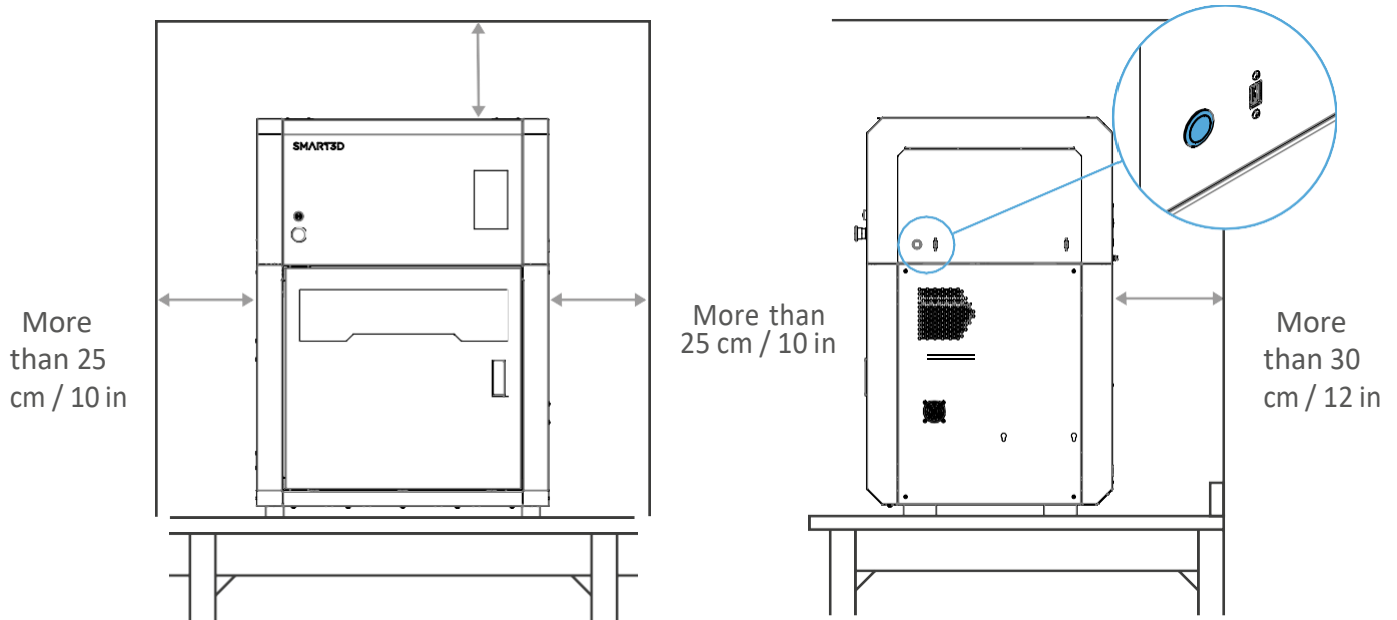


! Printer weights around 80 kg



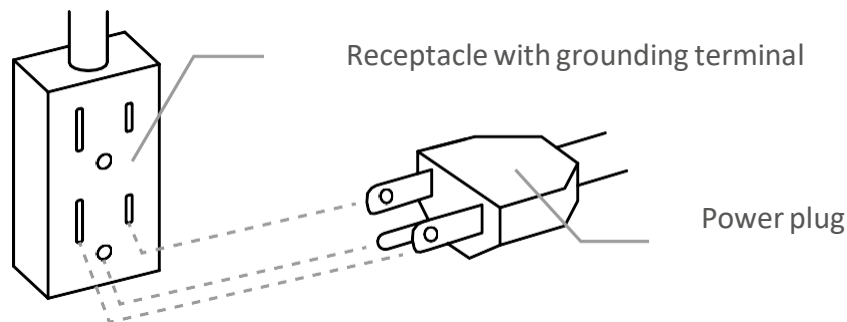
Site preparation

The Macro PU 3D Printer is for indoor use only. Place the unit on a firm and stable surface that can accommodate the printer's weight and dimensions, plus required clearances:



Always ground the unit

Connect the Macro PU to a grounded power source. Do not defeat or bypass the ground lead.



1. Plug in the female end of the supplied power cord directly into the socket located on the back of the printer.
2. Plug in the male end of the power cord directly into a grounded electrical outlet.
3. Press the Power button located on the right side of the printer (see image above).

After installation: Take measures to prevent the unit from falling off in case of an earthquake, high impacts, etc. as it could lead to personal injury.

If you have any questions or need assistance with these procedures, feel free to contact our support team on CSOps@smart3d.tech

2. Checking / Setting up the printer

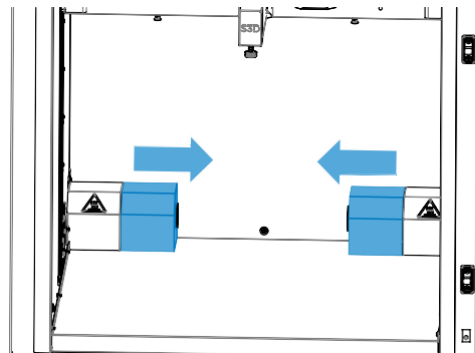
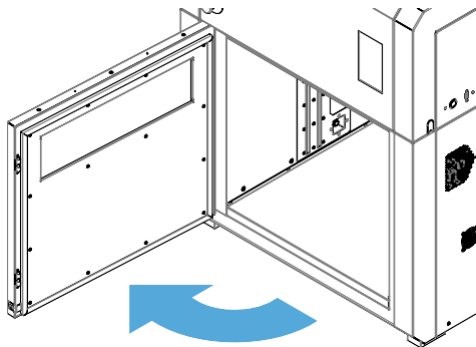
! DO NOT PLUG IN the printer yet.

1. First, proceed with a visual inspection all around the printer, looking for bumps or scratches.

Check the front glass door. Open the door and check the inside, nothing should be loose.

IMPORTANT: Report anything out of the ordinary to the support team for warranty purposes.

2. Open the front door. Remove the protective foam from the resistors by sliding them towards the center.

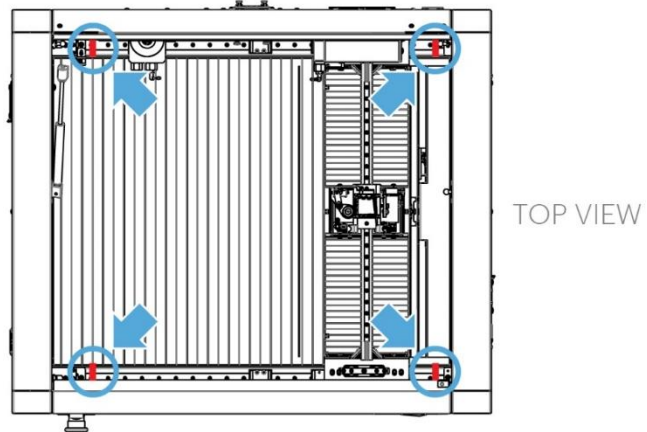
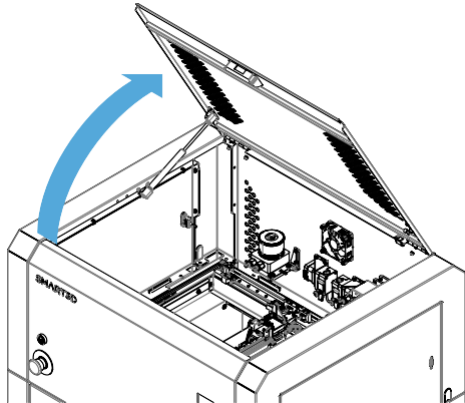


FRONT VIEW

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3. Open the top door to remove the four (4) zip ties securing the axis using a set of pliers and check the printhead can move freely. Be careful not to damage the belts. Manually move the printhead gently and slowly from left to right and front to back (15 cm in each direction should be sufficient). If you're unable to move the printhead, that means you have missed cutting one of the zip ties.

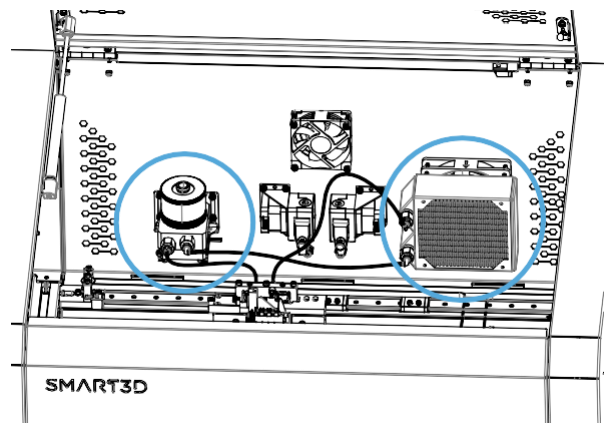


4. Check the liquid cooling repository for any leaks. If there is, contact technical support.



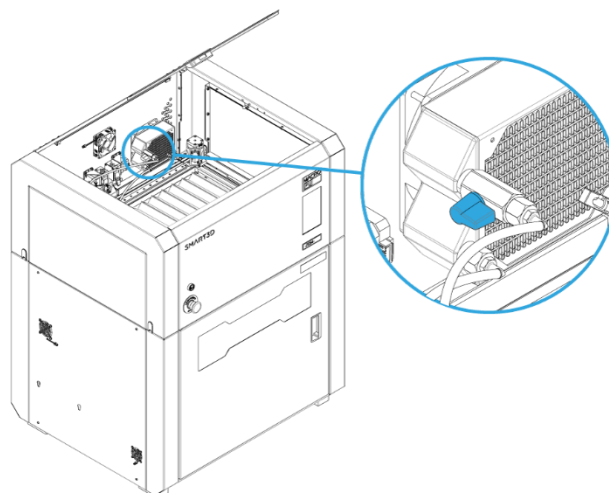
CAUTION: Wash your hands if you come into contact with the coolant and avoid touching your eyes, nose, or mouth.

Check the condition of the liquid cooling system tubing. The tubing should not be bent or twisted.



WARNING: This product can expose you to chemicals including Ethylene glycol (ingested), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

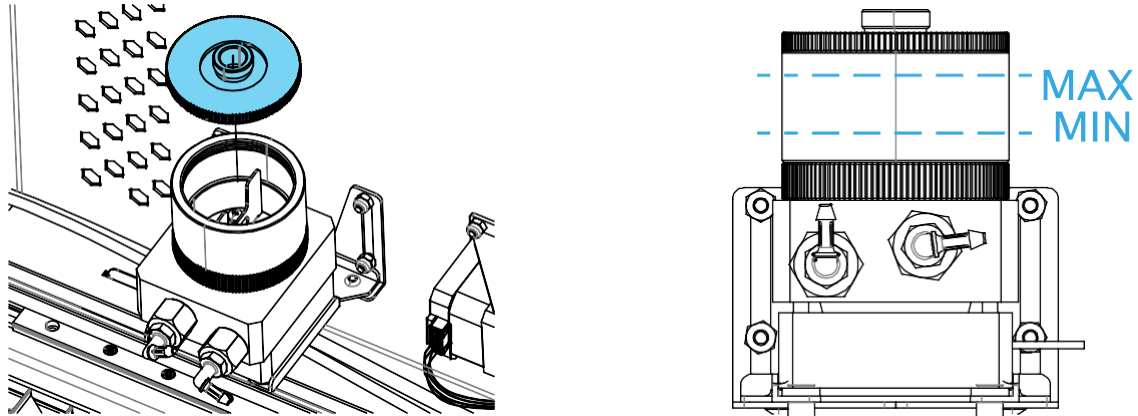
5. Open the cooling system stopcock as shown



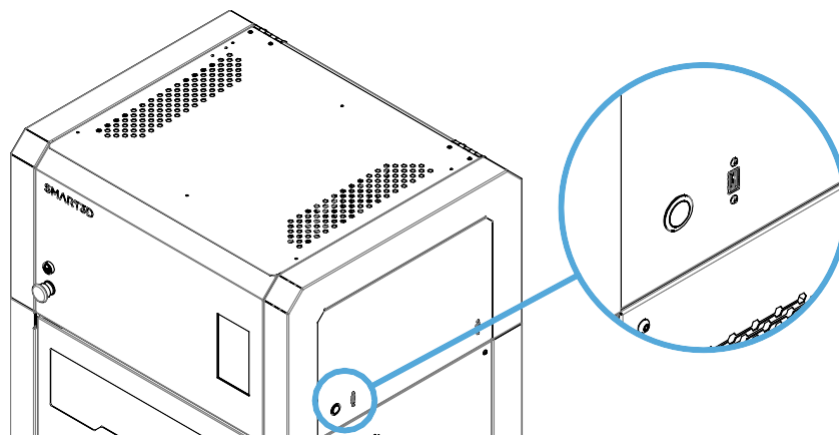
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6. Remove the reservoir lid (be careful not to lose its O-Ring) and fill the reservoir with the included Smart3D liquid coolant.



7. After filling up your cooling system, plug in the power cord and turn on the Macro PU.



The system will begin to purge the existing air in the pump.

Keep filling the reservoir to the specified max level (see level image in step 6) until the coolant in the reservoir no longer drains when the unit is on. Then put on the reservoir lid and open the fill port.

After filling up your cooling system, we recommend letting your unit run for at least 30 minutes without printing with the fill port open to vent as many air bubbles as possible. This will help improve the longevity of your cooling system.

When completed, close the fill port and the top door.

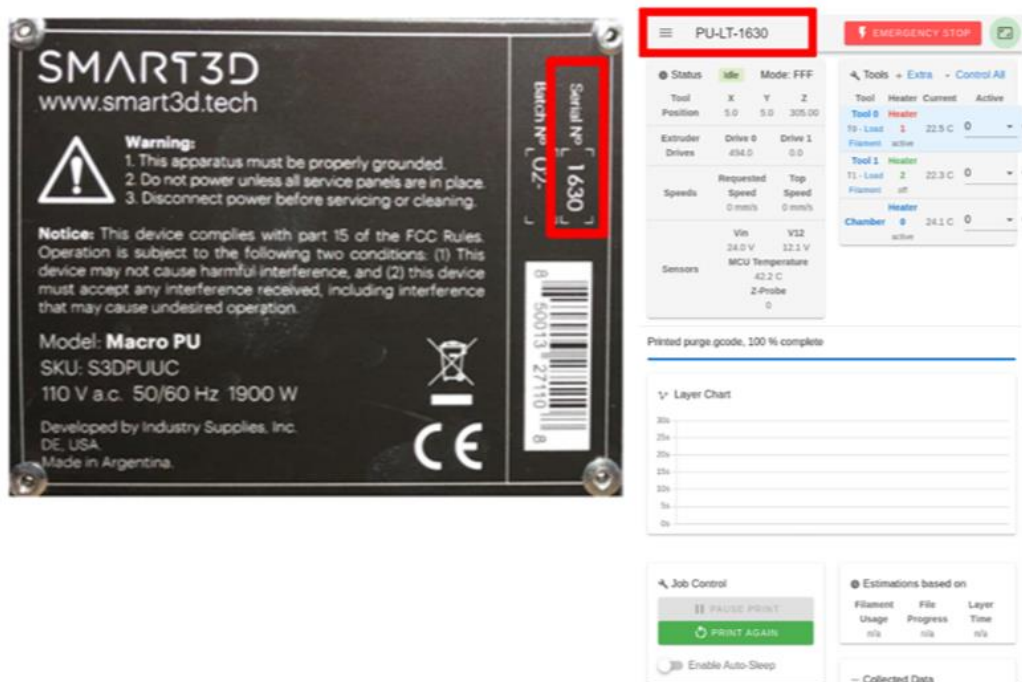
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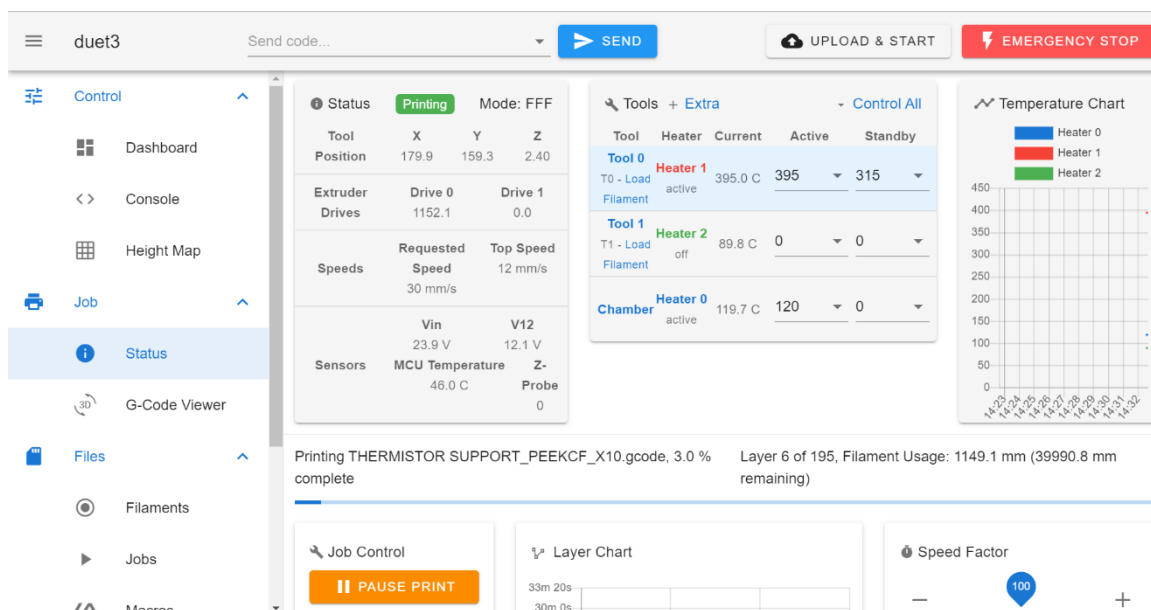
- To log into your Macro PU on a PC, enter the following in the address field in any web browser:
[PU-LT-\[Unit Serial Number\].local/](http://PU-LT-[Unit Serial Number].local/)



Your unit's serial number is available on the model identification tag on the back of the unit next to the power socket or the touchscreen.



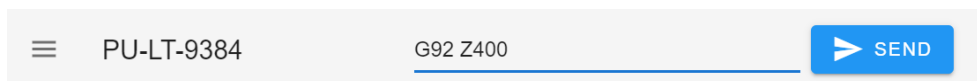
After logging in, you will have access to the command screen of your Macro PU via your computer.



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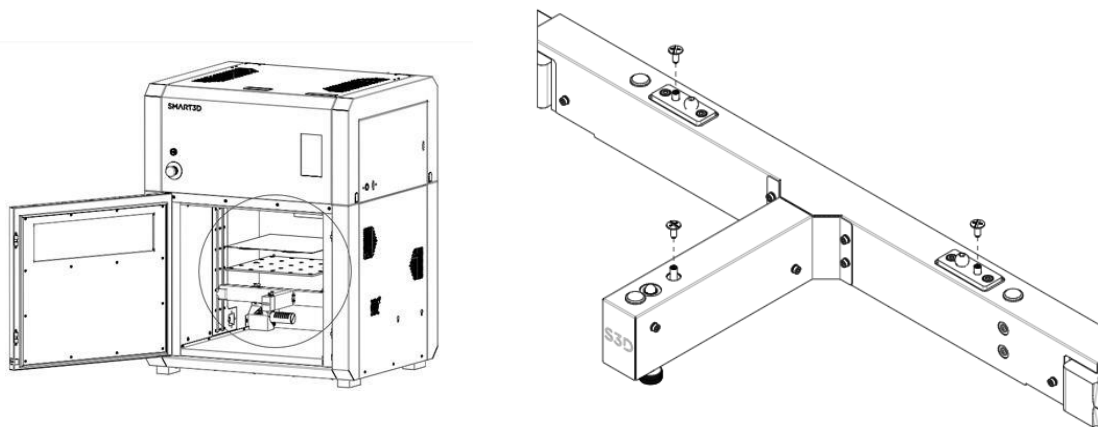
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9. We are going to indicate the actual position of the build plate by sending command **G92 Z400** in the command line at the top of the screen. The Macro PU will believe that its current position is Z400.

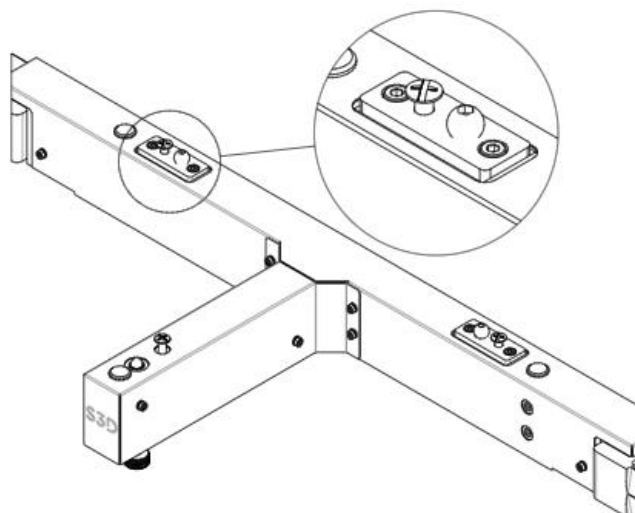


10. Now raise the build plate by typing sending command **G1 Z250**.

11. Remove the three (3) screws displayed in the image below.



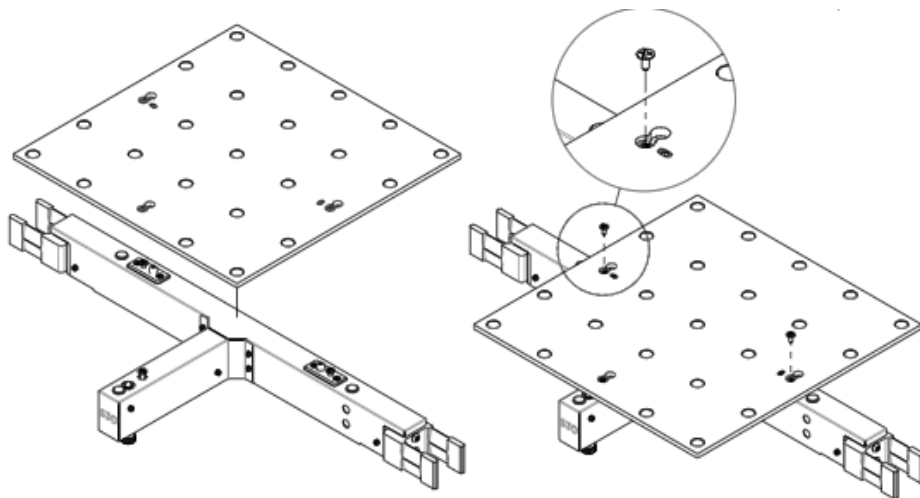
12. Align the highlighted holes in the bed with the screw holes from the previous step.



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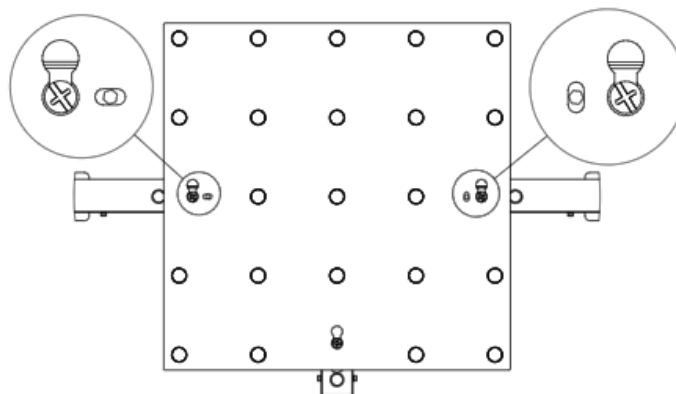
Be sure the bed hooks with the ball joint screws.



13. Push each screw upwards by hand and affix to the bed.



The screws should look like this when the bed has been properly affixed.



14. Verify that the build plate is parallel with the print head.

Send the print head to position X0 Y0, by pressing **HOME X HOME Y**.

HOME ALL ↔ Machine Movement COMPENSATION & CALIBRATION ▾

HOME X	< X-50	< X-10	< X-1	< X-0.1	X+0.1 >	X+1 >	X+10 >	X+50 >
HOME Y	< Y-50	< Y-10	< Y-1	< Y-0.1	Y+0.1 >	Y+1 >	Y+10 >	Y+50 >
HOME Z	< Z-25	< Z-5	< Z-0.5	< Z-0.05	Z+0.05 >	Z+0.5 >	Z+5 >	Z+25 >

! The following axes are not homed: X, Y

Slowly bring the build plate closer to the print head by pressing the **Z-25** button.

WARNING: make sure that the nozzle doesn't crash with the build plate.

HOME ALL ↔ Machine Movement COMPENSATION & CALIBRATION ▾

HOME X	< X-50	< X-10	< X-1	< X-0.1	X+0.1 >	X+1 >	X+10 >	X+50 >
HOME Y	< Y-50	< Y-10	< Y-1	< Y-0.1	Y+0.1 >	Y+1 >	Y+10 >	Y+50 >
HOME Z	< Z-25	< Z-5	< Z-0.5	< Z-0.05	Z+0.05 >	Z+0.5 >	Z+5 >	Z+25 >

Then move slowly the print head to the other end (X 350), by pressing the button **X + 50**.

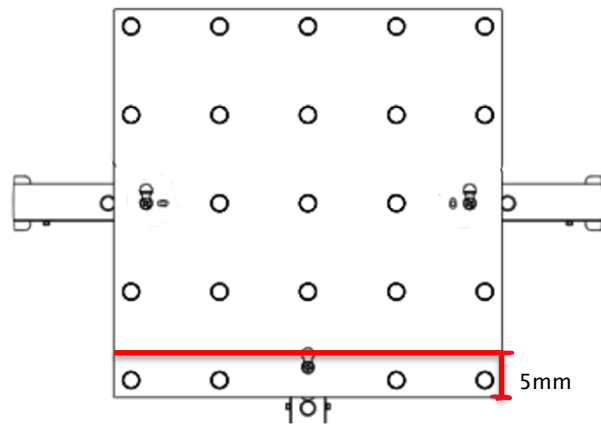
HOME ALL ↔ Machine Movement COMPENSATION & CALIBRATION ▾

HOME X	< X-50	< X-10	< X-1	< X-0.1	X+0.1 >	X+1 >	X+10 >	X+50 >
HOME Y	< Y-50	< Y-10	< Y-1	< Y-0.1	Y+0.1 >	Y+1 >	Y+10 >	Y+50 >
HOME Z	< Z-25	< Z-5	< Z-0.5	< Z-0.05	Z+0.05 >	Z+0.5 >	Z+5 >	Z+25 >

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Check that the build plate is parallel to the print head by measuring 5mm distance between the front right end of the build plate and the nozzle.



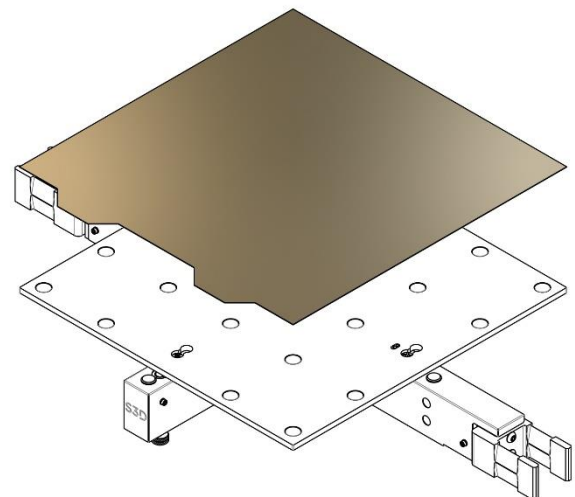
NOTE: If it is not parallel, with your hands, grab the bed from the front right end, and move it.

15. Place the PEI sheet.

16. Calibrate the build plate.

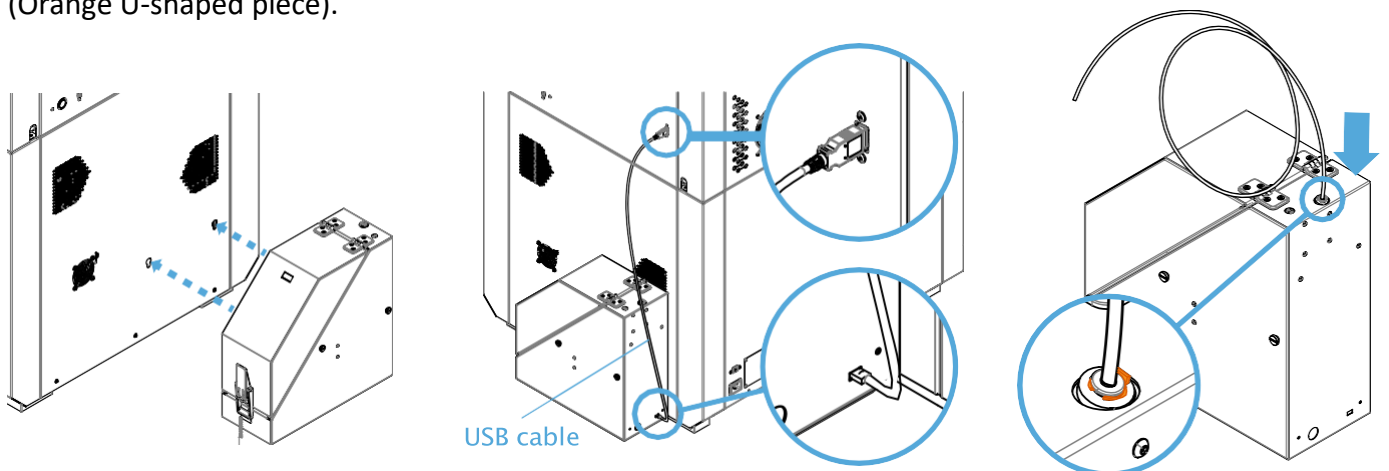
Follow the calibration procedure provided by Smart3D.

17. Place the support pins of the DryFeed over the mount slots on each side of the Macro PU and slide the DryFeed™ down until the support pins fit snugly into the mount slots.



Connect the USB cables from each DryFeed™ unit to the rear USB port on each side of the Macro PU.

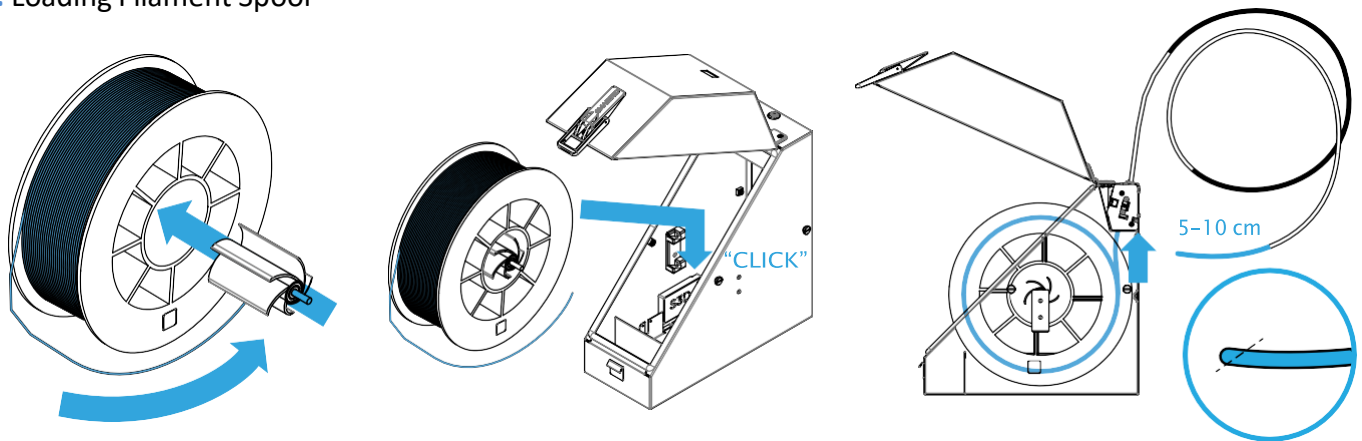
Insert the Bowden tubes into each DryFeed™ unit's Bowden connector and lock them with collet clips (Orange U-shaped piece).



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18. Loading Filament Spool



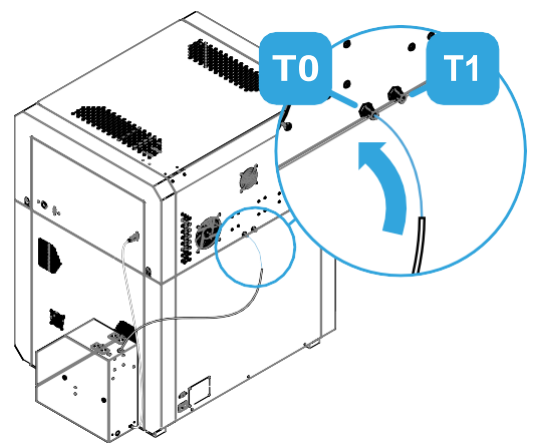
Feed the filament into the push-in connector on the back of the Macro PU until you feel a resistance (the filament reaches the extruder).

! Be careful not to push filament too hard. When you feel the resistance, the extruder should be able to grab and pull in the filament. The rest of the process is automatic.

Start the **Load the filament** procedure from the unit's touchscreen.

Once the hotend has reached the target temperature, make sure the extruder starts feeding the filament to the hotend. If it doesn't, push the filament in until you feel the extruder grabbing and feeding the filament.

IMPORTANT: Facing the front of the printer, extruder T0 is located on the right and T1 on the left.



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