

Use and maintenance manual

Sharebot large FDM

Defiant - Odyssey – Enterprise

Rev. 09/04/2026

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Introduction

The following use and maintenance manual describes all the operations for the correct and safe use of Sharebot large-format printers.

All procedures described below are intended for machine operators.

Safety

The safety systems of Sharebot printers are designed to guarantee operator safety by complying with the following directives:

Directive 2006/42/EC – Machinery Directive

Directive 2014/30/EU – Electromagnetic Compatibility Directive

Directive 2011/65/EU (RoHS) and Delegated Directive (EU) 2015/863

For machines that feature it (Odyssey, Enterprise), the safety control system is controlled by the keypad located near the control screen on the front of the printer. The system has two possible states:

- 1) armed (white light on)
- 2) disarmed (white light off)

For all machines, the emergency button is located near the control screen on the front of the printer.

Armed state

The printer is ready for use. This mode is enabled by pressing the green "1" button after closing all alarmed panels. Enabling the printer is indicated by the white LED.

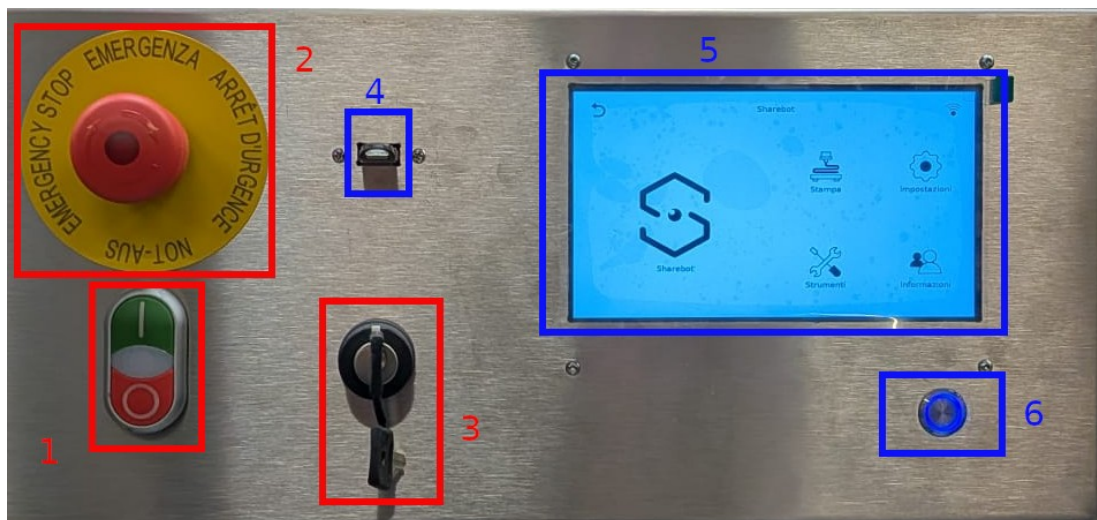
Disarmed state

The printer is not in use or is paused.

If an object is printing, construction is interrupted by opening one of the alarmed panels. To resume printing, you must return to the "armed" state by closing all panels, then use the "Resume" command.

Control Panel

The printer control panel is as follows



The components of the safety system are highlighted in red, the components of the control system are highlighted in blue.

1 – Armed/disarmed activation button panel and white LED

2 – Emergency stop button

3 – Emergency system disabling key

4 – USB port

5 – Control display

6 – On/Off button

Note: Not all printers may have all security controls. Smaller models may have different security ratings.

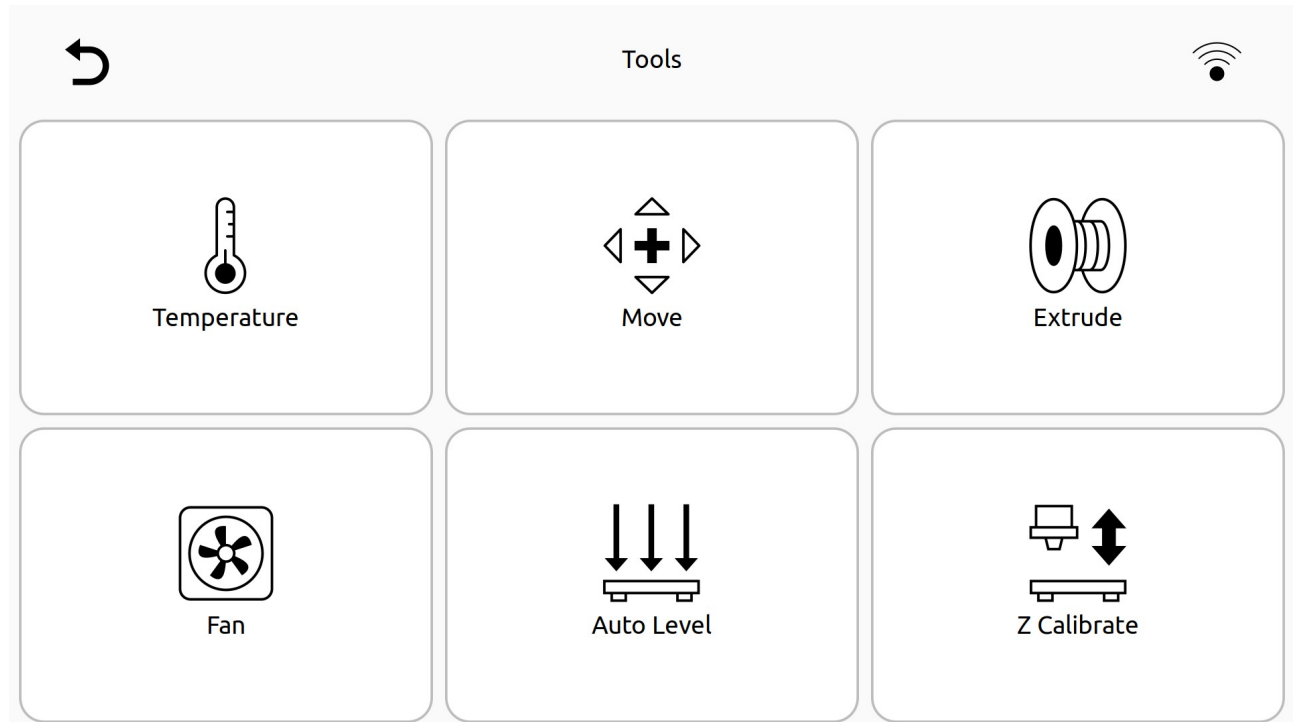
Characteristics

	Defiant	Odyssey	Enterprise
Print area (mm)	600x600x600	1000x1000x1200	1200x2000x1200
Dimensions (mm)	700x700x700	1200x1200x1400	1500x2500x1500
Weight (kg)	100	250	400
Consumption (kW)	1.5	3.5	7.0

Calibration

The calibration functions are accessible from the “ **Tools** ” menu on the main screen

The available operations are “Auto Leveling” and “Z Calibration”



Automatic leveling

This function is designed to detect the equidistance of the plane with respect to the 4 Z motors, QUAD GANTRY function, and the flatness of the individual areas of the plane.

The first function guarantees the orthogonality of the XY plane with respect to the Z axes, the second ensures that even when using a plane that may present imperfections, the objects are constructed in the best possible way.

Once you have selected the “Auto Leveling” function in the “Tools” section, 3 modes are available:

- 1) QUAD GANTRY + BED MESH
- 2) QUAD GANTRY
- 3) BED MESH CALIBRATE

QUAD GANTRY

Leveling the position of each of the individual Z axes that support the machining plane.

The calibration procedure consists of the following steps:

- 1) for each of the Z-axis motors the distance of the extruder from the bed is detected;

2) if the distance is greater than the “ **Measurement accuracy** ” setting, each of the motors is moved individually so as to have the same distance from the plane;

3) if an adjustment was made at point 2 the procedure restarts from the beginning.

Measurement accuracy : indicates within what is the maximum acceptable value difference for the Z movement of each individual motor.

BED MESH CALIBRATE

The plane is divided into a series of zones along the X-axis and along the Y-axis, for each one the actual distance between the extruder and the plane is detected.

The resulting values are used to dynamically correct the position of the extrusion head during printing.

Auto Level

2.43	2.08	1.85	1.86	1.85	1.86	1.92	2.16
1.90	1.45	1.17	1.16	1.20	1.31	1.56	1.98
1.56	1.01	0.71	0.70	0.78	0.94	1.28	1.79
1.24	0.70	0.39	0.36	0.46	0.63	0.96	1.43
1.23	0.65	0.38	0.35	0.46	0.61	0.92	1.39
1.49	0.98	0.79	0.78	0.94	1.07	1.34	1.71
1.96	1.58	1.46	1.45	1.60	1.69	1.88	2.13
2.34	1.98	1.87	1.86	2.02	2.06	2.18	2.40

QUAD+BED MESH 

 Calibrate

Level Ready!

level precision:

0.2

0.1

0.05

 reload

Z Calibration

Its purpose is to have the space of a sheet of paper between the nozzle and the print bed, that is, to define the empirical zero of the extrusion head.

This is an operation that must be performed every time the nozzle or the glass printing support is replaced.

Start the process by pressing the "Start" button; the machine will hone the print head and position it for measurement. Place a sheet of plain paper under the extruder.

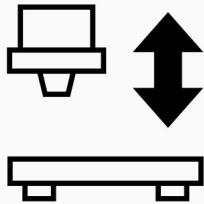
Select the amount of movement and move the extruder using the "Lower Plate" and "Raise Plate" buttons to ensure that the sheet of paper can move under the extruder with the shortest possible distance.

Press "Accept" to confirm the location.



Z Calibrate






Start


Guide


Lower Bed


Raise Bed


Accept


Abort

Move Distance (mm)

0.01

0.05

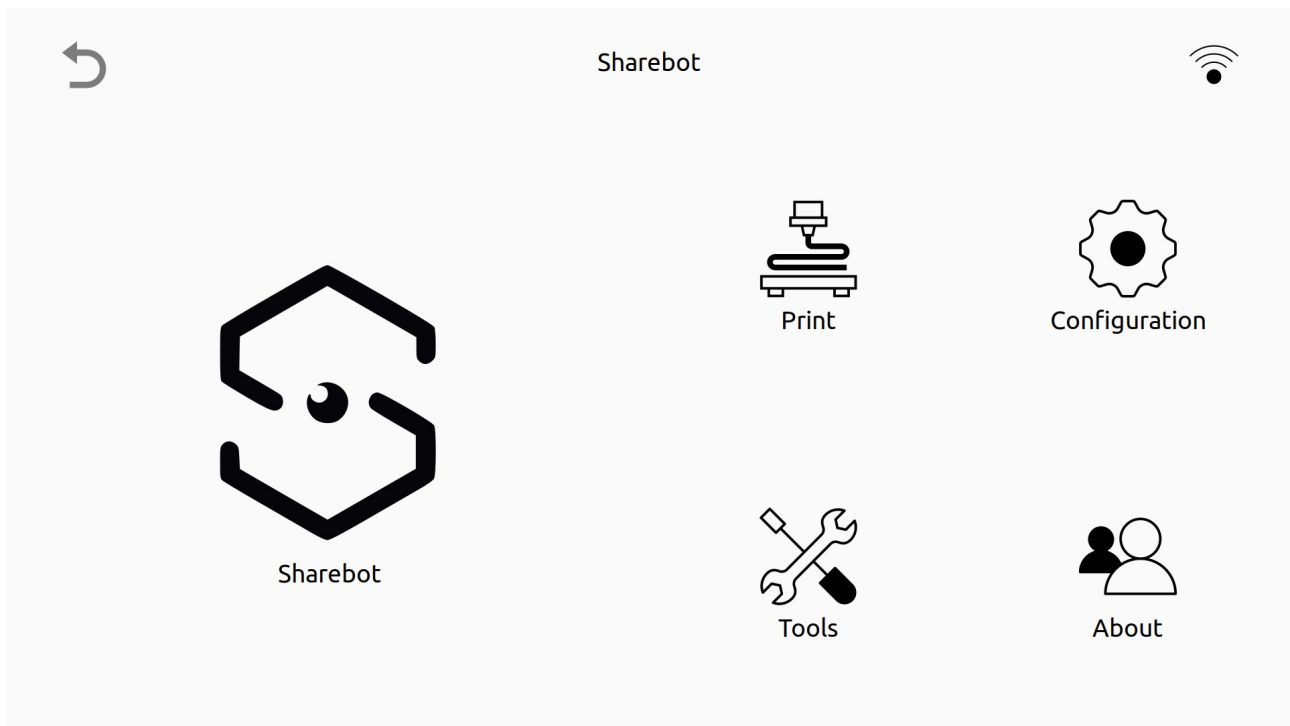
0.1

0.5

1

5

Main screen



The main screen allows you to access all the printer's features.

Pressing the “Sharebot” icon or the “Print” command provides access to the printing or resuming of an interrupted print function.

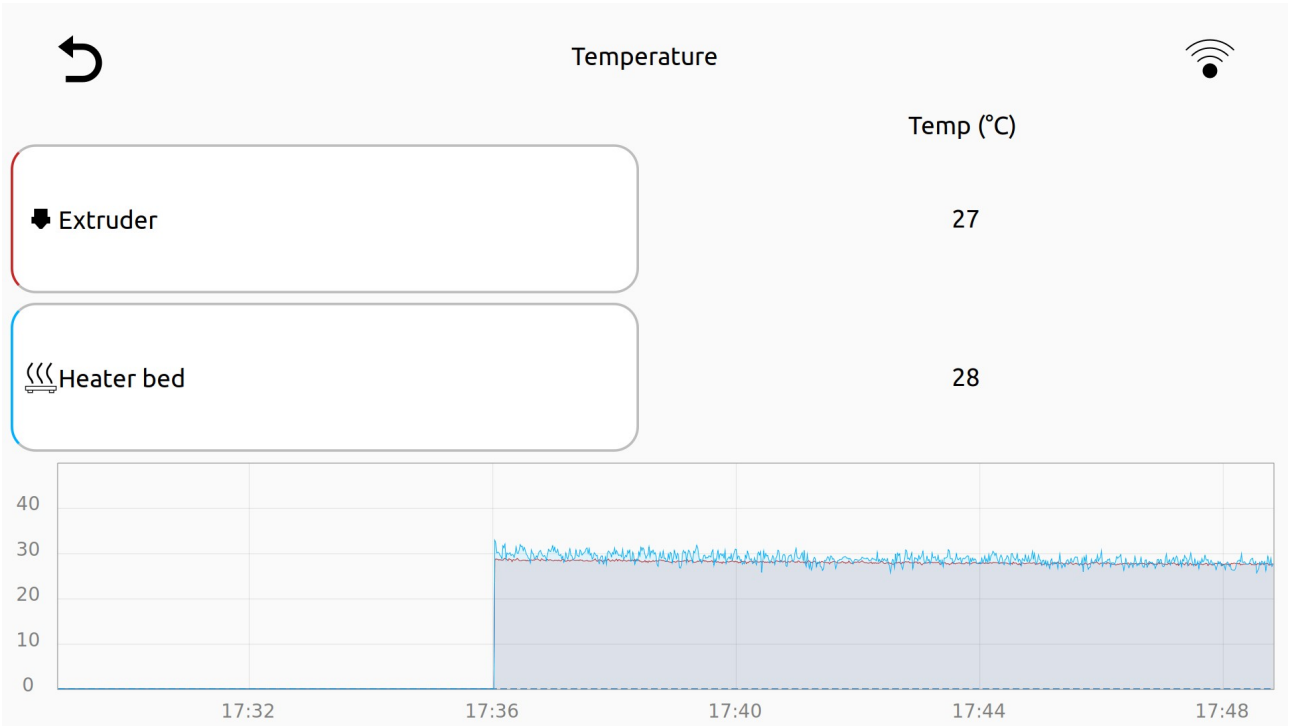
The “Tools” icon provides access to the settings, movement and calibration menu.

The “Settings” icon allows you to change the interface settings, while “Information” allows you to see information about the machine, including the usage hour counter.

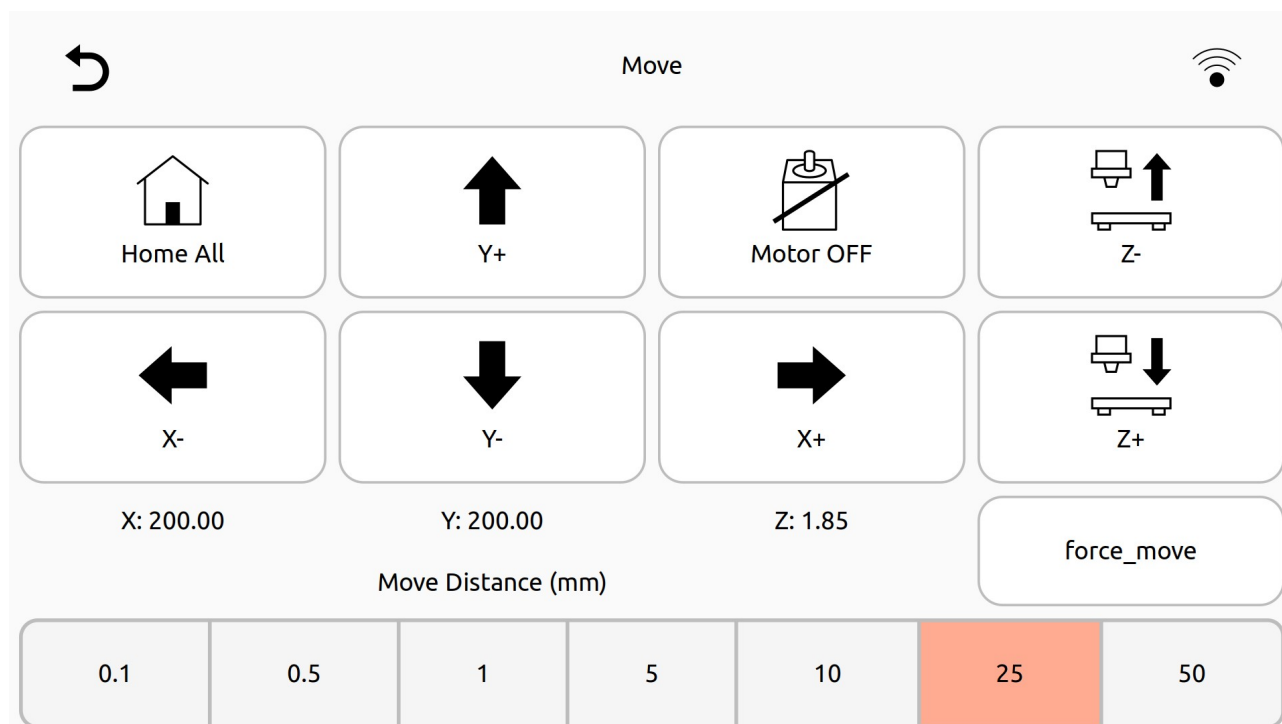
Tool

Temperature

Using the controls on this screen you can set or change the temperature of the extruder and the heated bed and view the historical graph of the readings.



Move



The commands in this section allow you to move the extruder (X and Y axes) and the work plane (Z axis). The movement distance can be set at the bottom of the screen.

The "Force movement" button allows the axes to be moved even when homing has not yet occurred, meaning the machine control system cannot determine the physical position of the extruder and the worktable.

Warning : This movement therefore represents a potential hazard, as it allows the axes to move in any direction, potentially causing collisions. For safety reasons, the machine requires explicit consent, which is requested by displaying a warning of the potential hazard.

Extrude



Extrude




27°


Load


Unload

Distance (mm)

50

100

150

-

Speed (mm/s)

5

10

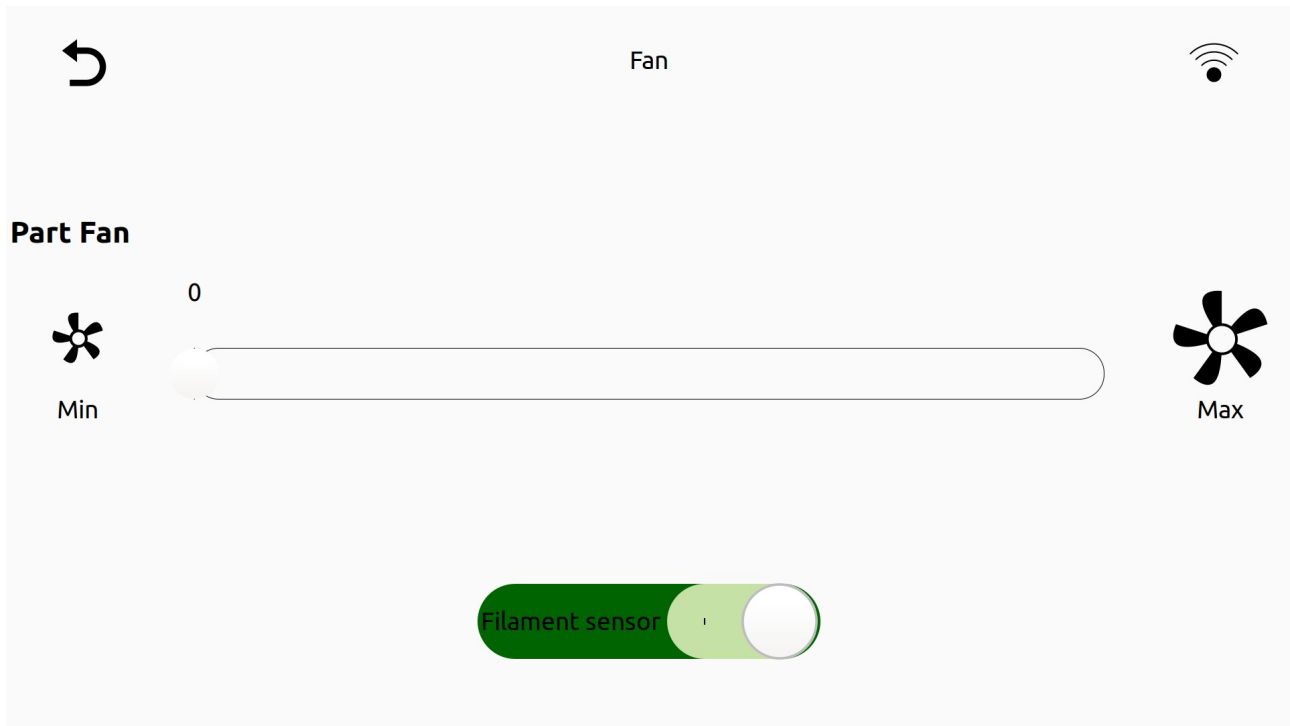
15

20

Selecting "-" will make the extrusion continuous.

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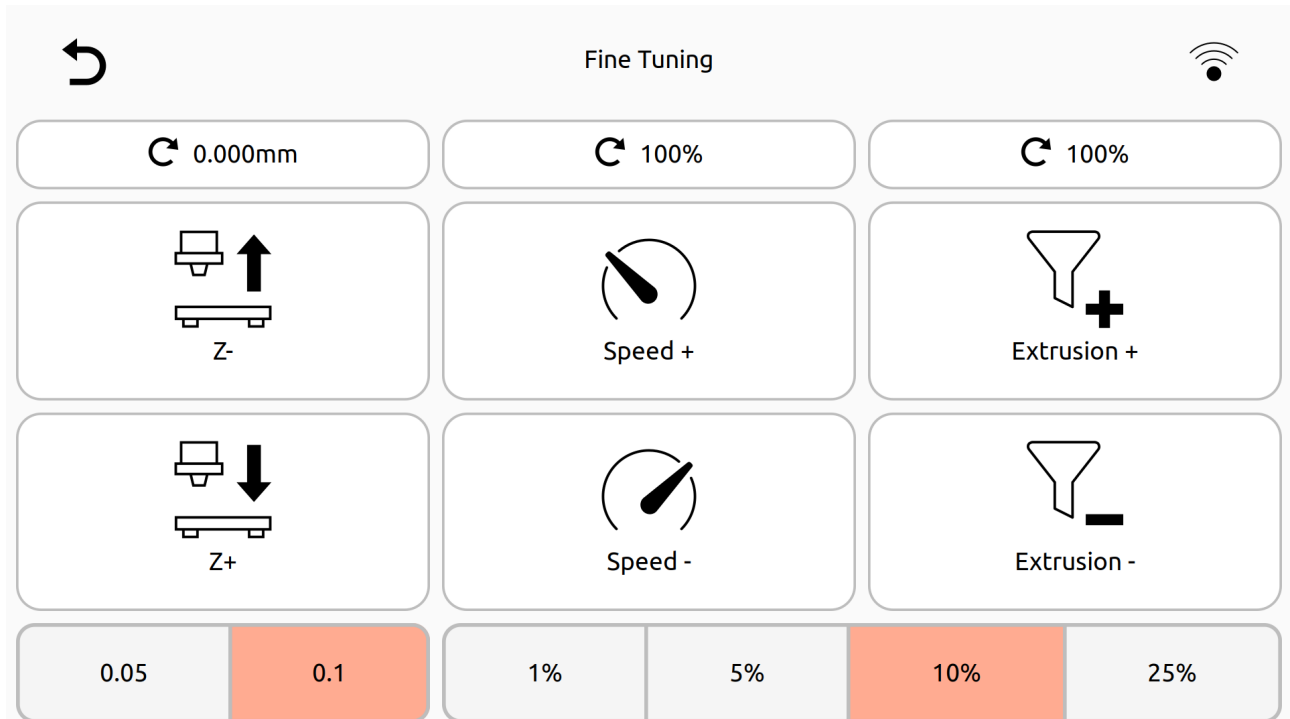
Fan and filament sensor



Note: The extruder fan is automatically activated when its temperature is above 40°C.

Setup – While Printing

The “Fine Tuning” menu allows you to change the printing parameters of an object while it is being built and can be accessed from the icon of the same name on the active status screen during a construction.



The available commands are:

- 1) Changing the distance of the extruder from the bed, “Z+” and “Z-” functions
- 2) percentage change in movement speeds
- 3) percentage change in extruder material flow

Extruder-bed distance

Since the extruder is fixed, the construction plane is moved by the distance set at the bottom of the column relating to Z movement. In the example in the previous screen, the possible values are “0.05” or “0.1” millimeters, and the latter is the one selected.

By pressing the “Z-” button the construction plane moves closer to the extruder by the selected distance, i.e. the plane goes up.

By pressing the “Z+” button the construction plane moves away from the extruder by the selected distance, i.e. the plane descends.

The current value of the distance change is shown at the top of the column. In the previous example, the value is 0.9 millimeters.

WARNING : The value set here remains stored and will also be used in subsequent prints.

Movement speed

The extruder movement speed can be changed as a percentage by selecting the change value from the four available at the bottom of columns “1”, “5”, “10” and “25” and then applying the change using the “Speed +” and “Speed -” buttons.

The current speed value (as a percentage of the gcode value) is visible at the top of the column. In the example screenshot, it is 100, so unchanged.

Extrusion flow

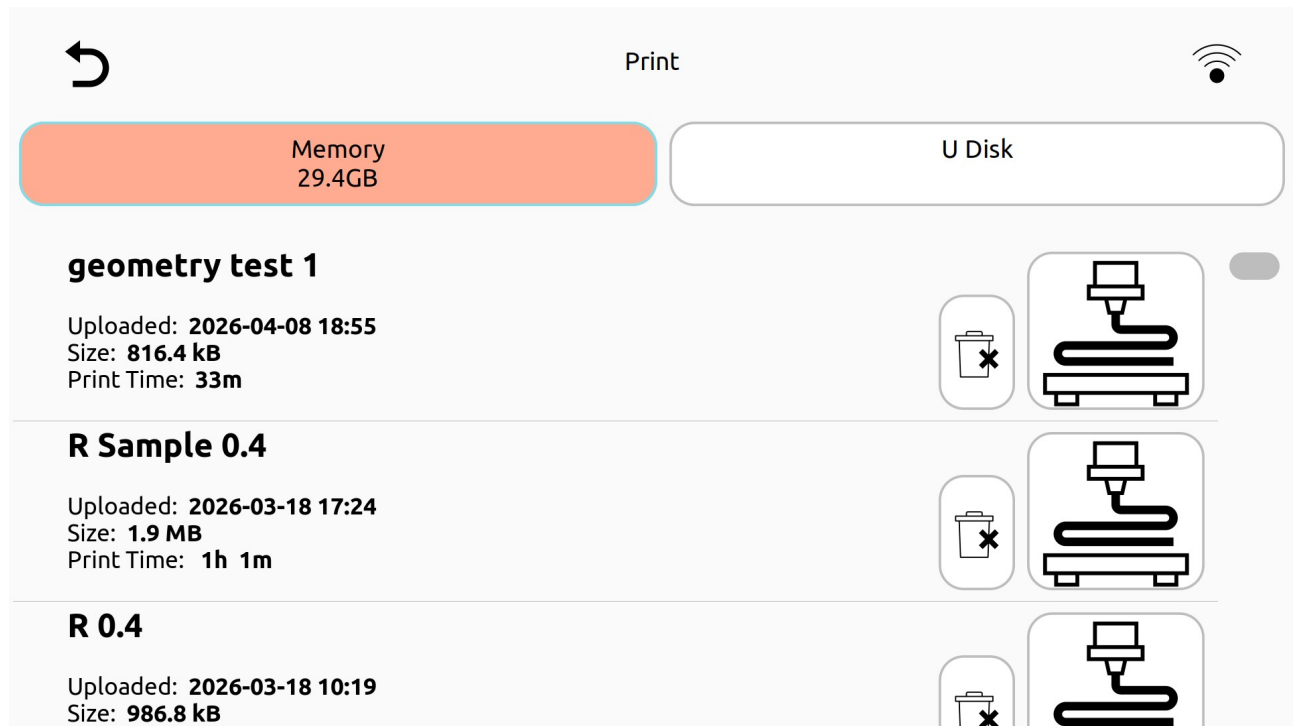
The flow of the extruded material can be changed in percentage by selecting the value of the change from the four available at the bottom of the columns “1”, “5”, “10” and “25” and then applying the change using the “Extrude +” and “Extrude -” buttons.

The current value, expressed as a percentage of the gcode value, is visible at the top of the column. In the example screenshot, it is 100, so it remains unchanged.

Print

The print menu is accessible from the main screen by either pressing the Sharebot logo or the “Print” button.

The print menu allows you to select the location of the file to be printed. The default location is "Memory," the printer's internal memory. Pressing the "USB" button browses for any USB stick connected to the front panel.



By pressing the printer icon, you are asked to confirm the operation. By pressing the “ **Print** ” button, the machine will start construction. The deposition of the material on the first layer strongly affects the success of the object. It is good practice to apply a uniform and adequate layer of primer on the bed and follow the processing of the first layer, modifying the distance from the extruder bed if necessary to ensure correct deposition.

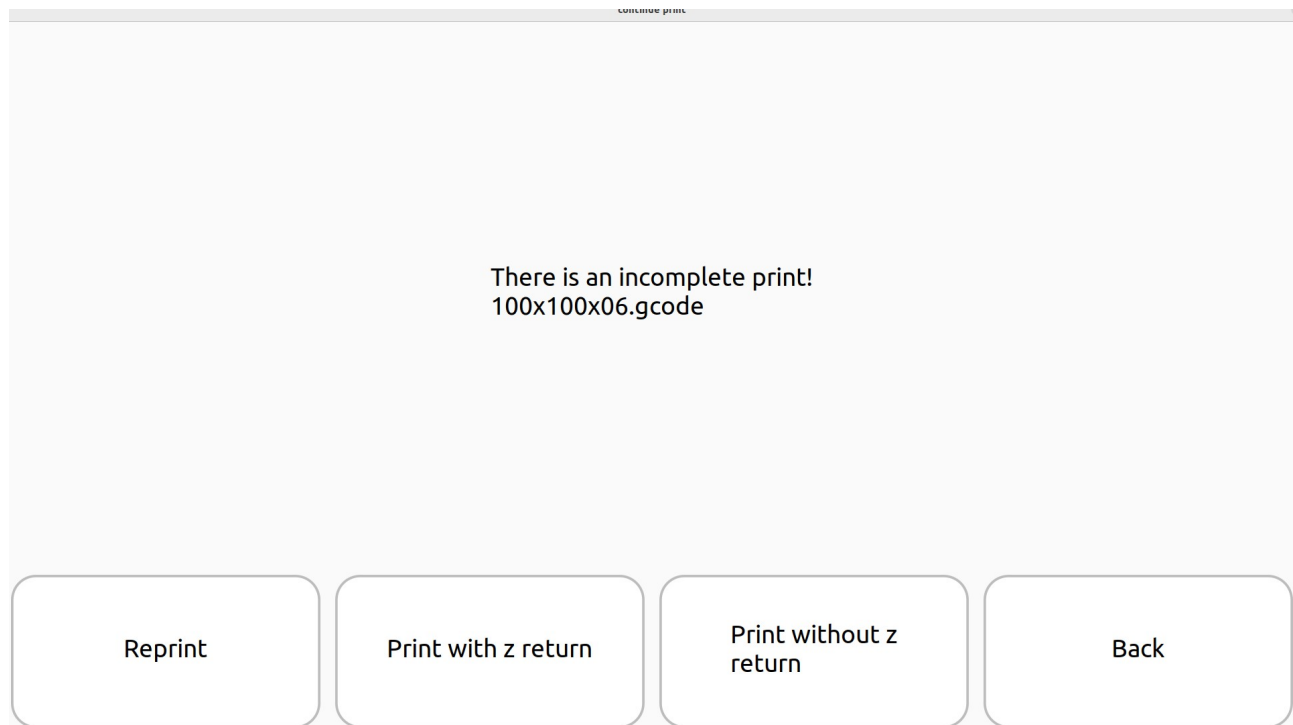
Primer and object removal : Always apply an even layer of primer to the printed area. For perfect part removal, wait until the print bed temperature drops below 40°: the part will practically detach from the print bed on its own.

By pressing the trash icon you can delete the file from the specified location.

Note : Gcodes, selected from the USB stick or sent remotely, will be automatically copied to the printer's internal memory before starting construction, making the printer independent of storage media or PC connection. The same object can then be printed by retrieving the gcode from the internal memory.

Resuming an interrupted print job

If the last print was interrupted due to a power failure, pressing the Sharebot symbol or selecting the interrupted object will ask you whether to resume from the last section performed .



The available options are:

“Reprint”: Restart printing from the beginning

“Print with z return”: All axes are homed and then printing resumes from the last line of gcode executed.

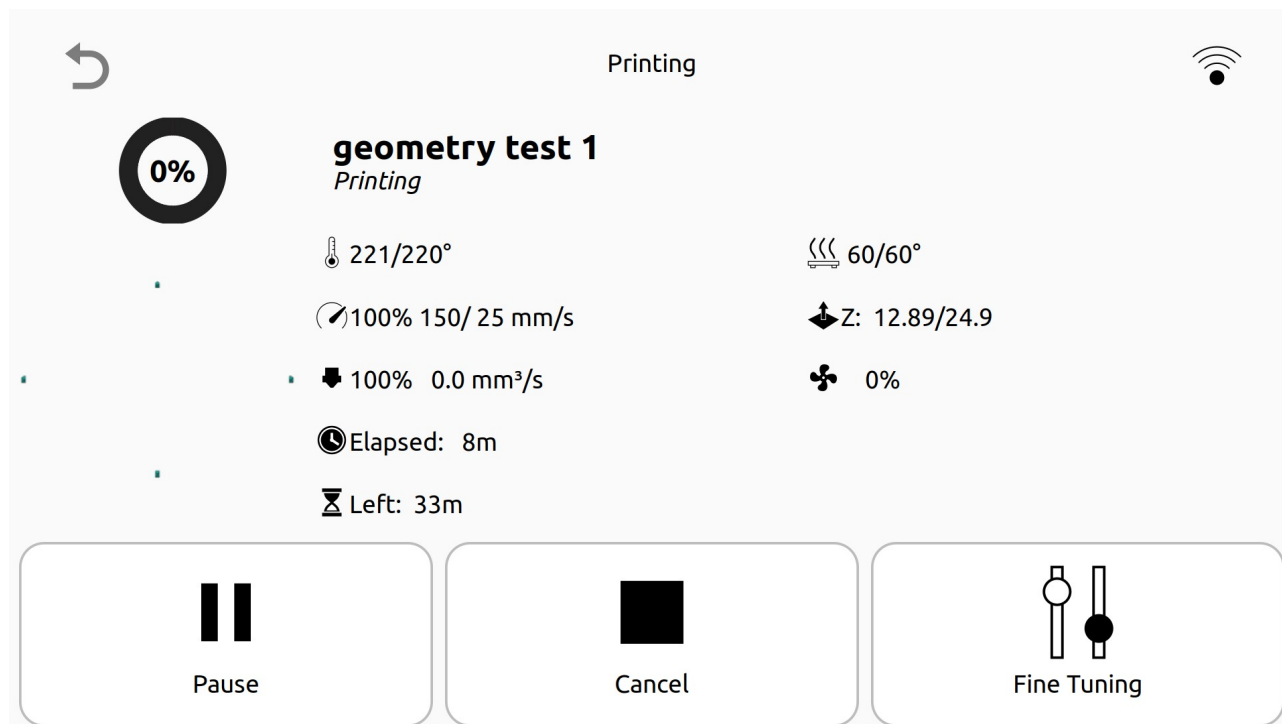
CAUTION : There must be enough space on the plane to return to the homing position, usually the bottom left, and home the Z axis.

“Print without z return”: Only the X and Y axes are homed, the Z is considered at the same level as the last recorded command, then printing is resumed from the last gcode line executed.

“Back”: Returns to the previous screen.

Printing progress status

While a build is in progress the main screen is replaced by the print status page.



In this screen you can see on the left side from top to bottom:

- 1) the percentage progress of the construction
- 2) the current extruder temperature compared to the set one. In the example, 210°C is equal to the requested “/210°C”
- 3) the movement speed both as a percentage and instantaneous compared to the required one
- 4) the instantaneous volumetric flow of the material exiting the extruder
- 5) the time elapsed since the start of printing
- 6) an estimate of the time remaining

On the right side, from top to bottom:

- 7) the current temperature of the hob compared to the set one
- 8) the current height in Z compared to the total height of the building
- 9) the percentage rotation speed of the extruder fans.

The available commands are:

“**Pause**”: Momentarily pauses the build progress and parks the extruder in the lower left corner of the plane.

“**Cancel**”: Stops printing.

“Fine tuning”: Changing the extruder-bed distance, movement speed and extruder flow parameters.

Maintenance

Monthly

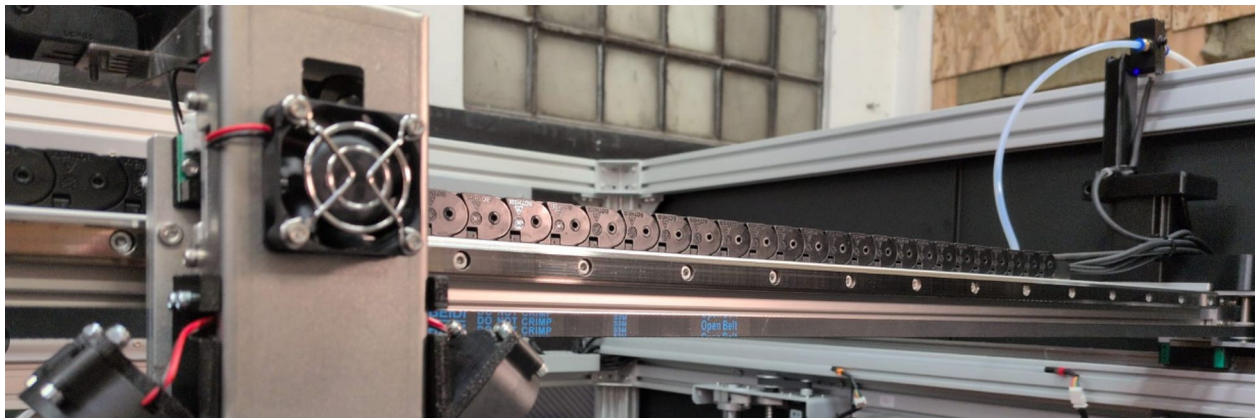
WARNING: Maintenance of the machine must be carried out only after it has been completely disconnected from the electrical power supply.

Check the condition of the X and Y belts.

Check the condition of the fixing bolts.

Bearing lubrication and maintenance

1. Apply a small amount of grease to the X-axis guide and spread it evenly with a tool.



- 2 Apply a small amount of grease to the Y-axis guide and spread it evenly.



3 Lubrication of threaded rods and rollers:

1. Use a grease gun to inject grease into the oil hole on the threaded rod. Perform this operation in sequence on the four lubrication points on the rods.



2. Apply grease to the 4 threaded rod bearings and machine rollers.



3. Apply grease to the machine bearings.

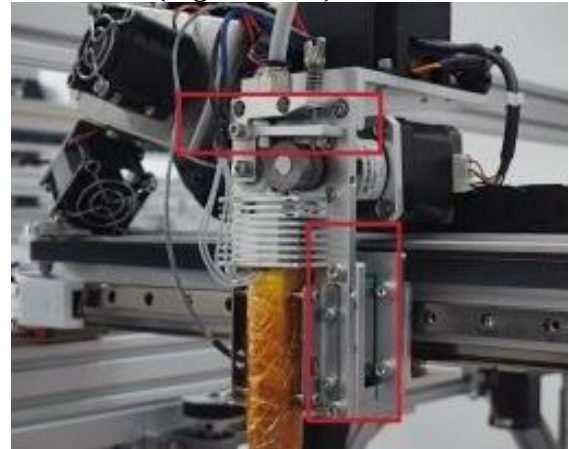
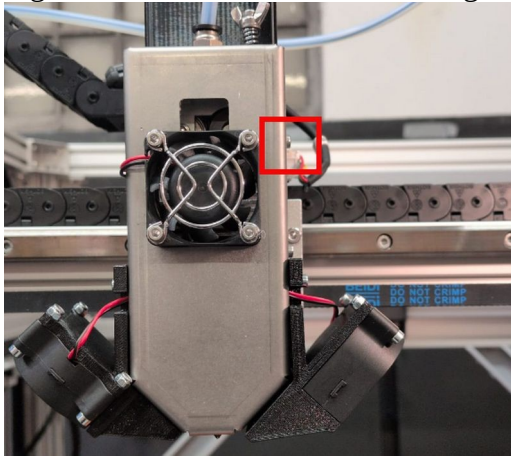




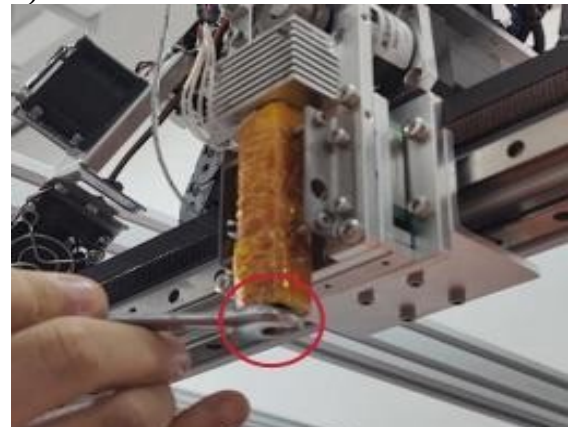
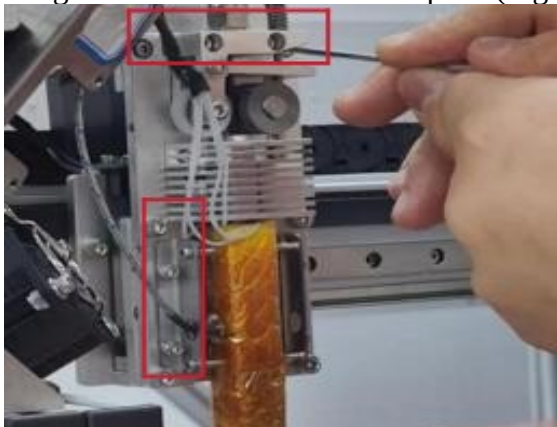
Maintenance and tightening of screws

1. Nozzle screw maintenance:

1. Open the extruder case (Figure 2.1-1).
2. Tighten the internal screws on the right side of the extruder (Figure 2.1-2).



3. Tighten the internal screws on the left side of the extruder (Figure 2.1-3).
4. Tighten the extruder after each print (Figure 2.1-4).

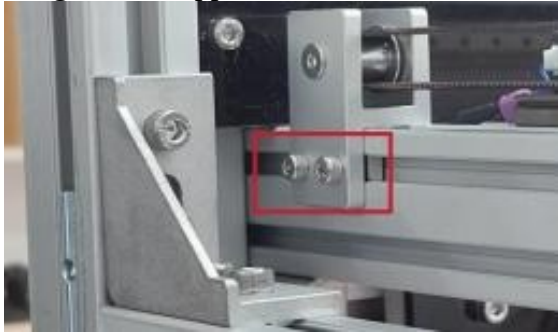


2 Y-axis screw maintenance:

1. Tighten the upper screw of the Y-axis drive synchronous pulley and the Y-axis belt fixing screws (Figure 2.2-1).



2. Tighten the Y-axis fixing screws on the right side (Figure 2.2-2).
3. Tighten the upper screws of the Y-axis rollers and the joint (Figure 2.2-3).

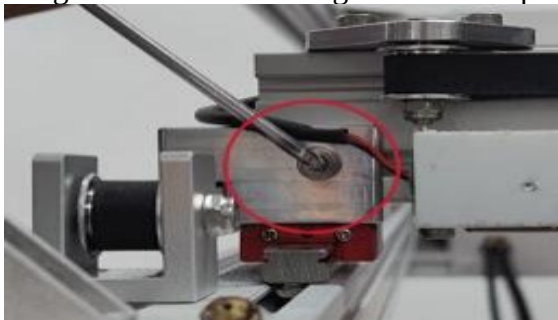


4. Tighten the Y-axis general screws (Figure 2.2-4).
5. Tighten the Y-axis motor screws (Figure 2.2-5).



3 X-axis screw maintenance:

1. Tighten the X-axis fixing screws in sequence (Figure 2.3-1).



2. Tighten the upper screw of the X-axis synchronous pulley (Figure 2.3-2).
3. Tighten the X-axis belt fixing screws (Figure 2.3-3).



4. Tighten the X-axis slide rail screws in sequence (Figure 2.3-4).



4. Z-axis screw maintenance:

1. Tighten the Z-axis roller holder locking screws (Figure 2.4-1).
2. Sequentially tighten the upper screw of the bearing seat of the threaded rod Z (Figure 2.4-2).



3. Sequentially tighten the Z-axis threaded rods and the aluminum plate of the support platform (Figure 2.4-3).
4. Tighten the upper screws of the Z-axis synchronous pulley in sequence (Figure 2.4-4).



5. Tighten the Z-axis motor screws in sequence (Figure 2.4-5).



Inspecting the motor connectors

Check whether the motor connectors on each axis are loose; if so, connect them securely.



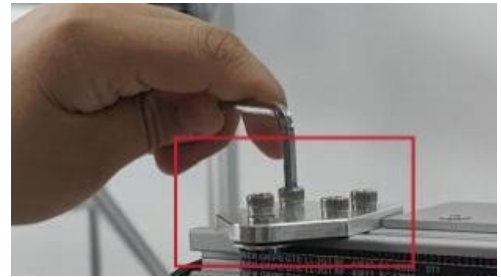
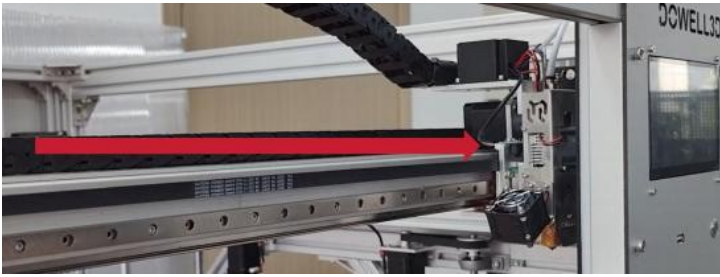
Belt Maintenance and Calibration (X and Y Axes)

If the belt feels loose after a period of operation, it must be tightened immediately.

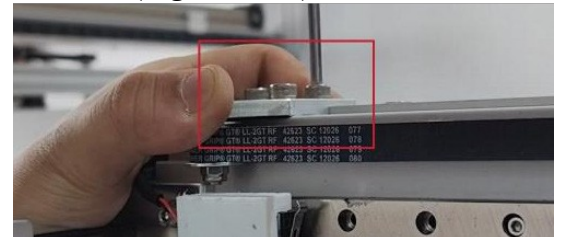
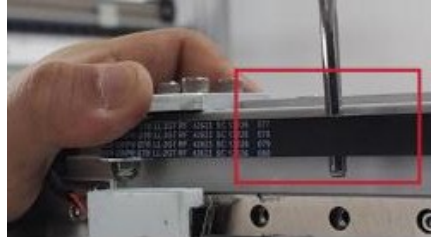
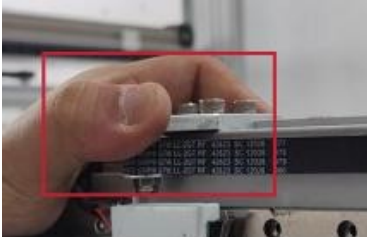


1. X-axis belt adjustment:

1. Move the extruder all the way to the right (Figure 4.1-1).
2. Loosen the four rear screws on the left side (Figure 4.1-2) without removing them completely.



3. Pull the fastener to the left to tighten the strap and tighten the screws (Figure 4.1-3).

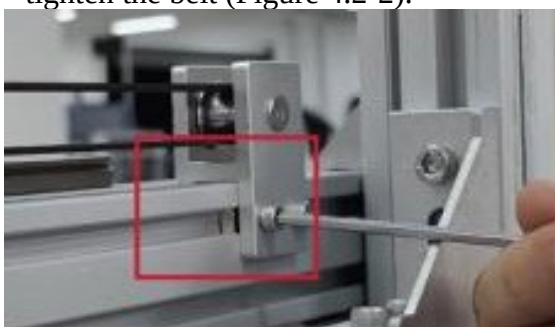


2. Y-axis belt adjustment:

1. Move the X-axis all the way back (Figure 4.2-1).



2. Loosen the fixing screws on the side of Y-axis, pull the block sideways with your hand to tighten the belt (Figure 4.2-2).



3. Tighten the screw (Figure 4.2-3).
4. The adjustment method on the right side is identical to that on the left side (Figure 4.2-4).



Assistance

Sharebot's after-sales service department is available to help you solve any problems you may encounter while using the printer.

You can contact us at any time using the email address below. Our specialized staff will get back to you within 3 business days.

Note: When alternating filaments of different materials, some impurities may remain inside the extruder, sometimes causing the print nozzle to clog.

How to contact support?

By email to support@sharebot.it

Differences between assistance and technical consultancy

In general, there is a difference between **technical assistance** and **technical consultancy** for a 3D printer:

1. Technical assistance

- It covers 3D printer **maintenance, repair, and troubleshooting** .
- Includes operations such as calibration, component replacement, troubleshooting, and firmware updates.
- It is generally provided by the manufacturer, by specialized centers or by expert technicians.

2. Technical consultancy

- It focuses on **support and strategic guidance** for the advanced use of 3D printing.
- It could involve choosing the right printer for your specific needs, optimizing printing parameters, choosing materials, or designing 3D models.
- It is often required to improve productivity, develop new products, or integrate 3D printing into a business process.

In short, technical support deals with **troubleshooting and maintenance** , while technical consulting is more **oriented towards strategy, optimization, and training** .

More specifically, the two types of activities can be defined as:

1. Technical assistance

Technical support covers everything related to the **maintenance, repair, and troubleshooting** of a 3D printer. It's a service typically provided by specialized technicians, manufacturers, or service centers.

Main activities of technical assistance:

- **Diagnosis and Troubleshooting** : If your 3D printer stops working properly, a technician will come in to identify and fix the problem (e.g., extrusion issues, firmware errors, mechanical failures).

- **Ordinary and extraordinary maintenance** : Includes operations such as cleaning the nozzles, calibrating the print bed and lubricating the moving parts.
- **Component Replacement** : If a part becomes damaged (e.g. clogged nozzle, loose belts, faulty motherboard), the technician can replace it.
- **Firmware and Software Updates** : To ensure proper printer operation, you may need to update the motherboard firmware or slicing software.
- **Initial setup support** : When you purchase a new printer, technical support can help you assemble and set it up correctly.

Objective : To ensure proper printer operation by resolving technical issues and maintaining optimal performance.

2. Technical consultancy

Technical consulting focuses on **strategic support and optimization** , helping users make the most of 3D printing technology. It is useful for both individual users and companies looking to implement 3D printing into their production processes.

Main activities of technical consultancy:

- **Choosing a 3D printer and materials** : Help you identify the most suitable printer based on your specific needs (e.g. FDM vs. SLA, standard vs. technical materials such as Nylon or PEEK).
- **Print Parameter Optimization** : Adjust temperature, speed, retraction, and other parameters to achieve high-quality prints and reduce waste.
- **Education and training** : Teach advanced printer usage, both hardware and software (e.g. how to best use slicing software like Cura, PrusaSlicer, or Simplify3D).
- **Improved design for 3D printing** : Support in creating 3D models optimized for printing (e.g. reduced material consumption, improved support management, optimization of geometries for mechanical strength).
- **Integrating 3D Printing into Business Processes** : Helping companies implement 3D printing in manufacturing, rapid prototyping, or product customization.
- **Reducing production costs** : Process analysis to reduce material waste and improve productivity.

Objective : To help users and businesses get the most out of 3D printing by improving print quality, reducing costs, and integrating this technology into their work processes.

Main differences in summary

I wait	Technical assistance	Technical consultancy
Focus	Troubleshooting and maintenance	Optimization and strategy
When is it needed?	When the printer has problems or needs maintenance	When you want to improve your workflow or integrate 3D printing into a business process
Typical activities	Repairs, component replacements, software updates	Training, optimization of printing parameters, choice of machines and materials
Main recipients	Users with specific technical problems	Individuals or companies who want to improve their 3D production