

# Flsun T1 Pro

Instruction Manual

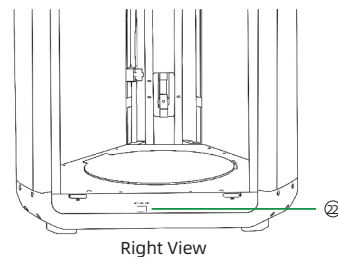
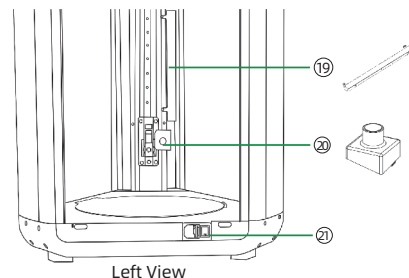
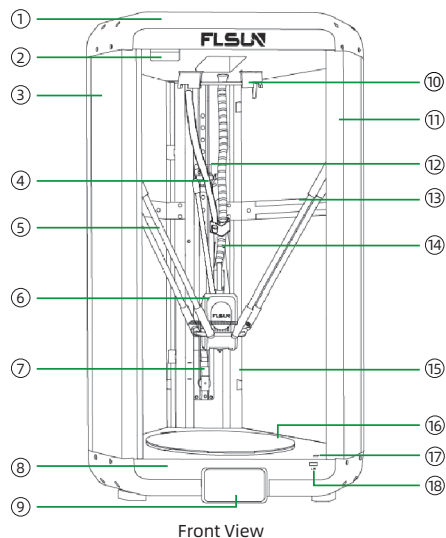
Ultra High-Speed 3D Printing

### Advice and guidance

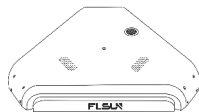
- 1.To avoid personal injury, safety issues and property damage, do not operate the printer in ways other than those specified in the manual.
- 2.The default power input voltage of the printer is 230V. If the local voltage is 115V, make sure to switch the input voltage before turning the printer on.
- 3.To ensure safe operation, always use a grounded power outlet.
- 4.Do not place the printer near flammable, explosive or high heat sources. Make sure that the printer is in a cool, dust free and well ventilated area.
- 5.Be careful when touching the print bed, print nozzle and other high temperature areas during or soon after use to avoid severe burns. Do not reach inside the print area while the machine is in use to avoid injury from high speed movements.
- 6.Do not allow children or persons who have not read the instructions in detail to operate it alone to avoid personal injury or property damage.
- 7.Please keep the cooling vent holes on the top shell cover plate unobstructed during printing, this will prevent insufficient cooling during printing. If this cooling vent is blocked, it could cause a printing failure or even damage to the CPAP turbofan.
- 8.Routine maintenance should be performed on the printer to ensure a long service life. The printer should be powered off before maintenance is performed. This is especially important for working parts such as the effector module and guide rails.
- 9.If the printer is not going to be used for an extended period of time unplug the power cord.
- 10.Each printer is thoroughly tested before leaving the factory to ensure quality and functionality. It is normal to find evidence of prior use.
- 11.Visit the official Flsun Wiki for more tutorials on machine use and maintenance:<http://wiki.flsun3d.com/en/home>.

PRODUCT		FLSUN T1 Pro
Printing Technology		FDM
Printing Accuracy		±0.1mm
Recommended Layer Height		0.1-0.35mm
Chassis	Build Volume	Φ260 *330mm <sup>3</sup> (Maximum height of the cylinder: 285mm)
	Enclosure material	Glass and Acrylic
	Frame	Full Metal
Physical Dimensions	Product Dimensions	436*490*836mm
	Package Dimensions	240*600*870mm
	Net Weight	18.41kg
	Gross Weight	22.5kg
Effector	Extruder	Dual-Gear Direct Drive Extruder
	Nozzle	Brass Nozzle
	Nozzle MAX Temp	300°C
	Nozzle Diameter	0.4mm
	Filament Diameter	1.75mm
Motor	Motor Types	High-Power Stepper Motor
Bed	Build Plate	Textured PEI Print Surface
	Bed MAX Temp	110°C
Filament	Supported	Optimal:PLA、PETG、TPU;Superior:ABS、ASA、PA、PC、PET

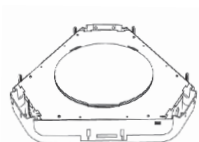
Cooling	Fan	CPAP turbofan
Speed	Max Speed of Tool Head	1000mm/s
	Max Acceleration of Tool Head	30000mm/s <sup>2</sup>
	Max Instantaneous Flow	90mm <sup>3</sup> /s (Flsun PLA-HS)
	Stable Flow Rate	52mm <sup>3</sup> /s PLA (Flsun PLA-HS; Temperature: 240°C; nozzle: 0.4mm)
PSU	Voltage	110-240V, 50/60HZ
	Rated Power	400W
Electronics	Display Screen	4.3" color Touch Screen
	Storage	8GB EMMC, 16GB USB Flash
	Control interface	Touchscreen, PC Interface
Camera	Real-time Monitoring	Support
	Time-Lapse Photography	Support
Sensors	Filament Detection	Support
	Vibration Compensation	Support
	Auto-Leveling	Support
Energy Efficiency	Screen auto sleep	Support
	Printer auto stop heating	Support
	Power Loss Resume	Support
System Upgrade	Upgrade Method	OTA
Softwares	Slicing Software	Flsun Slicer、Third-Party Slicers
	Supported OS	MacOS, Windows
	File Formats for Slicing	STL、OBJ、AMF、3MF



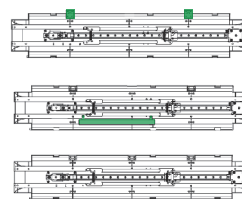
① Top Shell	② Cable Holder	③ Axis X	④ Effector Cord	⑤ Parallel Arm
⑥ Effector	⑦ Belt Tensioner Synchronous	⑧ Bottom Shell	⑨ Display Screen	⑩ Filament Holder
⑪ Axis Y	⑫ Slider	⑬ Enclosure Holder	⑭ Air Duct	⑮ Axis Z
⑯ Hot Bed	⑰ Type-c	⑱ USB Flash Port	⑲ LED Light	⑳ Camera
㉑ Power Switch	㉒ Change Voltage			



Top Shell



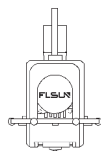
Bottom Shell



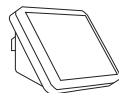
Axis X (With Hinge)

Axis Y (With LED Light)

Axis Z



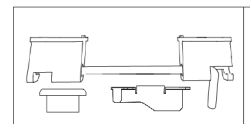
Effector



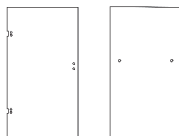
Display Screen



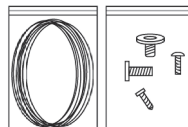
Camera



Parts Kit



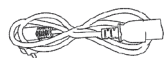
Front Enclosure\*1 Side Enclosure\*2



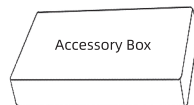
Filament and Screws



Enclosure Holder\*2



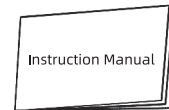
Power Cord



Accessory Box



Service Policy



Instruction Manual



Wrench Set



USB Flash Drive



Nozzle Needle



PTFE Tube



Lubricant



Glue Stick



Nozzle

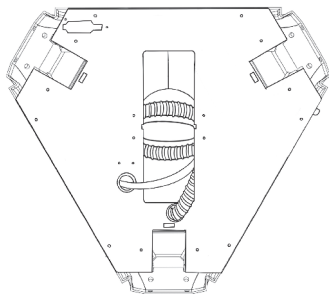


Open-end Wrench



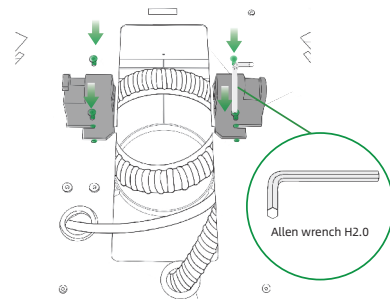
Pneumatic Joint

1



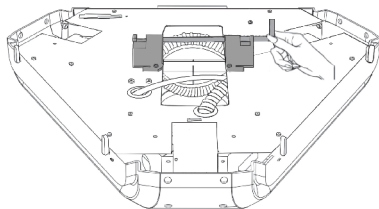
Take out ①Top Shell, ⑩ Filament Holder and M 3×6\*4 screws, place the top shell upside down on a table as shown in the diagram.

2



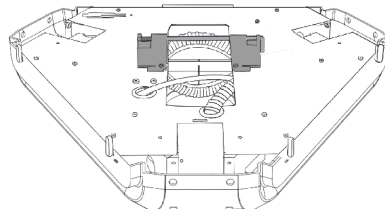
Align the filament holder with the screw holes on the top shell and affix the filament holder with M3×6 screws.

3



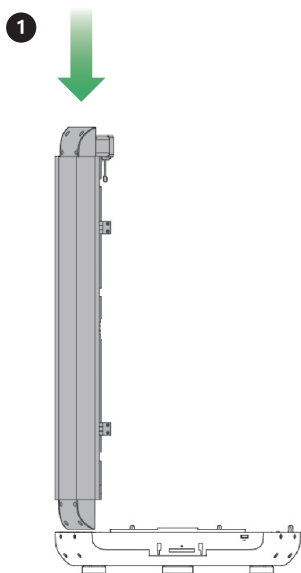
Insert the filament holder pins into the filament holder in the direction shown in the illustration.

4

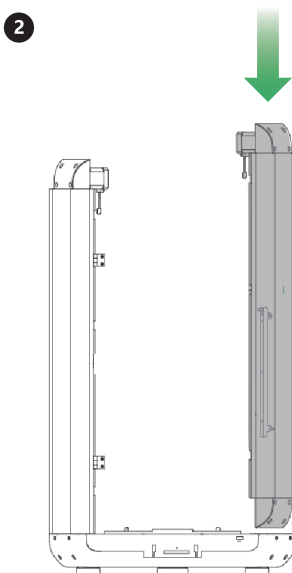


Filament holder installation completed.



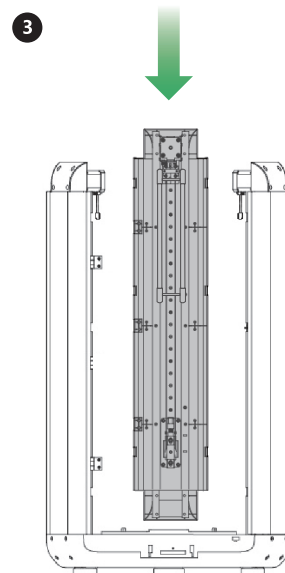


Place ⑧ Bottom Shell on a table. Take out the main wiring in the groove on the left side of the bottom shell. Insert ③ Axis X, as shown in the figure, insert into the bottom shell groove, left side for axis X.

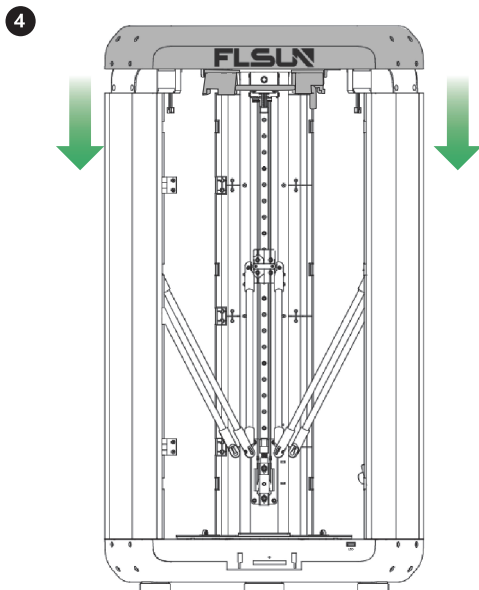


Take out ⑪ Axis Y and insert it vertically into the groove on the right side of the bottom shell.

*\*Please note that before inserting the Axis Y into the bottom shell, remove the LED light wire from the groove on the right side of the bottom shell.*

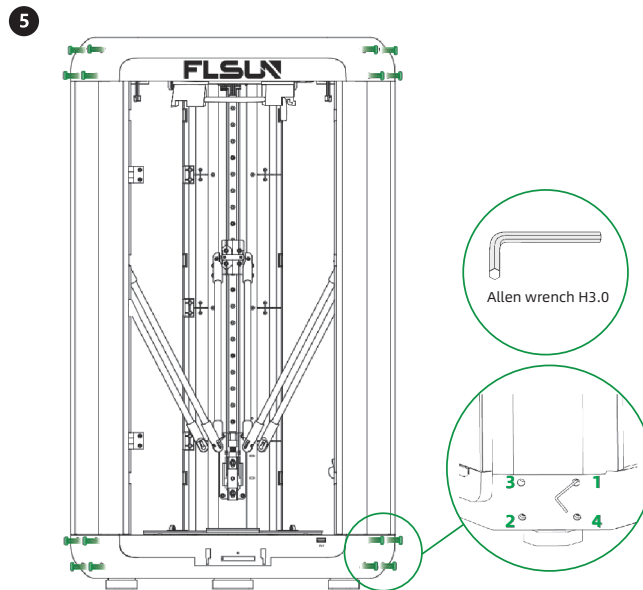


Take out ⑮ Axis Z and insert it vertically into the groove at the rear of the bottom shell.



Take out ①Top Shell and place it on the three axes. Ensure that there is no gap between the three axes and the top and bottom shells.

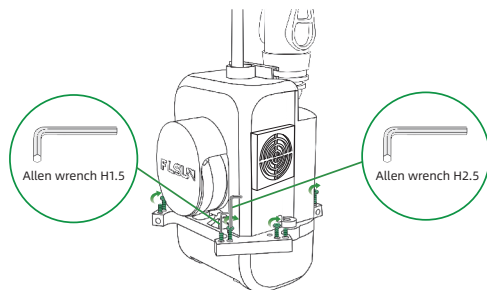
\*Please remove the motor wires and limit switch wires from the three grooves of the top shell before installing the top shell to prevent them from being pinched.



Use M4×12×24 screws to affix the top and bottom shells and the three axes, tighten the fixing screws of the bottom shell and the three axes first, and then tighten the fixing screws of the top shell and three axes, tighten diagonally in the order shown in the diagram.

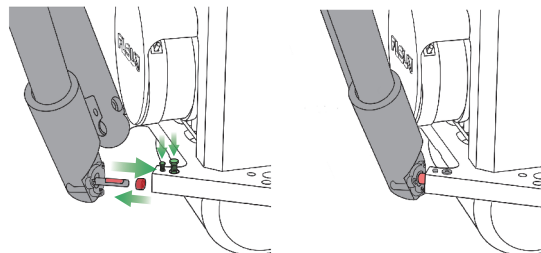
\*Please remove the retaining clips on the belt after installing the framework.

1



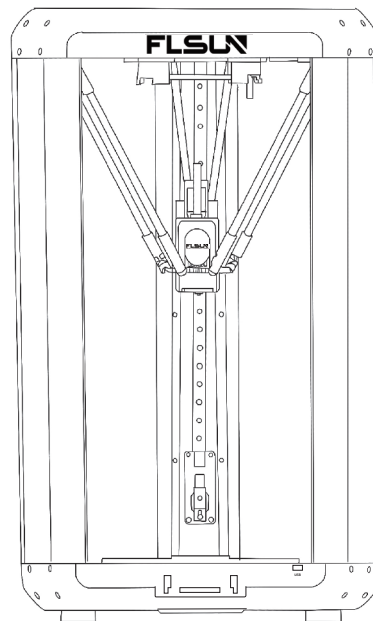
Take out the ⑥ Effector, M3×5\*6 and M3×3\*6 screws, and **pre-adjust** the screws 1-2 turns to the effector hanging platform as shown.

2



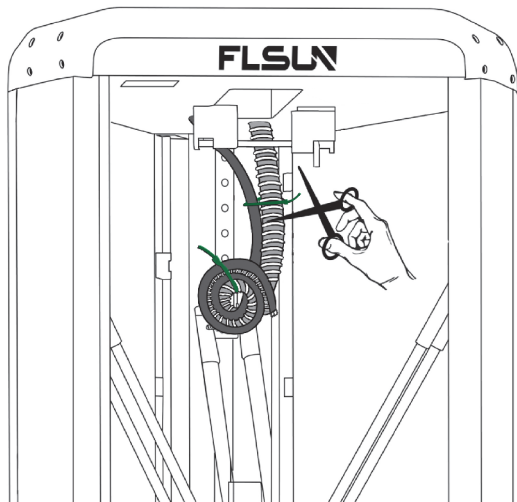
Take out the isolation column, install the isolation column to the parallel arm ball pin in the direction shown in the illustration. Insert parallel arm ball pins, please note that the parallel arm ball pin plane faces upwards, and then tighten screws. The other 5 parallel arms are affixed according to this method.

3



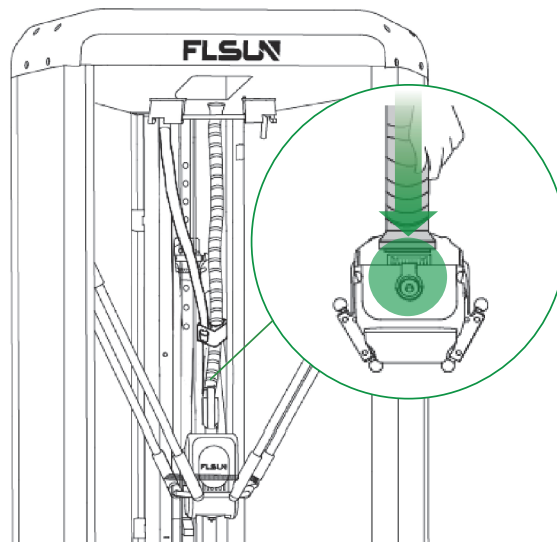
The installation of the parallel arm and effector is complete.

1



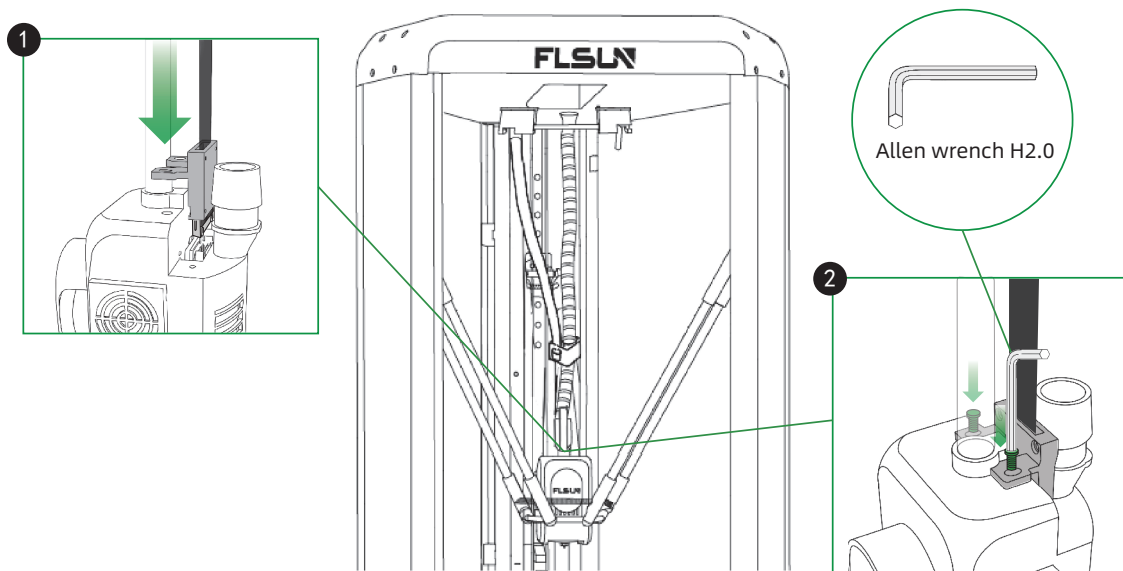
Take out the ④ Effector Cord and ⑭ Air Duct from the groove in the top shell, and cut off the fixing tie.

2



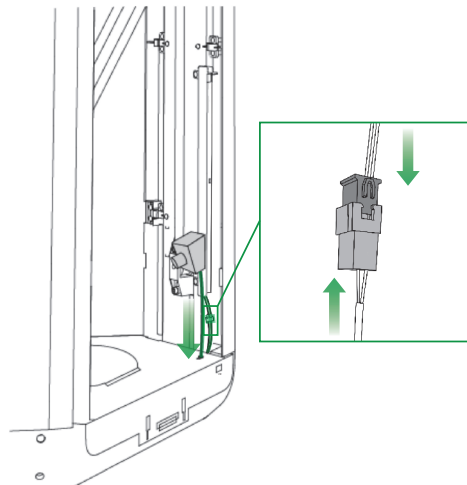
Align the air duct with the interface on the effector and press it down.

\*To prevent it from breaking, please be careful not to rotate the air duct.



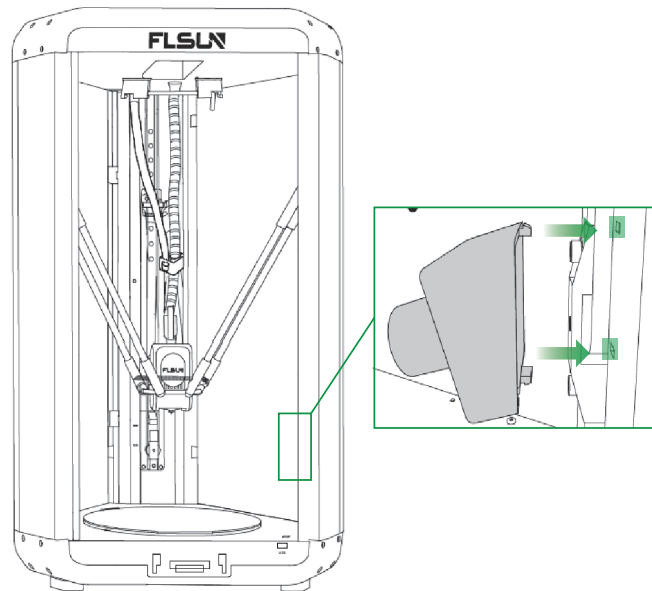
Align the ④ effector cord retainer with the screw holes on the effector housing and then push down and secure the effector cord, using M3×6\*2 screws to hold it in place.

2



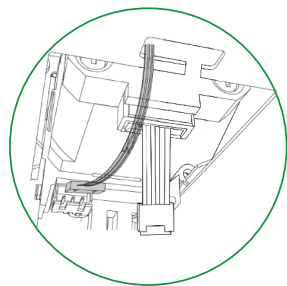
Connect the camera cable to the ⑰ Type-c port.  
Align the faces of the two LED cables face to face  
and connect them.

1



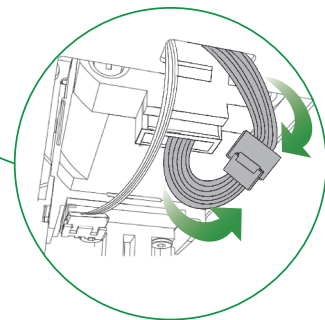
Take out the ⑱ Camera. Hold the camera parallel  
to the camera catch, push it in backward and  
snap it in tightly.

1

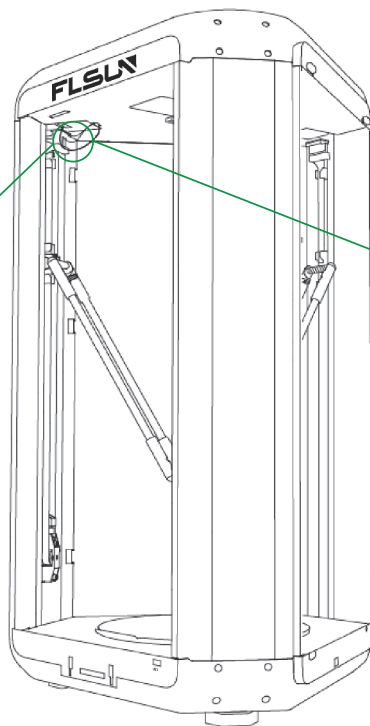


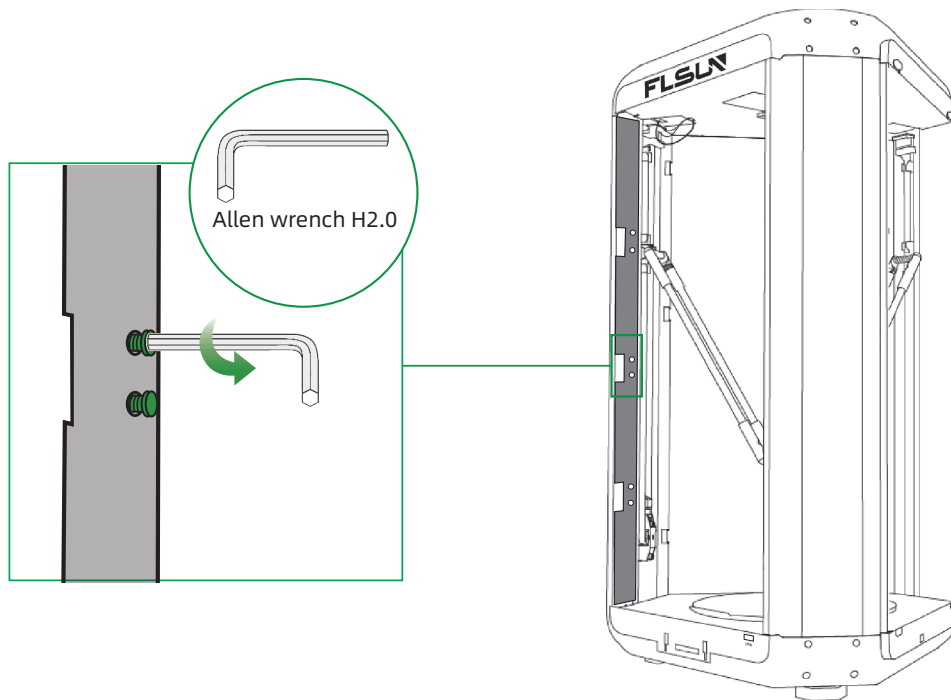
Plug the limit switch line of the three axes into the limit switch according to the label. (please note the direction)

2



Connect the three motor lines of the three axes according to the label.

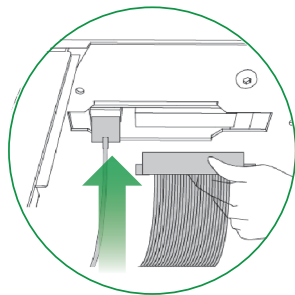




Remove the three ST2.9×16 screws on the cover plate on the axis X. Remove the axis X cover plate.

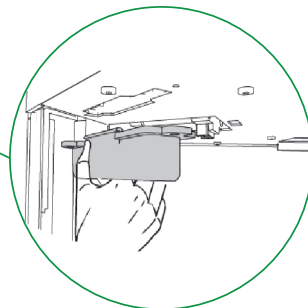


1

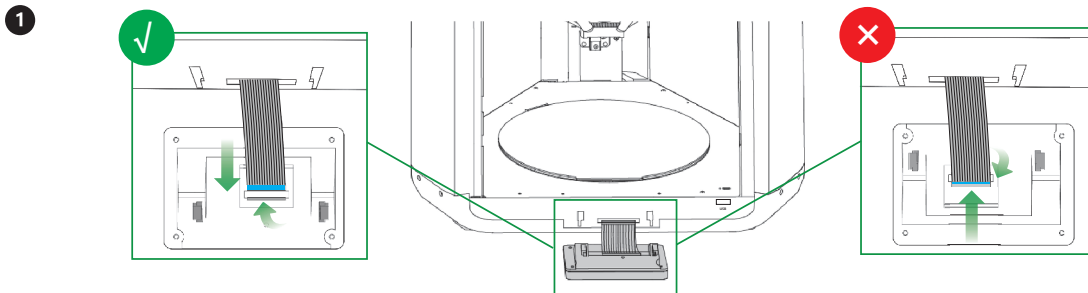


Lift upward and straighten the main wiring and type-c that was removed from the groove of the bottom, and then insert the cables into the corresponding ports on the underside of the upper case respectively. Then put back the axis X cover plate and secure it with ST2.9×16\*6 screws.

2

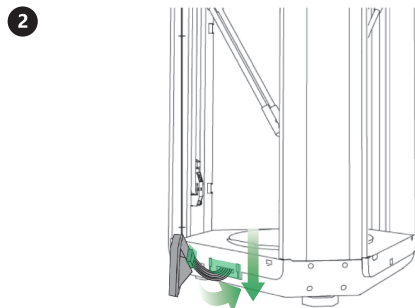


Take out ② Cable Holder. Pinch the center snap of the cable holder firmly and push up to organize the main wiring and type-c.

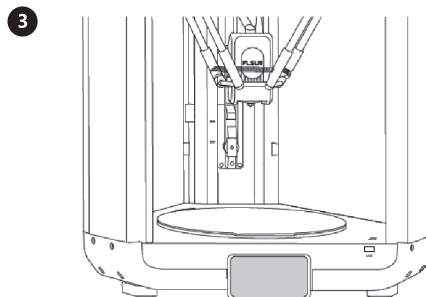


**\*Please note the display screen orientation.**

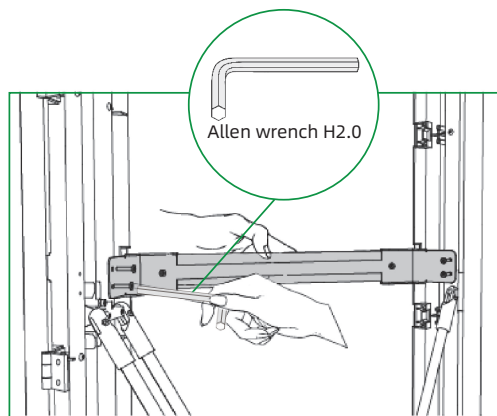
Take out the ⑨ Display Screen, gently snap open the black cable clamp upward as shown in the figure on the right. Push the screen cable in the direction shown in the figure. And press down the black cable clamp to fix the display cable (Please be careful not to twist, flip, or fold the screen cable).



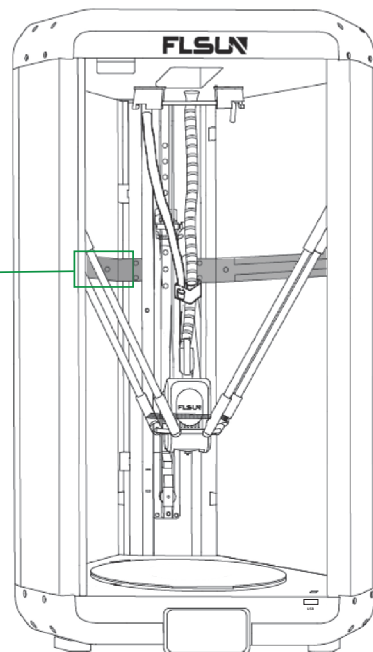
Push the display cable into the opening at the rear of the screen, then insert the display back into the display slot and push down to tighten the display.



Display screen installation completed.

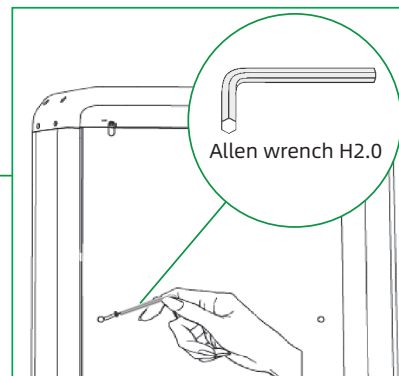
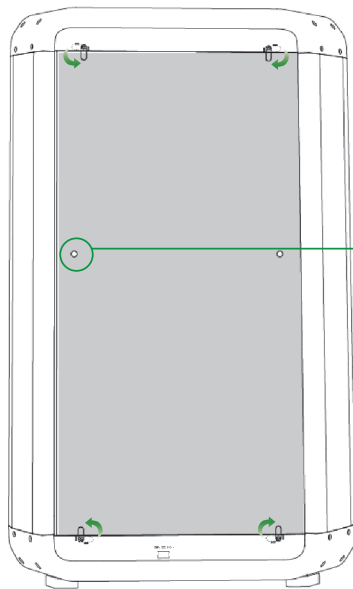


Take out the ⑬ Enclosure Holder and M3×6\*8 screws and affix the enclosure holder to the position shown on the axis.



Installation of two enclosure holders completed.

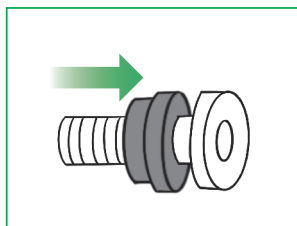
1



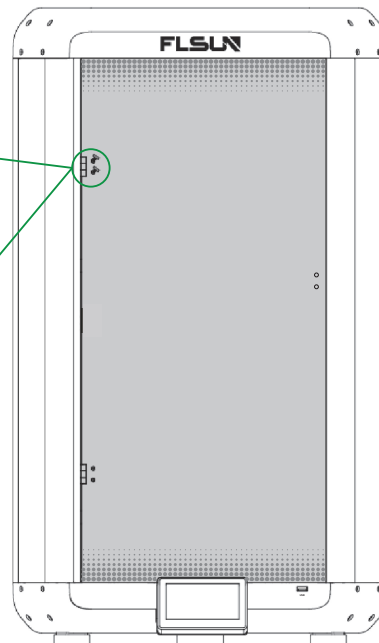
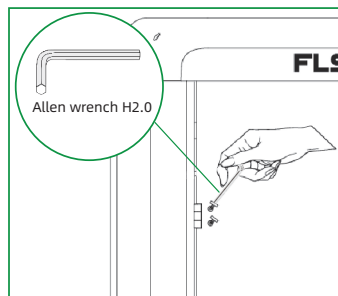
Use M3×6\*4 screws to affix the side enclosure and enclosure holder.

Take out the two side enclosures, align the side enclosure with the outer frame, and then toggle the clips on the top and bottom housings to secure the housings.

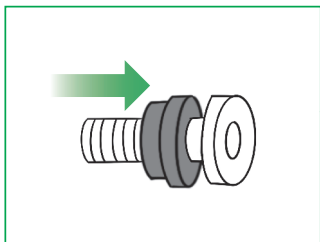
2



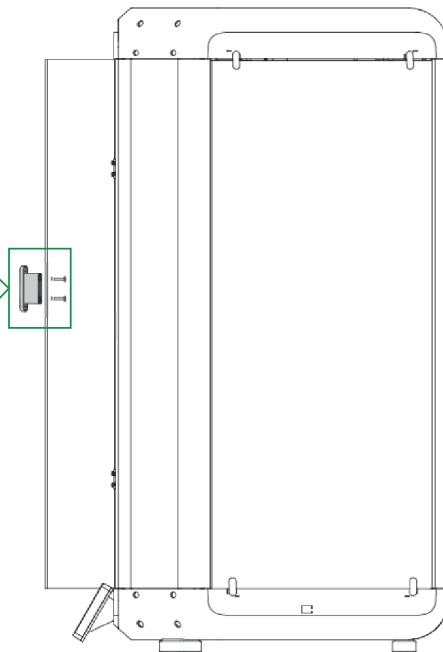
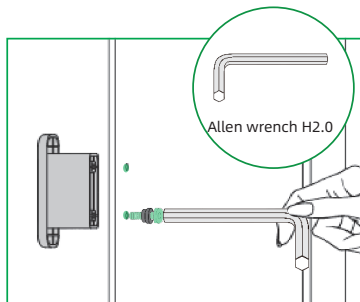
Take out the M3×6 screws and four spacers from the package and install the spacer to the screw as shown.



Take out the front enclosure from the package, tearing off the protective film on the front enclosure. Align the front enclosure with the hinge on the axis X and tighten it with M3×6 screws.

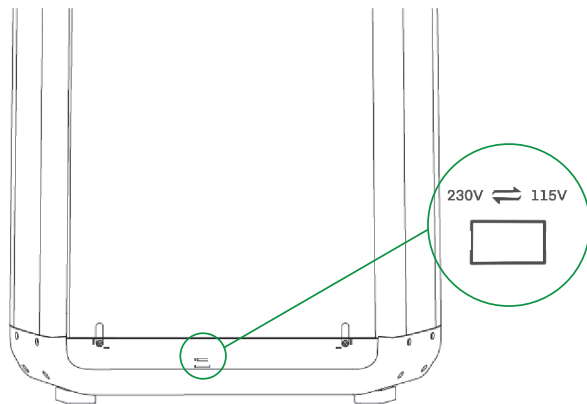


Take out the door handle, ST2.9×8\*2 screws and two spacers from the package, and follow the direction shown in the picture to slide the spacer onto the screw.



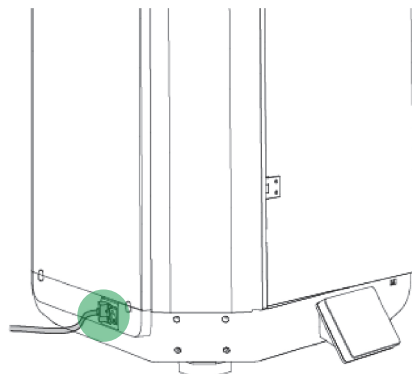
Align the door handle with the screw holes in the front enclosure and secure it with ST2.9×8 screws.

1




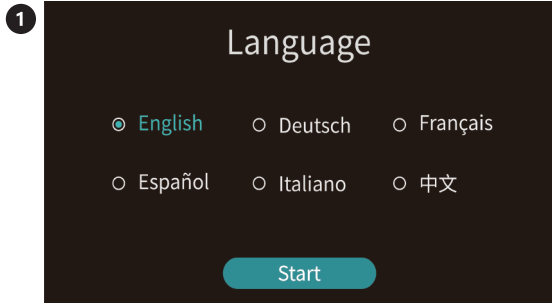
The default input voltage of the printer is 230V, if the voltage in your location is 115V, please manually adjust the power input voltage to 115V before powering on the printer for the first time.

2

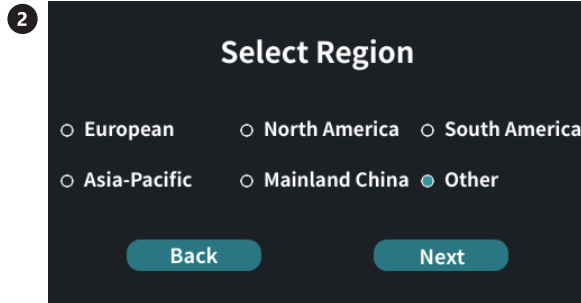


After ensuring that all lines are connected, take out the power cord and plug it into the left side of the printer and turn on the power switch to energize the machine.

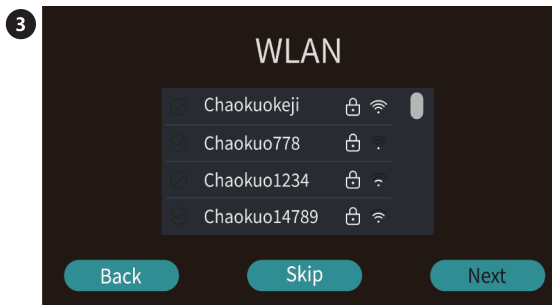
*\*Please note that before plugging in the power cord, please press the power switch  to ensure that the power switch is off.*



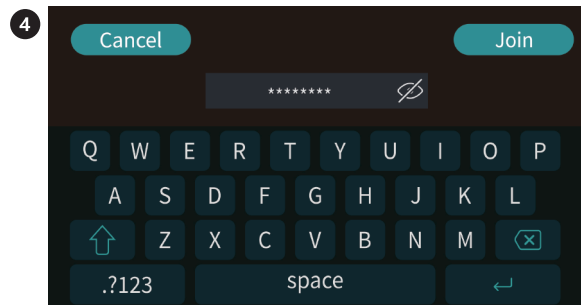
After powering on, follow the instructions on the screen to select the language and click "Start".



Select the region according to your location and click "Next".

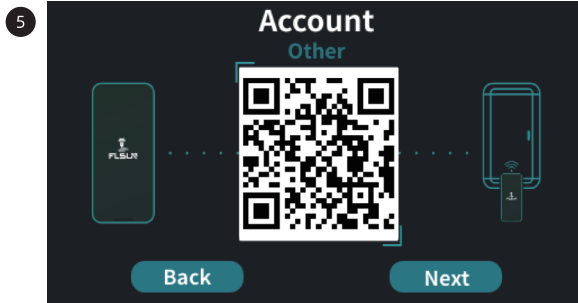


Select the network and click "Next". If no connection is needed, click "Skip"; if necessary, re-add the network connection to the screen.

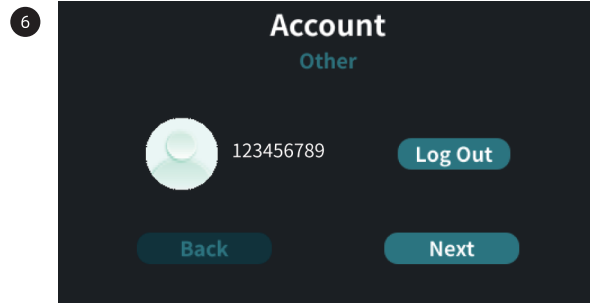


Enter the wifi password and click "Join".

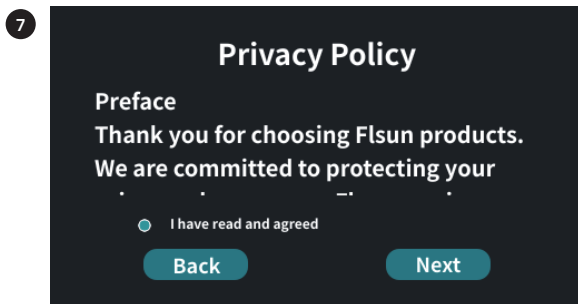




First of all, download Flsun World from APP Store, after the device is successfully networked, follow the prompts and use Flsun APP to scan the code to bind the device in order to realize the remote control from the mobile terminal.



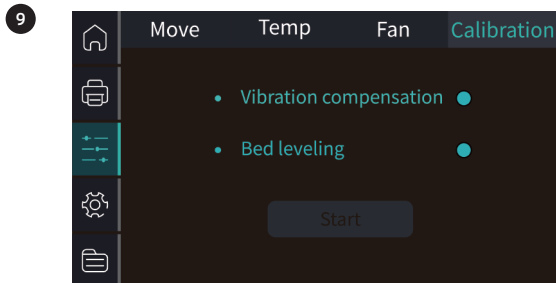
Account Binding Successful, click "Next".



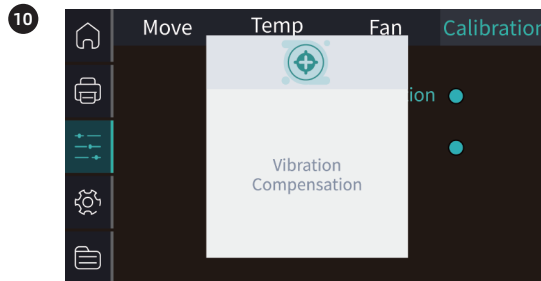
Follow the prompts, check the box to agree to the Privacy Policy, and click "Next".



Access to the main display page.



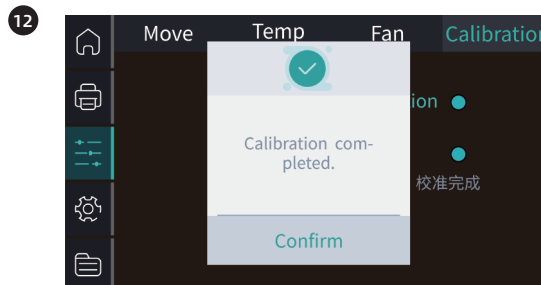
click " " – "Calibration", option "Vibration compensation" and "Bed leveling". Click "Start".



Vibration compensation.

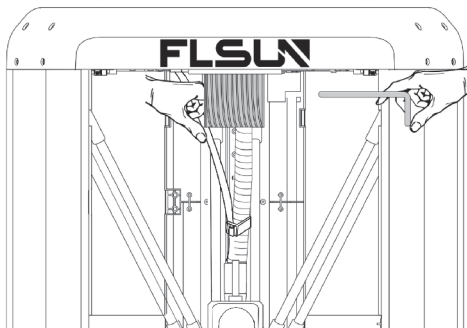


Bed leveling. Takes about 5 minutes.



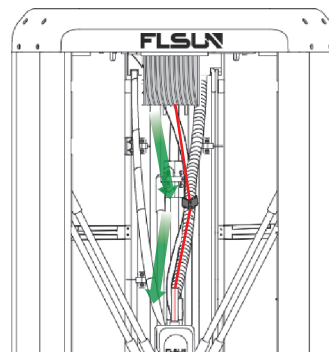
Calibration completed.

1



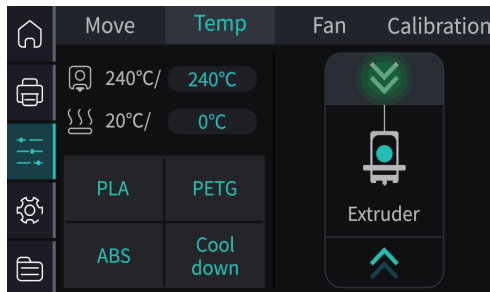
Insert the filament into the filament holder.

2



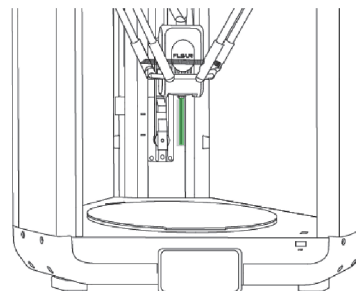
Pull the filament down through the center filament hole until it is inserted into the effector PTFE tube.

3

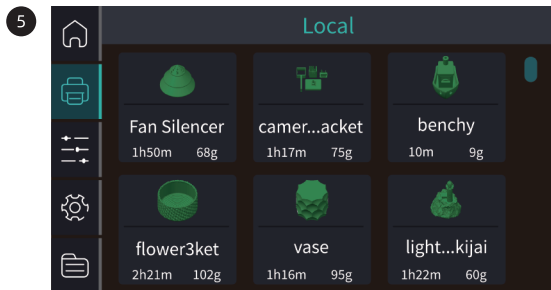



Click on " " - "Temp" - " " " ". When the nozzle heats up to the set temperature, the printer will automatically load the filament.

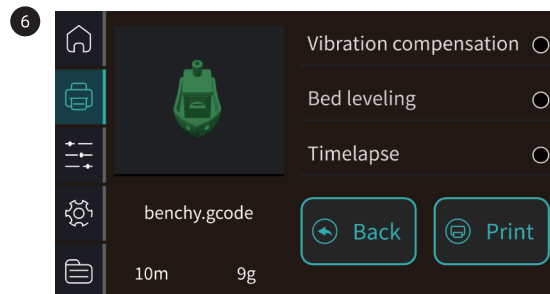
4



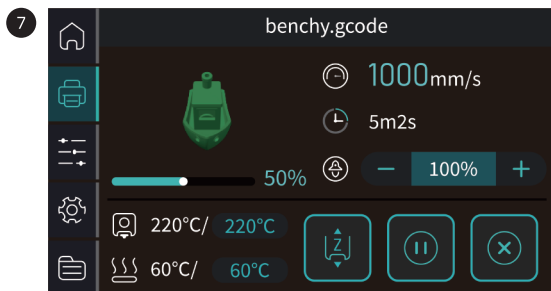
Wait for the filament to be extruded and then the "load" is finished.




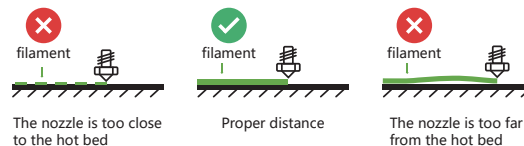
Click on "  " and select the model you want to print.



Before starting printing, you can manually select "Vibration compensation", "Bed leveling", and "Timelapse" then click "Print" to start printing.



If the nozzle is too low or too high when printing the first layer, you can click "  " during printing to adjust the height of the nozzle and the adjustment will be automatically saved.



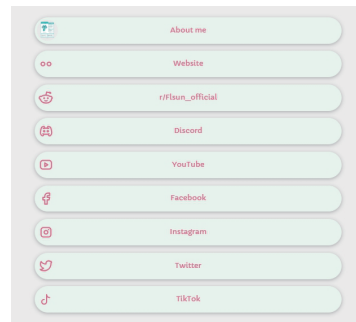
Please go to Flsun official website to download Flsun Slicer :

Official website: <https://flsun3d.com>

Please visit the official Flsun Wiki for more information on machine use, maintenance and FAQs:

<http://wiki.flsun3d.com/en/home>

By scanning the QR code you can choose any channel to get the latest product updates and related news.



If you need additional assistance, please feel free to contact us:

After-sales e-mail: [service@flsun3d.com](mailto:service@flsun3d.com)



Bring the personalized production capacity to everyone's desktop

[www.flsun3d.com](http://www.flsun3d.com)