

Bison 1000™



Welcome to your new Bison 1000 3D Printer!



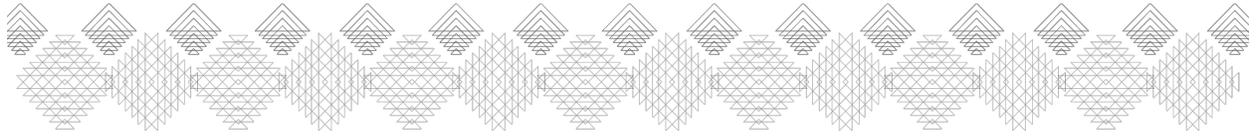
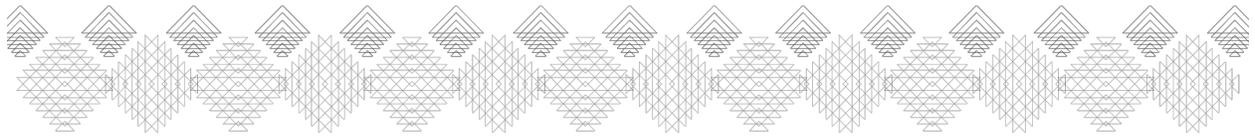


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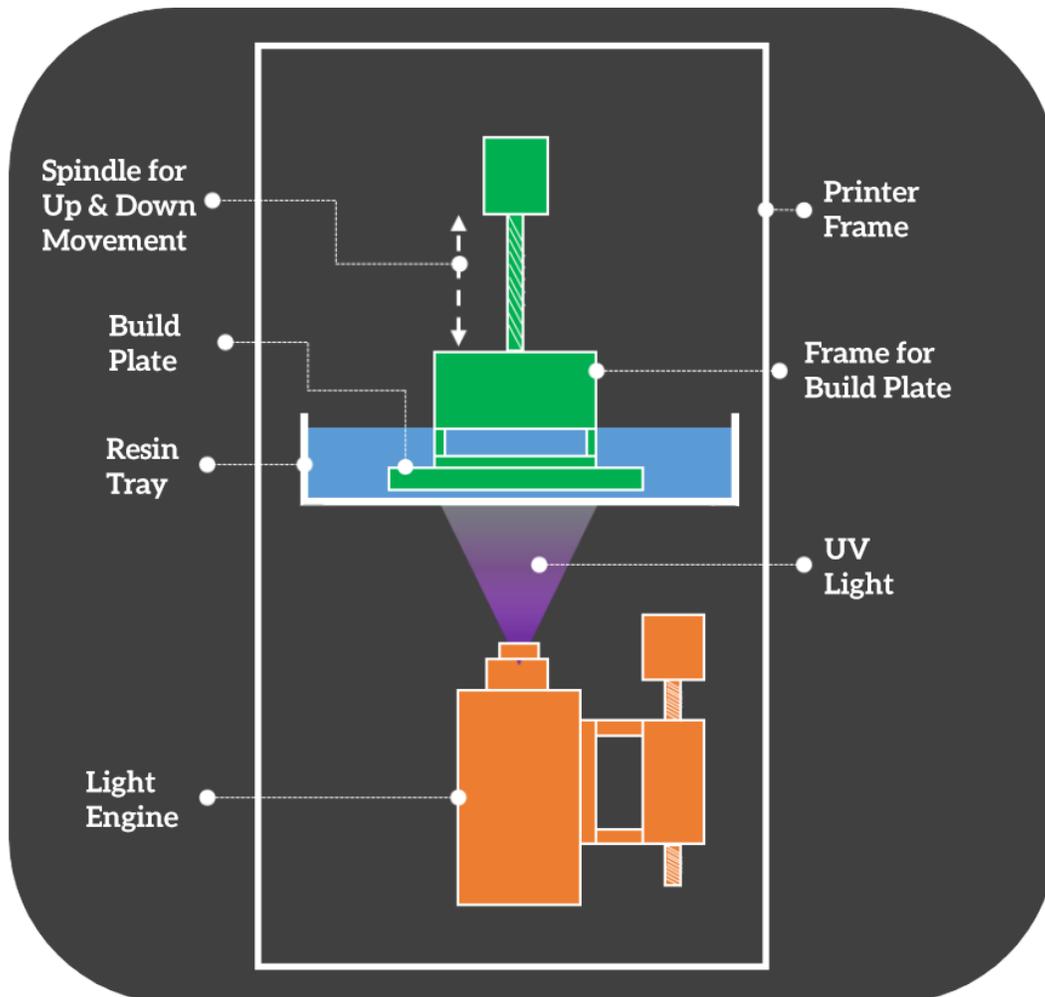


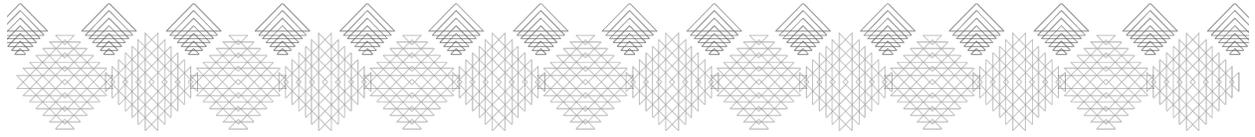


DLP Printing

What is DLP 3D Printing?

- DLP = Digital Light Processing
- 3D Printing in this method uses a cross section image of the object to be printed and cures this as a layer on the build plate using UV light.
- Due to the uniform projected light this is a faster method of printing than SLA (Stereolithography) 3D printing.



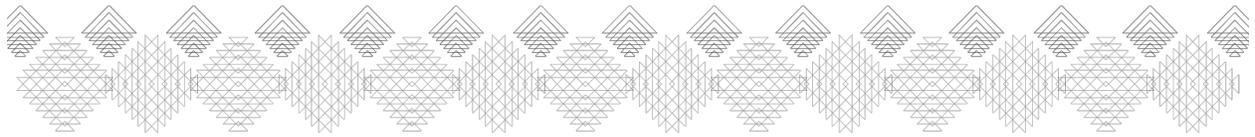


Introduction to the Bison 1000

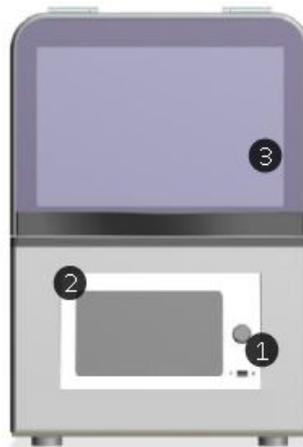
The Bison 1000 DLP 3D printer is an ultra detailed 3D printer suitable for complex industrial designs. It is compatible with numerous resins as well as custom formulated in-house resins.

Printer	Bison 1000
Resolution	1980 X 1080
Light Source	UV LED
Resolution (X/Y)	57 µm
Printing Volume	110 X 60 X 138
Layer Thickness	25, 50, 100 µm
Printer Size	564 X 395 X 397
Printer Weight	31.96kg
Power	100-240V, 50/60Hz, 2.5A, 260W
Materials	DLP and SLA Resins
Control Type	Embedded Touch Screen
Printer Environment	18-26 °C / 20-50% Humidity





A Front



- ① LED Power Button & USB Port
- ② LCD touch screen
- ③ Print Room Cover

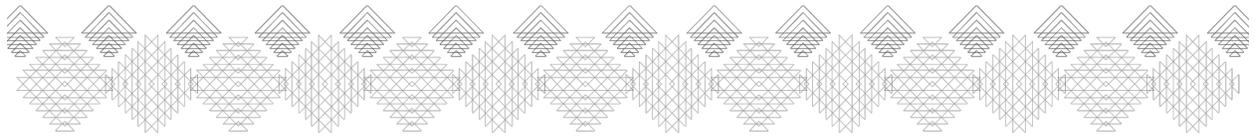
B Back

- Ⓐ ON/OFF Button
- Ⓑ Inject power adapter
- Ⓒ Ethernet Injection



- ① Back plate case key line
- ② Port platform
- ③ Printer Cooler
- ④ product information



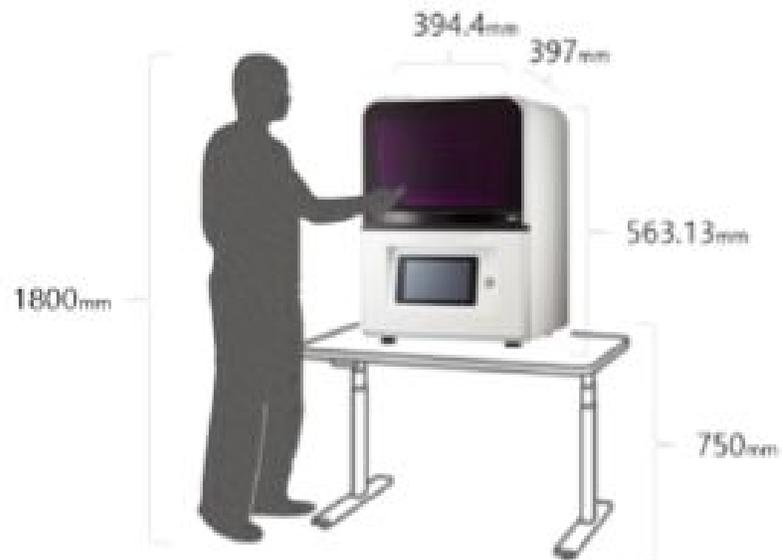


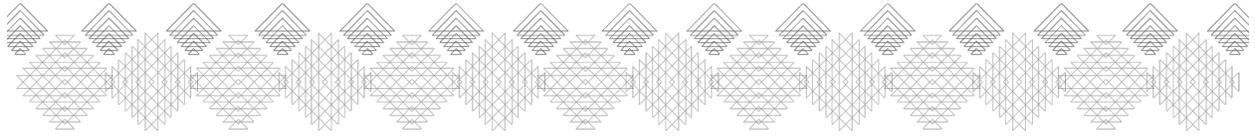
C Internal Structure



- 1 Build plate fixing pin
- 2 Build plate handle
- 3 Build plate
- 4 Actuator
- 5 Tray
- 6 Tray Sheet
- 7 Tray retention knob (left and right position)

D Size





Precautions

This information is intended to protect your safety and property damage.

Please be aware of the safety precautions before use to prevent serious personal injury or printer damage.



When you print out the printer, please put the printer in a well-ventilated place because resin may smell distinctive.



Do not use volatile objects near the printer as they may cause a fire or explosion.



When moving the printer, be sure to completely shut down the printer, and then remove the tray and plastic plate so that the resin in the tray does not overflow or flow.



If the printer is on, do not lower the power switch located on the back of the printer. This forced termination shortens the life of the printer engine and can cause mechanical failure. Please shut down the printer through the LCD panel after finishing the engine shutdown and automatic shutdown of the printer.

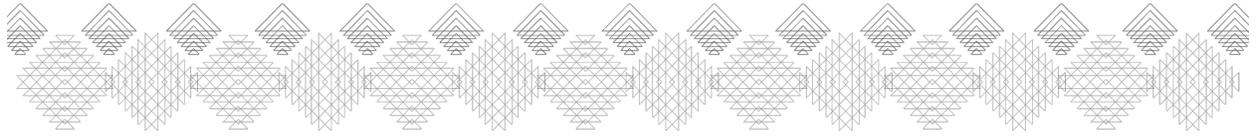


If foreign objects such as water or other liquids, metal chips, or other conductive material are introduced into the printer, it may adversely affect the printer, such



as mechanical malfunction. Also, do not operate with wet hands because of the risk of electric shock, please wear the nitrile gloves and use the printer.





If the printer power cable and USB cable are damaged due to being pulled or stepped on the rough surface, please note that sparking or voltage malfunction may occur. In addition, there is a risk of fire due to overheating when the power is turned off.



There are potential risks to the printer in terms of chemical composition and voltage. To prevent injury to children and pets, please install the printer in a safe place to prevent accidents.

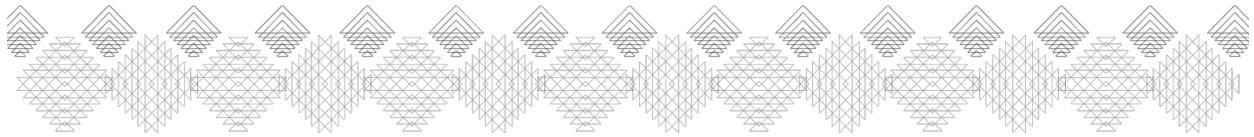


If the printer is installed in a place where there is a lot of humidity or temperature change, it may cause deformation and malfunction of the product.

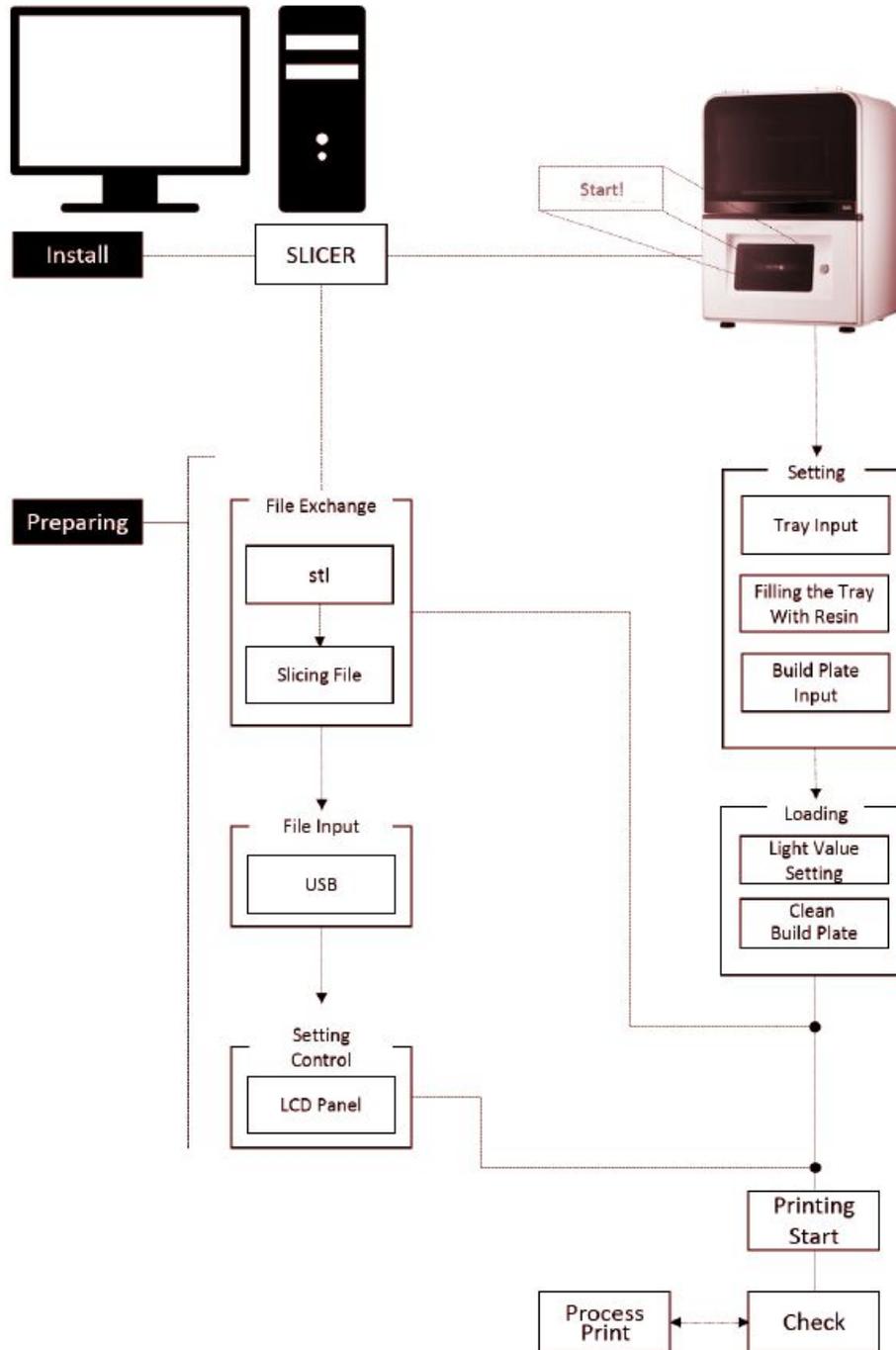


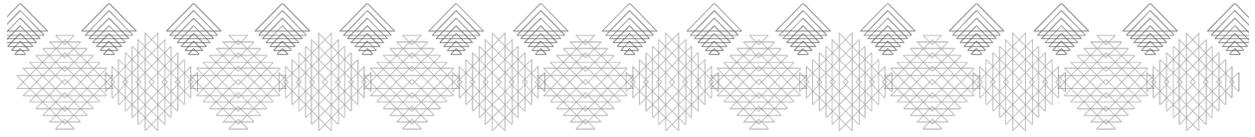
If you disassemble or modify the printer artificially, the warranty benefits will be lost and you will not be held liable for the loss caused by this.





Process





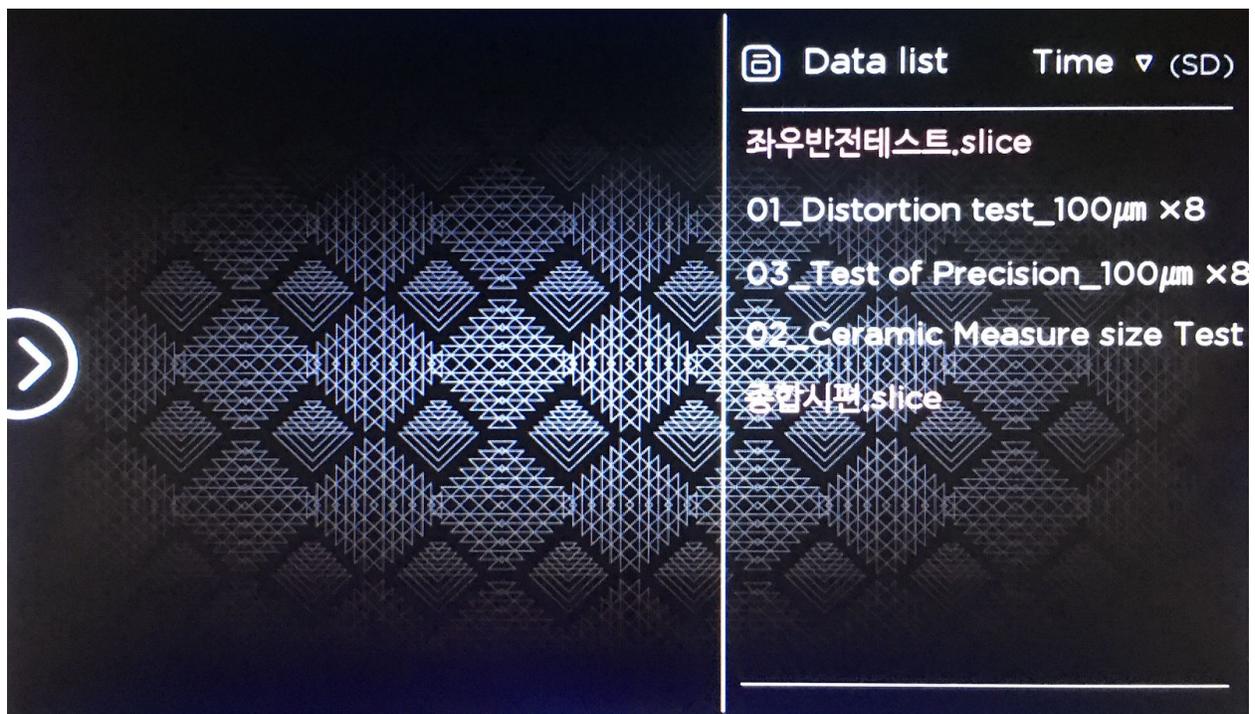
Printing

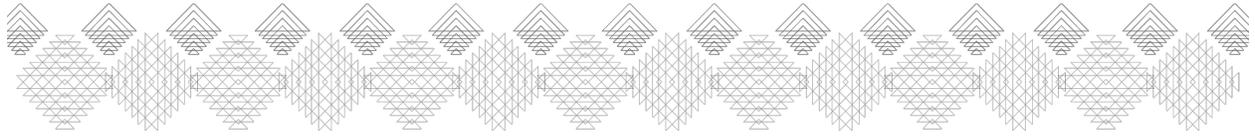
Loading File

Create a model file from your Tethonware software and save onto a USB drive. Insert it into the USB slot on the front of your machine.

If you have recently printed a file it will be already loaded up on the main screen and you can cycle through these by tapping the arrows on either side of the print.

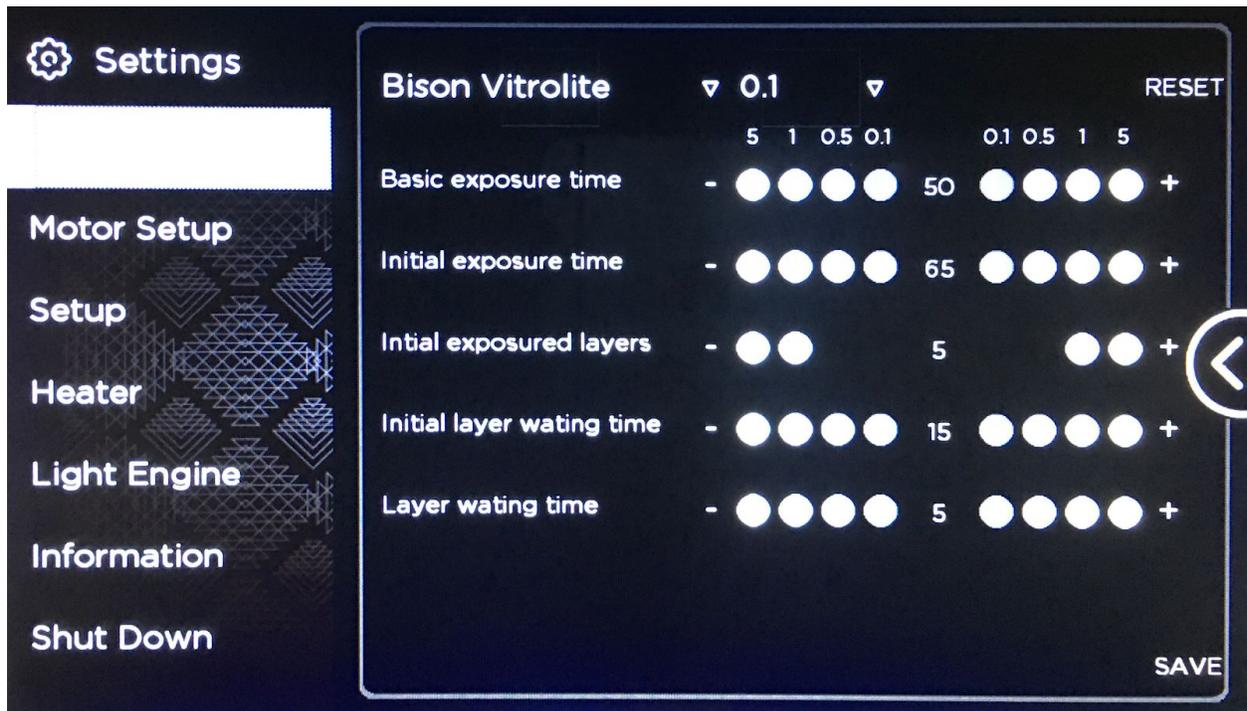
When selecting a new file from the USB, tap the arrow on the far right side of the display and navigate to your file to select it.





Settings

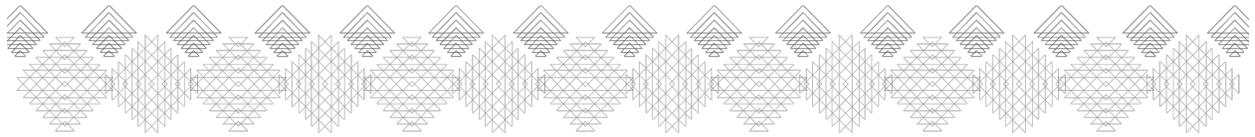
Once you have your file loaded make sure you have the correct settings for your material choice. To navigate to these settings tap the arrow on the far left side of the display until you get to the settings screen in the image below.



Select the correct material and make sure your micron thickness matches the created sliced file.

Hit Save when finished.



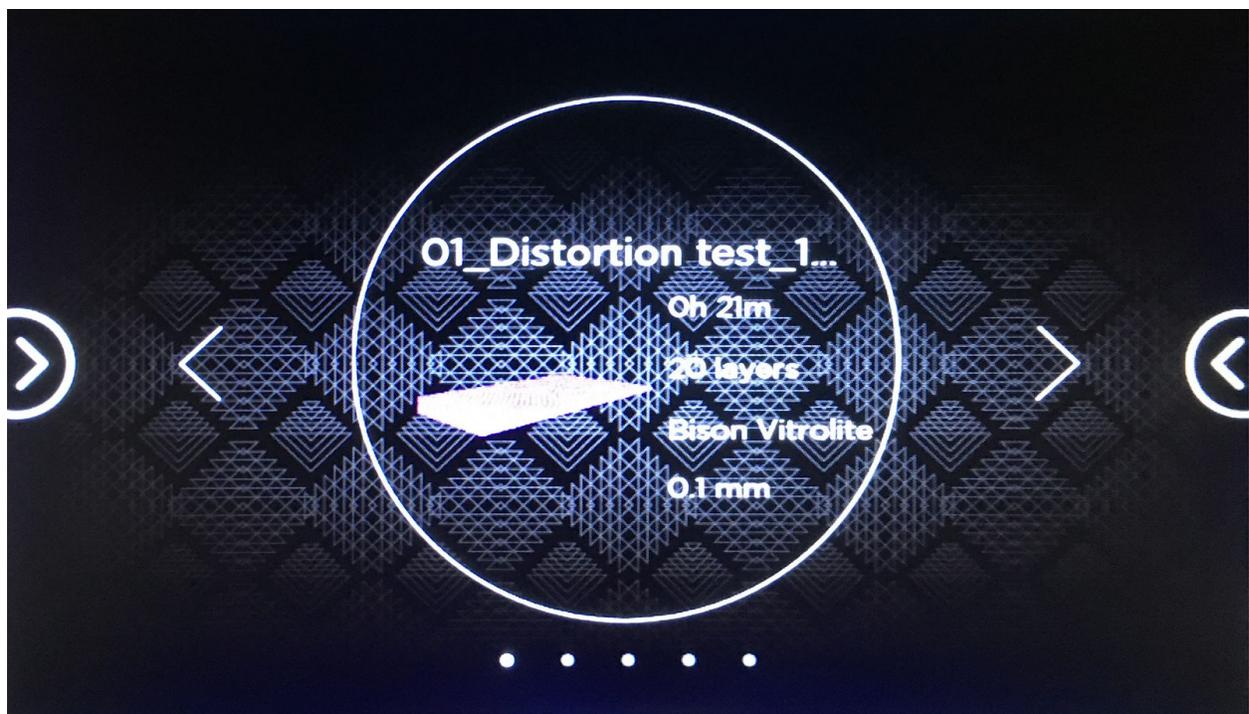


Starting Print

Set resin tray in place and secure down by the two latches on the sides

Insert the build plate, handle facing forward, and tighten the knob on the top.

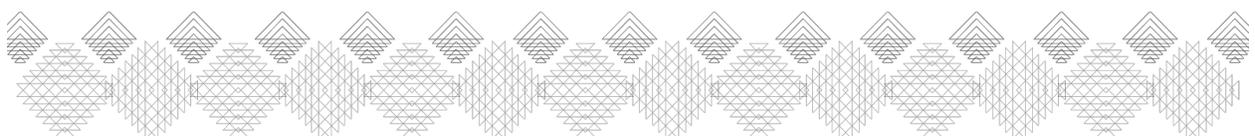
If your settings are correct tap the image of the file you would like to print.

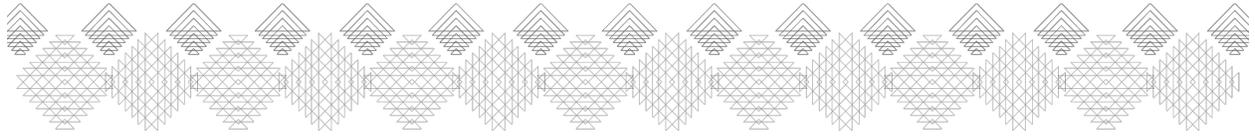


Select Print

Follow message on screen and tap screen one more time to begin the print.

Your printer has started! If using the heated tray your printer will heat until the sensor reads the correct temperature and then begin printing.

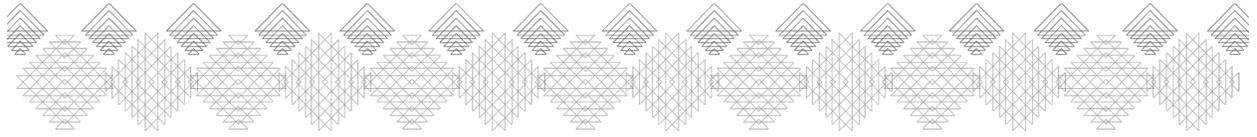




Safety

- Isopropyl Alcohol (IPA) is a flammable substance. When not in use keep in a closed container and out of the reach of children.
- Use caution when removing print from build plate. Metal scraper can slip and cause a nasty ouchie.
- Always wear nitrile gloves and safety glasses when handling resin. Wash resin off of skin with plenty of soap and water.
- Do not look directly into the projected UV light.
- When providing maintenance to the Bison 1000 always shut off and unplug from the power source. Never access the interior of the printer while it is still plugged in.
- Make sure to not overfill the resin tank as the build plate will displace the resin further. Resin that spills over may damage the printer.

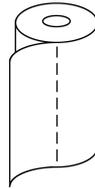




Printer Maintenance

It is important to keep the printer maintained to increase the longevity of the Bison 1000. Use these following steps to clean and maintain your printer.

- If resin drips or overflows from the tray onto the machine clean with alcohol and paper towels. A microfiber towel is recommended to avoid abrasion of the glass.

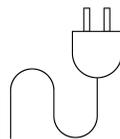


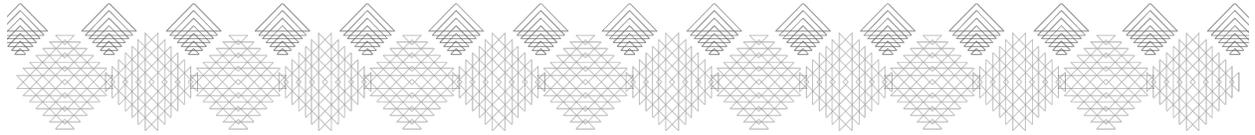
- Dust may accumulate over time on the lens of the light engine. Remove with canned air or by using a microfiber cloth and wiping gently in a circular motion.



Damage to the light engine lens can adversely affect the print quality. Handle with care.

- If not being used for an extended period of time, power down the printer and store in a safe area.

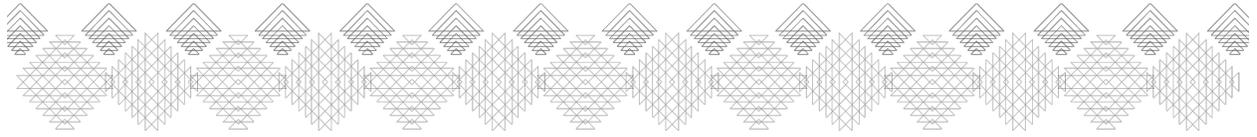




Troubleshooting

- Print is not adhering to the build plate.
 - Re-zero the build plate.
 - Replace film in resin tray
- Light Engine is not turning on.
 - Restart printer.
 - Check brightness setting.
- Printed object is stretched or squashed
 - Check to make sure the layer thickness is set to the same thickness as the slice file. (would this be a resin troubleshooting)
- Heater does not turn on
- Build plate is stuck at the top and printer will not boot up





Support

Thank you for purchasing Tethon 3D's Bison 1000 Printer! If you have any questions or need support call 402-281-4085 or email

support@tethon3d.com

For Material support see Resin Guidelines.

