



Trusana Premium Denture System User Workflow – Asiga Printers

Purpose

To achieve optimum physical and mechanical properties restorations when printing with Trusana on Asiga printers.

Formulation

The instructions outlined in this document are valid for Trusana Premium 3D Printing Resin.

Prior to Printing

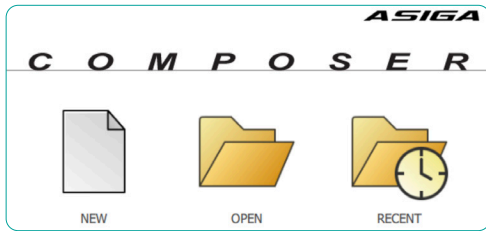
- Log in to Asiga.com
- Go to Material Library
- Choose the Myerson folder Download files:
 - o Myerson_Trusana_Base_100mic.ini
 - o Myerson_Trusana_Teeth_50mic.ini
- Ensure the area is well-ventilated prior to printing
- Ensure all required PPE is being used
- Store at ambient temperature (15–40°C) in a cool, dry location

Equipment

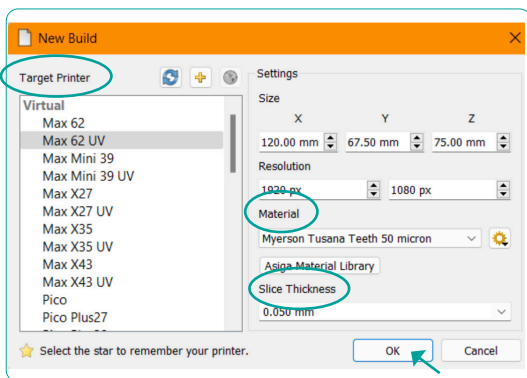
- Asiga 3D printer
- Composer software (software used with Asiga 3D printers)
- Orbital Shaker or something similar to gently agitate the alcohol baths
- Two plastic containers with lids, one for the “Dirty” bath, one for the “Clean” bath. Containers should be large enough to hold printed parts, but also fit on the orbital shaker
- 99% isopropyl alcohol (IPA)
- Handheld light cure wand (optional)
- Asiga Flash Curing unit (post curing equipment)
- Scientific water bath set to 80°C/176°F (annealing equipment)
- Sealable plastic bags (to keep printed objects sealed in water bath)
- Stainless steel scraper (to remove object from printer’s build plate)
- Gloves
- Tongs/forceps (to minimize handling of parts)
- Timer

Printing Trusana

- 1 Ensure two separate trays are utilized (e.g., one tray for Trusana Teeth resin and another for Trusana Denture Base resin).
- 2 Open Asiga Composer.
 - Select “NEW” for a new project
 - Select “OPEN” or “RECENT” for an existing project



- 3 From the “Target Printer” list, choose the desired printer. Select the Myerson “Material”, then the indicated “Slice Thickness”. Select “OK”.



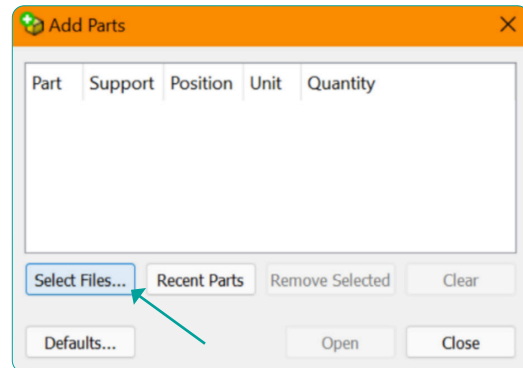
Denture Base

Material: Myerson Trusana Base
Slice Thickness: 0.100 mm

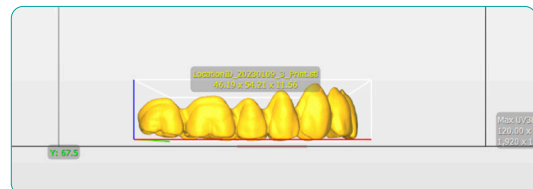
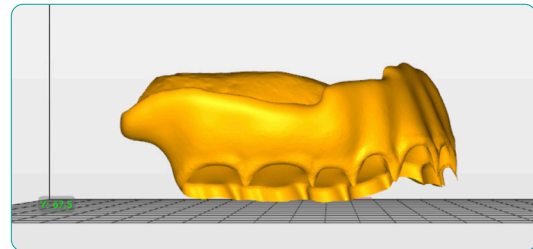
Teeth

Material: Myerson Trusana Teeth
Slice Thickness: 0.050 mm

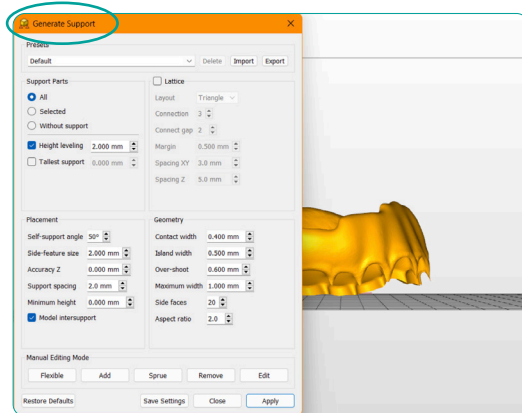
- 4 On the Add Parts screen, choose Select Files and navigate to where your objects are stored.



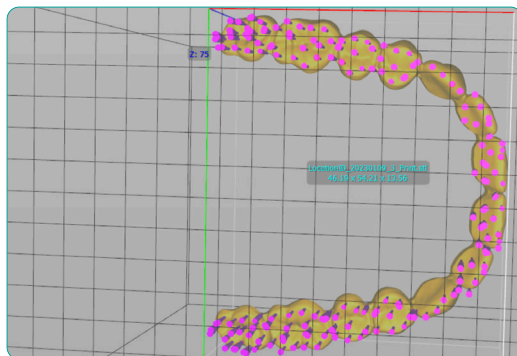
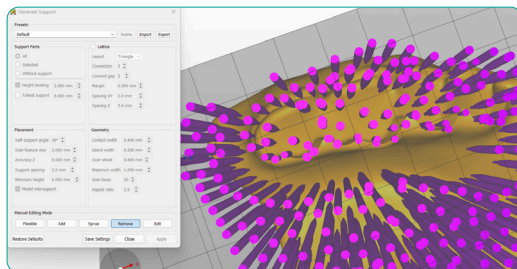
- 5 Select your files and click Open to import.
- 6 Always have occlusal surface and socket side facing toward the build plate at a 20° angle or less.
 - To move the objects, left click and hold
 - To rotate the objects, right click and hold



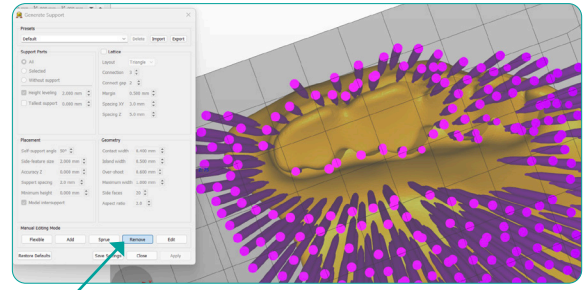
- 7 To attach supports, go to Generate Support.



- Supports are automatically generated



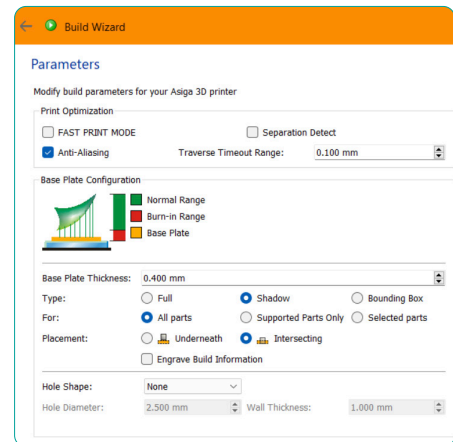
- 8 Click the “Remove” button to remove all supports from the sockets from the Denture Base.



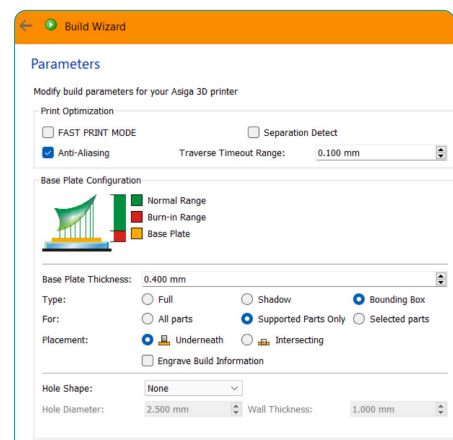
- 9 Select Build to open Build Wizard.

- In the Parameters window, use setting A for Denture Base or setting B for Denture Teeth
- Then, click Next and Next again

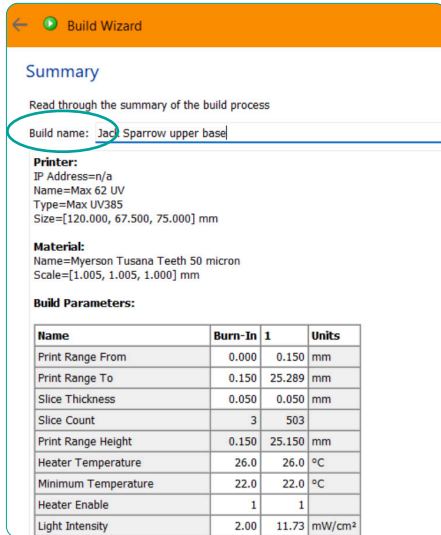
A



B



10 Name the Build, then click Send Build.



Build Wizard

Summary

Read through the summary of the build process

Build name: Jack Sparrow upper base

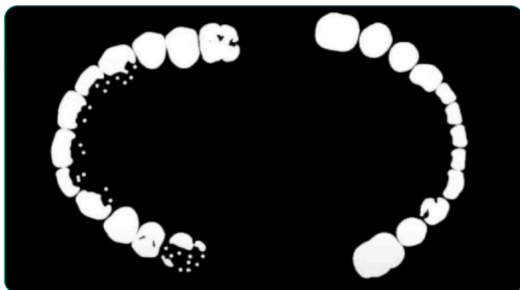
Printer:
 IP Address=n/a
 Name=Max 62 UV
 Type=Max UV385
 Size=[120.000, 67.500, 75.000] mm

Material:
 Name=Myerson Tusana Teeth 50 micron
 Scale=[1.005, 1.005, 1.000] mm

Build Parameters:

Name	Burn-In	1	Units
Print Range From	0.000	0.150	mm
Print Range To	0.150	25.289	mm
Slice Thickness	0.050	0.050	mm
Slice Count	3	503	
Print Range Height	0.150	25.150	mm
Heater Temperature	26.0	26.0	°C
Minimum Temperature	22.0	22.0	°C
Heater Enable	1	1	
Light Intensity	2.00	11.73	mW/cm²

11 View slices, and if there are no anomalies, start the print job from the Asiga Printer Web Interface.



• Build Plate and Resin Preparation

- 1 Ensure your resin tray and build plate are clean and free of debris. Remove any visible particles. Remove solids from previous printing.
- 2 Calibrate the printer per manufacturer's instructions including the build plate and any other necessary components.
- 3 Vigorously shake or roll resin for five minutes prior to each print with agitation equipment if available. Longer agitation may be required.
- 4 Pour the required volume for printing into resin tray.
- 5 Remove bubbles from the poured resin with a spatula or allow them to dissipate.

Post-processing

- 1 After the print job is complete, wear gloves and carefully remove the printed parts from the print platform using a scraper. Carefully remove the supports then place the printed parts in the Dirty alcohol bath and agitate for 2 minutes. When done, move the printed parts to the Clean alcohol bath and agitate for 1 minute. Use a brush soaked in 99% IPA to remove any residual resin from sockets in the Denture Base.

Note: It is very important to properly dispose of the IPA in the Dirty bath every few print batches, depending on the number of parts being washed, then replacing it with the IPA from the Clean bath. You can then replenish the Clean bath with fresh IPA.

- 2 After removing the printed parts from the Clean bath, gently dry the parts using compressed air.
- 3 Make sure the sockets and the bases of the teeth are free from any remaining supports to ensure a perfect fit. Test fit before moving on to Denture Assembly.



Denture Assembly

Note: Be sure to wear all required personal protective equipment before beginning the denture assembly process.

- 1 Wearing gloves, carefully push and turn the cap to open the Trusana Bond bottle. Gently squeeze one drop of liquid into each socket of the printed denture base. Be sure to distribute drops of adhesive evenly across the entire arch before working the adhesive thoroughly into the sockets using a small brush.



- 2 Squeeze 1–2 drops of adhesive onto the same brush and apply evenly across the base of the printed teeth.



- 3 Place the teeth into the sockets of the denture base and press gently to remove air pockets. Still holding the teeth and base together, brush or wipe away excess adhesive with a clean brush or tissue. Check for any gaps and add adhesive where needed.



- 4 Holding the two pieces together firmly, tack cure for 10 seconds once on both the left and right side of the arch and once on the anterior area using a hand-held light cure wand. You may also use the Asiga Flash Light cure unit for this step. Turn the unit on. Securely holding the part together, hold under the light for 10 seconds.



- 5 Place the tack-cured printed parts into the Asiga Flash Curing Unit with the base of the denture flat on the tray. Note: The cure setting on the Flash should be set to the 30-minute timer as shown below:



Set an external timer to 12 minutes. On the Asiga Flash, press “time start” to begin curing, then start your external 12-minute timer.



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- 6 Once the 12 minutes are up, turn off the Asiga Flash cure box and turn the printed part over and repeat step 6.
- 7 After curing the printed part for 12 minutes on each side (24 total minutes), remove the printed part from the cure box and place in a sealable plastic bag.
- 8 Place the sealed bag containing the printed part in the 80-degree Celsius water bath and set a timer for 10 minutes. Note: The bag and object must be completely submerged. You can place an object on top of the bag to keep it submerged. This is a very important step and must not be skipped! The time and temperature must be strictly adhered to as the strength and esthetics of Trusana will be adversely affected if instructions are not followed.
- 9 Once the timer goes off, take the printed part out of the water bath, and let it cool in the sealed bag until the printed part comes to room temperature. Once cooled, you are free to remove the fully cured printed part from the plastic bag.

Finishing

- 1 You may polish your Trusana Premium Denture like Duraflex or other Myerson dental materials.
- 2 You may use light curable composites, such as Gradia or Optiglaze according to the manufacturer's instructions. These can be found on myersontooth.com.

Clean up

- 1 Place a funnel on top of the bottle of resin used to print.
- 2 Place a filter paper in the funnel.
- 3 Carefully pour resin from print tray into funnel. Use a spatula to guide resin into funnel to avoid spilling. Remove funnel when all resin is back in the bottle. Securely fasten cover of resin bottle. Discard filter paper.
- 4 Wash or wipe down print tray and any other apparatus used with isopropyl alcohol and tissue.
- 5 Allow it to dry before using again.

Maintenance

- 1 Follow manufacturer's maintenance guidelines for all equipment used.