

## PLEASE READ CAREFULLY

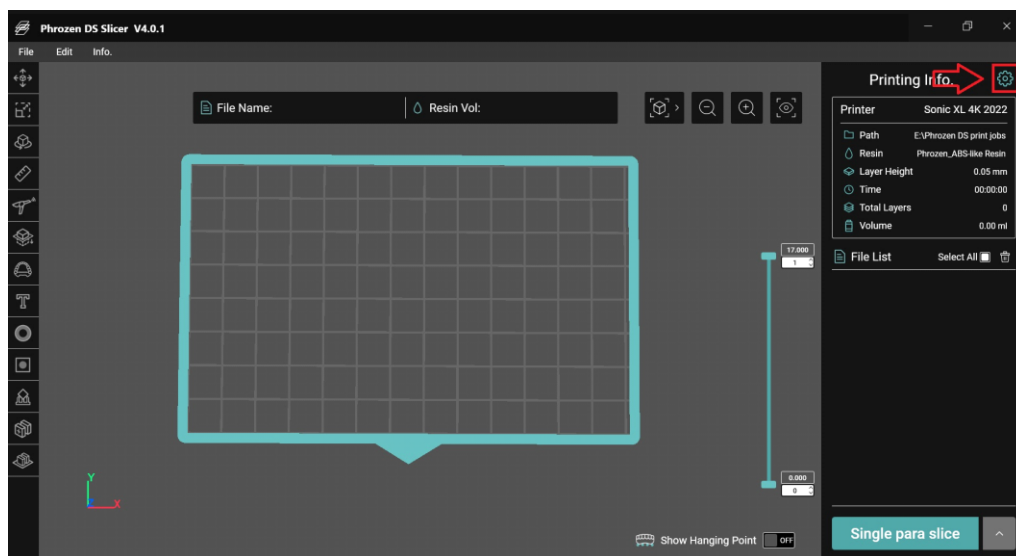
For Sonic XL 4K users, two different resin profiles for each resin must be imported: one in the Phrozen DS slicer software and the other in Phrozen OS (in your printer). The zip package you downloaded from the DenPlus website, once unzipped, will have a Phrozen DS folder (into which the Phrozen DS profiles are found) and a Phrozen OS folder (into which the Phrozen OS profiles are found).

### Importing Phrozen DS profile

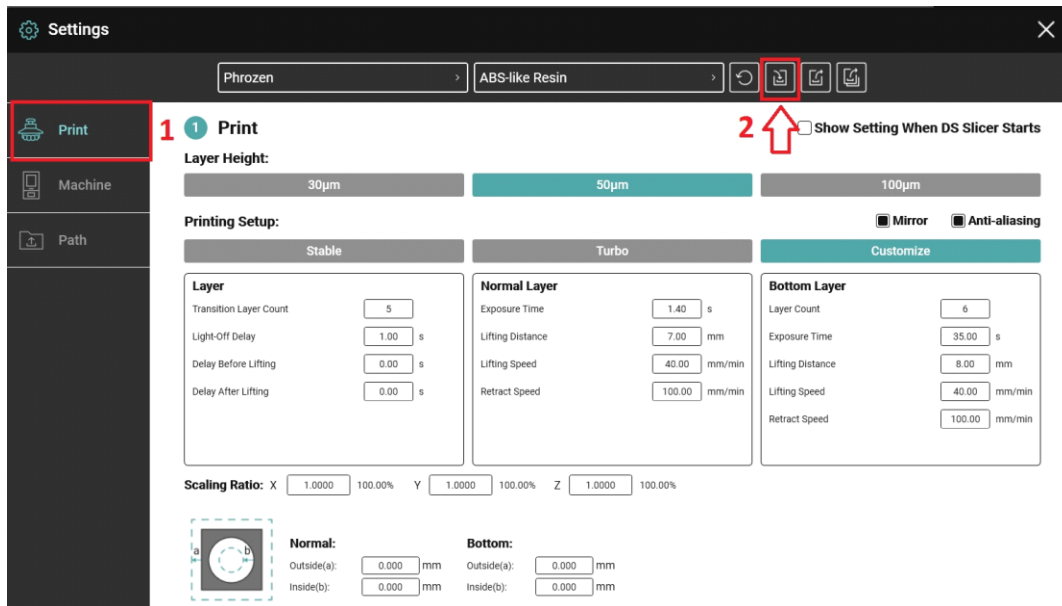
Before starting, ensure that your version of Phrozen DS is V4.0.2 or higher (Top left corner), and that **Sonic XL 4K** is selected as the printer in **Machine Settings**.

There are currently three DenPlus3D Dental Model resin profiles, one for each resin color (Beige, Gray, and White). The following steps describe how to import the Beige resin profile. Repeat steps 1 to 7 for the other resin colors if you plan to use them.

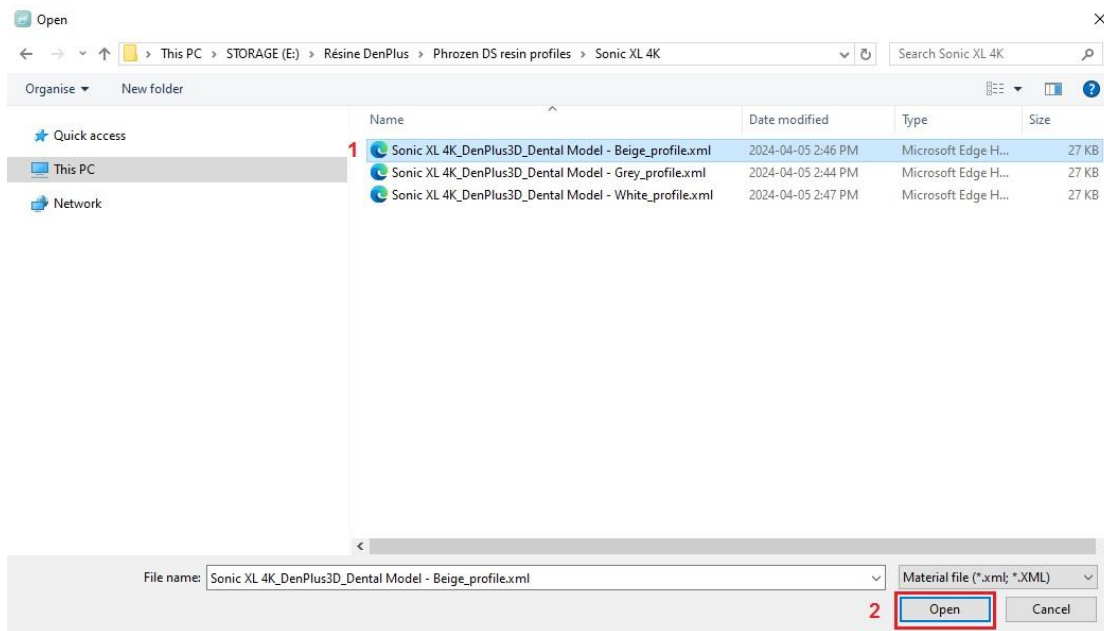
1. Open Settings (top right corner)



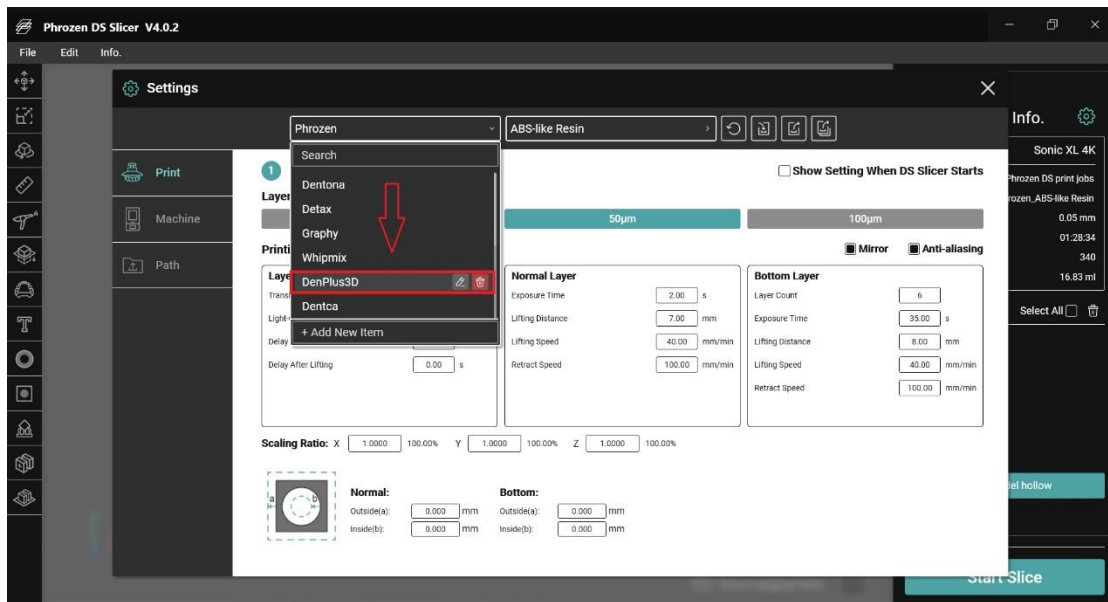
2. In the Print settings, click on the **Import** button.



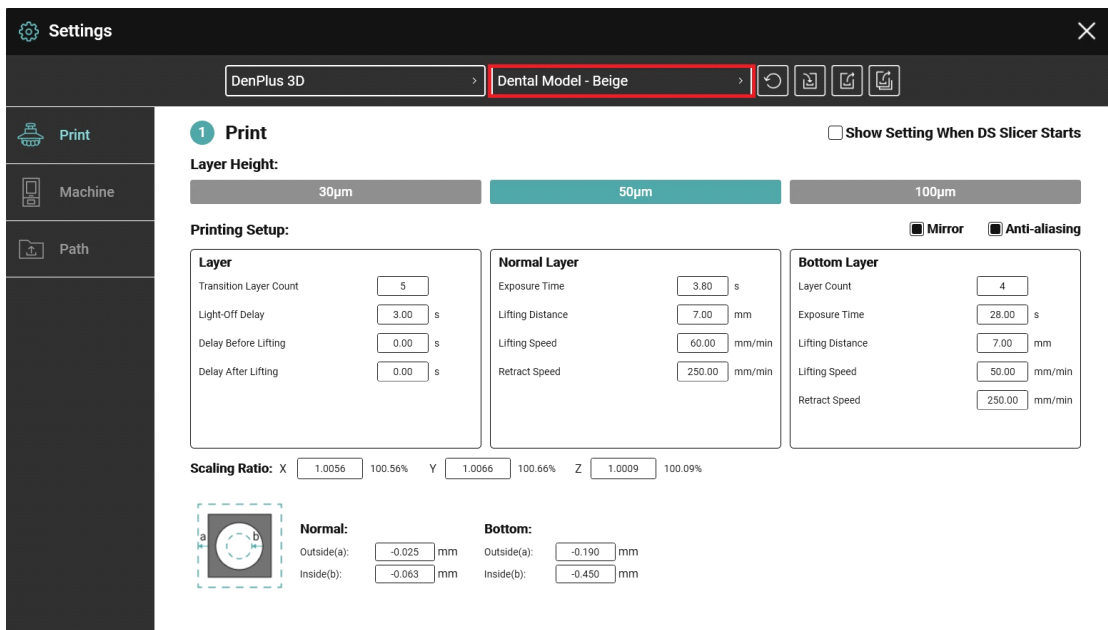
3. Select the resin profile you wish to import and click on Open. In the example below, we are selecting the Beige resin profile.



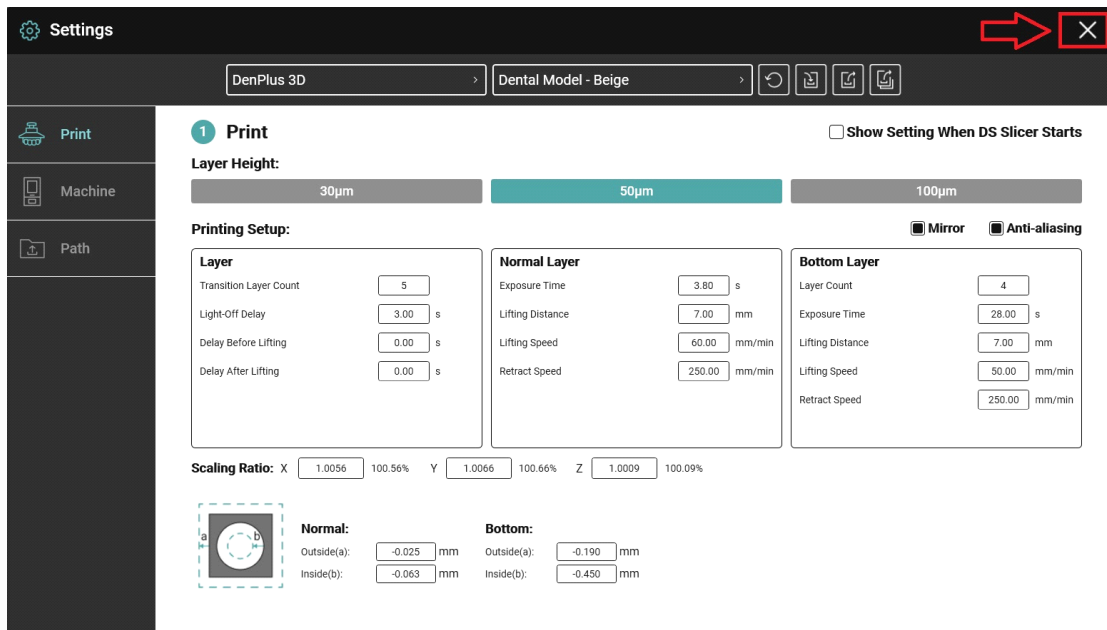
4. Check that the DenPlus3D resin profile imported successfully by clicking on the resin brand drop-down list. DenPlus 3D should be found.



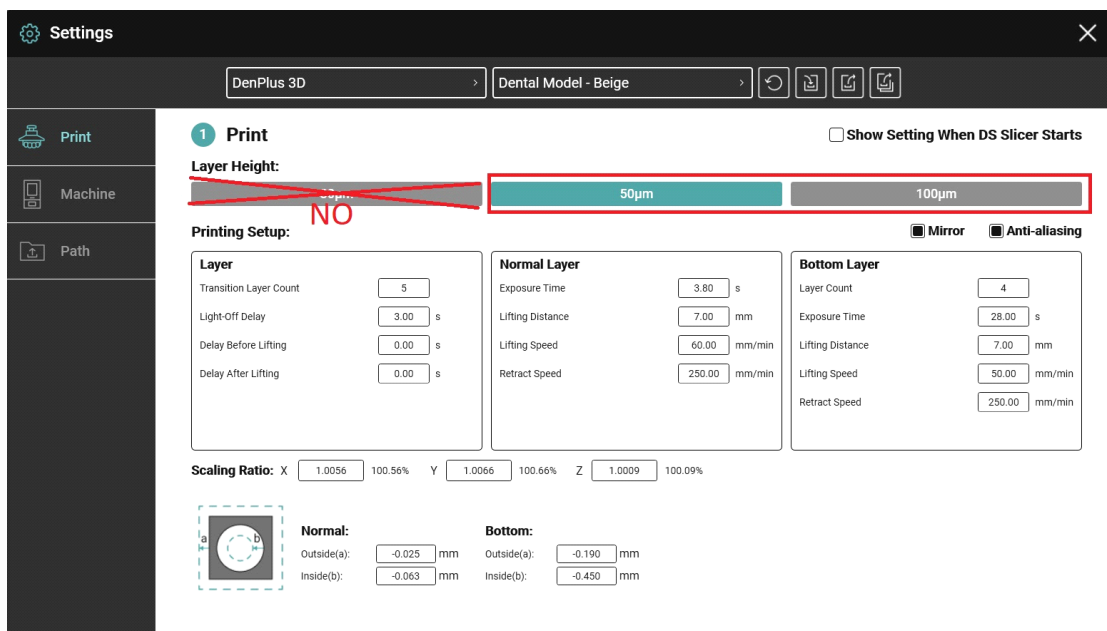
5. The **Dental Model - Beige** resin profile should be available in the resin type menu.



6. Close the Settings window.



7. You have successfully imported the resin profile. When using the resin, be sure to select the desired layer thickness, either 50um or 100um. Never select 30um.



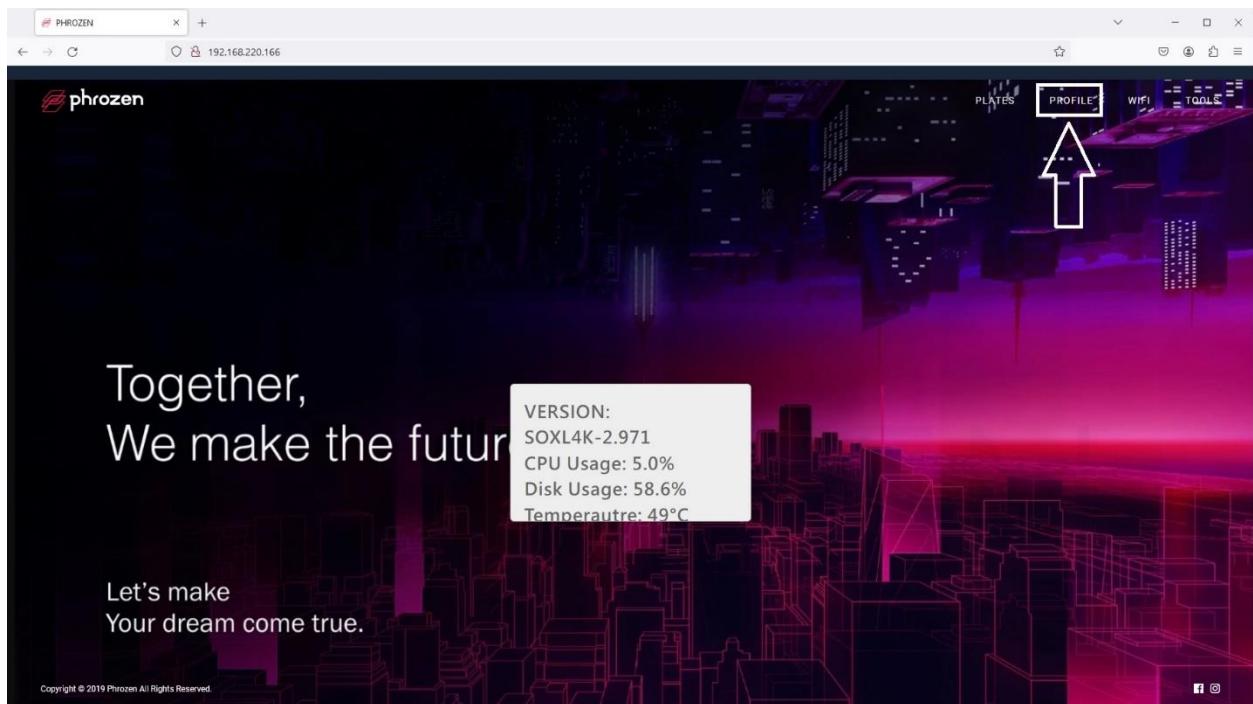
## Importing Phrozen OS profiles

To import Phrozen OS profiles, your Sonic XL 4K printer must be turned on and connected to the same network as your computer.

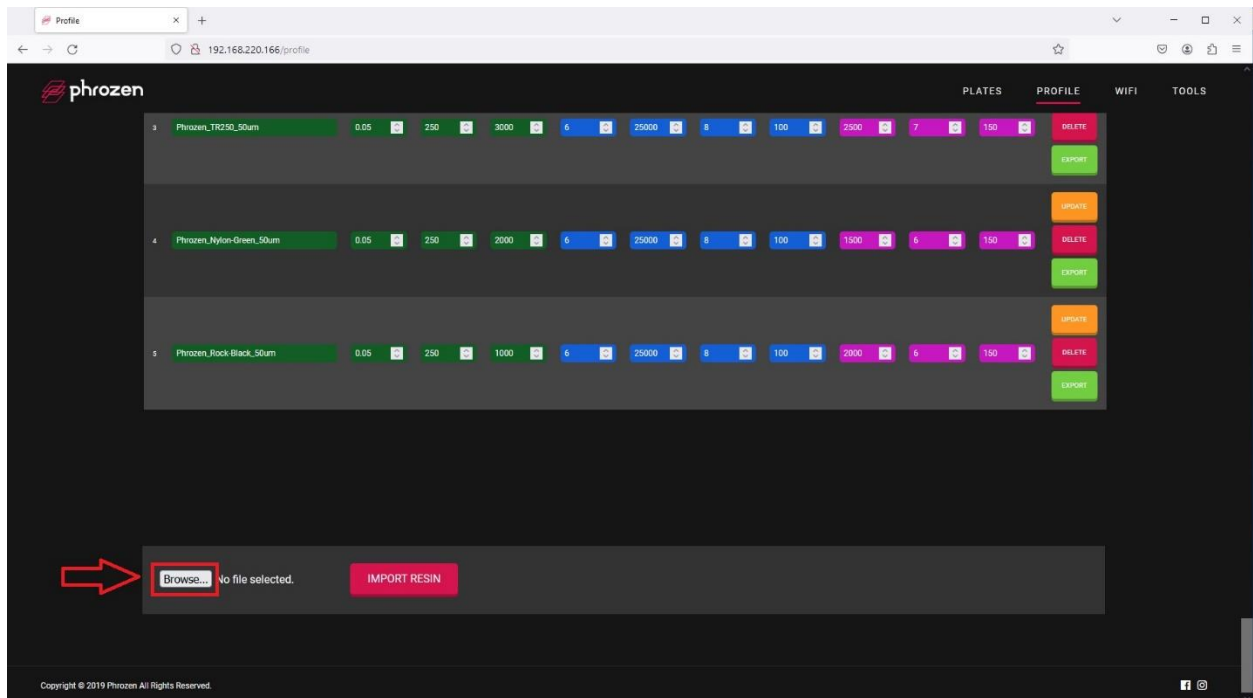
1. Open your Internet browser (Chrome, Firefox, Edge...) and type your printer's IP address into the address bar. In the example below, the printer's IP address is 192.168.220.166.



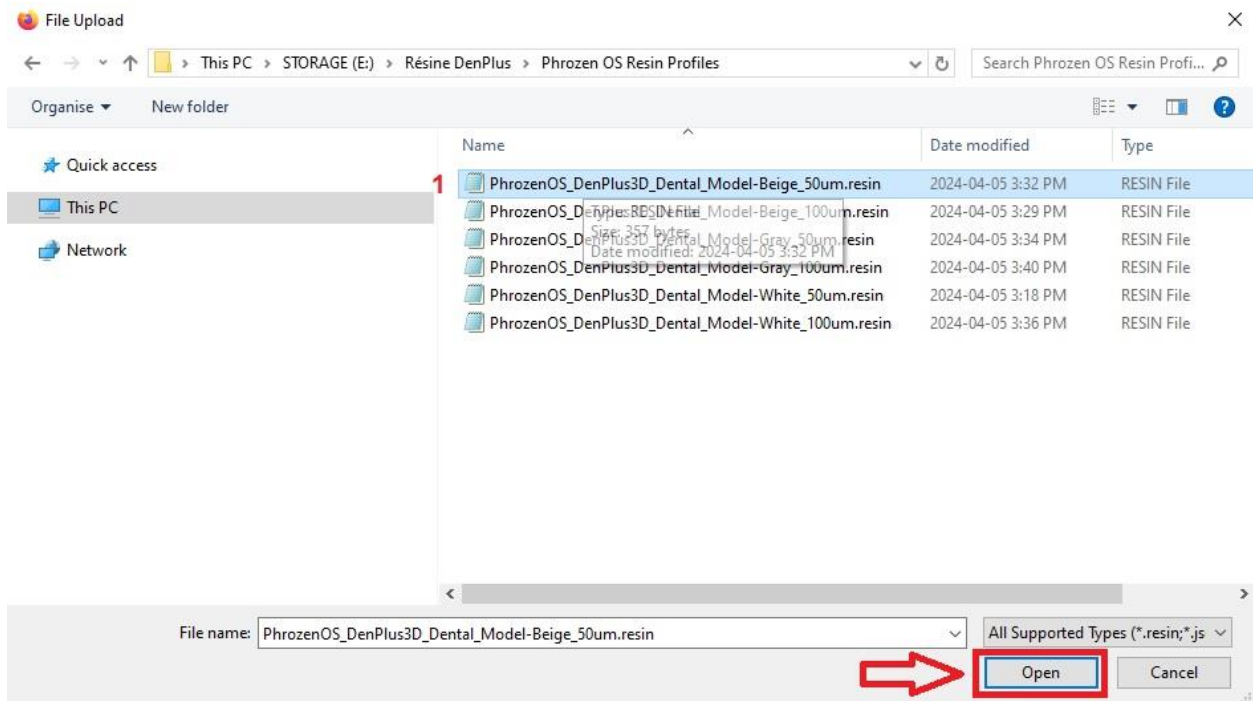
2. Click on PROFILE at the top right.



3. Scroll all the way to the bottom and click on Browse.



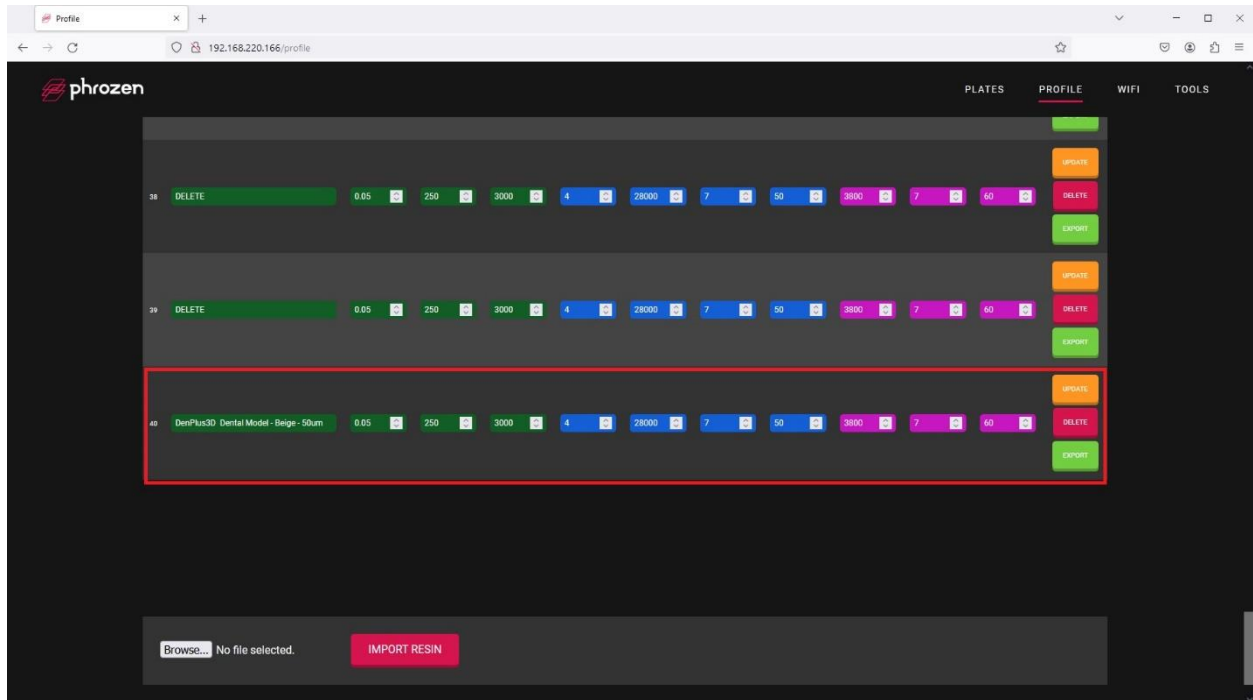
4. Navigate to the location of the Phrozen OS resin profiles folder. For each resins there is 50um and a 100um profile. If you plan on printing at both layer thickness, you must import both. Select the one you wish to import and click **Open**. In the example below, we are importing the Beige – 50um profile.



5. Click on IMPORT RESIN.



6. Scroll back down to the bottom and you should see the newly imported profile in the list.



7. Repeat steps 1 through 6 for any additional Phrozen OS profiles you wish to import.

You are now ready to use the DenPlus3D Dental Model resin of your choice with your SonicXL 4K 3D printer. Once you have uploaded your print job to Phrozen OS, be sure to select the correct resin profile and click on UPDATE before starting the print.

### Post-Curing Time

- 35-40 minutes per side in the FabCure 1 or Phrozen Cure (or similar)
- 35 minutes total in the FabCure 2
- 2400 flashes per side in the OtoFlash G171

Post-curing your printed parts for the prescribed amount of time is vital to obtaining dimensionally accurate and stable parts.

## UNDERSTANDING RESIN CALIBRATION AND FINE TUNING

The DenPlus3D resin parameters are the results of rigorous in-house testing on our own Sonic XL 4K 3D printer, to obtain the most accurate models and parts possible. It is important to understand that several factors can affect your own results. The main factor of influence is the energy output of your printer's LED light array module. Over time, the LED light array of an LCD printer gets weaker. Our Sonic XL 4K outputs between 4.9 and 5.3 mW/cm<sup>2</sup>. You can measure your own printer's light output with a UV light meter such as [this one](#) from Chitu Systems. If your Sonic XL 4K's LED light output is in a similar range as ours, your results should be the same. If on the other hand, it outputs significantly more or less light, you will likely need to adjust the exposure times and/or scaling X and Y ratios accordingly and Normal contour offset parameters in the profile.

Lastly, our resin profile has been tuned to reduce to a minimum the bottom elephant foot effect of parts printed directly on the print platform. Furthermore, it has been tuned so that implant analogs fit snugly in models without the use of an analog shaft gap (analog offset) in your CAD design software. Check that your CAD design software does not already have one set by default and set it to 0.