

Denture Workflow

User Guide

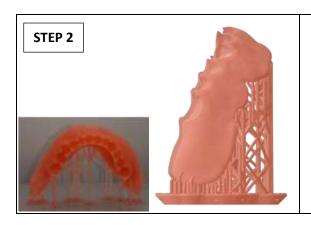


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Design

Design the denture model in two mating parts, the denture base and denture teeth in a suitable CAD software such as exocad

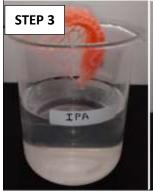


3D Print the denture base .stl file

Import the 3D Model .stl file into a slicing software Set up suitable setting printer parameters Orient it vertically or at a slight angle (10-25°) to minimise the supports and support marks. Avoid supports in the intaglio region.

- 1. Contact point ~ 1 to 1.5 mm
- 2. Overshoot diameter ~ 0.7 mm

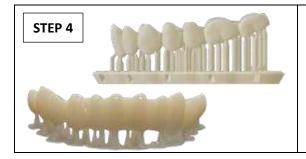
3D print the part





Clean the denture base

Denture base can be cleaned with IPA spray and wipe. Excessive IPA cleaning in acyclone can cause a powdery surface due to resin removal from top layer. If cyclone is used, please use a short cycle (Approx 5 seconds). For Bio Compatible resins, maintain a separate cleaning system with IPA to prevent cross contamination with TEC resins.



3D Print the denture teeth .stl file

Import the 3D Model .stl file into a slicing software Set up suitable setting printer parameters Generate suitable supports on the occlusal surface of the part

3D print the part

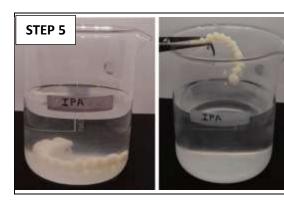


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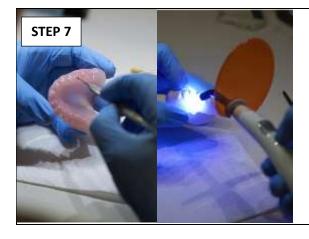
Clean the denture teeth

Denture teeth can be cleaned with IPA spray and wipe. Excessive IPA cleaning in acyclone can cause a powdery surface due to resin removal from top layer. If cyclone is used, please use a short cycle (Approx 5 seconds). For Bio Compatible resins, maintain a separate cleaning system with IPA to prevent cross contamination with TEC resins.



Fitment Check

Join the mating parts and check the fitment of teeth in the denture base



Assembly

Join the denture teeth to the denture base using a suitable adhesive (recommended product Visiolink, Bredent).

First stage curing of adhesive can be done in the post cure machine. Then, a hand-held dental light cure machine should be used both from above and below to ensure full curing of the adhesive.

Alternatively, a thin layer of denture resin can be applied with a brush in the sockets and used as an adhesive. In this case the post cure machine is best for curing.



Post Cure

Put the whole assembly in a glass beaker / Glass pot filled with glycerol (50%) +water (50%) and post cure in a curing chamber. This allows the oxygen inhibited layer to cure. Set curing time based on machine power

- 1. 30-50 watt- Cure for 20 mins
- 2. 60-80 watt-Cure for 10 mins
- 3. >100 watt- Cure for 3-5 mins

^{*}Curing under nitrogen or vacuum will improve results



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Support removal

Cut the supports by using a flash cutter



Polishing

After ensuring that the adhesion is properly achieved, proceed to polish the denture using standard polishing techniques. For clinicians, we recommend the Bredent polishing kit, Part No REF VLTOOLKIT



Glazing

If only polishing is found sufficient for end use, it is the best option. However, if not, then after polishing, a UV cured glaze like D Tech Pro Glaze or GC Optiglaze can be used to give a shiny look.

Note: Glaze must not be used in instead of polishing. Glaze should act as a sealer of any porosity instead of a substitute to polishing.