Rodin Full & Partial Denture Fabrication Guide

1.0 Design

1.1 Design the socket area with an offset of a minimum 100 microns and up to 150 micron gap to allow the printed arch to completely seat to minimize socket adjustments.

Note - Exceeding a 150 micron offset gap could result in holes in the socket area or occlusal misalignment with opposing dentition.

1.2 Support lower dentures with a cross bar to prevent warping. Specialized nesting software such as Cambridge has this feature available.

2.0 Orientation

2.1 Orientate both upper and lower denture bases at 30 degrees with the socket area facing upwards.

3.0 Supporting

3.1 Support the perimeter of the internal adaption ridge area ensuring that low points and overhangs are adequately supported.

3.2 Ensure that supports are not tangential to the base, this will result in additional hand finishing.

3.3 The recommended minimum support diameter is 0.27mm at the point of contact where the support meets the restoration.

3.4 The recommended minimum support height is 2mm to prevent breakage during removal of restoration(s).

4.0 Post-Print Cleaning

4.1 Break away supports with from the base and remove excess resin with compressed air or a paper towel.

4.2 Rinse printed denture bases in 99% isopropyl alcohol in an agitating wash bath. Transfer denture base to a secondary agitating wash bath with clean IPA for an additional 5 minutes.

4.3 Dry the printed denture base with compressed air.

Note- A thoroughly cleaned denture base should have a matte finish. If there are any areas with a shiny appearance, wash the area with fresh IPA and dry with compressed air. Rinse and repeat as needed.

5.0 Pre-finishing

5.1 Grind away support tips with a broad carbide bur or grinding wheel at low speeds.

5.2 Contour and reshape teeth if required.

Note – Due to the increased strength of the material after light curing, it is recommended to make the majority of contour adjustments and support removal prior to post curing to prevent chipping and/or micro fracturing.

6.0 Assembly

6.1 Fully seat the tooth arch into the denture base socket. Carefully adjust the sockets if path of insertion is compromised with heavy undercuts.

6.2 Apply a light coat of denture base resin into the sockets of the denture base and reset the tooth arch into position.

6.3 Carefully fill in any voids with additional denture base resin with a fine tip paint brush. Brush away excess denture base resin near the socket area throughout the denture base.

7.0 Post Cure

7.1 Carefully place the completed assembly in a validated UV light box and follow recommended time and temperature schedules.

8.0 Finishing

8.1 Remove deep build lines with a white Robinson wheel and polishing compound such as “Wow” or a rag wheel with wet pumice.

8.2 Steam off all remaining compound or pumice debris.

Note – Do not concentrate on a specific area for more than 5 seconds at a time, overheating is possible when grinding away build lines. Dimensional changes to the denture base may occur if not followed.

9.0 Polishing

9.1 High shine the denture with an acrylic buffing compound and rag wheel.

9.2 Steam off residual buffing compound and buff with rag wheel and water for optimal glaze free high shine. Remove any residual debris with steam gun.

9.3 Apply UV curable stain and/or glaze if desired. Follow manufactures recommended time and temperature light curing schedule as directed.