



ZAAG Cast to Female Coping Instructions

Zest Anchor™ Advanced Generation Fabrication

ZAAG Cast Coping

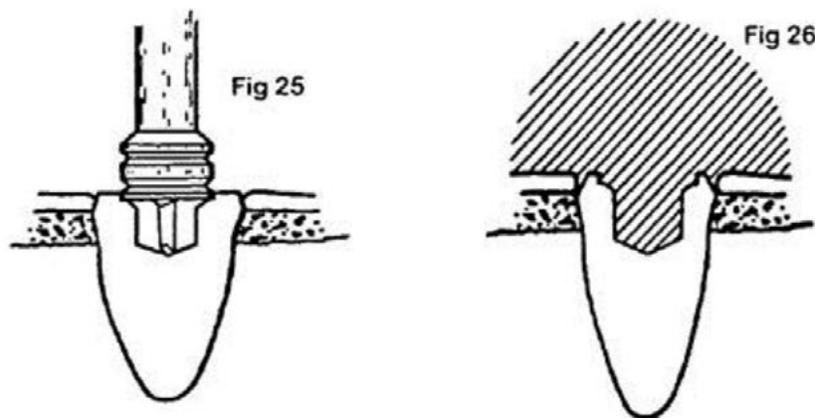
A special ZAAG Cast-to Female (Standard or Mini Size without titanium nitride coating) is used when a cast gold coping to cover and protect the root surface is desired (Fig 24). The following procedure is recommended for the Standard Cast-to Female.



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NOTE: The Mini Cast-to Female uses the same procedure except a cast-to One Step Drill is used following the drilling steps.

1. The endodontic treatment is completed and the remaining tooth structure is reduced to the level of the gingiva. It is desirable that the root be prepared with a beveled shoulder or chamfer margin.



2. The ZAAG One Step Drill is self starting and pilot holes are not necessary. At a slow speed (750 RPM), drill a hole with the One Step Drill to a depth where a recessed seat is created on the occlusal surface. Next, use the Cast-to Drill. This will provide an adequate reduction preparation (and room) for the wax-up and the Cast-to Female. Water should be used generously when cutting with the ZAAG Drills (Fig 25).

3. An impression is made (FIG 26), being sure to include other attachments and anatomy to determine the path of insertion of the denture. The master cast and dies are prepared.

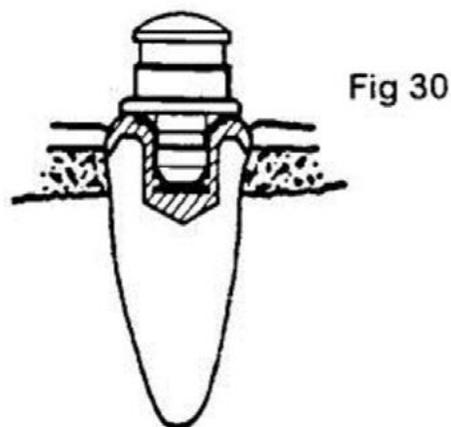
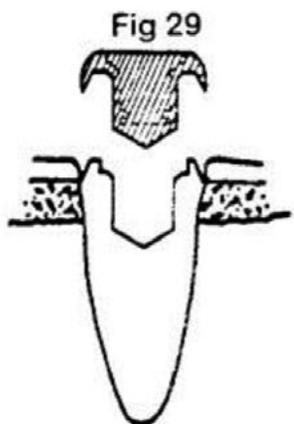
Devesting

11. After casting, allow to bench cool for 20 minutes. To remove the investment material from the Cast-to Female without damage to the stainless steel, use an acid free investment and porcelain remover solution (Kleen-It D), or a hydrofluoric/sulfuric acid mixture (EZ Strip) in an ultrasonic cleaner for a period of 30-45 minutes. **Do NOT use a bur to remove the investment, or sandblast with aluminum oxide which may damage the internal surface of the female.** A [Fiberglass Pencil](#) may be used to remove any remaining investment.

Finishing and Polishing

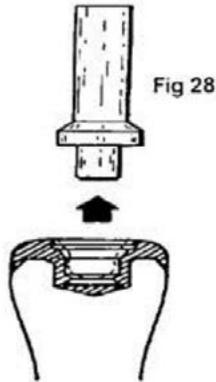
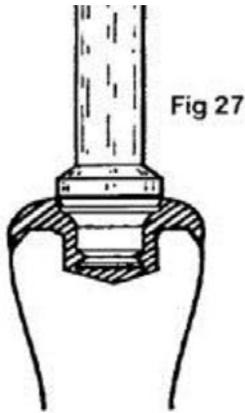
12. Use caution when polishing with a rubber wheel not to damage the Cast-to Female attachment. Polish the surface of the coping to make a smooth mating surface for the male attachment. The plastic Paralleling Post can be placed in the female to protect the attachment while polishing. If additional polishing is needed, it is recommended to only use glass beads at a low pressure at 40 psi, or a fiberglass or bristle polishing brush.

13. After polishing the coping, place a male attachment into each Cast-to Female and check for proper fit. Clean again in ultrasonic solution and deliver to the dental office to be cemented in place intra-orally on the prepared tooth root.



14. The finished copings containing the ZAAG Cast-to Female are cemented in place intra-orally on the prepared root tooth (Fig 29).

15. Snap a male (stainless steel cap, nylon male, and centering sleeve) into each cemented coping for chairside pickup into the denture (Fig 30). If processing of the denture component by the laboratory is desired, follow steps 2-8 in "Male Placement by Laboratory."



4. Using a surveyor, place the plastic Paralleling Post with the attached Cast-to Female parallel with the other ZAAG attachments. If multiple attachments (4 or more) are planned, the prosthetic path of insertion as directed by the flanges should not be divergent in excess of 10° for any of the ZAAG attachments.

5. Wax the Cast-to Female directly into the die. The stainless steel should be completely encased with a layer of wax up to, but not over the junction of the plastic Paralleling Post (Fig 27). Use a hard wax so the female will be held securely when removing the Paralleling Post.

6. Remove the plastic Paralleling Post: leaving the stainless steel attachment cavity open for investment material to flow into (Fig 28).

Spruing

7. Run the sprue at a 45° angle to the Cast-to Female so the molten gold will flow down along one side of the metal female, around the metal female, and up the other side. The sprue should NOT be directed at the metal female, which could possibly dislodge it when casting.

Investing

8. Use Ceramigold Investment by Whip Mix Corp, or an equivalent High Heat Investment. The investment material is flowed into the attachment cavity to stabilize it during burnout and prevent gold from going inside the female. Make sure investment flows into each ZAAG Cast-to attachment. Bench set ring for 60 minutes.

Burnout

9. Place ring in a cold furnace (sprue hole down) and raise temperature to 1500° F maximum. Use a rate of climb of 0° F to 1500° F maximum over a time period of one hour.

Casting

10. Use only precious or semi-precious alloys for casting root copings. Cast the copings using the recommended temperatures of the alloy manufacturer. The stainless steel female will withstand a temperature of up to 2000° F without any dimensional change.