



1st Appointment

Preliminary Impression

ZirCap™ Solid Zirconia Full-Arch Implant Prosthesis option; consider anterior-posterior spread and keep in mind that 10 plus mm of verticle clearance is required. Although a closed-tray impression technique is described here, open-tray impressions can be used as well.

Take an implant-level impression, including the vestibules. Ensure the palate is included for maxillary impressions.



- a. Remove the healing abutments or appliance from the implants. If the patient has multi-unit abutments in place, take an abutment-level impression.
- b. Seat the impression copings and tighten the screws (Fig. 1). Take a periapical radiograph to verify complete seating. Check the impression tray for proper fit.
- c. Take a VPS impression of the edentulous arch. Allow the material to completely set, carefully remove the impression tray, loosen the screws and remove the impression copings.
- d. Replace the healing abutments or appliance.
- e. Take an impression of the opposing arch.
- f. Carefully place the impression copings back into the impression (Fig. 2). Or send them to the lab for placement.
- g. Fill out lab Rx including implant system and diameter of implants. Send the lab Rx in with the case.



Figure 1: Seat the impression copings.



Figure 2: Carefully replace mpression copings back into impression.

ZirCap™ Full- and Partial-Arch Implant Prosthesis

2nd Appointment

Jaw Relation Records and Shade Selection

You will receive from Tetra a bite block with one or two screw-retained temporary cylinders and a wax-rim instruction guide to determine significant relationships. Refer to Bite Procedure Instructions (Fig. 3; see right).

- Remove the healing abutments or appliance from the implants.
- Seat the bite block and gently tighten the screws by hand (Fig. 4).
- With the patient sitting up, use conventional denture technique to achieve accurate jaw relation records.
- Unscrew the cylinder screws and remove the bite block(s). Replace the healing abutments or appliance.
- Take an impression of the opposing dentition and an impression of current denture for study model.
- Select the shade and mold of the denture teeth. The study model of the patient's existing denture can be used as a reference regarding the size and shape of the new teeth.
- Select the gingival shade.
- Return the case to Tetra with the master model, bite block, bite registration, opposing impression and study model.



Figure 4: Seat the bite block.

BITE PROCEDURE FOR FULL MOUTH RESTORATIONS

1. Seat bite block or screw in bite block using temp cylinders or similar provided.
2. Take accurate Bite registration being sure patient does not hit posteriorly which causes the mandible to shift forward.
 - 2a. Then hold anterior centric, pull back lips posteriorly and syringe "mousse" into "v" notches in bite block.
3. Check for proper freeway space (1-2mm).
4. Contour upper bite block under lip and nose for proper support.
5. Scribe a) midline, b) high lip line, and c) Cuspid Lines
6. Do the same for the lower arch.
7. Adjust bite block to exact length of anterior teeth desired.
8. Take new full upper and lower alginates of temps and counter. Make sure to include full vestibles of U/L and palate of upper. These will be used for landmarks on master and study to double check the bite registration.
9. Send all to lab for fabrication of abutments and framework or bridgework.

Figure 3: Bite Procedure

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Note: The final restorative option is determined following the Second Appointment, after your bite block has been received. We may determine that multi-unit abutments are required to correct implant angulation, accommodate screw access holes that are too far to the facial, or connect the prosthesis to implants that are 2 plus mm subgingival. In these cases, the we will contact the doctor to provide information concerning treatment options and pricing. (See Fig. 5 and 6)



Figure 5: Depth and angles of implants measured.



Figure 6: Multi-units needed due to depth and angle of implants.

ZirCap™ Full- and Partial-Arch Implant Prosthesis

3rd Appointment

Setup Try-in, Verification Jig and Final Impression



Tetra will send a wax setup, a custom tray and an implant verification jig . If multi-unit abutments are required, they will also be provided.

Setup Try-in

A wax setup is provided with temporary cylinders and a checklist.

- Remove the healing abutments or appliance. If multi-unit abutments were supplied by Glidewell, deliver the multi-unit abutments in the same sequence and positions represented on the model.
- Seat the wax setup (acrylic base with teeth in wax). Tighten the temporary cylinder screw(s) by hand.
- Evaluate the VDO, CR, esthetics, shade, occlusion, phonetics and midline. If CR is incorrect, a new bite registration should be taken.
- Send clinical photos per the checklist included with the case.
- Unscrew the temporary cylinder screws and remove the setup.
- If a reset is necessary, include necessary changes on your Rx and a new bite registration should also be taken.



Figure 7: Set-up with screw-down cylinder.

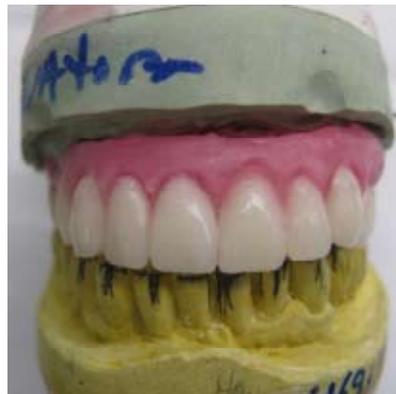


Figure 8: Trial set-up mounted.

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Verification Jig

It is necessary To ensure a passive fit of your restoration, we must obtain an accurate final impression. A custom tray is provided along with an implant verification jig that has been either cast as one piece or sectioned in two. Or you may get a one piece PEEK or PMMA jig.

—Screw down each cylinder by hand tightening one at a time feeling for any tension. If tension is determined then the bar has to be sectioned with only a half mm space between sections. Make sure there is no tension. Then lute together sections with GC pattern resin, Triad, Zapit or similar

- a. Allow the material to flow through and completely around the gaps.
- b. Ensure the material is completely cured. Next, test the passivity of the jig with a one-screw test. Tighten a single guide pin into one of the distal cylinders. No lifting of the jig should occur.

—Check for a passive fit by visibly inspecting completely around each cylinder for complete seating. This process can be repeated for each implant.

- a. If any section has a cylinder-implant interface that is subgingival, a periapical radiograph should be taken to verify complete seating.
- b. If any cylinder is not completely seated, the jig must be sectioned in that area, reluted and rechecked until a passive fit is obtained.



Figure 9: Cast verification.

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Final Impression

—Check the custom impression tray for proper fit (no contact with the jig or cylinders).
Using a medium body VPS material, take the final impression with an open-tray technique.

- a. Inject VPS impression material under and around the jig to capture the ridge and all anatomical landmarks as for a full denture including full vestibular extensions. Capture the complete palate for maxillary cases.
- b. Completely fill the impression tray. Seat the filled impression tray, ensuring the heads of the guide pins are exposed through the tray (Fig. 10).
- c. Once the material has set, remove guide pins and then remove the impression.

Note: The verification jig is picked up in the impression. Inspect the impression for the required detail. Replace the healing abutments or appliance. If multi-unit abutments were supplied leave them in place if possible. Send in entire case, including the wax setup, opposing model, the final impression containing the implant verification jig and guide pins, and lab Rx with reset instructions (if necessary).

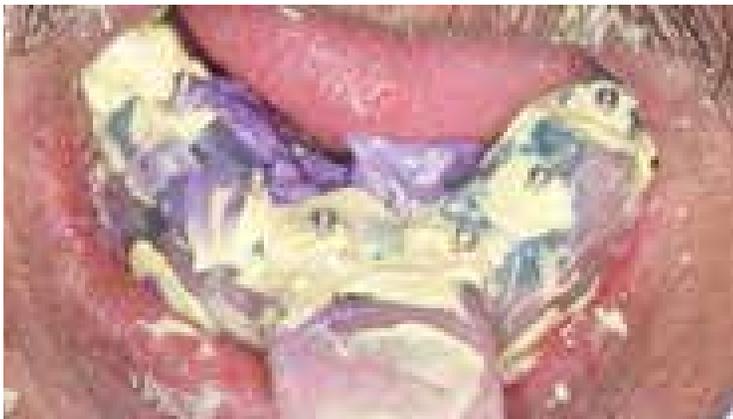


Figure 10. Seat tray, ensuring guide pins are exposed.

ZirCap™ Full- and Partial-Arch Implant Prosthesis

4th Appointment

Delivery of Provisional CAD/CAM Implant Prosthesis

The provisional CAD/CAM implant prosthesis serves as a temporary appliance and allows the patient a trial period to evaluate the function and esthetics prior to fabrication of the final prosthesis.

- Remove the healing abutments or appliance.
- Seat the provisional prosthesis on the implants or multi-unit abutments.
- Hand tighten the prosthetic screws, alternating from one side to the other.
- Tighten the screws to the appropriate torque per manufacturer instructions. Wait approximately 5 minutes and retorque the screws.
- Confirm the occlusion. Make adjustments as necessary.

Place a small amount of cotton in the screw access holes and fill with light cure composite or acrylic to prevent bacteria build-up.

When the patient is ready for the final prosthesis, return the master cast and opposing model. If any adjustments were made to the provisional CAD/CAM implant prosthesis, return the provisional appliance and list the adjustments on the prescription.

ZirCap™ Full- and Partial-Arch Implant Prosthesis

5th Appointment

Delivery of Final Prosthesis

Remove the provisional CAD/CAM implant prosthesis. Seat the final prosthesis on the implants or multi-unit abutments. Hand tighten the prosthetic screws, alternating from one side to the other. Tighten the screws to the appropriate torque per manufacturer instructions. Wait approximately 5 minutes and retorque the screws.

Confirm the occlusion. Make adjustments as necessary. Place a small amount of cotton in the screw access holes and fill with light cure composite or acrylic to prevent bacteria build-up.

Note: Tooth-colored composite or acrylic should be used for access holes in the teeth, while pink composite or acrylic should be used for access holes in the prosthesis base.



ZirCap Partial-Arch Implant Prosthesis

ZirCap™ Full- and Partial-Arch Implant Prosthesis



One Week

Follow-up check.

Tetra will send a wax setup, a custom tray and an implant verification jig . If multi-unit abutments are required, they will also be provided.

Setup Try-in

A wax setup is provided with temporary cylinders and a checklist.

- Check occlusion.
- Review oral hygiene instructions.
- Set recall schedule.
- Take upper and lower impressions as well as a bite registration in centric occlusion for bite splint.
- Send to lab for fabrication of bite splint.

Maintenance Appointments

How to Maintain Final Prosthesis; six-month hygiene appointment.

- a. Perform prophylaxis under the prosthesis. Twelve-month (annual) hygiene appointment.
- b. Remove prosthesis for thorough cleaning.
- c. If prosthesis screws are damaged or show signs of stripping, screws should be replaced.