

CLINICAL PROTOCOLS



AvaDent™ ... the digital platform that is changing removable dentistry forever!

AvaDent Digital Denture's revolutionary technology brings the precision, speed and profitability of digital process automation to removable dentistry using Computer Aided Engineering. CAE is the broad usage of computer software to aid and control engineering tasks. CAE in conjunction with CAD/CAM goes beyond traditional CAD/CAM fabrication by using sophisticated scientific algorithms to create a comprehensive platform technology that drives a level of control and consistency never before possible. Only AvaDent allows the dental professional the ability to create a precise fitting, esthetic prosthetic, completely within a digital environment, in as little as three or two appointments.



AvaDent, whose name is derived from "Ava" meaning *rebirth* and "Dent" meaning *dentition*, allows dental professionals to offer a digital denture based on accepted clinical protocols. To date over 150,000 AvaDent Digital Dentures have been provided to patients. As the leader in the field of digital dentures, AvaDent provides access to digital denture education to dental professionals, which is paramount to patient outcomes. AvaDent has developed multiple training modules and is proud to offer those to members of the Foundation for Dental Laboratory Technology and also to members of the American College of Prosthodontists.

AvaDent Digital Dentures offers a full line of tissue-supported or implant-supported treatment options including; complete over complete, single maxillary and mandibular, implant retained, immediate, provisional, Bouma try-in, Wagner try-in, conversion denture, obturator and much more.

Unique to AvaDent is the all-important AvaDent digital record that allows the dental professional to offer their patients a new degree of convenience and security never before possible. Should they ever lose or damage their AvaDent, a new AvaDent can be manufactured quickly and easily using the digital record on file.



AvaDent Digital Dentures are manufactured in the USA.

For information about AvaDent™ Digital Dentures call 855-AVADENT (282-3368) or go to www.avadent.com.

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You can view all clinical protocols at: www.AvaDent.com



No Changes Necessary

The great thing about creating an AvaDent Digital Denture is that the clinician doesn't need to change his or her normal workflow. First and foremost, accurate final impressions must be made. Second, the clinician has many techniques available to make an accurate inter-occlusal record. To ensure a successful AvaDent Digital Denture, the accurate record must communicate 6 key factors.

6 KEYS TO A SUCCESSFUL AVADENT DIGITAL DENTURE:

- 1 Midline
- 2 Centric Relation
- 3 OVD (*Occlusal Vertical Dimension*)

- 4 Anterior Tooth Size
- 5 Lip Support
- 6 Incisal Edge Location



AvaDent™ XCL Monolithic Complete Denture



A true monolithic denture is milled entirely from an individually produced puck that is made from extreme cross-linked teeth material and high-impact base material. Bonding material is no longer needed. The XCL-2 technology produces a denture with polychromatic teeth, including a high translucency enamel and dentin core. Along with improved natural morphology, the XCL-2 gives you premium - new and greater - natural esthetics. The XCL-2 is available in Vita® Classic shades: A1, A2, A3, A3.5, B1, B2, C1, C2 and D3. Also available with monochromatic XCL-1 teeth.



AvaDent™ Bonded Complete Denture

AvaDent™ Bonded Complete Dentures are precision-milled from a patented bio-hygienic puck of acrylic and manufacturers' teeth are bonded into the milled pockets. A variety of tooth manufacturers can be selected providing a wide range of tooth moulds, from basic to premium teeth. Get the perfect esthetics for the patient.



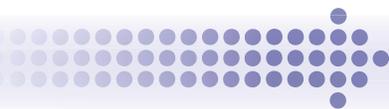
AvaDent™ Immediate Complete Denture

The AvaDent™ Immediate Complete Denture offers all the advantages of a standard AvaDent™ Digital Denture for immediate patients. Additionally, it can be part of a comprehensive system that offers you a series of clinical deliverables from immediate dentures to provisional dentures to a verification / reduction guide to a definitive AvaDent™ all within a 100% digital workflow.



AvaDent™ Base Plate and Advanced Base Plate

The AvaDent™ Base Plate is computer-designed and precision-milled from AvaDent's patented biohygienic, no-shrink acrylic pucks. It is the ideal record base to create a final set-up, but with AvaDent's exceptional fit. The Advanced Base Plate makes tooth setup and processing more user friendly. It has a precise junction between milled base plate and processed acrylic. An offset on the residual ridge creates more room for the tooth setup.



AvaDent™ Bouma Try-In (BTI)

The AvaDent™ Bouma Try-In is the most popular digital try-in denture and manufactured to the Vita Classic tooth shade of your choice. It is a bio-functional Try-In to verify all functions, phonetics and esthetics. This monolithic Try-In denture can also function as a spare backup denture for the patient.



AvaDent™ Wagner Try-In (WTI)

The Wagner Try-In is a marriage of conventional averages with a digital process. Following the Wagner Try-In protocol, the clinician can deliver a final prosthesis in as little as three, 30-minute appointments. This monolithic WTI allows the clinician to move teeth and establish all correct settings before ordering the final AvaDent digital Denture. The maxillary anterior teeth are individually milled and set in wax and the maxillary posterior teeth are milled in the base acrylic to be used as bite stops. The mandibular anteriors are milled in a solid piece to establish desired overbite/overjet and posteriors have Aluwax™ to establish VDO/ CR.



AvaDent™ Conversion Denture

The AvaDent™ Conversion Denture is a fully milled monolithic prosthesis. During surgery it is used to stabilize and orient the prosthesis to the tissue. Implant surgery is then performed, and final implant placement is completed. The AvaDent Conversion Denture is seated and secured to the abutment copings with resin. The pre-cut flanges are easily cut away and it becomes an AvaDent™ provisional hybrid.



AvaDent™ Position Handles and Occlusal Locks

The AvaDent™ occlusal locks are ideal for orienting and aligning opposing dentition and ensuring perfect occlusion, The position handles are easy and helpful to maneuver the conversion denture into position.



AvaDent™ Implant Overdenture

AvaDent™ Digital Dentures makes offering implant retained over-dentures to your patients convenient and economical. Can be used with all chair side pick-up systems and optioned with most denture orders and bar retention systems, such as Hader and Dolder bars. Optionally, the bar can also be provided by the customer. The overdentures are available in bonded teeth or with the XCL-1 and XCL-2 monolithic technology options.



AvaDent™ Hybrid Prosthesis

The AvaDent™ Hybrid Prosthesis is a computer designed and precision milled AvaDent Digital Denture that has been reinforced with a titanium bar for use in implant cases. As a true monolithic, fully-milled XCL hybrid denture that is made from a pre-shrunk, bio-hygienic, polychromatic acrylic puck, the titanium bar is fully integrated into the hybrid denture. The AvaDent Hybrid Prosthesis may be designed as a full wrap around or "MONTREAL" configuration. The patented true monolithic (one-piece) construction means no risk of tooth pop-offs or delamination.



AvaDent™ Monolithic Fixed Hybrid with Integrated Ti-Bar

The world's first fully integrated, lightweight and ultimate strength hybrid prosthesis. Featuring AvaDent XCL and Digital Positioning Technologies, the fully integrated 3D printed Titanium honeycomb bar is precisely positioned into and milled from the same AvaDent acrylic puck providing ultimate strength against delamination and fracture.



AvaDent™ Snap-Pin Bar

As a true monolithic, fully-milled XCL bar supported overdenture, the best of two techniques exist in one click. Providing the stability of a fixed solution and the ease of hygiene of a removable prosthesis. It's stress-free with passive fit, easy replacement of retentive pins and low on maintenance costs.



AvaDent™ AccelerSet

AvaDent's AccelerSet is the ultimate fixed hybrid digital prosthesis that has a full computer-generated digital setup. The AccelerSet is fabricated using individually milled zirconia crowns, a precision milled titanium bar and a milled pink acrylic base joined together with extreme accuracy using Digital Positioning Technology (DPT), a patented AvaDent process. AccelerSet's patented keying of the milled bar and teeth allows easy maintenance of the prosthesis for years to come.



AvaDent™ Bone Reduction Guide

A clear AvaDent™ appliance / surgical guide used to perform alveoplasty and tissue contouring during immediate complete denture and implant procedures.



AvaDent™ Scanning Guide

The AvaDent™ Scanning Guide is a clear guide with fully milled radiopaque dentition. It is an exact duplicate of the proposed final AvaDent™. To maximize the scanning effectiveness of the guide, the teeth are made of radiopaque barium sulphate acrylic polymer ideal for CT scanning.



AvaDent™ Verification Jig / AvaDent Implant Record Device

The AvaDent™ Verification Jig is used to confirm implant placement and pick up the implant cylinders. The AvaDent™ Implant Record Device is designed to accommodate the AvaDent™ Verification Jig and modified Scanning Guide to allow for insertion of impression material to capture and record all soft tissue and implant position.



AvaDent™ Partial Denture

The AvaDent Removable Partial Denture is a true monolithic fully milled monolithic prosthesis featuring XCL technology. Combined with AvaDent Signature teeth technology, optimal tooth position and glide planes are established resulting in a perfect and comfortable fit of an AvaDent and the highest retention possible. AvaDent Signature Teeth optimizes the mesial and distal contact.



AvaDent™ Obturator

The AvaDent™ Obturator is milled from a pre-shrunken, bio-hygienic puck. Due to our milling accuracy, obturators are lighter and more comfortable to the patient than with the conventional process. Obturators can be milled solid or milled in 2 pieces to create a lightweight hollow obturator. Obturator cases can utilize bonded teeth, XCL-1 or XCL-2 teeth

AVADENT WAGNER TRY-IN (WTI) GUIDE PROTOCOL

RELIABLE, PREDICTABLE AND EASY - ALWAYS 3 SHORT APPOINTMENTS

APPOINTMENT 1

- A. Final Impressions
- B. Papillameter Measurement
- C. Tooth Mould Selection
- D. Create Centric Bite Record



APPOINTMENT 2

- E. Seat Try-In
- F. Refine Anterior Teeth
- G. Interocclusal Record



APPOINTMENT 3

- H. Place Final Dentures



OVERVIEW

The AvaDent WTI Guide protocol is designed to allow the clinician to produce high-quality AvaDent digital dentures in just 3, 30 minutes appointments. The technique can also be used as the basis for implant-based prostheses and can be the foundation for more sophisticated tissue-based removable prostheses as well.

APPOINTMENT 1: IMPRESSIONS & MEASUREMENTS IN 30 MINUTES



A. IMPRESSION OVERVIEW

Although any impression technique is accepted for final impression making, we recommend the following technique using Wagner impression trays and/or the materials of your choice.

Dentsply's Aquasil Ultra + Fast Set impression material is demonstrated here. Aquasil Ultra + Fast Set Heavy is used for border moulding and Aquasil Ultra + Fast Set LV is used for the final impression.

A.1. HEAT THE TRAYS

Heat the maxillary impression tray in 160° F (70°C) water for 1 minute. For details see the videos on bigjawbone.com.

Repeat for the mandibular ridge.

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RELIABLE, PREDICTABLE AND EASY - ALWAYS 3 SHORT APPOINTMENTS



A.2. SHAPE THE TRAYS

Place the tray in the patient's mouth and shape the tray to the patient's palate and alveolar ridge using border moulding motions. Again, for details, see the video on bigjawbone.com.

Repeat for the mandibular ridge.



A.3. EVALUATE AND MODIFY THE TRAYS

The trays can be trimmed with scissors or material added (extra material comes with each tray and the trays can be stretched). You can perforate the tray for open tray implant impression if required. Apply tray adhesive to the trays.



A.4. BORDER MOULD THE TRAYS

Border mould the trays. For details see the videos on bigjawbone.com. Repeat for the mandibular ridge



A.5. CREATE RELIEF

If the tray material shows the PVS material, remove it with a carbide bur.

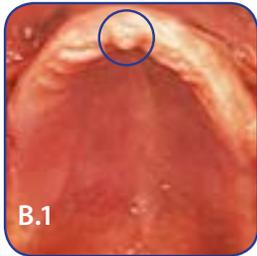


A.6. MAKE FINAL IMPRESSIONS

Make the final impressions.

AVADENT WAGNER TRY-IN (WTI) GUIDE PROTOCOL

RELIABLE, PREDICTABLE AND EASY - ALWAYS 3 SHORT APPOINTMENTS



← B.1. PAPILLAMETER MEASUREMENT

The incisive papilla is an important anatomic landmark when determining the position of the maxillary central incisor.

B.2. SET THE PAPILLAMETER →

The papillameter is placed on the anterior alveolar ridge centering the incisive papilla in the middle of the instrument.

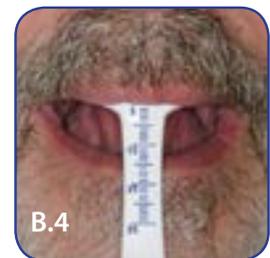


← B.3. ASK THE PATIENT TO RELAX THEIR UPPER LIP

Record the length of the upper lip in mm.

B.4. ASK THE PATIENT TO SMILE →

Record the high smile line in mm.



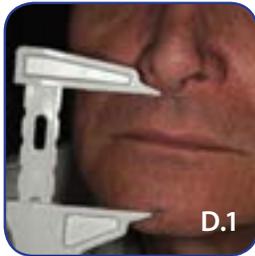
← C. TOOTH MOULD

Select the tooth mould and shade of your choice.

Choose moulds from multiple manufacturers, such as Dentsply Sirona, Ivoclar and Candulor.

AVADENT WAGNER TRY-IN (WTI) GUIDE PROTOCOL

RELIABLE, PREDICTABLE AND EASY - ALWAYS 3 SHORT APPOINTMENTS



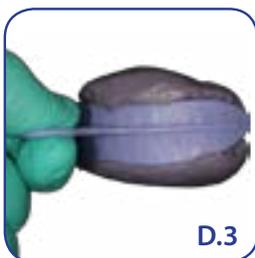
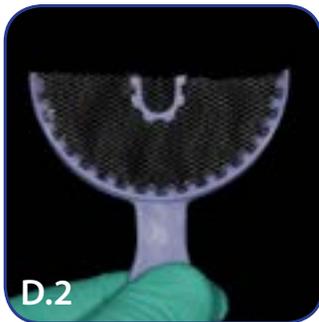
◀ D.1. VERTICAL DIMENSION

Determine desired vertical dimension using preferred method

- a. Using facial calipers measure vertical dimension. Place two marks on the patient 1. under nose 2. tip of chin
- b. Determine vertical dimension at rest and then subtract 2-3mm to determine vertical dimension of occlusion

⇓ D.2. IMPRESSION PUTTY

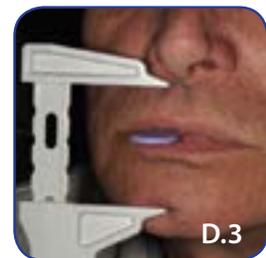
Using an anterior triple tray, place impression putty on both sides of the tray



◀ D.3. CENTRIC RELATION ▶▶▶▶

Place in the patients mouth and guide the into centric relation

- a. Instruct the patient to place their tongue to the roof of the mouth, as far back as they can go and have them bite down slowly until they reach the previously measured vertical dimension. Using facial calipers to verify vertical dimension.



AVADENT WAGNER TRY-IN (WTI) GUIDE PROTOCOL

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D.4. RELINE

Once set remove from the mouth and reline with light body impression material

D.5. PRELIMINARY INTERARCH

Preliminary interarch relationship

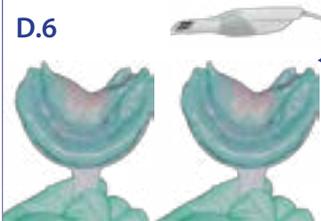
D.5



Initial Registration

Registration After Wash Impression

D.6



Mail Records or Scan Records

D.6. SEND INFO

Send information and records to AvaDent to fabricate WTI

D.7. ADDITIONAL INFO:

- The tray has thin mesh separating the two sides of the triple tray, so it works very well for immediate denture interarch records, since the patient can close down all the way if they have teeth that oppose each other.
- Choose a putty that is firm but has long enough setting time so the impression putty does not set before you have time to allow the patient to close to the desired position.
- The reline with a light body impression material may or may not be indicated depending on how much of the ridge is registered.

This completes the first appointment. The patient is dismissed and the impressions, papillameter measurements and the tooth mould plus shade selection are sent to AvaDent.

AVADENT WAGNER TRY-IN (WTI) GUIDE PROTOCOL

RELIABLE, PREDICTABLE AND EASY - ALWAYS 3 SHORT APPOINTMENTS

THE WTI IS FABRICATED AT AVADENT

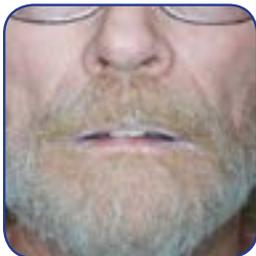


APPOINTMENT 2: TRY-IN ADJUSTMENTS AND RECORDS TAKING IN 30 MINUTES



E. SEAT THE TRY-IN

Adjust the bases if necessary. Check the orientation of the horizontal occlusal plane. Check the midline. Adjust the midline if necessary.



F. EVALUATE TOOTH POSITION

Evaluate the length and position of the central incisors. Adjust if necessary. Create a natural smile by moving the anterior teeth.



G. RECORD OVD AND CENTRIC RELATION

Determine the occlusal vertical dimension and record centric relation. Adjust if necessary. Position the lower anterior teeth into their proper position.

AVADENT WAGNER TRY-IN (WTI) GUIDE PROTOCOL

RELIABLE, PREDICTABLE AND EASY - ALWAYS 3 SHORT APPOINTMENTS



H. OBTAIN THE PATIENTS' APPROVAL FOR ESTHETICS



After obtaining the patient's approval, make an interocclusal record with PVS and send the WTI to the AvaDent laboratory.

THE FINAL DIGITAL DENTURE IS FABRICATED AT AVADENT



APPOINTMENT 3: DELIVERING FINAL DENTURES IN 30 MINUTES



H.1. SEAT THE DENTURES

The dentures are delivered to the patient using traditional seating techniques.

Clinical Checklist

Final Impressions-Upper

1. Make PVS cast from existing denture.



2. Choose correct size tray. Place tray in hot water (160°-170° fahrenheit) for 60 seconds until tray is malleable.



3.  Thermo-form trays to PVS cast.



4.  Trim trays borders 2mm short of border depth.



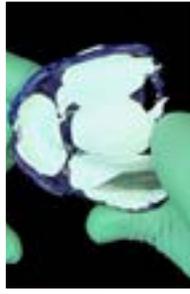
5. Apply adhesive to tray.



6. Using AvaDent Bite Registration material, place stops in impression tray.



7. Trim stops not to interfere with border molding material.



8. Express AvaDent Border Molding material along entire edge of prepared border, then cover entire tray.



9.  Insert tray into mouth and perform border movements then inspect impressions for tray exposures and overall quality. Correct if necessary.



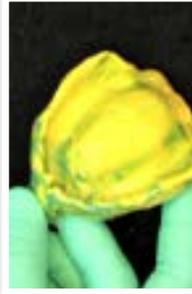
10. Apply light body AvaDent Impression material wash sufficient to complete final impression.



11.  Insert tray into mouth and perform border movements.



12.  Inspect impressions for tray exposures and overall quality. Correct if necessary.



= This quality control check alerts you to critical steps required to minimize potential error in your AvaDent Digital Record and Final AvaDent.

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Clinical Checklist

Final Impressions-Lower

1. Make PVS cast from existing denture.



2. Choose correct size tray. Place tray in hot water (160°-170° fahrenheit) for 60 seconds until tray is malleable.



3.  Thermo-form trays to PVS cast.



4.  Trim trays borders 2mm short of border depth.



5. Apply adhesive to tray.



6. Using AvaDent Bite Registration material, place stops in impression tray.



7. Trim stops not to interfere with border molding material.



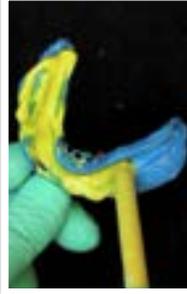
8. Express AvaDent Border Molding material along entire edge of prepared border, then cover entire tray.



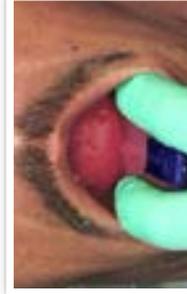
9.  Insert tray into mouth and perform border movements then inspect impressions for tray exposures and overall quality, correct if necessary.



10. Apply light body AvaDent Impression material wash sufficient to complete final impression.



11.  Insert tray into mouth and perform border movements.



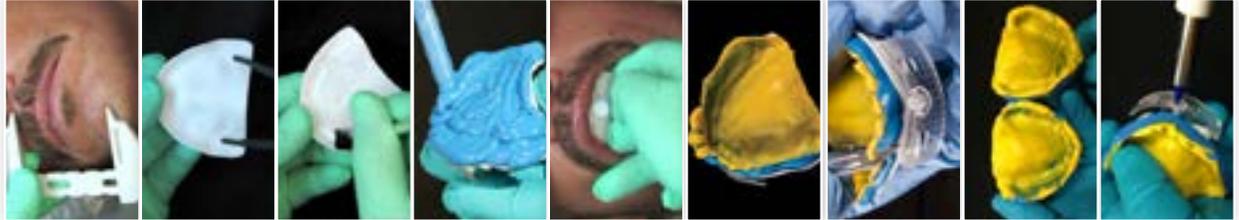
12.  Inspect impressions for tray exposures and overall quality, correct if necessary.



Clinical Checklist

Complete over Complete - AMD

- 1.** Establish OVD and mark nose (or filtrum) and chin with permanent marker for future reference.
- 2.** Select correct sized maxillary AMD tray. Trim if necessary.
- 3.** Apply AvaDent Adhesive to tray.
- 4.** Fill tray with AvaDent Border Molding material.
- 5.**  Position tray so it seats completely onto the ridge, is centered on patient's midline, is horizontally correct to patient's inter-pupillary line and is parallel to mandible.
- 6.** Remove tray, wash with AvaDent Impression Material and re-impres.
- 7.** Remove tray, trim excess impression material and/or tray that would otherwise distort natural lip contour.
- 8.**  Review and compare integrity of Final Impressions and AMD impressions. Impressions should be similar. Correct if necessary.
- 9.** Remove lip support and re-insert maxillary tray.



- 10.**  Choose correct mandibular tray and insert tray for verification of fit. Verify position of central bearing pin. Rehearse border movements to ensure tray is adequately positioned to record the Gothic Arch tracing. Trim tray if necessary.
- 11.** Apply AvaDent Adhesive to tray.
- 12.**  Using AvaDent Border Molding Material, completely fill tray and position tray so that tracing table is aligned with the desired horizontal plane of occlusion and parallel to the mandible and the maxillary tray.
- 13.** Remove tray, wash with AvaDent Impression Material and re-impres.
- 14.** Remove tray, trim excess impression material and/or tray that would otherwise distort natural lip contour.
- 15.**  Review and compare integrity of Final Impressions and AMD impressions. Impressions should be similar, correct if necessary.
- 16.**  Re-insert both trays and observe that trays are parallel and not touching. Trim if necessary.
- 17.**  Establish OVD by adjusting central bearing pin with the AvaDent Adjustment Tool. Do not allow mandible to rotate forward around central bearing pin. Observe trays are still parallel A/P and laterally.
- 18.** Remove maxillary tray and finger tighten central bearing pin lock nut.

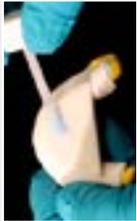


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Clinical Checklist

Complete over Complete - AMD

19. Remove mandibular tray. Paint tracing table and inferior surface of maxillary tray with adhesive.



20. Replace trays and perform gothic arch tracing.



21. Remove mandibular tray. Create divot at apex of tracing arrow with bur.



22.  Re-insert tray and relocate central bearing pin into divot.



23. Express AvaDent Bite Registration material liberally into space between trays.



24.  Remove AMD, visually verify central bearing pin has remained in divot. Correct if necessary.



25.  Trim excess impression material and/or trays which may cause un-natural contour of facial features.



26. Replace lip support and adjust to correct lip contour.



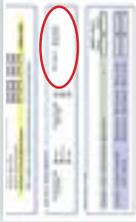
27.  The lips should now close around AMD comfortably and AMD should not be discernible when in patient's mouth. This will be the basis for your final aesthetic verification.



28. Insert Horizontal Occlusal Plane to establish horizontal plane of occlusion.



29. Record number on Rx and remove Horizontal Occlusal Plane.



30.  Mark midline on lip support with permanent marker.



31.  Draw incisal edge across entire lip support with permanent marker.



32. Align Self-Adhesive Aesthetic Transparency to midline and incisal edge and affix.



33. Record Aesthetic Transparency size and gingival height on Rx.



34.  Insert AMD. Ask patient to smile. Verify aesthetics, including vertical, midline, incisal edge and overall facial features. AMD should appear neutral in mouth while at rest. Make aesthetic changes if necessary.



35. Take photos of patient at rest and smiling.



36. Complete Rx and send to laboratory with Impressions, AMD and photos



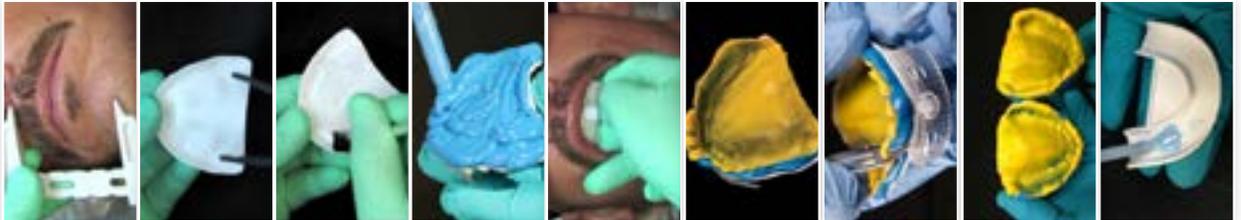
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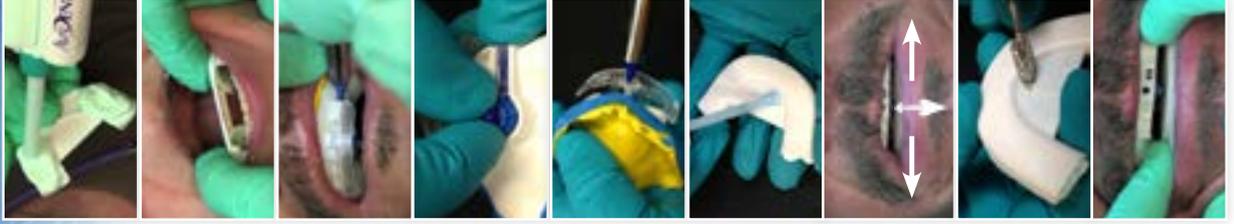
Clinical Checklist

Single Arch with Lower Tracing Tray

- 1. Establish OVD and mark nose (or filtrum) and chin with permanent marker for future reference.
- 2. Select correct sized maxillary AMD tray. Trim if necessary.
- 3. Apply AvaDent Adhesive to tray.
- 4. Fill tray with AvaDent Border Molding material.
- 5.  Position tray so it seats completely onto the ridge, is centered on patient's midline, is horizontally correct to patient's inter-pupillary line and is parallel to mandible.
- 6. Remove tray, wash with AvaDent Impression Material and re-impress.
- 7. Remove tray and trim excess impression material and/or tray that would otherwise distort natural lip contour.
- 8.  Review and compare integrity of final impressions and AMD impressions. Impressions should be similar. Correct if necessary.
- 9. Choose correct mandibular tray and apply AvaDent Adhesive to tray.



- 10. Using AvaDent Bite Registration material, fill posterior portion of tray.
- 11.  Position tray over opposing dentition leaving lower anterior teeth exposed.
- 12.  Establish OVD by adjusting central bearing pin until lower edge of lip support displays proper vertical overlap and trays are not touching. Trim trays if necessary.
- 13. Finger tighten central bearing pin locking nut to secure position. If insufficient room, remove locking nut and proceed.
- 14. Remove lip support.
- 15. Remove mandibular tray. Paint tracing table and inferior surface of maxillary tray with adhesive.
- 16. Replace trays and perform gothic arch tracing.
- 17. Remove mandibular tray and create divot at apex of tracing arrow with bur.
- 18.  Re-insert tray and relocate central bearing pin into divot.



Clinical Checklist

Single Arch with Lower Tracing Tray

- 19.** Express AvaDent Bite Registration material liberally into space between trays.
- 20.** Remove AMD and visually verify central bearing pin has remained in divot and trays are not touching. Correct if necessary.
- 21.**  Trim excess impression material and/or tray which may cause un-natural contour of facial features.
- 22.** Replace lip support. Establish final lip contour.
- 23.**  The lips should now close around the AMD comfortably and AMD should not be discernible when in patient's mouth. This will be the basis for your final aesthetic verification.
- 24.** Insert Horizontal Occlusal Plane to establish horizontal plane of occlusion.
- 25.** Record number on Rx and remove Horizontal Occlusal Plane.
- 26.**  Mark midline on lip support with permanent marker.
- 27.**  Draw incisal edge across entire lip support with permanent marker. Confirm desired vertical overlap as identified with incisal line.



- 28.** Align Aesthetic Transparency to midline and incisal edge and affix.
- 29.** Record Aesthetic Transparency size and gingival height on Rx.
- 30.** Remove AMD. Wash entire mandibular tray with AvaDent Border Molding material.
- 31.**  Insert AMD and record entire occlusion of opposing dentition. Confirm your anterior vertical overlap.
- 32.**  Remove AMD. Ensure opposing is captured. Trim excess impression material that may cause un-natural contour of facial features.
- 33.**  Insert AMD and ask patient to smile. Verify aesthetics including: vertical, midline, incisal edge and overall facial features. AMD should appear neutral in mouth while at rest. Make aesthetic changes if necessary.
- 34.** Take photos of patient at rest and smiling.
- 35.** Complete Rx.
- 36.** Send final impression, AMD, photos and completed Rx to laboratory.

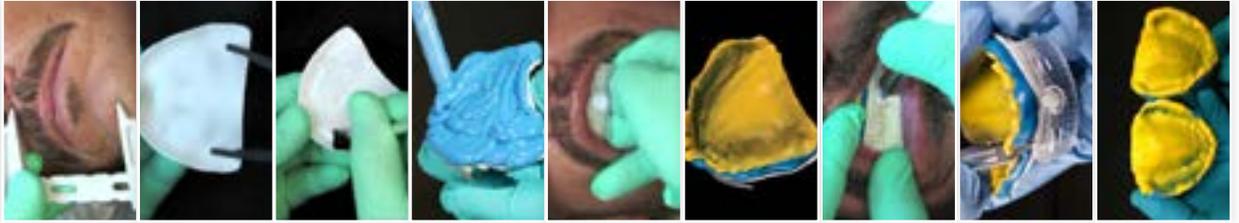


= This quality control check alerts you to critical steps required to minimize potential error in your AvaDent Digital Record and Final AvaDent.

Clinical Checklist

Single Arch Upper without Lower Tracing Tray

- 1.** Establish OVD and mark nose (oriltrum) and chin with permanent marker for future reference.
- 2.** Select correct sized maxillary AMD tray, trim if necessary.
- 3.** Apply AvaDent Adhesive to tray.
- 4.** Fill tray with AvaDent Border Molding material.
- 5.**  Position tray so it seats completely onto the ridge, is centered on patient's midline, is horizontally correct to patient's inter-pupillary line and is parallel to mandible.
- 6.** Remove tray, wash with AvaDent Impression Material and re-impres.
- 7.**  Adjust lip support to final lip contour.
- 8.**  Remove tray and trim excess impression material and/or tray that would otherwise distort natural lip contour. Re-insert tray.
- 9.**  Review and compare integrity of Final Impressions and AMD impressions. Impressions should be similar. Correct if necessary.



- 10.** Insert Horizontal Occlusal Plane to establish horizontal plane of occlusion.
- 11.** Record number on Rx and remove Horizontal Occlusal Plane.
- 12.**  Mark midline on lip support with permanent marker.
- 13.**  Draw incisal edge across entire lip support with permanent marker. Confirm desired vertical overlap is identified with incisal line.
- 14.** Align Aesthetic Transparency to midline and incisal edge and affix.
- 15.** Record Aesthetic Transparency size and gingival height on Rx.
- 16.** Remove AMD. Apply AvaDent Adhesive to inferior surface of tray.
- 17.** Place AvaDent Bite Registration stops in each tuberosity area.
- 18.**  Establish OVD by manipulating mandible into stops until desired vertical overlap is achieved. Allow material to polymerize.



= This quality control check alerts you to critical steps required to minimize potential error in your AvaDent Digital Record and Final AvaDent.

Clinical Checklist

Single Arch Upper without Lower Tracing Tray



- 19.** Remove AMD and wash entire mandibular tray, including stops, with AvaDent Border Molding material.
- 20.**  Insert AMD and record entire occlusion of opposing dentition. Confirm anterior vertical overlap.
- 21.**  Remove AMD. Ensure opposing is captured and trim excess impression material that may cause un-natural contour of facial features.
- 22.**  Insert AMD and ask patient to smile. Verify aesthetics including: vertical, midline, incisal edge and overall facial features. AMD should appear neutral in mouth while at rest. Make aesthetic changes if necessary.
- 23.** Take photos of patient at rest and smiling.
- 24.** Complete Rx.
- 25.** Send Final Impressions, AMD, photos and completed Rx to laboratory.



= This quality control check alerts you to critical steps required to minimize potential error in your AvaDent Digital Record and Final AvaDent.

AvaDent™ Immediate Dentures

Only AvaDent™ offers the dental professional a simplified process for delivering an immediate denture as well as a comprehensive immediate system that allows them to treatment plan a final definitive AvaDent™ all within a 100% digital environment.

As with all immediates the process starts by taking impressions and gathering inter-occlusal records. With AvaDent™, this is all done at the first appointment. (See impression taking and creating an inter-occlusal record options below.)

The impressions and the records are then sent to the laboratory where they are scanned, a virtual model is created and the remaining teeth are digitally removed from the virtual model. An AvaDent™ Immediate Denture is then designed and the digital record is stored for future use. The AvaDent™ Immediate Denture is unique in that it is precision-milled with a larger, deeper intaglio surface, removing the base of the teeth and excess acrylic material from inside the ridge so as to maintain optimal occlusion. This creates a thinner, light-weight denture designed to accommodate the higher and/or uneven ridges generally found with immediate cases.

If bone reduction is required, the doctor now has the option to order an AvaDent™ Bone Reduction Guide. The AvaDent™ Bone Reduction Guide is a clear, milled, AvaDent™ baseplate used to assist in alveoloplasty and tissue contouring to help ensure proper seating of the AvaDent™ Immediate Denture. The AvaDent™ Bone Reduction Guide is digitally reduced and precision-milled to exactly match the design of the AvaDent™ Immediate Denture. An e-mail showing a digital arch with the proposed reduction is sent to the doctor for approval or modification prior to milling.

The AvaDent™ Digital Denture is then sent to the doctor, the remaining teeth are extracted from the patient, the AvaDent™ Bone Reduction Guide is utilized to remove and contour excess tissue and the denture is seated. As the tissue heals over the next several months, the denture is relined and adjusted.

In some cases this becomes the final denture. However, for the dental professional and patient who want the function and aesthetics of a definitive AvaDent™ after the healing process is complete, the AvaDent™ Immediate Denture System offers an extraordinary solution.

Using the AvaDent™ digital record, an AvaDent™ Provisional Denture is created and sent to the dental professional. The AvaDent Provisional Denture is created with the exact same precision parameters as an AvaDent™ Digital Denture with one significant difference. Instead of using manufacturers' denture teeth, the APD teeth are 100% milled from an added layer of tooth colored acrylic.

Once the extraction sites have healed, the AvaDent™ Provisional Denture can be lined, equilibrated and worn by the patient as a temporary prosthesis until the definitive AvaDent™ is completed.

The adjusted AvaDent™ Immediate Denture along with an occlusal bite record are then sent to the lab. They are scanned, merged with the existing file and the Definitive AvaDent™ Digital Denture is fabricated.

The final step is the delivery of the definitive AvaDent™ Digital Denture to the patient. As with all AvaDents, the permanent digital record is retained.



Impression Technique for AvaDent™ Immediate Denture

1. Choose or create an impression tray that allows you to capture the remaining dentition, the edentulous ridge (if any) and the appropriate border depth to stabilize the AvaDent™ Immediate Denture.
2. Properly prepare tray to allow for space of existing dentition by placing 1.0 - 3.0 mm of relief wax over existing dentition and try in the tray. The wax will be removed prior to impression.

Tip: Place utility wax around the cervical of a recessed tooth and any undercuts to allow for easy removal of tray. Alternatively, use light cured block-out resin.

3. Express AvaDent™ Border Molding Material onto the borders of the tray. Express one rope of material just below the apex of the tray border all the way around the tray. Express a second rope on top of the apex of the border all the way around the tray. Fill the remainder of the tray with adequate amount of border molding material.
4. Express AvaDent™ Border Molding Material around the existing dentition.
5. Insert the filled tray into the mouth and perform the necessary border molding movements to capture the anatomy of the remaining dentition, the edentulous ridge (if any) and the border.
6. Make a wash impression using AvaDent™ Impression Material to capture additional anatomy of the edentulous ridge, border or dentition if necessary.

Option for Impression of Class III Mobile Teeth

In cases where the teeth are extremely mobile, choose or create an impression tray that allows you to capture the remaining dentition, the edentulous ridge (if any) and the appropriate border depth to stabilize the AvaDent™ Immediate Denture. Place utility wax around the cervical portion of existing dentition to allow for easy removal of tray. Make an alginate impression and pour a stone cast. Depending on the remaining dentition scenario, the inter-occlusal record will be created as described below and returned with the stone casts.

Please DO NOT remove teeth from casts!

Creating an Inter-Occlusal Record

There are many possible scenarios which may present in an immediate denture case. Careful assessment needs to be made concerning the remaining dentition as well as the OVD, centric relation and aesthetic records. There are four principle categories from which a record is created. (See list below) An accurate inter-occlusal record is required for the successful design and completion of the AvaDent™ Immediate Denture. This record can be created with the AMD or a modified version of it. The following examples show a variety of resourceful solutions.

- Type 1.** Has OVD, sufficient intercuspation and aesthetic reference available.
- Type 2.** Has OVD, posterior teeth present and no aesthetic reference available.
- Type 3.** No OVD, available anterior teeth and has aesthetic reference available.
- Type 4.** No OVD and no aesthetic reference available.

Type 1. OVD and Aesthetic Reference Available

When a patient has sufficient remaining opposing teeth that interdigitate and an OVD position and CR can be confirmed or established, make an inter-occlusal record with AvaDent™ Bite Registration Material to record the position making sure to capture the anatomy of the remaining dentition and the edentulous ridge (if any). Case will be designed using existing aesthetic references unless otherwise indicated.



Type 2. OVD and No Aesthetic Reference Available

When a patient has sufficient remaining opposing teeth that interdigitate and an OVD position and CR can be confirmed or established, make an inter-occlusal record with AvaDent™ Bite Registration Material. Prior to placing the bite registration material, hold in place the Compact AMD in the appropriate anterior position and incorporate it into the bite registration material. Establish aesthetic records including lip support, midline, horizontal plane, incisal edge, mold size and cervical line on the Compact AMD. If the Compact AMD cannot be accommodated, attach the lip support alone. The mandibular AMD tray is also adapted according to the remaining dentition and appropriate AMD procedure is followed for AvaDent™ complete over complete or single arch denture.



Type 3. No OVD, Available Anterior Teeth

When a patient has remaining anterior dentition and the aesthetic record is present including midline, incisal edge, horizontal plane, make an inter-occlusal record with AvaDent™ Bite Registration Material to record the correct OVD and centric relation making sure to capture the anatomy of the remaining dentition and the edentulous ridge (if any). Modified AMD trays may be used to establish correct OVD and centric relation if applicable and AvaDent™ complete over complete or single arch protocol is followed.





Type 4. No OVD, No Aesthetic Reference

When a patient has no aesthetic reference with the remaining dentition and the teeth do not interdigitate confirming OVD or centric relation, use an appropriately modified AMD to establish the correct inter-occlusal record. Follow existing AvaDent™ protocol for AvaDent™ complete over complete or single arch for creating the appropriate AMD. Establish aesthetic records including OVD, centric relation, lip support, midline, horizontal plane incisal edge, mold size and cervical line.



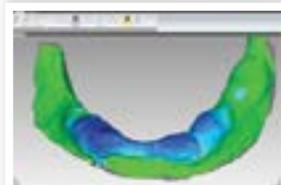
Extraction Alveoloplasty, Tissue Contouring and AvaDent™ Immediate Denture Insertion

AvaDent™ Bone Reduction Guide Option

If bone reduction is required, the doctor now has the option to order an AvaDent™ Bone Reduction Guide (ABRG). The ABRG is a clear AvaDent™ base-plate, surgical guide used to perform an alveoloplasty and tissue contouring during immediate and implant cases.



An e-mail showing a digital arch with the proposed reduction is sent to the doctor for approval or modification prior to milling. The AvaDent™ Immediate can now be designed for optimal aesthetics. The ABRG features easy cut away surgical guide cutouts.



AvaDent™ Immediate Denture

The AvaDent™ Immediate Denture is a unique milled prosthesis specifically designed to accommodate a higher ridge and a soft relines. As the healing process continues over time, relines and adjustments can be made to this healing denture as is customary.



AvaDent™ Provisional Denture Option

The AvaDent™ Provisional Denture is a milled duplicate of the original AvaDent™ Immediate Denture which will be worn as an interim denture until the definitive AvaDent™ is completed. Once healing has taken place, it will be re-lined chair side, adjusted occlusally and worn until the definitive AvaDent™ Denture arrives.



Optionally, the adjusted AvaDent™ Provisional Denture can be relined, adjusted and sent to the lab as the design for the creation of the definitive AvaDent™ Digital Denture. The AvaDent™ Provisional Denture can remain with the patient.

IMPORTANT: *A complete bite registration is to be included with the returned AvaDent™ Provisional Denture or AvaDent™ Immediate Denture.*

Note: *Additional adjustments may be included upon request. Instructions are indicated on the prescription and sent with the AvaDent™ Provisional Denture or AvaDent™ Immediate Denture to be finalized.*

Delivery of the final AvaDent™

The AvaDent™ Immediate Denture (or AvaDent™ Provisional Denture) is scanned and merged with the original record and a definitive AvaDent™ denture is created that incorporates any changes that were required. Any additional changes that were requested in the prescription are also entered by the designing technician.

The final AvaDent™ is then milled, new teeth bonded in, finished and polished and returned for delivery. The definitive AvaDent™ is inserted, final adjustments are made and the process is complete.



The AvaDent™ Reference Denture Record procedure (RDR) is an optional method which can be used to obtain the necessary records to create a new AvaDent™ Digital Denture using the patient's existing denture. The process can be used for totally edentulous, single arch and implant retained cases. The following is a step by step process for a totally edentulous patient.

1. Assess the patient's old dentures for vertical dimension of occlusion, the rest position, centric relation and aesthetics.



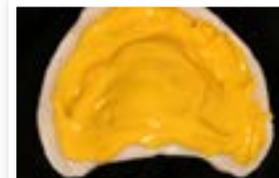
2. Duplicate the patient's existing denture using your preferred method. The duplicate will become the template for your RDR.



3. To record the vertical dimension, insert the duplicated dentures into the patient's mouth and ensure that these are correctly seated. Record the Occlusal Vertical Dimension (OVD) and measure with an AvaDent™ caliper. Assess whether this measurement will need to be adjusted.



4. Reline the duplicated dentures with light-body AvaDent™ Impression Material. The impression material will increase the OVD.



5. Re-assess the OVD; if it needs to be increased, place wax or composite stops onto the occlusal surfaces. If the OVD needs to be decreased, reduce the occlusal surfaces.



6. To confirm aesthetics, verify patient's midline, incisal edge, gingival height and horizontal plane of occlusion.



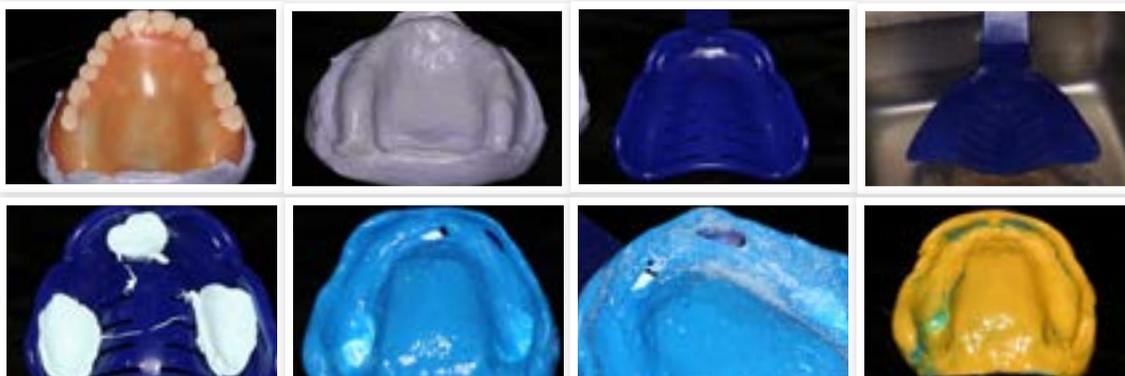
7. Mark changes with a permanent marker. For additive changes to incisal edges of the anterior teeth, posterior occlusal plane or flange contours, add wax or composite resin as needed to represent new aesthetics.



8. Verify the centric relation position and record with AvaDent™ Bite Registration material.



9. Make final impressions according to procedures described in the AvaDent™ complete over complete and/or single arch techniques.



10. Disinfect and ship RDR and Final Impressions to the lab for fabrication of final AvaDent™ Digital Denture. Also, please include photos of patient smiling and at rest for aesthetic verification.



11. Delivery of your final AvaDent™ Digital Denture.

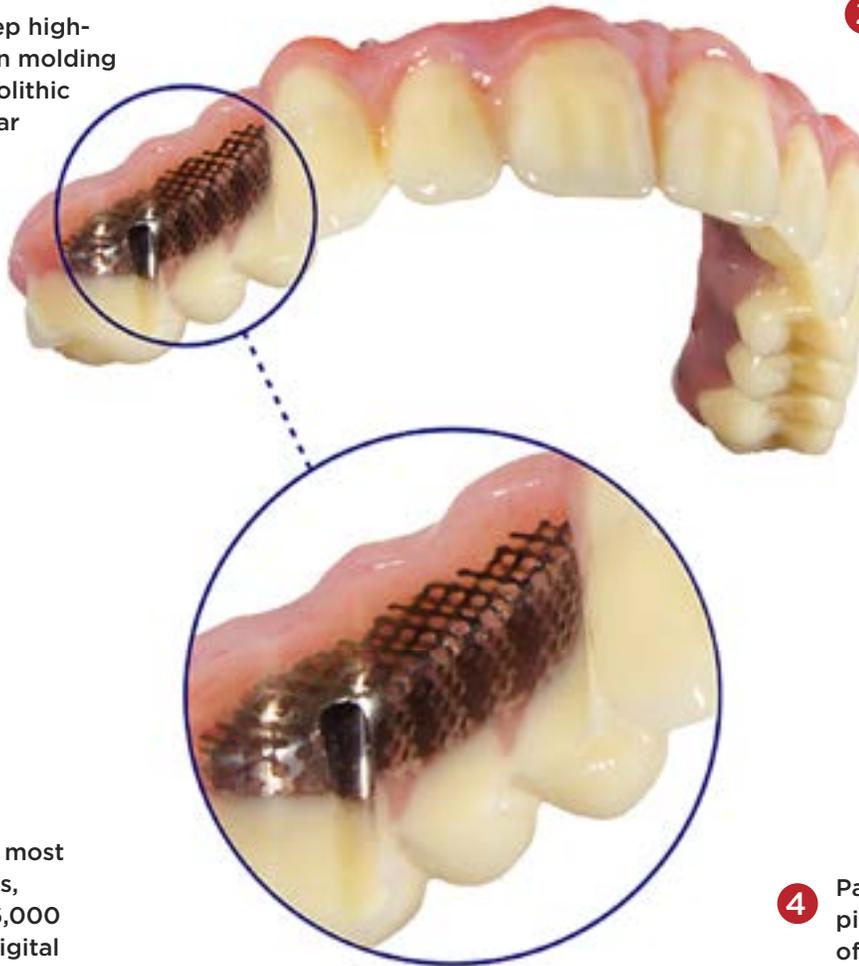




AvaDent Monolithic Fixed Hybrid

WITH INTEGRATED TI-BAR

1 Patented one-step high-pressure injection molding permits the monolithic prosthesis and bar with implant interfaces to be milled concurrently.



2 Printed medical grade Ti-bar with open mesh ensures maximum adhesion between PMMA and titanium.

3 Concurrently designed bar and teeth ensure that the occlusion and implant interfaces are in perfect alignment.

5 Compatible with most implant platforms, with more than 6,000 implants in the digital library.

4 Patented true monolithic (one-piece) construction means no risk of tooth pop-offs or delamination.

Details

- Monolithic PMMA materials with ultra-high-pressure forging
- Medical-grade titanium (Ti6Al4V-ELI) • 510k cleared



In my private practices, we exclusively use the AvaDent Monolithic Fixed Hybrid with Integrated Titanium Bar as we offer our patients the most innovative therapies in dentistry today. When I am educating with the Digital Dentistry Institute, this technology is emphasized to reduce complications with acrylic hybrid treatments to prevent delaminations and fracture of prostheses.

Sundeep Rawal, DMD
Florida Prosthodontics

HYBRID SINGLE ARCH

SCANNER AVAILABLE AT CLINICAL APPOINTMENT (SCAN REFERENCE ON MASTER CAST)

DESCRIPTION

This protocol can be used for treating maxillary or mandibular single arches (written for maxillary) and when a scanner is available at the clinical appointment. The patient's existing prosthetic can be scanned attached to the master cast and then returned to the patient.

CLINICAL RECORDS NEEDED

1. Final verified maxillary impression
 - a. Make verified soft tissue maxillary master cast
2. Mandibular Impression
 - a. Make mandibular opposing cast
3. Maxillary screw-retained existing prosthetic (temporary converted denture)
 - a. Make maxillary master cast
4. Interocclusal record between existing prosthetic and natural opposing

ARTICULATING AND SCANNING CLINICAL RECORDS (See figures below, reference steps)

1. Mount maxillary master cast
2. Screw temp/try-in to the maxillary master cast
3. Use interocclusal record to align opposing mandibular cast to the mounted maxillary master cast
4. Set articulator pin to 0
5. Mount opposing mandibular cast
6. Make putty verification matrix between maxillary master cast and mandibular opposing cast
7. Remove maxillary master cast from articulator
8. Scan maxillary temp/try-in on the master cast
 - a. If using a patient's provisional it can go back to the patient after scan complete (CONFIRM SCAN BEFORE RETURNING)



HYBRID SINGLE ARCH

SCANNER AVAILABLE AT CLINICAL APPOINTMENT (SCAN REFERENCE ON MASTER CAST)

RESULT:

1. Mounted maxillary verified soft tissue master cast
2. Mounted mandibular opposing cast
3. Putty Verification Matrix



RECORDS NEED TO BE SHIPPED TO AVADENT AND SUBMIT SCAN

TIP: Additional scans can be sent to AvaDent to begin digital production while records are in transit

1. Bite: Maxillary Master Cast + Mandibular Opposing Cast
 - a. Use putty verification matrix to scan casts independent of articulator
 - b. If scanner permits, records can be scanned on articulator (e.g. Sirona Ineos X5)
2. Maxillary Master Cast with 20 mm guide pins screwed in analogs
3. Maxillary Master Cast with Temp/Try-in (scan completed during articulation)
4. Mandibular Opposing Cast

HYBRID SINGLE ARCH

NO SCANNER AVAILABLE AT THE CLINICAL APPOINTMENT, SHIPPING SETUP REFERENCE

DESCRIPTION

This protocol can be used for treating maxillary or mandibular single arches (written for maxillary), when scanning is not possible at the clinical appointment, and if the clinician can ship the patient's reference prosthetic (either wax-up, try-in, or duplicated existing prosthetic) to AvaDent for scanning.

CLINICAL RECORDS NEEDED

1. Final verified maxillary impression
 - a. Make verified soft tissue maxillary master cast
2. Mandibular Impression
 - a. Make mandibular opposing cast
3. Maxillary screw-retained setup reference (either wax-up, try-in, or duplicated existing prosthetic)
4. Interocclusal record between setup reference prosthetic and natural opposing

ARTICULATING CLINICAL RECORDS (See figures below, reference steps)

1. Mount maxillary master cast
2. Attach screw-retained setup reference prosthesis to the maxillary master cast
3. Use interocclusal record to align mandibular opposing cast to the mounted maxillary master cast
4. Set articulator pin to 0
5. Mount mandibular opposing cast
6. Make putty verification matrix between maxillary master cast and mandibular opposing cast

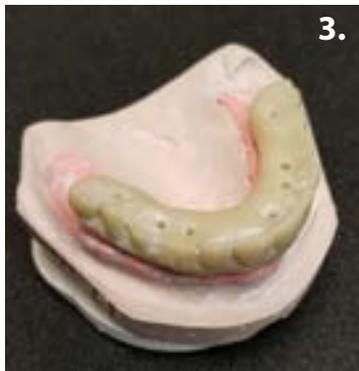


HYBRID SINGLE ARCH

NO SCANNER AVAILABLE AT THE CLINICAL APPOINTMENT, SHIPPING SETUP REFERENCE

RESULT:

1. Mounted maxillary verified soft tissue master cast
2. Mounted mandibular opposing cast
3. Screw Retained Reference Prosthetic
4. Putty Verification Matrix



RECORDS NEED TO BE SHIPPED TO AVADENT

TIP: If scanner is available after clinical appointment, the following scans can be sent to AvaDent to begin digital production while records are in transit

1. Bite: Maxillary Master Cast + Mandibular Opposing Cast
 - a. Use putty verification matrix to scan casts independent of articulator
 - b. If scanner permits, records can be scanned on articulator (e.g. Sirona Ineos X5)
2. Maxillary Master Cast with 20 mm guide pins screwed in analogs
3. Maxillary master cast with screw-retained setup reference
4. Mandibular Opposing Cast

HYBRID SINGLE ARCH

NO SCANNER AVAILABLE AT THE CLINICAL APPOINTMENT, UNABLE TO SHIP SETUP REFERENCE

DESCRIPTION

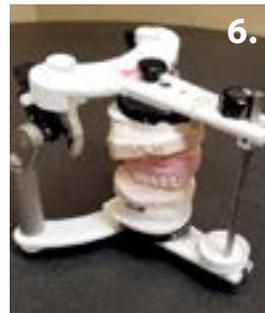
This protocol can be used for treating maxillary or mandibular single arches (written for maxillary), when there are no scanning capabilities at the clinical appointment, and the clinician cannot ship the patient's existing reference prosthetic to the lab or AvaDent. The reference for the setup (existing prosthesis) will be duplicated in stone, cross mounted to opposing, and returned to the patient.

CLINICAL RECORDS NEEDED

1. Final verified maxillary impression
 - a. Make verified soft tissue maxillary master cast
2. Mandibular Impression
 - a. Make mandibular opposing cast
3. Maxillary prosthetic impression
 - a. Make maxillary master cast
4. Interocclusal record between existing prosthetic and natural opposing

ARTICULATING CLINICAL RECORDS

1. Mount maxillary master cast
2. Attach screw-retained existing prosthesis to the maxillary master cast
3. Use clinical bite record to align mandibular opposing cast to the mounted maxillary master cast
4. Set articulator pin to 0
5. Mount mandibular opposing cast
6. Make putty verification matrix between maxillary master cast and mandibular opposing cast
7. Remove master cast and setup reference from articulator
 - a. If using a patient's existing temporary, it can go back to the patient
8. Place interocclusal record on the mounted opposing cast
9. Use interocclusal bite record to align maxillary reference cast to mandibular opposing cast
10. Mount maxillary reference cast



HYBRID SINGLE ARCH

NO SCANNER AVAILABLE AT THE CLINICAL APPOINTMENT, UNABLE TO SHIP SETUP REFERENCE

RESULT:

1. Mounted maxillary verified soft tissue master cast
2. Mounted mandibular opposing cast
3. Mounted maxillary reference cast
4. Putty Verification Matrix



RECORDS NEED TO BE SHIPPED TO AVADENT

TIP: If scanner is available after clinical appointment, the following scans can be sent to AvaDent to begin digital production while records are in transit

1. Bite 1: Maxillary Master Cast + Mandibular Opposing Cast
 - a. Use putty verification matrix to scan casts independent of articulator
 - b. If scanner permits, records can be scanned on articulator (e.g. Sirona Ineos X5)
2. Bite 2: Maxillary reference Cast + Mandibular Opposing Cast
 - a. Use a putty verification matrix to scan casts independent of articulator
 - b. If scanner permits, records can be scanned on articulator (e.g. Sirona Ineos X5)
3. Maxillary Master Cast with 20 mm guide pins screwed in analogs
4. Maxillary Reference Cast
5. Mandibular Opposing Cast

www.AvaDent.com

Global Dental Science
15730 N 83rd Way • Scottsdale, AZ 85260

CustomerServiceUS@AvaDent.com
Tel: 480-275-2736

 www.facebook.com/AvaDentDigitalDentures
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