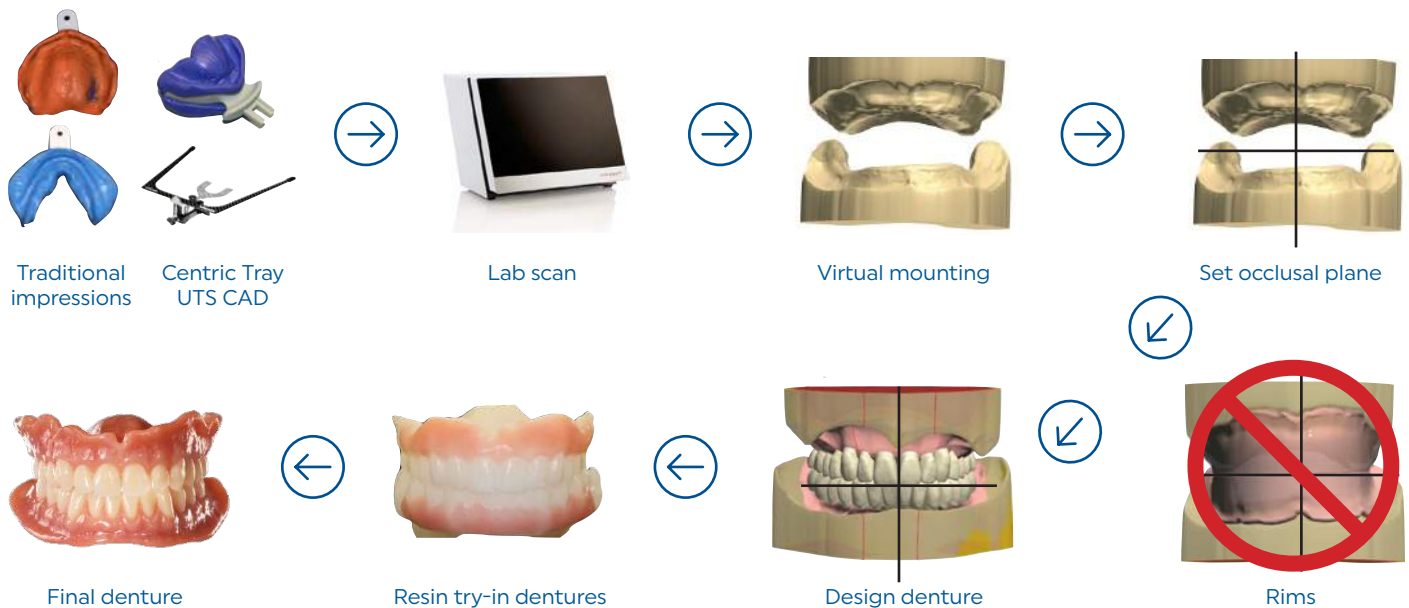


"Direct to try-in" workflow



➤ Dentures are designed using information provided by the Denture Gauge and/or Papillmeter. If no information is provided, then average values will initially determine tooth position.

- The **Centric Tray** and **UTS CAD** tools are unique to the **"Direct to try-in workflow"**.
- The Centric Tray record and impressions are scanned and virtually mounted.
- The software will assign an occlusal plane template using the UTS CAD information. This template will act as a guide and reference for setting the new denture teeth.
- Note that the rim stage is eliminated and the output will go directly to fabricating a try-in denture. Thus the name of the workflow **"Direct to try-in"**.

Impressions

Impression options



Alginate
two phase



PVS
putty



PVS
putty + wash

- There is a multitude of impression materials and technique options to choose from.
- The author has selected the above options for discussion, however, the clinician could certainly use their familiar traditional materials and techniques if desired.
- It should be noted that the alginate option would require the impressions to be either scanned immediately or poured and prepared as casts which could then be scanned.

Impressions

AccuDent® XD alginate impression system



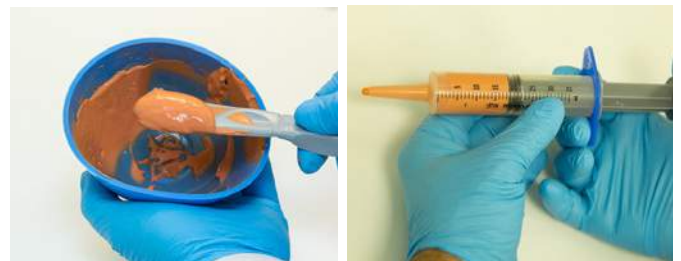
AccuDent XD

AccuDent XD is a two phase alginate system consisting of a light body syringe material and a heavy body tray material.



Syringe material

The syringe material is mixed first and loaded into the syringe provided with the kit. It has a 30 second longer working time which compensates for the mixing and loading time.



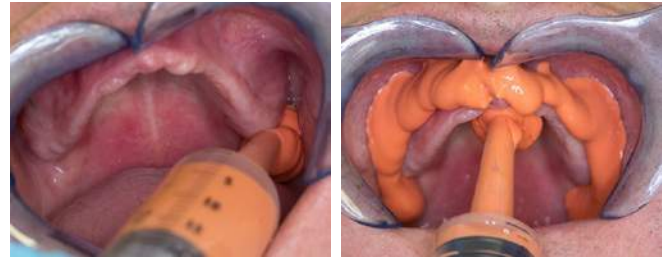
Tray material

The Tray material is more viscous. It is suggested that a small amount is first loaded in the tray and pressed to engage the retentive holes in the tray.



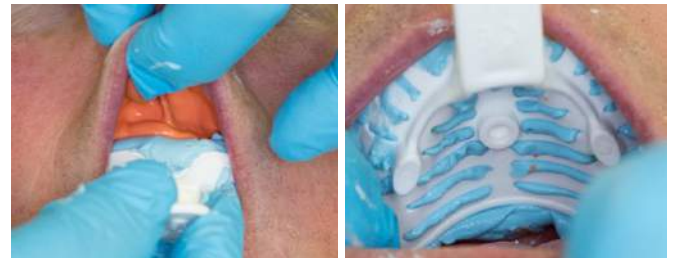
Syringe material injection

The syringe material is injected into the vestibule and some into the anterior palate area.



Seating tray

The tray is inserted and seated until the syringe material begins to express over the borders. It is suggested to not overseat the impression.



Tray removal

After the material has set, carefully remove the tray by breaking the peripheral seal first and then rotating the tray from the mouth.



Completed impressions

Impressions are inspected for proper extension and accuracy.



Impressions

Virtual® XD PVS impression putty material



Thermoplastic trays

The AccuDent® XD system has a complete assortment of dentate and edentulous impressions trays. A major feature of the trays is the thermoplastic property which allows the tray to be modified by soaking in hot water.



Thermoplastic trays

An example of tray modification is shown for the mandibular edentulous tray in the master notch areas.



Thermoplastic trays

An example of tray modification is shown for the maxillary edentulous tray in the retrozygomatic areas.



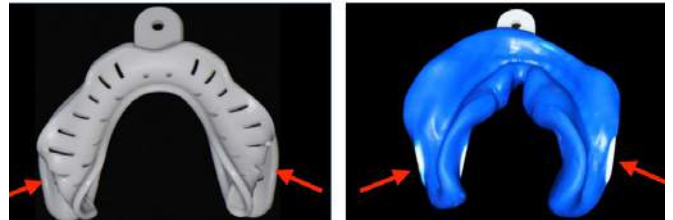
Virtual XD putty

Virtual XD impression putty is an excellent material to make preliminary impressions for the edentulous mouth. Its viscosity helps to extend the material into the vestibular borders. Typically two scoops of each material is sufficient for most impressions.



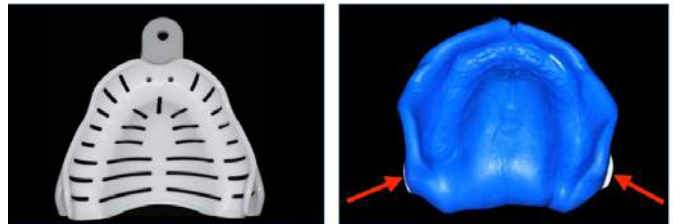
Virtual XD putty

This mandibular impression demonstrates the need to modify the mandibular impression tray in the master notch area which was previously mentioned.



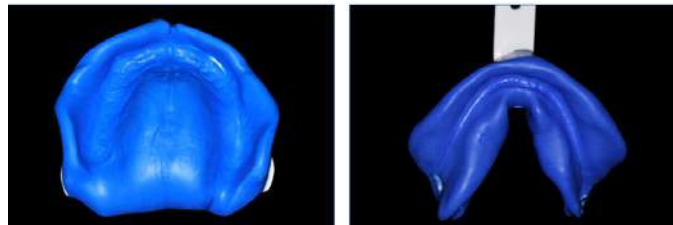
Virtual XD putty

This maxillary impression demonstrates the need to modify the impression tray in the retrozygomatic area as previously mentioned



Virtual XD putty

Impressions are inspected for peripheral extensions and accuracy.

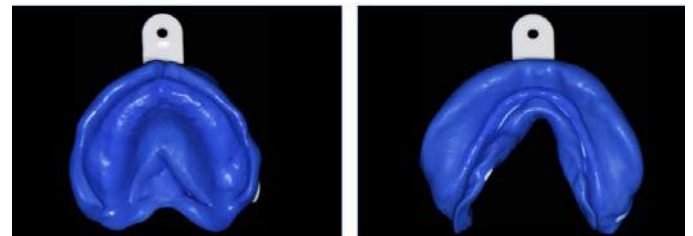


Impressions

Virtual® XD PVS impression putty + light body wash

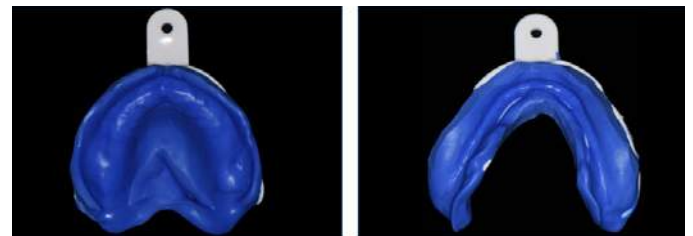


One of the major advantages of the putty system is that if an area is deficient (as noted for the palatal area) the impression can be corrected with a wash impression without having to remove the material and start over.

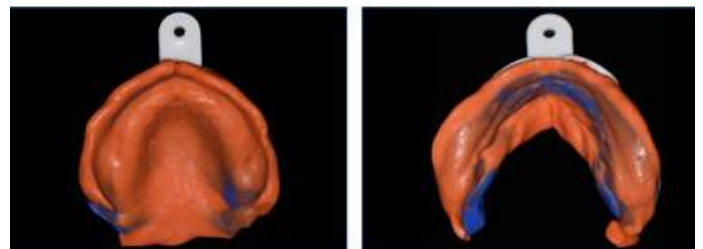


Also the added tissue detail will provide more accuracy when the impressions are scanned.

Excess material and border thicknesses are removed and all frenum attachments are also relieved.



The **Virtual XD light body material fast set** is selected for the wash impression. The impressions are inspected for extension and accuracy.



Centric Tray / UTS CAD records



Centric Tray



UTS CAD

The Centric Tray and UTS CAD are unique to the "Direct to try-in workflow".
The purpose of the Centric Tray record is to provide an inter-arch relationship at a select vertical dimension. The purpose of the UTS CAD is to provide facial plane information (Bipupillary & Camper's) to the design software, which that will help select the occlusal plane template.

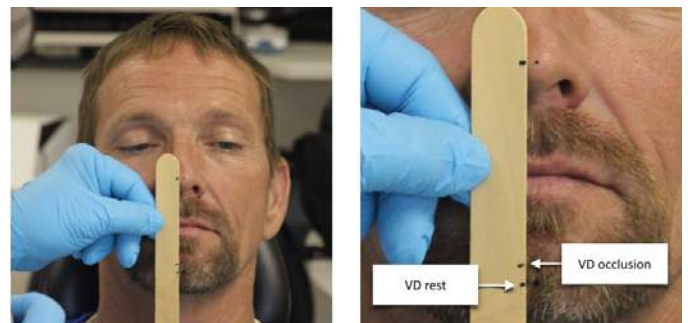
Centric Tray

Virtual XD PVS impression putty material



Predetermination of VDO

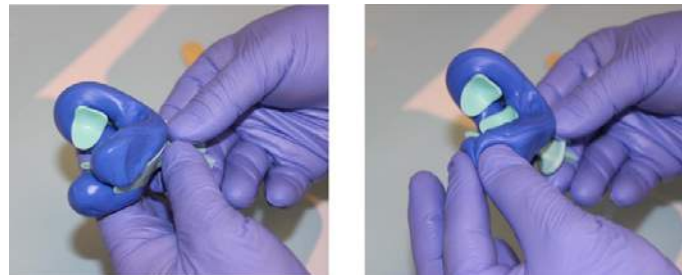
Reference marks placed on nose and chin. Patient is asked to relax to approximate "VD rest" position. A tongue blade is used to mark the reference marks. Another mark is made approximately 4mm closed to identify the VD of occlusion.



Mix and load Centric Tray

Two scoops of each putty material is sufficient for most patients; however, if a patient has severe resorption, three scoops may be required.

Thoroughly mix material and evenly load upper and lower chambers of the Centric Tray.



Guide patient to close

Once the tray is inserted have the patient relax and chin guide the patient closure.



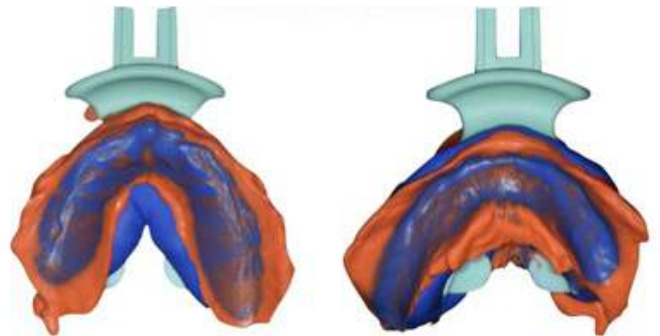
Close to previously determined VDO
Continue having the patient close until the predetermined VDO is obtained.



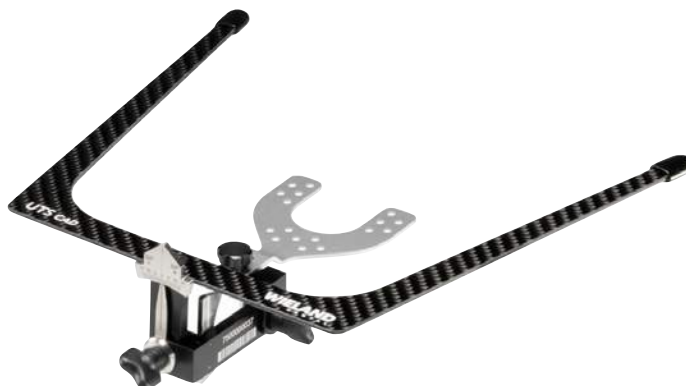
Centric Tray record
Inspect for adequate extension and accuracy.



Light body wash
If the record is insufficiently extended or has large voids a light body wash impression can be added. This is particularly useful if the patient has a severely resorbed arch that is left with little anatomical detail to record.



UTS CAD values



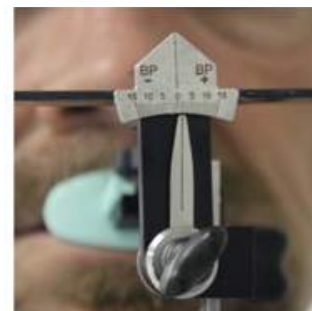
Centric Tray handle

The UTS CAD holder accepts the Centric Tray handle. It also accepts the Bitefork, which can be utilized for other procedures.



Bipupillary plane (BP)

This is very important to accurately assess. The value is recorded as BP.



Camper's plane (CE)

Camper's plane is referred to as CE (Camper's Even) and not CP because it is a more universal interpretation. This plane is not as critical to record since it will most often be changed due to other factors such as interarch distance, retromolar pad anatomy, etc. however, it does provide a starting position.



Tooth mould selection



Phonares® II

The ultimate tooth solution

Precision crafted with Nano Hybrid Composite, Phonares II represents the next generation of denture teeth offering a unique blend of unrivaled beauty and unparalleled performance.



BlueLine® DCL

The high performance tooth choice

BlueLine denture teeth easily blend next to natural teeth in partial denture cases, or give the complete denture wearer a beautifully natural and esthetic appearance.



Vivodent® S PE | S DCL

Two tooth lines — One esthetic result

Esthetically and prosthetically optimized, designed to suit the characteristics of each individual tooth. Constructed entirely of the highly cross-linked DCL polymer (Double Cross-linked) material

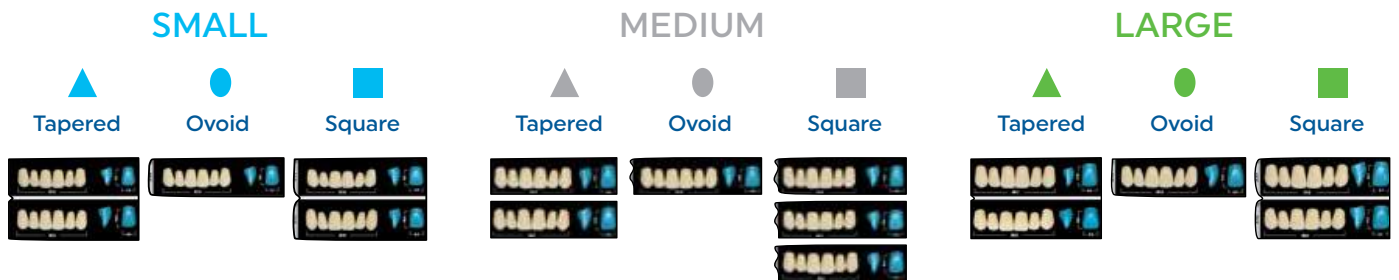


Full arch preset

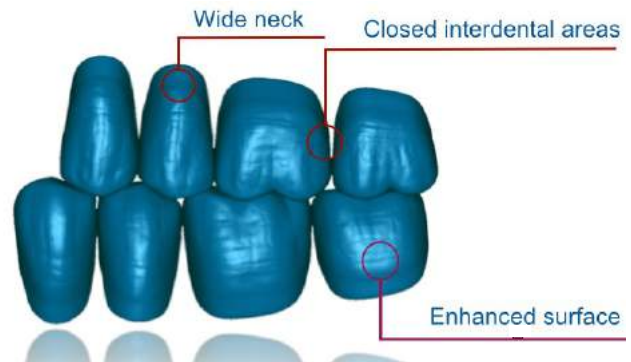
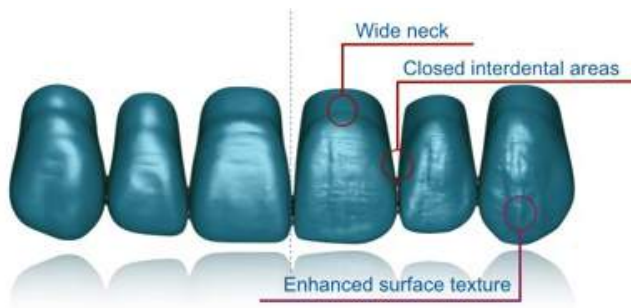
Most moulds in each mould system are **preset** as a complete coordinated anterior and posterior set-up. The selection of the maxillary tooth mould will automatically select the appropriate mandibular anterior and posterior teeth. The posterior teeth can also be selected as lingualized or semi-anatomic Orthotyp (20 degrees) occlusal schemes.

Tooth mould selection

SR Vivodent® S DCL



The maxillary anterior mould is the focus for tooth selection since the mandibular anterior teeth and posterior teeth are automatically selected to harmonize with the maxillary anterior mould. The Vivodent S DCL is composed of 16 maxillary anterior moulds, which are select moulds that have been enhanced cervically to provide an excellent architecture for milled gingiva papillae. They are uniquely organized to size (small, medium, large) and shapes (tapered, ovoid, square) to facilitate tooth selection.

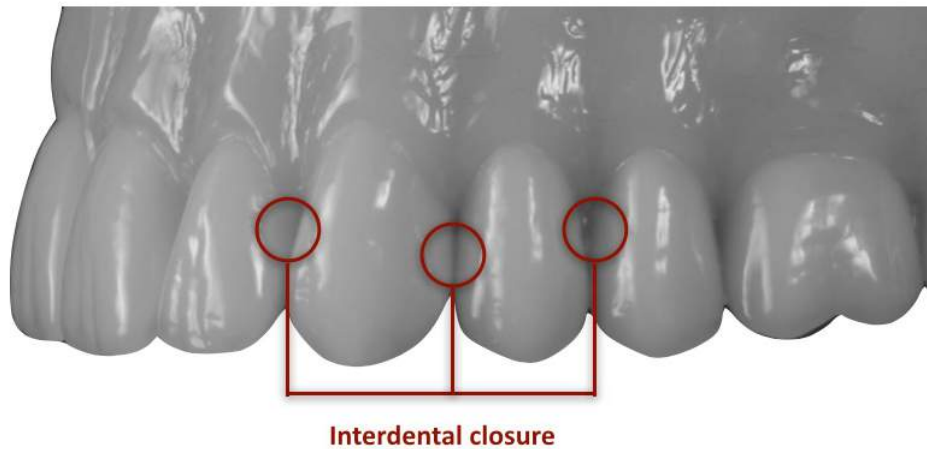


Tooth mould selection

Phonares® II

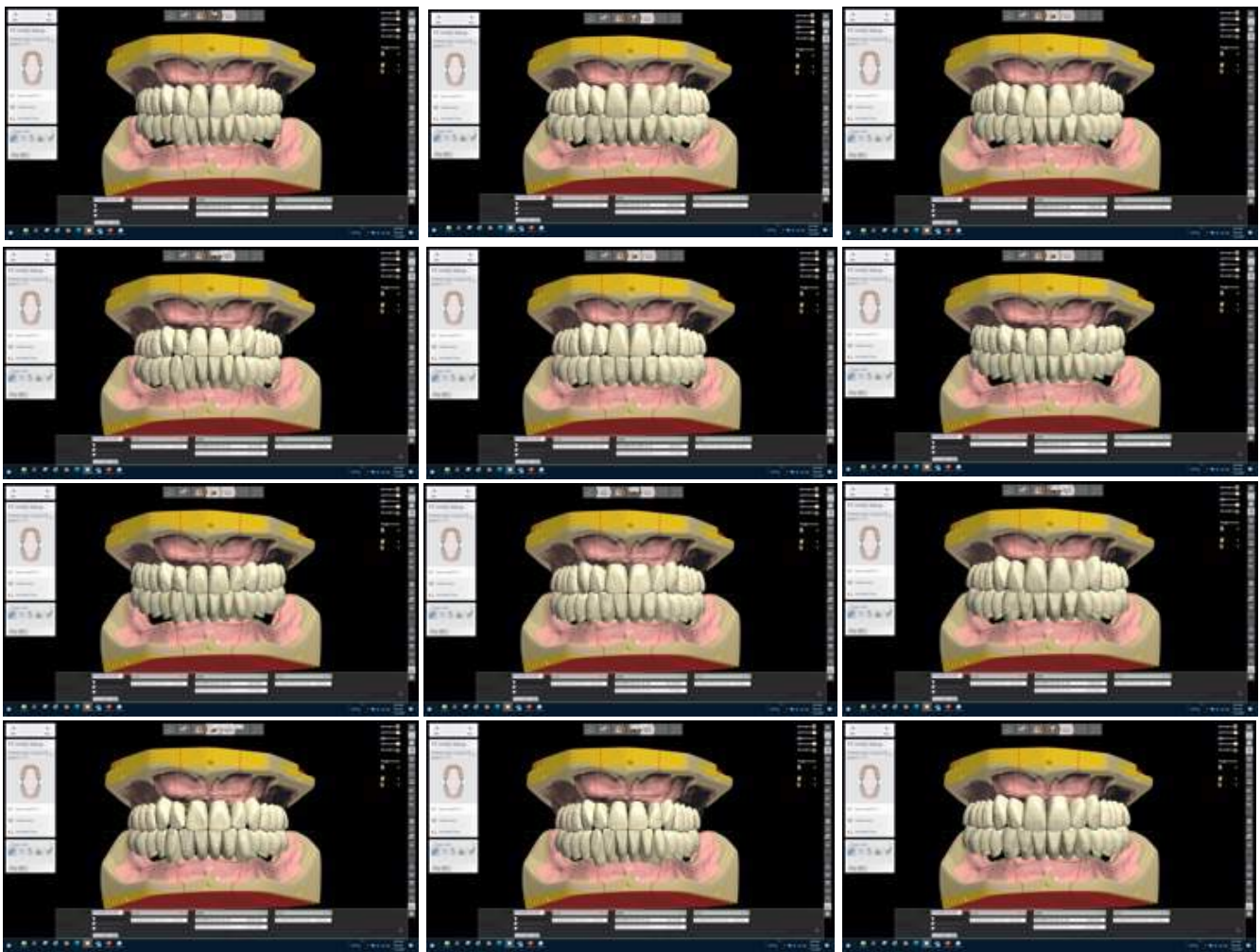


The organization of the Phonares II is also unique and is arranged according to size (small, medium, large), shape (soft, bold) and age (youthful, universal, mature). Similar to the Vivodent S DCL, the cervical enhancement provides an excellent milled gingiva architecture.



Tooth mould selection

Visualizing complete pre-set arches is a completely different experience than viewing teeth on a mounted card. Also, having the ability to change moulds with one click affords the opportunity to view many moulds quickly and provides more visual information to help select an appropriate tooth mould. In addition, milled teeth also provide the opportunity to change individual tooth shapes with morphing tools, so the possibilities are endless.



It is suggested that the clinician make themselves familiar with tooth moulds from Vivodent S DCL and Phonares II, since they both complement the digital process.

Manufacturing processes

Oversize Process

The denture base and denture teeth are separately milled but not final milled. This allows the teeth to be bonded to the base and returned to the mill for final milling. The final mill precisely removes excess bonding material and finishes the milling process.

Materials

- Ivotion Base
- Ivotion Dent
- Ivotion Dent Multi
- Ivotion Bond kit



Partially milled base & teeth

Bonding

Final mill

PRESCRIPTION:

Tooth moulds:

Maxillary anterior tooth mould: _____

Tooth shade:

Gingival shade:

Occlusion:

Monolithic Process

The Ivotion disc contains both the tooth and base in one disc. It uniquely fabricates the denture monolithically without a bonding interface.

Materials

- Ivotion disc



Ivotion disc

PRESCRIPTION:

Tooth moulds:

Maxillary anterior tooth mould: _____

Tooth shade:

Gingival shade:

Occlusion:

Communication tools

Traditional wax rim bite



Impressions & bite in dentures



Immediate dentures

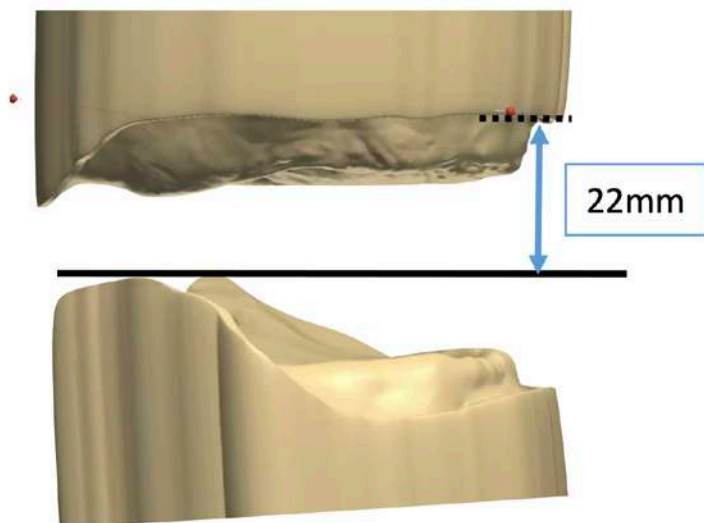


Direct to try-in



The first three clinical workflows provide a reference matrix (wax rims, denture, extracted teeth) to help guide the position of the new teeth. They are by far the best means of communication since they provide a tangible reference from which to create the new design. However, when starting from scratch as in the "Direct to try-in workflow," there are no reference matrices. Therefore, the following optional communication tools are suggested as they provide some guidance either based on the patient's existing dentures (Denture Gauge) or the patient's lip length (Papillameter). Without either of these, the design technician would only have average values to set the initial set-up template.

Average value



Communication tools



Denture Gauge



Papillameter

If the patient presents with dentures, it is an excellent opportunity to gather patient data that may help with the new denture design. The Denture Gauge is a convenient tool that helps to gather the patient's denture information. If patient does not have dentures, the Papillameter record is recommended.