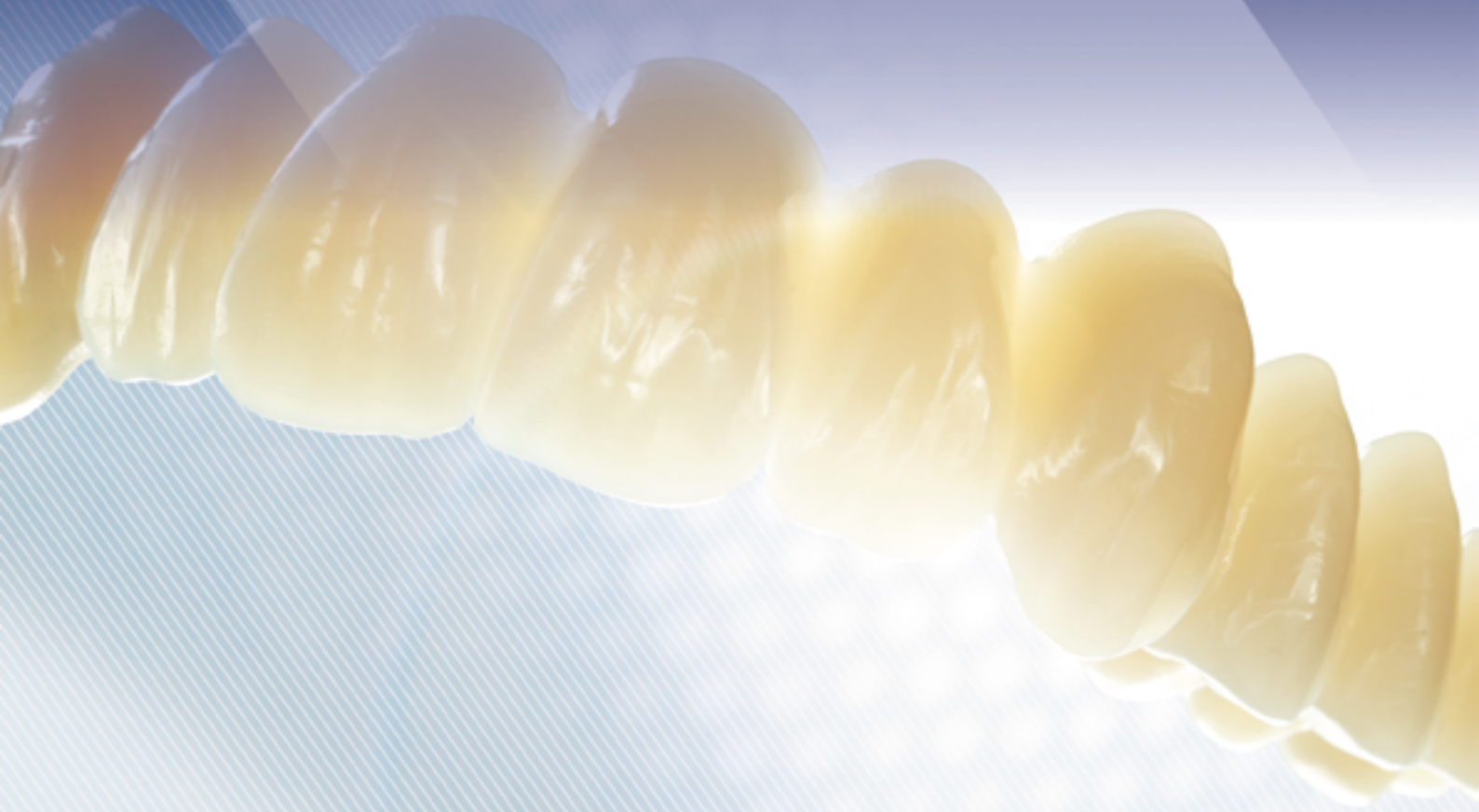


# Digital Denture

User's Guide



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### ▶ Process description

Digital Denture is a manufacturing process for the rapid digital production of removable full-arch dentures. This innovative process integrates the digital manufacturing process in the laboratory with the treatment steps in the dental practice. Exclusive design software and ideally coordinated materials, combined with well-designed manufacturing strategies, provide results of a consistently high quality.

The Digital Denture system provides the clinician-technician team with a quick and efficient method to create individualized premium quality dentures for edentulous patients using a variety of guided digital workflows.

Digital Denture is a flexible system that allows the treatment team to select its favourite workflow.

The system is suited for the following indications:

- ▶ Single-arch complete dentures (upper or lower jaw)



- ▶ Complete dentures (upper and lower jaw)



- ▶ Duplicate complete dentures (upper and lower jaw)



- ▶ Immediate complete dentures (upper and lower jaw)



- ▶ Deckprothese auf zwei Druck-Knöpfen (nur in Verbindung mit SR Vivodent CAD-Zahnkranz)



# Digital Denture

## Digital Denture Process

Digital Denture is a software-enabled process developed by Ivoclar Vivadent that offers a highly automated workflow for the fabrication of removable dentures. It allows the shape and function of tooth segments imported from the Ivoclar Vivadent tooth library to be customized and adapted to satisfy the specific needs of the individual patient.

A manufacturing process consisting of 2 discs (IvoBase® CAD and SR Vivodent® CAD) allows new indications such as unimaxillary, immediate, duplicate and **Deck-Prothesen auf Druck-Knöpfen** to be realized efficiently and quickly.



## Digital Denture Professional Process

The Digital Denture Professional process enables the digital production of dentures for edentulous patients using an innovative and exclusive clinical procedure.

Functional impression-taking and needle point registration can be performed in one step with the exclusive 3D Bite Plate.

The UTS CAD assists in determining the patient-specific occlusal plane. Esthetically exacting upper and lower full-arch dentures can be achieved with the prefabricated denture teeth from Ivoclar Vivadent and SR Vivodent® CAD.



# Digital Denture



## System components

### Scanners

A range of 3Shape scanners are suitable for digital data capture in removable denture prosthetics. These scanners include versions D710, D750, D800, D810, D850, D900 and D900L and the new versions D1000, D2000 E1, E2 and E3. The scanners are used in combination with the ScanIt Dental scan suite.



An impression fixture from Ivoclar Vivadent is required to hold the Centric Tray and 3D Bite Plate in place for the scan.



## Software

### Add-on modules from Ivoclar Digital

Ivoclar Digital offers exclusive add-on software modules for the CAD construction of complete dentures. These modules are based on the 3Shape Dental System and Full Denture add-on module.

**Important: The CAM V4 software version is a prerequisite for the manufacturing process.**

## Software Digital Denture

The Digital Denture software has been exclusively developed by Ivoclar Digital. This innovative design software, together with the new SR Vivodent® CAD discs, enables a highly automated manufacturing process for the fabrication of monolithic dentures. It allows the shape and function of tooth segments from the Ivoclar Vivadent tooth library to be customized and adapted to meet the specific needs of the individual patient. The Digital Denture add-on module of Ivoclar Digital offers the following exclusive functions for the fabrication of monolithic complete dentures:

- Functional sample setup of Ivoclar Vivadent tooth lines
- Fast monolithic manufacturing process with SR Vivodent CAD and IvoBase CAD



## Software Digital Denture Professional

The Digital Denture Professional software module additionally offers an exclusive clinical treatment route in conjunction with process-supporting tools such as the Gnathometer CAD and the UTS CAD for the accurate transfer of patient-specific data. To facilitate the digital denture design, the module offers exclusive features such as a digital library of prefabricated denture teeth from Ivoclar Vivadent and the automatic generation of a transfer template for the reliable positioning of the individual teeth.

- Construction of 3D Bite Plate with Gnathometer CAD
- UTS CAD for measuring the patient-specific position of the occlusal plane
- Esthetic results with select Ivoclar Vivadent tooth lines that are bonded to the denture base with the help of the transfer template





# Digital Denture

## Process-supporting instruments for the clinical workflow

### Centric Tray

The Centric Tray is a prefabricated impression tray that features an interface to the UTS CAD for the registration of the vertical dimension of occlusion in edentulous upper and lower jaws.



### UTS CAD

The UTS CAD is a registration device for measuring the angle of the occlusal plane in relation to Camper's plane and the bipupillary line.

The angles and/or deviations of the occlusal plane from the CP/BP established with the UTS CAD are then transferred to the Digital Denture Professional software module to reproduce the correct virtual position of the occlusal plane for the design of the denture.



### Gnathometer CAD

The Gnathometer CAD is a needle-point tracing device that allows the intraoral registration of centric relation in edentulous patients.

This registration device is distinguished by the click connections built into the registration plates. The click mechanism allows the bite rims and registration plates to be easily fitted and removed to implement the different working steps. For the digital scan, the registration is placed in the scanner with a special impression fixture.

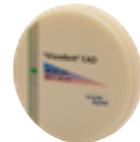




## Materials

### SR Vivodent® CAD Multi

SR Vivodent® CAD Multi sind zahnfarbene multichromatische Scheiben aus DCL-Material für die Anfertigung von definitiver Prothesenzähne in der abnehmbaren Prothetik. Die 20 mm starken SR Vivodent CAD-Scheiben sind in den Zahnfarben BL3, A1, A2, A3, A3.5, B1, B3, C2, D2 verfügbar.



### SR Vivodent® CAD

SR Vivodent® CAD are tooth-coloured discs made from DCL material for the fabrication of permanent denture teeth. The 20-mm thick SR Vivodent CAD discs are available in the shades BL3, A1, A2, A3, A3.5, B1, B3, C2 and D2.



### ProArt CAD Try-In

ProArt CAD Try-In is a milky white PMMA disc for the fabrication of custom trays, the 3D Bite Plate and functional try-ins.



### ProArt CAD Wax pink

ProArt CAD Wax pink is suitable for the fabrication of wax try-ins and individual wax bite rims in complete denture prosthetics. Special feature: ProArt CAD Wax pink can also be used for conventional finishing procedures in injection and pressing techniques - the ability to boil out for wax removal makes this possible.



### ProArt CAD Transfer

ProArt CAD Transfer are discs made from polyoxymethylene (POM). They are designed for the production of transfer templates. The transfer template enables prefabricated or milled denture teeth to be cemented into a CAD/CAM-fabricated denture base in the correct position.



### Pre-fabricated denture teeth

Select tooth lines from the Ivoclar Vivadent range are recommended for esthetically demanding cases. These teeth are stored as functional sample setups in the Digital Denture and Digital Denture Professional add-on software modules.

Tooth lines from Ivoclar Vivadent

- SR Phonares® II, SR Phonares II Typ, SR Phonares II Lingual
- SR Vivodent S PE, SR Orthotyp S PE, SR Ortholingual S PE
- SR Vivodent S DCL, SR Orthotyp S DCL, SR Ortholingual S DCL
- SR Vivodent DCL, SR Orthotyp DCL, SR Ortholingual DCL



### IvoBase® CAD Bond

IvoBase CAD Bond is a self-curing PMMA-based two-component bonding system. The material is suitable for luting prefabricated or CAD/CAM-produced teeth and tooth segments (SR Vivodent CAD) to denture bases made from IvoBase CAD. IvoBase CAD Bond features a universal pink colouration.



## Equipment

The innovative PrograMill and Zenotec® select milling units are suitable for denture milling.

**Important: The CAM V4 software version is a prerequisite for the manufacturing process.**

The following milling units are suitable for milling removable dentures:



PrograMill® PM3



PrograMill® PM5



PrograMill® PM7

A special modification ring has been developed for the PrograMill holder to enable the production of digital dentures in the Digital Denture workflow. The ring allows the accurate re-positioning of a disc that has already been processed. In this way, a denture that has already been milled from the upper side can be easily removed so that the prefabricated teeth can be bonded and then re-positioned for further processing.



### Digital Denture Workflow with SR Vivodent® CAD/Multi

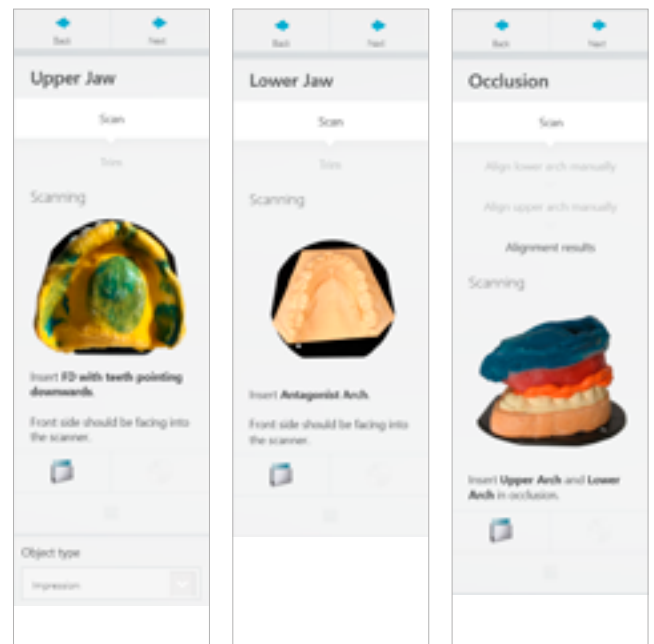
#### Create an order form

- Mark the teeth (2<sup>nd</sup> molars) in the maxillary and/or mandibular posterior regions in the jaw to be treated.
- In "Anatomy", select the option "Artificial tooth type" and the material "Ivoclar ProArt CAD Try-In" for a functional try-in or "SR Vivodent CAD/Multi" for the final denture.
- In "Bridge", define the tooth segment.
- In "Gingiva", select the material "ProArt CAD Try-In" for a functional try-in or "Ivoclar IvoBase CAD milled teeth" for the final denture.
- In "Scan settings", select the object type "Impression" or "Model".
- With the object type "Impression", only immobilized impressions, such as functional impressions with existing dentures, can be scanned.
- With the object type "Models", you can choose between "Model" and "Impression" for the jaw to be restored.



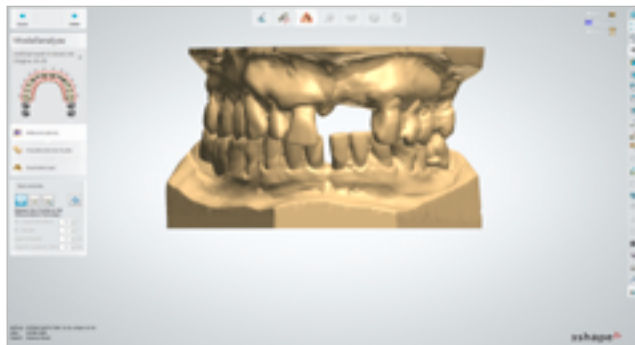
#### Scanning

- If immobilized functional impressions, **Bisswahl** oder with existing dentures are scanned, secure the adapter to the palatal side using lab putty and mount it on the scan holder or secure the impressions on the scan plate using Bluetech. The impression should be located within the base block if possible.  
**Eine weitere Option ist, die OK-/UK-Modelle verschlüsselt mit Biss einzuscannen.**
- Start the data capturing process.
- On the preview scan, define the area to be scanned.
- If all areas are clearly displayed, start the high-resolution scan.
- The software proposes a jaw alignment (matching). In most cases, the proposed alignment is very accurate. If you want to perfect the proposed alignment, deselect the existing alignment and mark one or three congruent areas and re-start the alignment process.
- Both jaws are now aligned with each other in the software program according to the patient-specific data.
- If you use gypsum models, secure the models and bite records on the scan plate using Bluetech and then perform the scan.



# Digital Denture

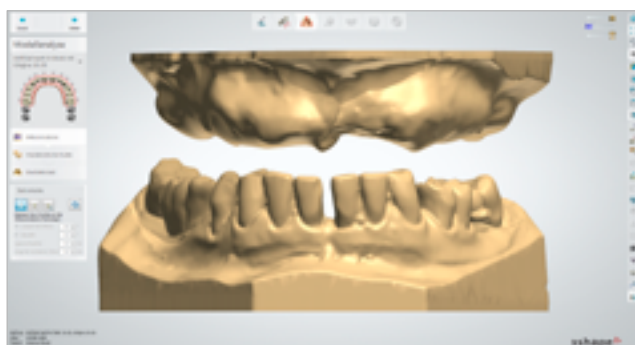
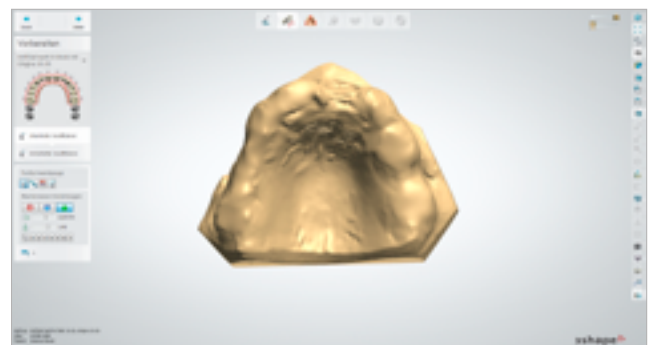
Denture design am Beispiel einer Immediat-Prothese



## Important:

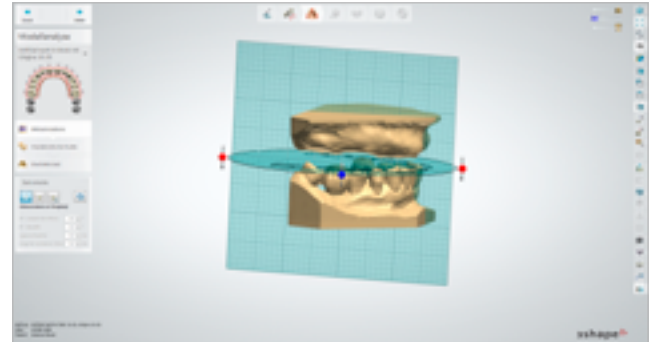
If immediate dentures are fabricated, the existing teeth have to be first erased. They can then be displayed in the "Pre-preparation slider".

To do this, go back a step in the tooth setup ("Smile composer") and then use the tools for erasing teeth.



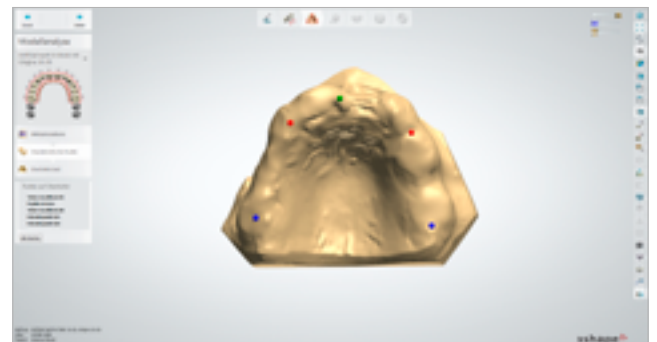
## Defining the occlusal plane

- First define the occlusal plane with respect to the inclination and vertical position with three points on the bite template.
- In the posterior region, align the occlusal plane with the centre of the retromolar pads.
- The anterior vertical position should ensure an appropriate lip closure line. Use the value from the Papillameter. Alternatively, align the occlusal plane exactly with the markings on the bite rim or the incisal edge of the existing denture (if not indicated otherwise by the clinician). For this purpose, increase the value "Length of upper lip" as required.



## Model analysis

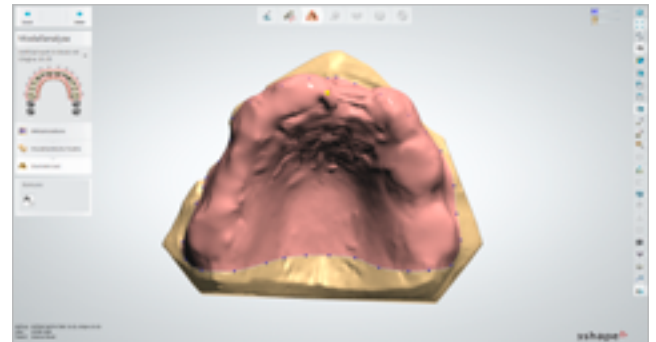
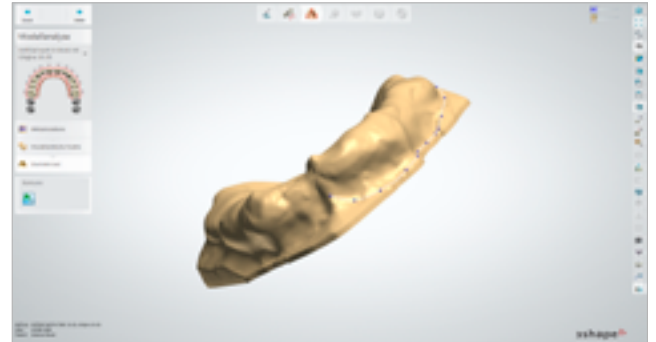
For setting up the teeth, the characteristic points in the upper and lower jaw are now defined. Follow exactly the given order.



# Digital Denture

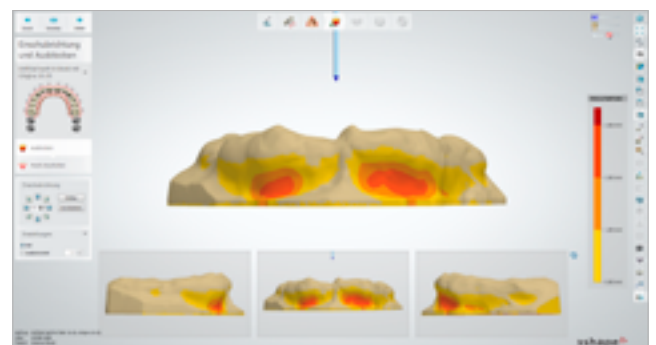
## Defining the extension of the denture

- To define the extension and border of the denture, the marking is applied 1 to 1.5 mm to the vestibular, at the deepest part of the gingivobuccal fold.
- Create adequate free space for the labial and buccal frenula.



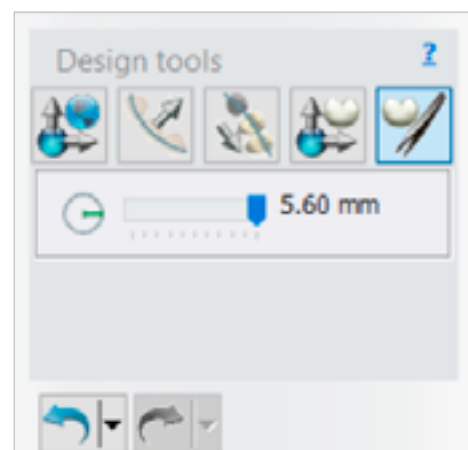
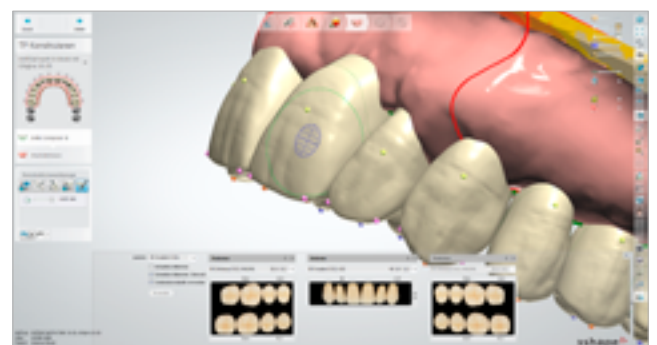
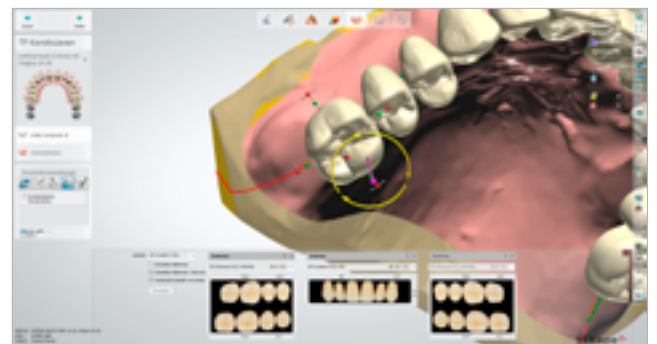
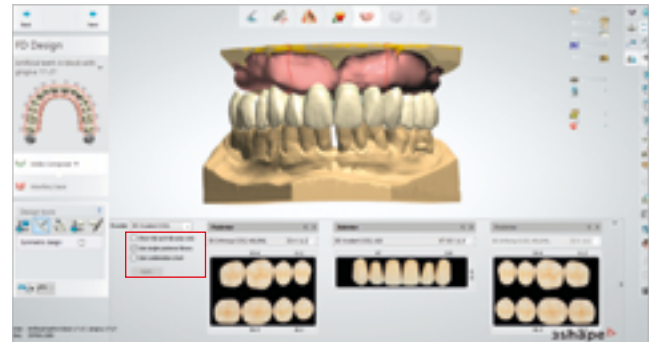
## Insertion path and blocking out

- With the insertion path, you define the direction with which patients insert their new dentures into their mouth. Ideally, the dentures are inserted with a slight inclination (5° to max. 10°) from the anterior.
- If desired, undercuts can be blocked out automatically or manually.



## Designing the complete denture

- Select the desired tooth line and tooth size according to the clinician's specifications.
- The "Smile composer" offers the following possibilities of importing the tooth line chosen:
- **Show full-arch libraries only**  
With this function, the teeth are imported as a complete, ideal arch.
  - **Use single posterior library**  
With this function, it is possible to choose differently sized moulds of the same tooth line for each quadrant.
  - **Use combination chart**  
The anterior and posterior teeth are combined according to the combination table in the Tooth Mould Chart.
- Now the functional sample setup with the selected teeth is displayed.
  - Individualize and adjust the sample setup according to the specifications given by the clinician.
  - First check the lip support, midline and anterior tooth length. The displayable bite template or extracted residual dentition provide the information required for this step.
  - Check the cheek support in the same way.
  - Adjust the teeth to achieve a functional occlusion.





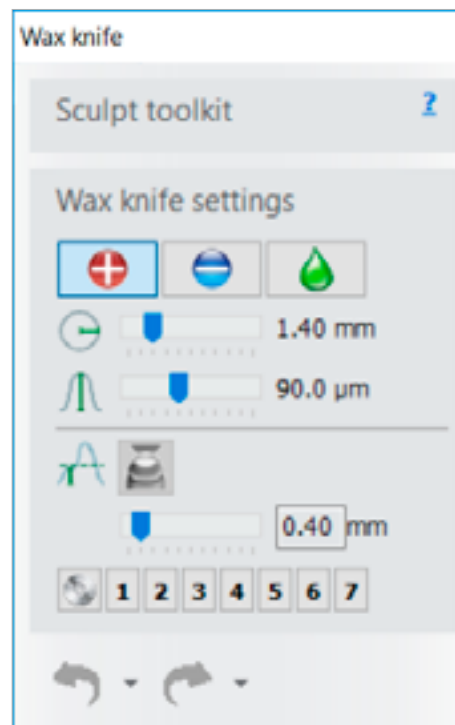
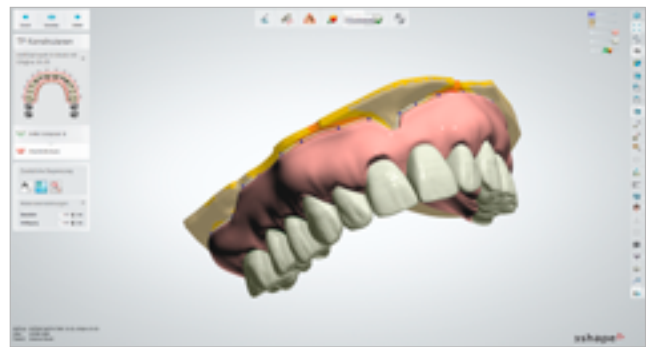
# Digital Denture

## Checking the design

- The software system now checks the denture design for possible errors.
- If any "Gingival lines" are violated, they can be amended when the gingiva is designed.

## Denture base designing

- Ensure that the denture base has a minimum thickness of 2.0 mm.  
Note: If the thickness falls short of the required minimum thickness, premature material fatigue may occur.
- Check the dimensions of the denture, taking into account the tooth setup and the labial and buccal frenula.
- Various virtual tools are available for designing the denture body. These tools allow you to drag, slide, press, add, remove and smooth the material of the virtual denture base.
- For good lip support, design the upper denture with a slightly convex curve on the vestibular surface.
- Slightly define the natural contours of the roots.
- Go to "Next" to go to the section where you can design the lower denture base.
- Here too, check the minimum material thickness and extension.
- Design the lower denture according to the same scheme as described. However, the vestibular surfaces should be contoured concavely to conform to the muscle activities occurring in this area.



## Completing the order

- Save the file and complete the order.
- The CAM output will be generated automatically.



## Digital Denture Workflow mit SR Vivodent® CAD/Multi

für eine Deckprothese auf 2 Druck-Knöpfen

Zur Herstellung einer Deckprothese auf zwei Druck-Knöpfen muss der Digital Denture Workflow mit der SR Vivodent CAD oder SR Vivodent CAD Multi gewählt werden. Für den Scan-Vorgang wird empfohlen, die Modelle mit dem passenden Duplier-Matrizen einzuscannen. Der weitere Designworkflow entspricht dem von Digital Denture, wobei die Matrizen ausreichend auszublocken sind, um eine spätere Verklebung zu ermöglichen.

Unter Einhaltung der nachfolgenden Parameter kann auf ein Verstärkungsgerüst verzichtet werden:

- Der Zahnkranz darf keine Segmentierung aufweisen.
- Die Prothesenbasis muss durchgehend eine Mindestdicke von 2 mm aufweisen.
- Es dürfen nicht mehr als zwei Druckknöpfe (Attachment) in eine Prothese eingearbeitet werden.
- Zum Verbinden des Zahnkranzes mit der gefrästen IvoBase CAD ist ausschliesslich IvoBase CAD Bond zu verwenden.
- Um einen passiven Sitz der Prothesen im Mund sicherzustellen, wird empfohlen die Matrizen mit einem geeigneten Material im Mund einzupolymersieren.

### Completion in four steps

- 1 Precision milling of the vestibular denture surface and precision milling of the cavities



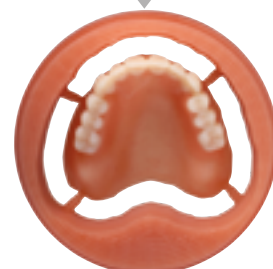
- 2 Milling the dental arch



- 3 Cementing the dental arch



- 4 Milling and finishing the denture in the milling machine



# Digital Denture

## Finishing the denture base

- Cross-cut tungsten carbide burs are suited for finishing PMMA materials. The cross-cut pattern allows a quick removal of material without causing heat build-up in the material and provides smooth material surfaces that are easy to polish.
- Natural structures (texture, surface morphology) can be applied individually to the denture base with the help of a tungsten carbide bur, as required. Subsequently, polish the denture with rubber polishers and silicone polishing wheels.
- Use a round bur for finishing the surface texture of the prosthetic gingiva. The round bur gently carves the acrylic material when adjusting the anterior gingival surface and provides a natural surface texture.



### Finishing the teeth

- After the dentures have been milled and finished in the milling machine, the teeth may be discreetly post-contoured.
- To accentuate the surface texture of the teeth, cross-cut burs are suitable to provide smooth surfaces.
- For finishing the transition between tooth and papilla, a single-cut conical fissure bur is suitable. The tooth neck, sulcus and papilla are contoured applying light pressure.



# Digital Denture

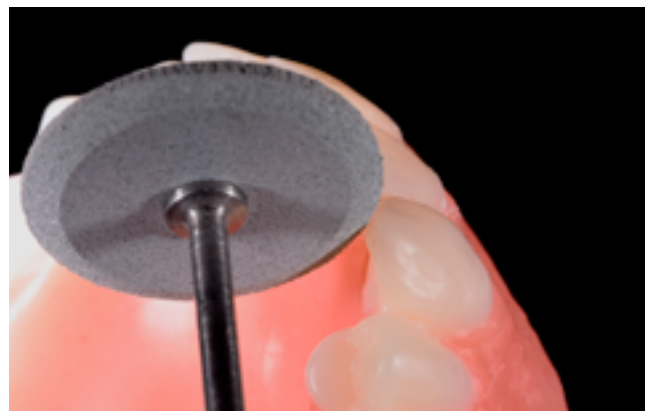
- To separate the teeth and open the embrasures, use fine-grit diamond discs.



- Subsequently, use an ultra-thin diamond disc to contour the marginal ridges and contact points.

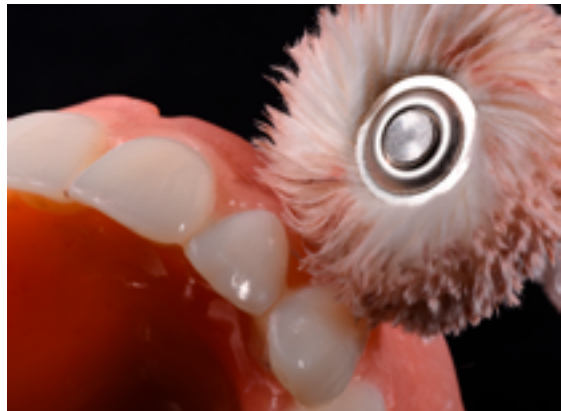


- To create a true-to-nature appearance, wear facets can be ground in on the incisal surface with the help of a rubber polisher.



### Polishing

- Prepolishing is carried out with a handpiece and a goat hair brush, fine pumice or universal polishing paste.
- Begin by carefully polishing the areas around the occlusal surfaces, followed by the gingival margin.
- On the polishing unit, only the large surfaces of the denture base and denture margins are polished with pumice.
- Subsequently, polish the teeth and denture base to a high gloss using polishing paste and either a cotton buff (lesser





# Digital Denture Professional

## Digital Denture Professional Workflow

für die Herstellung einer Ober- und Unterkieferprothese mit Stützstiftregistrat

### Workflow for creating 3D Bite Plates

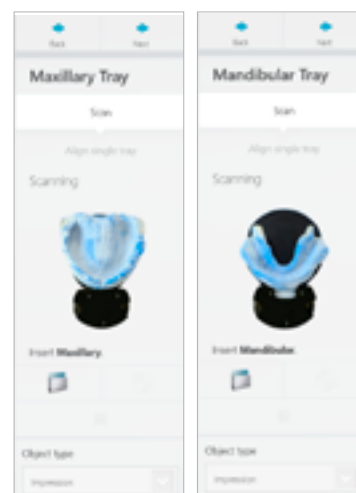
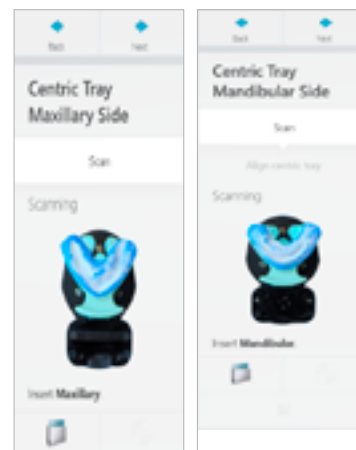
#### Create an order form for a 3D Bite Plate

- Mark the teeth (2<sup>nd</sup> molars) in the posterior regions in the upper and lower jaw.
- In "Appliance" define the 3D Bite Plate and the Ivoclar ProArt CAD Try-In material.
- In "Scan settings", select the object type "Impression" and in "Tray system" select "Two standard impression trays and Centric Tray".
- Start the scan process.



#### Scanning

- Mount the Centric Tray in the scan holder or the primary bite registration on the scan plate using Bluetech. Begin by scanning the upper jaw. Make sure that the Centric Tray is positioned correctly in the scan holder as it serves as reference for the UTS CAD.
- With the "Preview scan", the tray position and the areas to be captured can be controlled and defined.
- Start the high-resolution scan procedure.
- Scan the lower jaw side. For this step, remove the upper part of the scan holder and turn it by 180°.
- The primary bite registration and the Centric Tray are automatically joined after the scan.
- Manual matching – e.g. with a squash bite – is also possible, but the alignment has to be performed via one or three points.
- After that, you can select whether you want to scan impressions or models.
- Secure the lower jaw impression/model in the scan holder/on the scan plate.
- With the "Preview scan", check and define the lower jaw impression and areas to be captured.
- To scan the upper jaw impression/model, proceed in the same way as for the scan of the lower jaw impression.





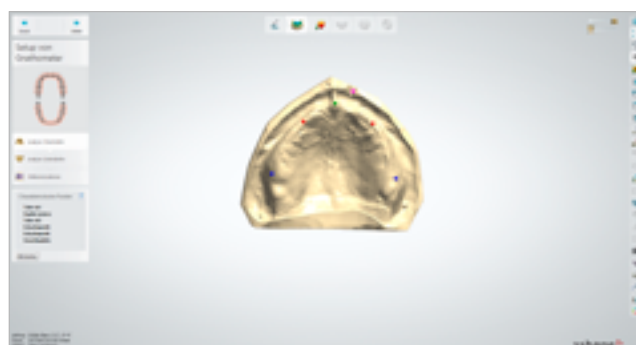
### Aligning the upper and lower jaw impression with the Centric Tray or preliminary bite registration

- Mark three areas that are as closely identical as possible on the impression and the Centric Tray registration.
- The software automatically superimposes the registration with the virtual upper and lower jaw.

### Model analysis of the upper jaw

Mark the following anatomical landmarks:

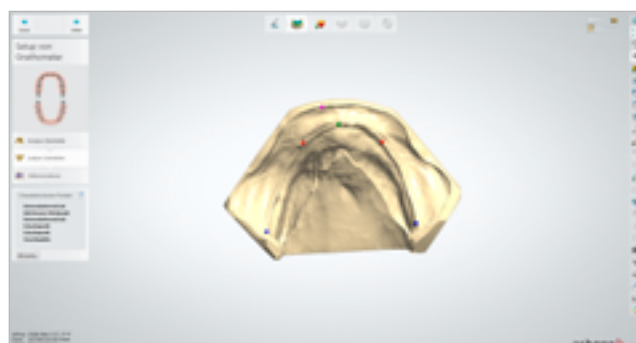
- highest point of the maxillary tuberosity on the right,
- centre of the incisive papilla,
- highest point of the maxillary tuberosity on the left,
- canine position 1 on the right and 2 on the left,
- deepest point next to the lip frenulum in the gingivobuccal fold.



### Model analysis of the lower jaw

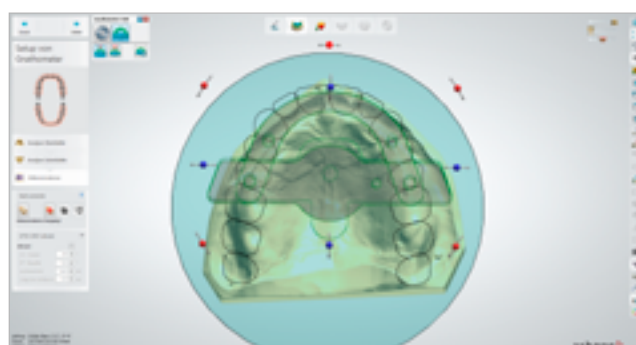
Mark the following anatomical landmarks:

- retromolar area on the right in the middle of the retromolar pad,
- centre of the alveolar ridge,
- second retromolar area on the left,
- canine position on the right and on the left,
- deepest point next to the lip frenulum in the gingivobuccal fold.
- **Important:** Make sure that the markings of the deepest point (gingivobuccal fold) are opposite each other in the upper and lower jaw.



### Defining the occlusal plane

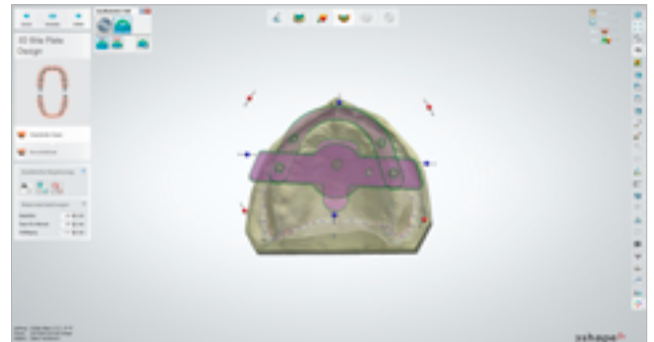
- By default, the software refers to the retromolar triangles of the model analysis in the posterior region.
- In the anterior region, the software automatically calculates the intervestibular distance, measured from the markings of the deepest point in the upper and lower jaw, in a 60:40 ratio.
- However, if patient-specific reference values are provided with the UTS CAD, then these will be used.
- Activate the field "UTS CAD values". The UTS CAD is displayed and the values for the Camper's plane and bipupillary line can be entered.



# Digital Denture Professional

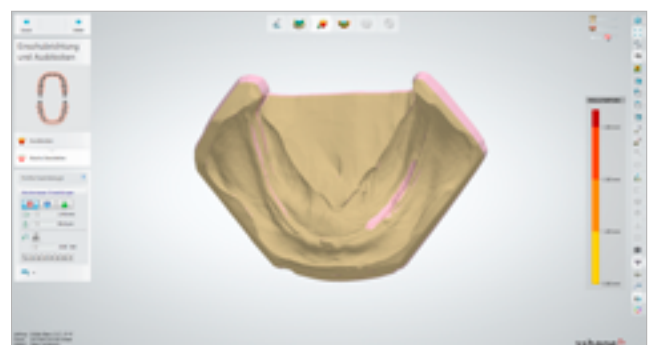
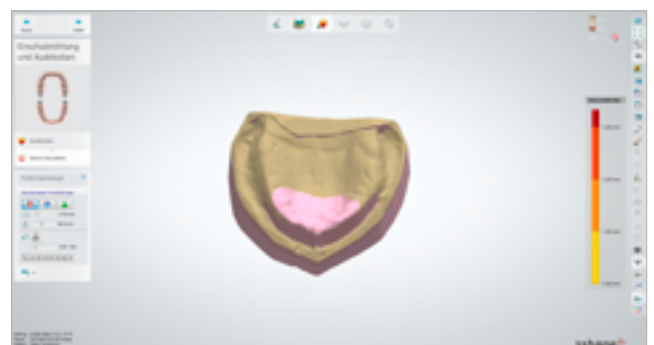
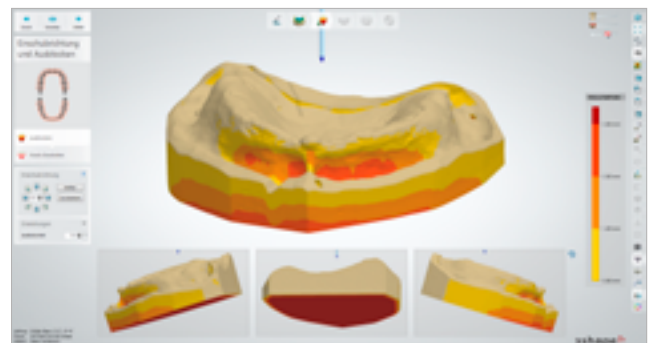
## Positioning the Gnathometer CAD

- The Gnathometer CAD is aligned with the analytical reference point of the incisive papilla + 7 mm and therefore already takes the need for anatomical lip support into account.
- From an occlusal perspective, the registration pin of the Gnathometer CAD should be positioned at the height of the second premolars in the distal area, centred on the mid-palatal suture.
- Make sure that there is sufficient guide surface for the protrusive movements.



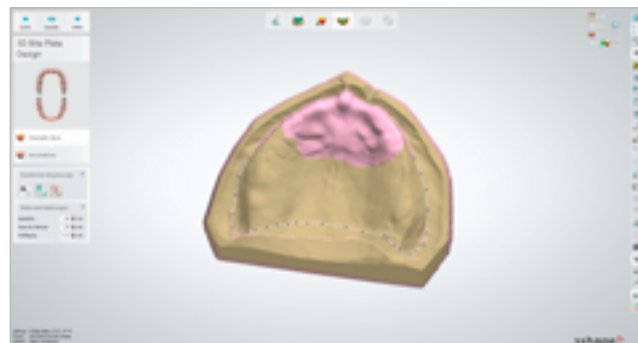
## Defining the path of insertion

- With the insertion path, you define the direction with which patients insert their new dentures into their mouth. Ideally, the dentures are inserted with a slight inclination (5° to max. 10°) from the anterior aspect.
- Undercuts are automatically blocked out in the Preview.



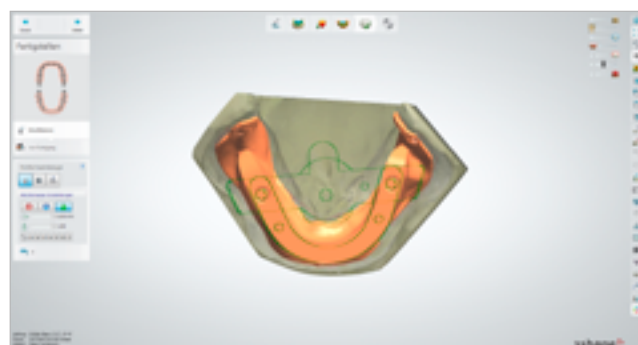
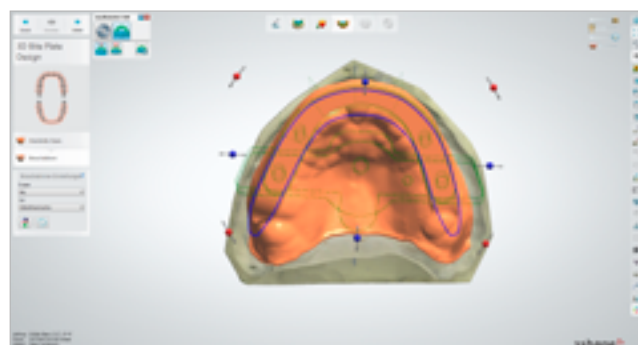
### Outlining the extension of the denture base

- Mark the extension of the lower and upper base approx. 2 mm from the gingivobuccal fold to create sufficient space for the functional border. Leave space for the labial and buccal frenula.
- The material settings are predefined by default. The thickness of the base should not fall below 1.5 mm.
- Set the spacer for the impression material. The default value is 1.0 to 1.5 mm.



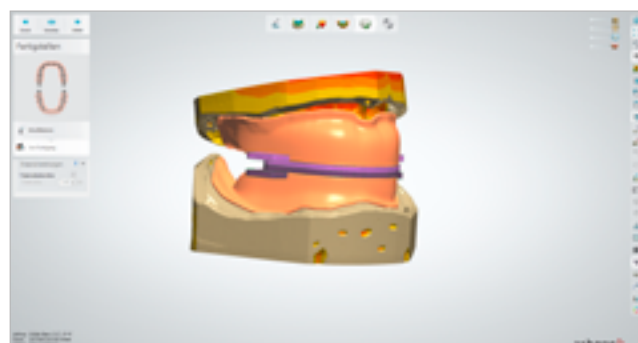
### Designing the 3D Bite Plate

- In "Bite plate settings" select the option "3D Bite Plate".
- The bite rim is aligned with the analytical reference point of the incisive papilla + 7 mm and therefore already takes the need for anatomical lip support into account.
- Align the bite rim individually with the alveolar ridge in the posterior region. Make sure that the openings of the Gnathometer CAD are completely covered.
- Proceed in the lower jaw according to the same scheme.
- The recommendation provided by the software for the lower jaw is based on the course of the alveolar ridge.
- Apply or remove material with the wax knife, as required.
- Once the design meets your expectations, complete it by going to "Next".



### Completing the order

- Save the file and complete the order.
- The CAM output will be generated automatically.



### Manufacturing

- Milling of the upper and lower 3D Bite Plate.

# Digital Denture Professional

## Workflow for the production of complete dentures

am Beispiel einer Oberkiefer- und Unterkiefer-Prothese mit konfektionierten Zähnen

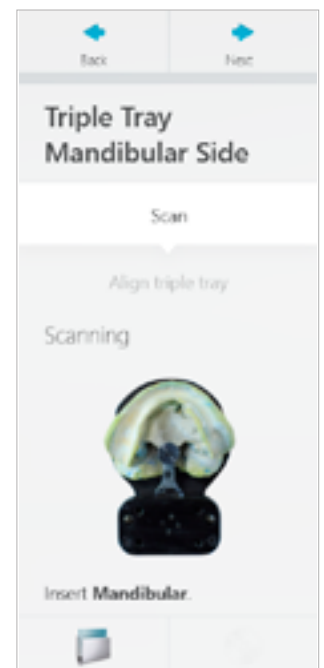
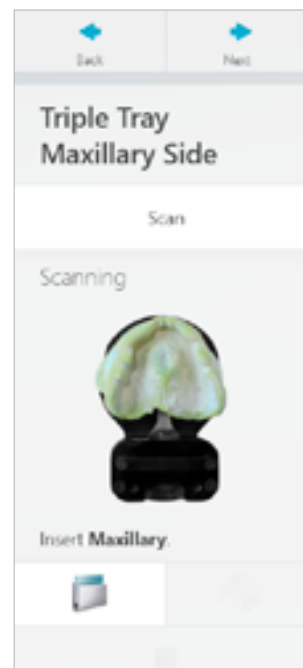
### Create an order form

- Mark the teeth (2<sup>nd</sup> molars) in the maxillary and mandibular posterior regions of the jaw to be treated.
- In "Anatomy", select the option "Artificial tooth type" and define the material: "Ivoclar ProArt CAD Try-In2" for a functional try-in, "Ivoclar SR Vivodent CAD" or "Ivoclar Artificial Tooth" (prefabricated denture teeth) for the final denture.
- If you use SR Vivodent CAD, define the tooth segment in "Bridge".
- Define the material in "Gingiva".
  - Select "Ivoclar ProArt CAD Try-In" for a functional try-in.
  - "Ivoclar IvoBase CAD milled teeth" in conjunction with SR Vivodent CAD for the final denture
  - "Ivoclar IvoBase CAD artificial teeth" in conjunction with prefabricated denture teeth for the final denture



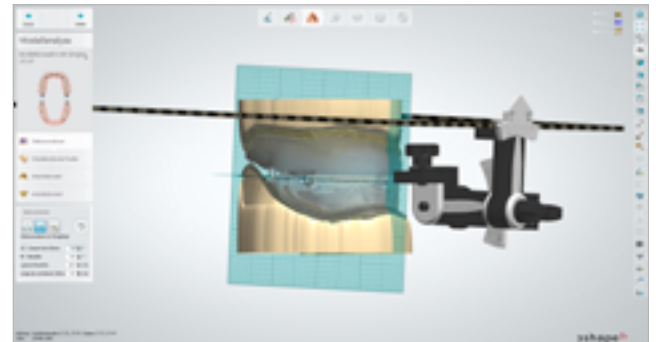
### Scanning the 3D Bite Plate

- With the help of the adapter, secure the 3D Bite Plate registration in the impression fixture with the upper jaw facing upwards. The functional impression should be located within the base block if possible.
- After that, start the data capturing process. The program guides you through the scanning process step by step.
- Both jaws are now aligned with each other according to the patient-specific data.
- If you want to make this proposal more precise, deselect the existing alignment, mark one or three congruent areas and re-start the alignment process.



### Defining the occlusal plane

- First define the occlusal plane with respect to the inclination and vertical position.
- Activate the field "UTS CAD values". The UTS CAD is displayed and the values for the Camper's plane and bipupillary line can be entered.
- The anterior vertical position should ensure an appropriate lip closure line. Use the value from the Papillameter. Alternatively, align the occlusal plane exactly with the markings on the bite rim or the incisal edge of the existing dentures (if not indicated otherwise by the clinician). For this step, modify the value "Length of upper lip" as required.



### Model analysis

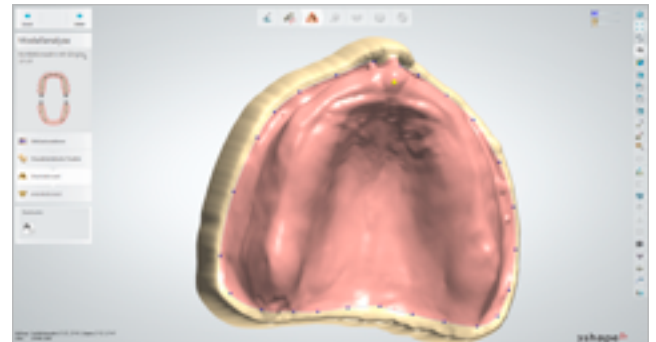
- For setting up the teeth, characteristic points in the upper and lower jaw are defined. Follow exactly the given order.
- The points can be specified in this phase at any time.



# Digital Denture Professional

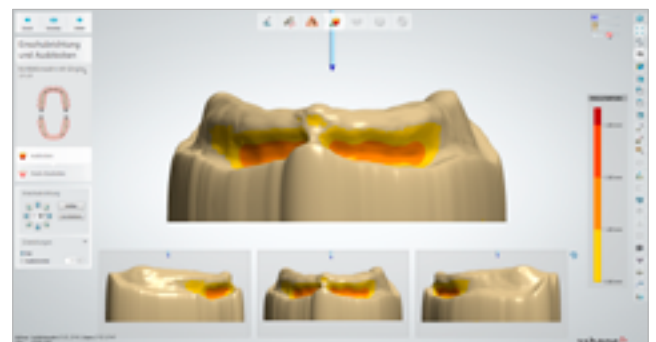
## Defining the extension of the denture

- To define the extension of the denture, a marking is applied 1 to 1.5 mm to the vestibular, at the deepest point of the gingivobuccal fold.
- Create appropriate free space for the labial and buccal frenula. The line can be easily adjusted to achieve this.



## Insertion path and blocking out

- With the insertion path, you define the direction with which patients insert their dentures into their mouth. Generally, the dentures should be inserted with a slight inclination (5° to max. 10°) from the anterior.
- If desired, undercuts can be blocked out automatically or manually.





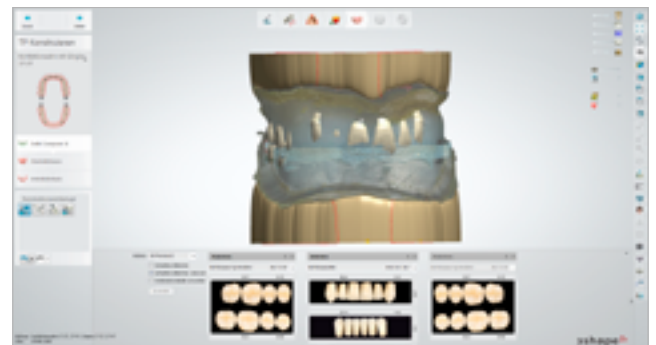
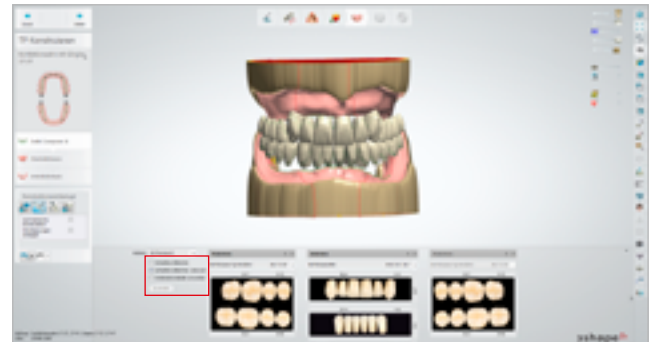
### Designing complete dentures

- Select the desired tooth line and tooth size according to the clinician's specifications.

The "Smile composer" offers the following possibilities of importing the tooth line chosen:

- **Show full-arch libraries only**  
With this function, the teeth are imported as a complete, ideal arch.
- **Use single posterior library**  
With this function, it is possible to choose differently sized moulds of the same tooth line for each quadrant.
- **Use combination chart**  
The anterior and posterior teeth are combined according to the combination table in the Tooth Mould Chart.

- Now the functional sample setup with the selected teeth and defined occlusal plane is displayed.
- Individualize the sample setup according to the specifications given by the clinician.
- First, check the lip support, midline and anterior tooth length. Fine adjustments are best performed with the complete setup in place. The 3D Bite Plate registration provides important information for this step.
- Check the cheek support in the same way. Always implement these adjustments in the group.
- Individual anterior tooth characteristics can be achieved by slightly rotating individual teeth.



### Checking the design

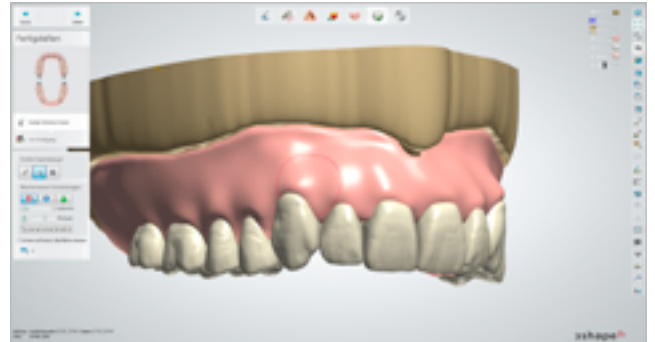
- The software program now checks the denture design for possible errors.
- If "Tooth collisions" are discovered, correct them in the "Smile composer".
- If any "Gingival lines" are violated, they can be amended during the reconstruction of the gingiva.



# Digital Denture Professional

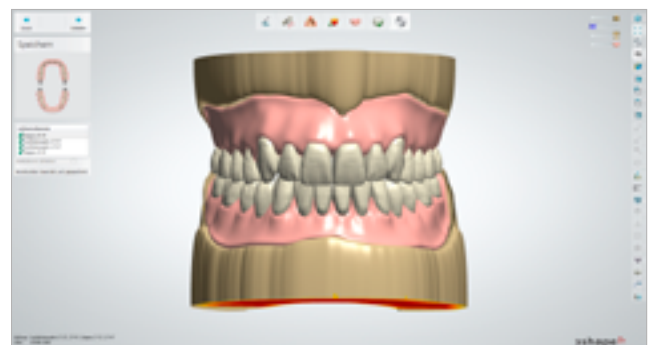
## Denture base designing

- Ensure that the denture base has a minimum thickness of 2.0 mm.  
**Note:** If the thickness falls short of the required minimum thickness, premature material fatigue may occur.
- Check the dimensions of the denture, taking into account the tooth setup and the labial and buccal frenula.
- Go to "Next" to get to the section where you can design the lower jaw base.
- Here too, check the minimum material thickness and extension.
- Various virtual tools are available for designing the denture body. These tools allow you to drag, slide, press, add, remove and smooth the material on the screen.
- For good lip support, design the upper denture with a slightly convex curve on the vestibular surface.
- Slightly outline the natural contours of the roots.
- Design the lower denture according to the same scheme. However, the vestibular surfaces should be contoured concavely to conform to the muscle activities occurring in this area.
- If prefabricated denture teeth are used, the software automatically prepares a transfer template.



## Completing the order

- Save the file and complete the order.
- Generate a CAM output.



## Manufacturing

- Milling the vestibular denture surface and roughing the basal surface
- Milling the transfer template
- Cementing the denture teeth
- Milling the basal denture surface

## Finishing

- Remove excess luting material around the teeth using a conical round bur.
- Subsequently, apply natural structures (texture, surface morphology) to the denture base using a tungsten carbide bur and then smooth out with rubber polishers and silicone polishing wheels.

## Polishing

- For best results, begin by first polishing the areas around the teeth, papilla, etc. using a soft Robinson brush and polishing paste. On the polishing unit, only the large surfaces of the denture base and denture margins are now polished with pumice. Subsequently, the teeth and denture base are polished to a high gloss using polishing paste and a polishing buff without applying any pressure.



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EN

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