



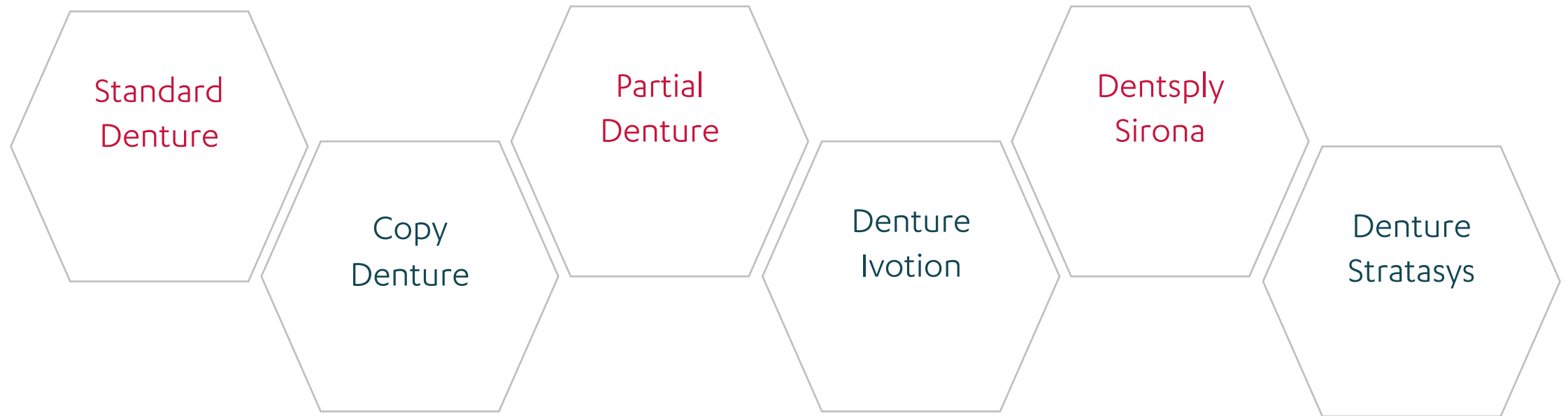
Current Denture Offering

Important Aspects

3Shape Design Services

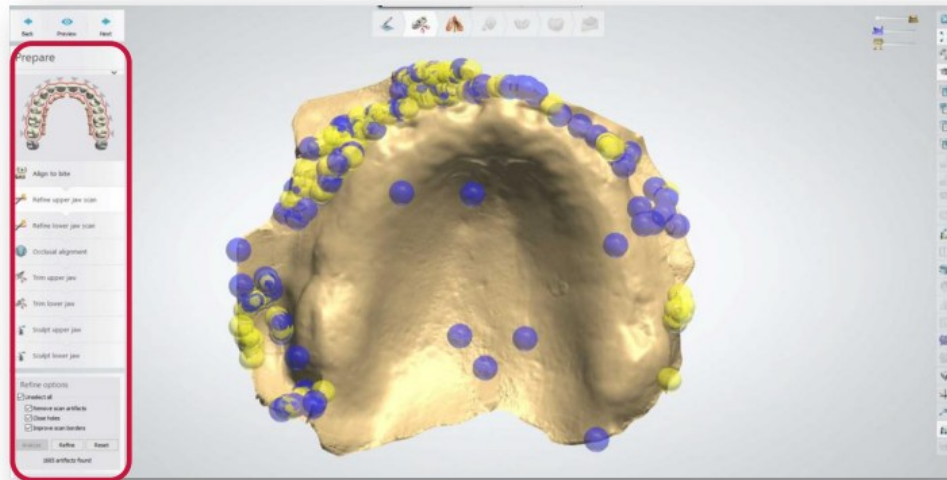
3shape 

Current Denture Offering

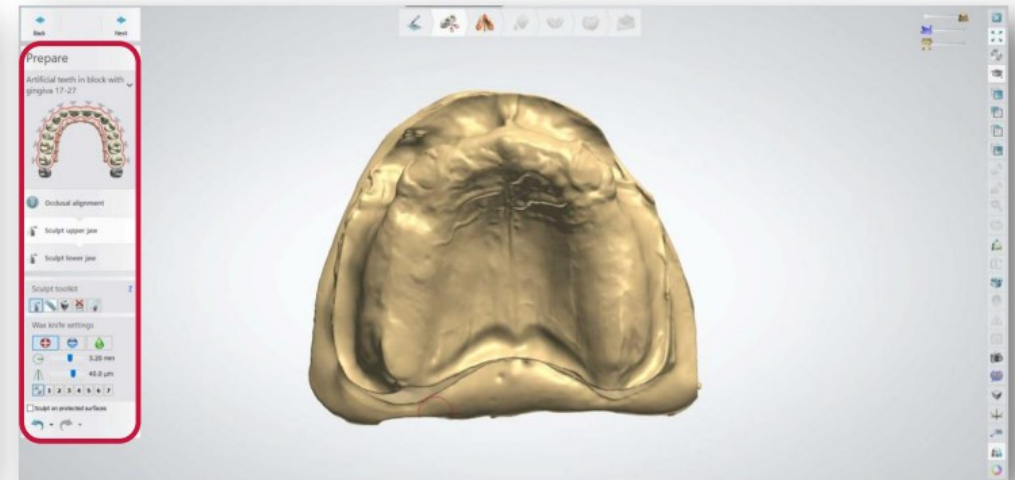


3Shape Dental System has different workflows for dentures, for this reason is very important to select the correct design type.

With digital impression as the design type, we have the option to create the bases. With model as the design type, we don't have it.

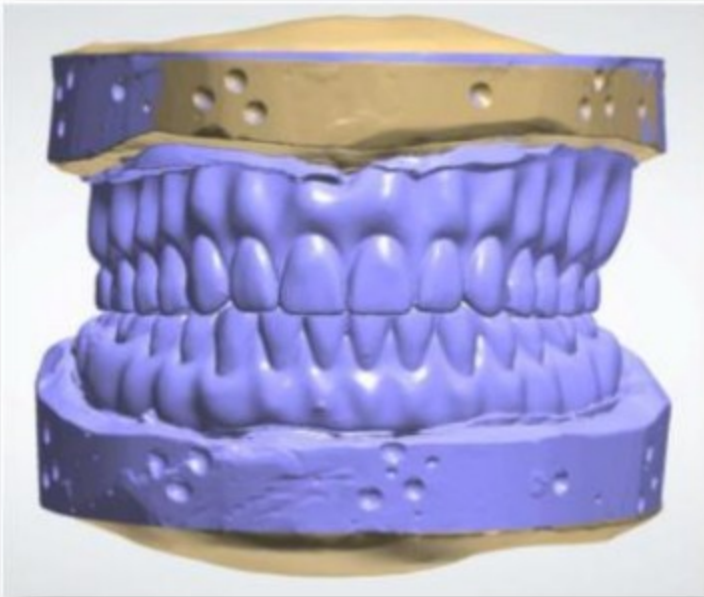


**Digital Impression
Order**



Model Order

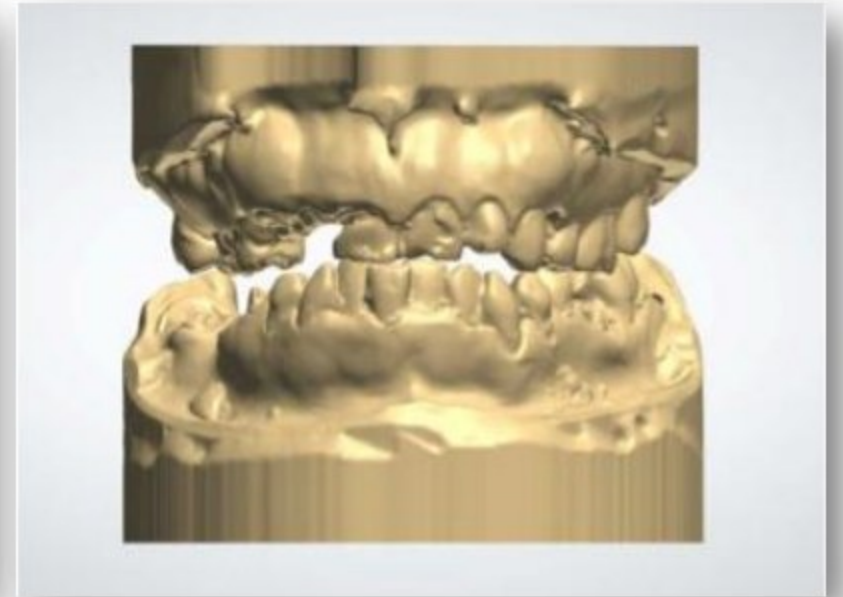
We can use different references (wax rim/pre-op) to guide us on the design:



Reference



Bite Block



Immediate

Full Dentures, Immediate Dentures, Reference Dentures, Partial Dentures (Acrylic Base and 3Shape order).

Turn Around Time: 24 Hours

Types of files we accept:

- 3Shape Order (DS Versions Allowed: 2020-2023)
- STL files into a .zip folder

Scans Needed:

- Object Type: Model
 - Type of Scans we Accept: Stone Models – Scans Closed (With bases)
 - ✓ Scans Needed: Upper, Lower and Bite with VDO.
- Object Type: Digital Impression
 - Type of Scans we Accept:
 - IOS/Digital Impression - Intra Oral
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.
 - Impressions: Reference Dentures
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.

Current Teeth Libraries

- Default Library: Vertex (Posterior Anatomy options are available).
- Other Libraries Available: Nobileum.

Materials

- FCDC: 3Shape Design Services Internal Material
- Customized Materials: Only for cases with 3Shape orders, we will test the case to make sure we can design it and output the files without any errors.

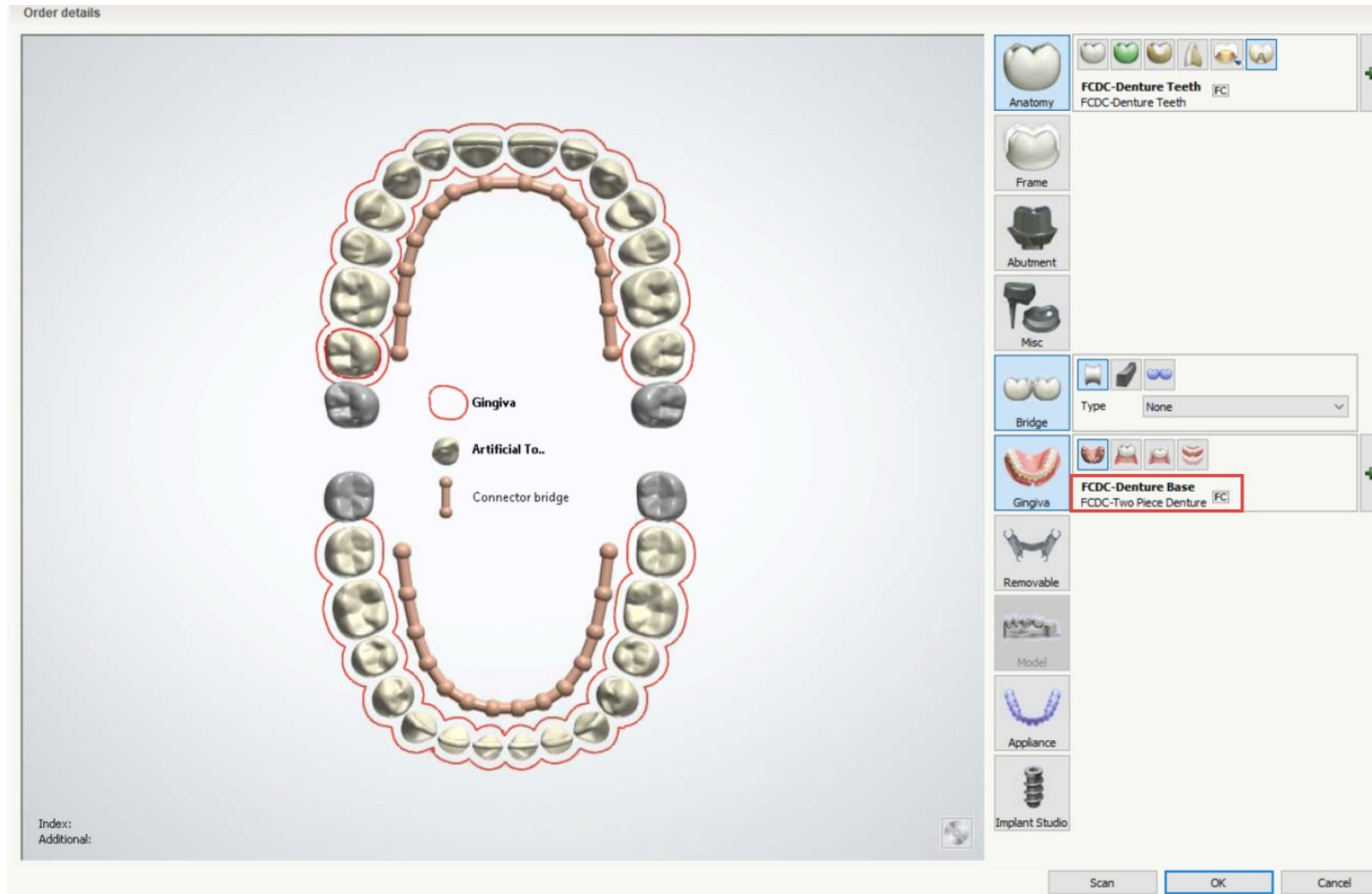
Output

- Output Files: Try-in and Final.
- Output Format: STLs (for printing) and CAM5 files for milling.

Redesign Options

- Number of redesigns allowed : 1
- Number of Bite Adjustments * New Impressions: 1
- Number of changes of Mould * Teeth Library: N/A, A new case needs to be submitted.

Order Set Up – Standard Dentures



Anatomy: Artificial Teeth
Material: FCDC Denture Teeth

Gingiva Type: Two-Piece Denture
Material: FCDC Denture Base

Design Type : Copy Denture

Full Dentures (Exact Copy of Existing Denture)

Turn Around Time: 24 Hours

Types of files we accept:

- 3Shape Order (DS Versions Allowed: 2020-2023)
- STL files into a .zip folder

Scans Needed:

- Object Type: Model
 - Type of Scans we Accept: Stone Models – Scans Closed (With bases)
 - ✓ Scans Needed: Upper, Lower and Bite with VDO.
- Object Type: Digital Impression
 - Type of Scans we Accept:
 - IOS/Digital Impression - Intra Oral
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.
 - Impressions: Reference Dentures
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.

Current Denture Design Offering

Knowledge Base Articles

[Click Here](#)

Current Teeth Libraries

- Default Library: Vertex (Posterior Anatomy options are available).
- Other Libraries Available: Nobileum.

Materials

- FCDC: 3Shape Design Services Internal Material
- Customized Materials: Only for cases with 3Shape orders, we will test the case to make sure we can design it and output the files without any errors.

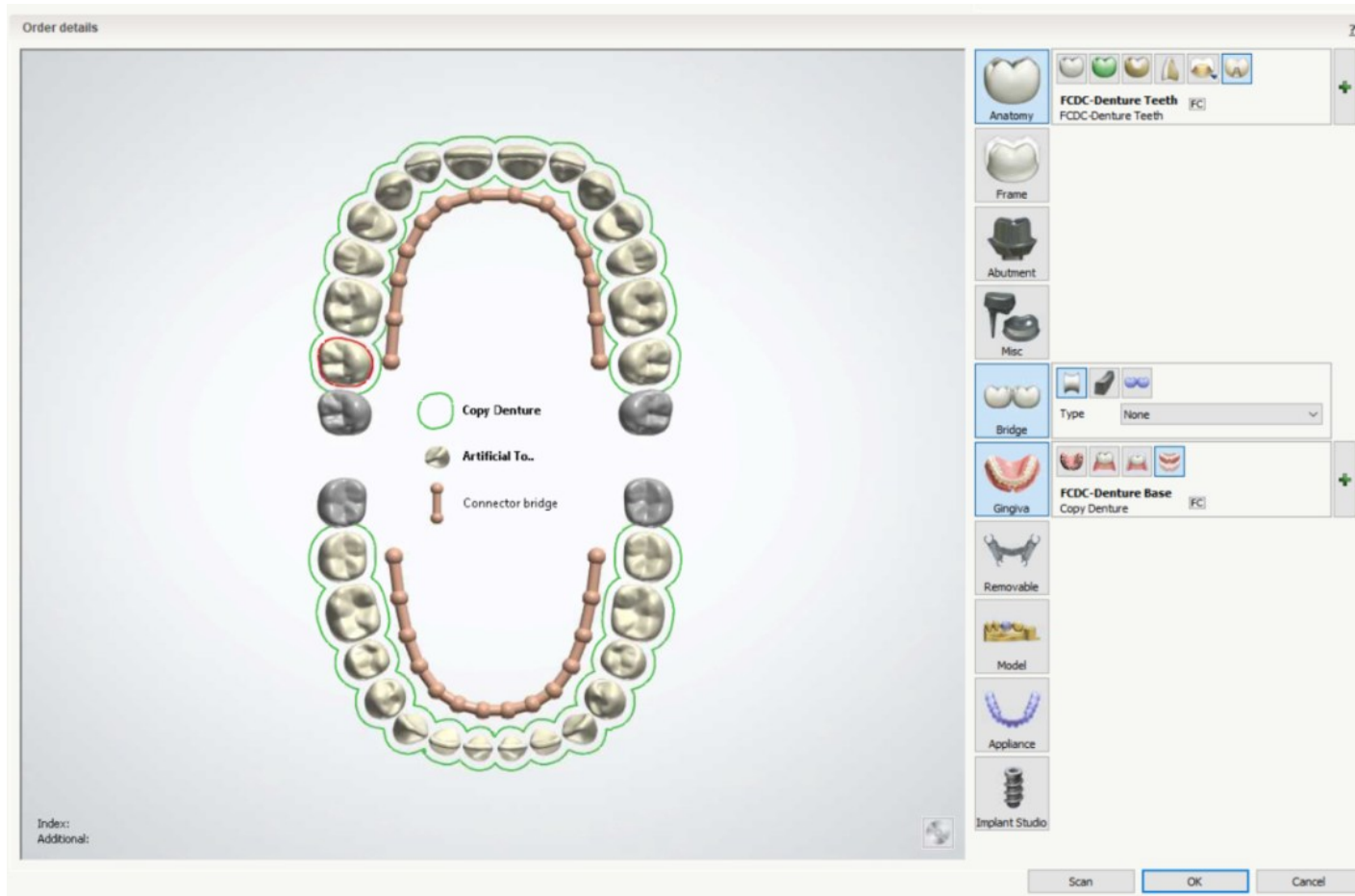
Output

- Output Files: Try-in and Final.
- Output Format: STLs (for printing) and CAM5 files for milling.

Redesign Options

- Number of redesigns allowed : 1
- Number of Bite Adjustments * New Impressions: 1
- Number of changes of Mould * Teeth Library: N/A, A new case needs to be submitted.

Order Set Up – Copy Dentures



Anatomy: Artificial Teeth
Material: FCDC Denture Teeth

Gingiva Type: Copy Denture
Material: FCDC Denture Base

** One Bridge should be added, if segmentation is needed
can be communicated throughout the design guide codes.

Full Dentures, Immediate Dentures, Reference Dentures, Partial Dentures (Acrylic Base and 3Shape order).

Knowledge Base Articles

[Click Here](#)

Turn Around Time: 24 Hours

Types of files we accept:

- 3Shape Order (DS Versions Allowed: 2022-2024)
- STL files into a .zip folder

Scans Needed:

- Object Type: Model
 - Type of Scans we Accept: Stone Models – Scans Closed (With bases)
 - ✓ Scans Needed: Upper, Lower and Bite with VDO.
- Object Type: Digital Impression
 - Type of Scans we Accept:
 - IOS/Digital Impression - Intra Oral
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.

Current Teeth Libraries

- Default Library: Vertex
- Other Libraries Available: Dentsply (HC Genios, HC Portrait, Portrait, Genios), Ivoclar (DCL, Blueline, Phonares), Candulor, Nobilium, Kulzer.

Materials

- FCDC: 3Shape Design Services Internal Material
- Customized Materials: We will test the case to make sure we can design it and output the files without any errors. (No flexible material.)

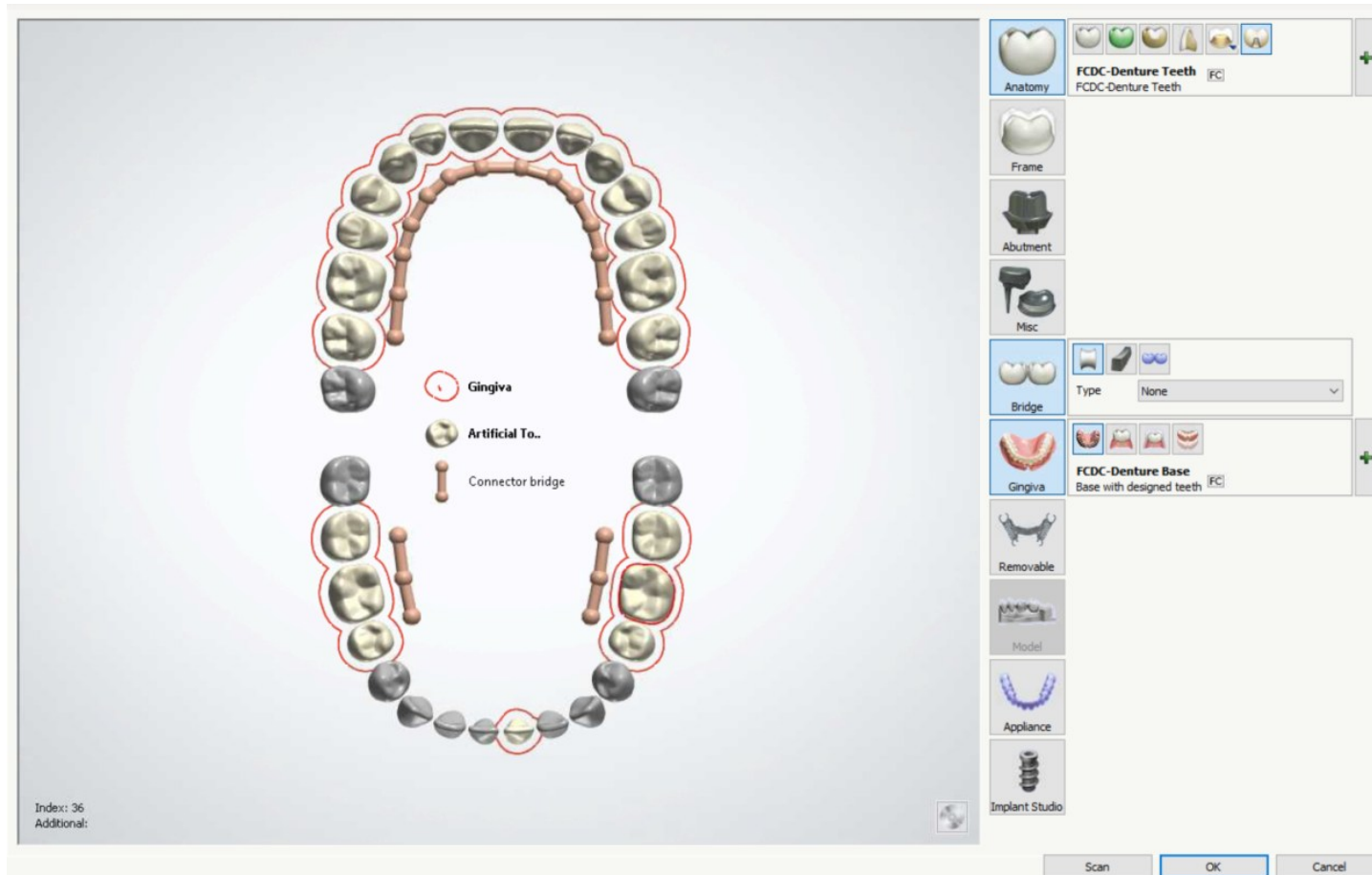
Output

- Output Files: Try-in and Final.
- Output Format: STLs (for printing) and CAM5 files for milling.

Redesign Options

- Number of redesigns allowed: 1
- Number of Bite Adjustments * New Impressions: 0
- Number of changes of Mould * Teeth Library: N/A, A new case needs to be submitted.

Order Set Up – Partial Dentures



Anatomy: Artificial Teeth
Material: FCDC Denture Teeth

Gingiva Type: Base with Designed Teeth
Material: FCDC Denture Base

Design Type : Dentsply Sirona

Full Dentures, Immediate Dentures, Reference Dentures

Turn Around Time: 24 Hours

Types of files we accept:

- 3Shape Order (DS Versions Allowed: 2021-2023)

Scans Needed:

- Object Type: Model
 - Type of Scans we Accept: Stone Models – Scans Closed (With bases)
 - ✓ Scans Needed: Upper, Lower and Bite with VDO.
- Object Type: Digital Impression
 - Type of Scans we Accept:
 - IOS/Digital Impression - Intra Oral
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.
 - Impressions: Reference Dentures
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.

Current Denture Design Offering

Knowledge Base Articles

[Click Here](#)

Current Teeth Libraries

- HC Genios
- HC Portrait
- Portrait
- Genios

Materials

- Dentsply Sirona Library Teeth / DS Lucitone Digital Print 3D

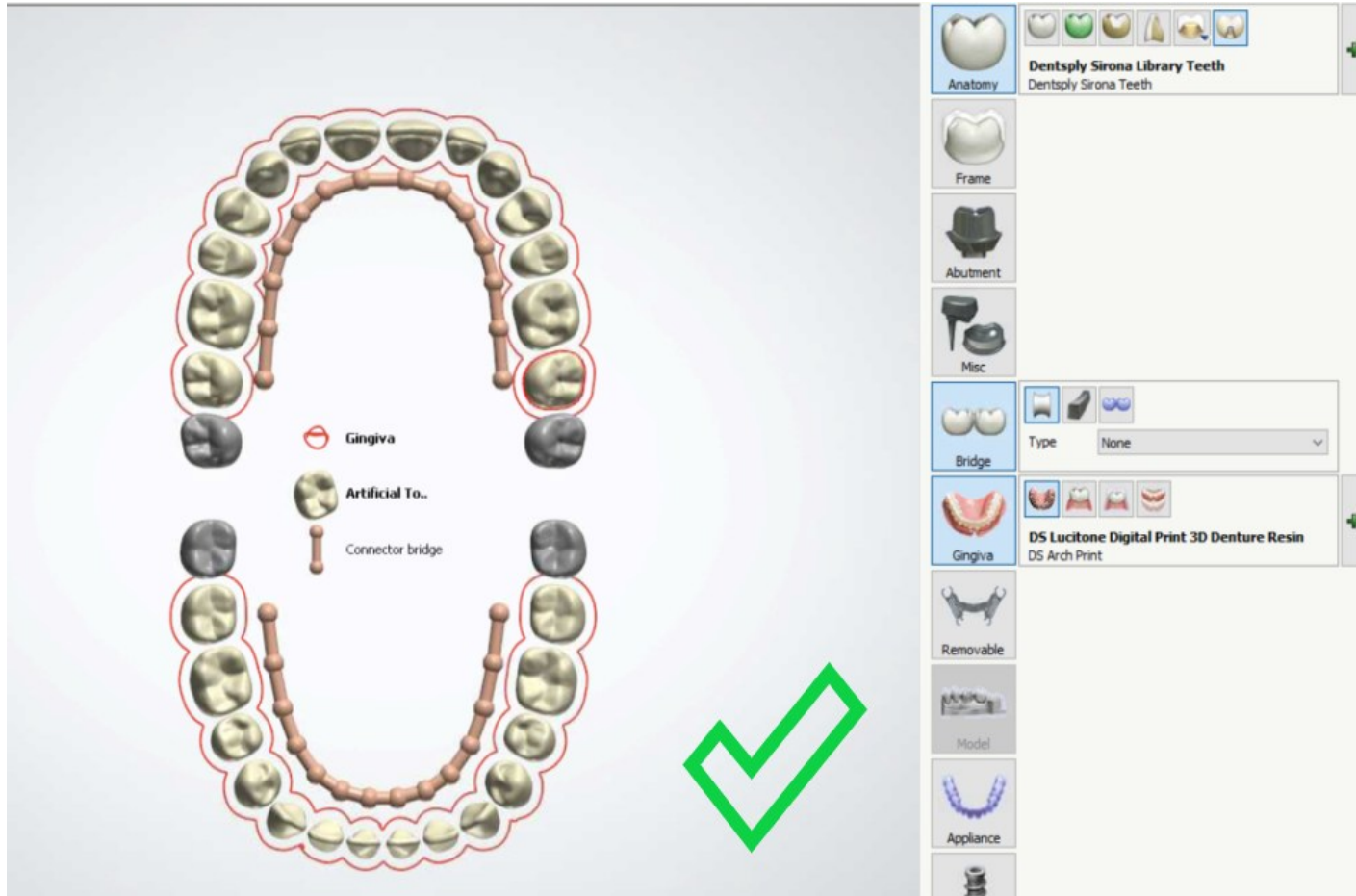
Output

- Output Files: Try-in and Final.
- Output Format: STLs (for printing).

Redesign Options

- Number of redesigns allowed : 1
- Number of Bite Adjustments * New Impressions: 1
- Number of changes of Mould * Teeth Library: N/A, A new case needs to be submitted.

Order Set Up – Dentsply Sirona



Anatomy: Artificial Teeth
Material: Dentsply Sirona Library Teeth

Gingiva Type: DS Arch Print
Material: DS Lucitone Digital Print 3D

** Required Bridges should be added on the order and communicated throughout the design guide codes.

Design Type : Ivotion Denture

Full Dentures, Immediate Dentures, Reference Dentures

Turn Around Time: 24 Hours

Types of files we accept:

- 3Shape Order (DS Versions Allowed: 2021-2023)

Scans Needed:

- Object Type: Model
 - Type of Scans we Accept: Stone Models – Scans Closed (With bases)
 - ✓ Scans Needed: Upper, Lower and Bite with VDO.
- Object Type: Digital Impression
 - Type of Scans we Accept:
 - IOS/Digital Impression - Intra Oral
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.
 - Impressions: Reference Dentures
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.

Current Denture Design Offering

Knowledge Base Articles

[Click Here](#)

Current Teeth Libraries

- Ivoclar Ivotion

Materials

- Ivoclar Ivotion

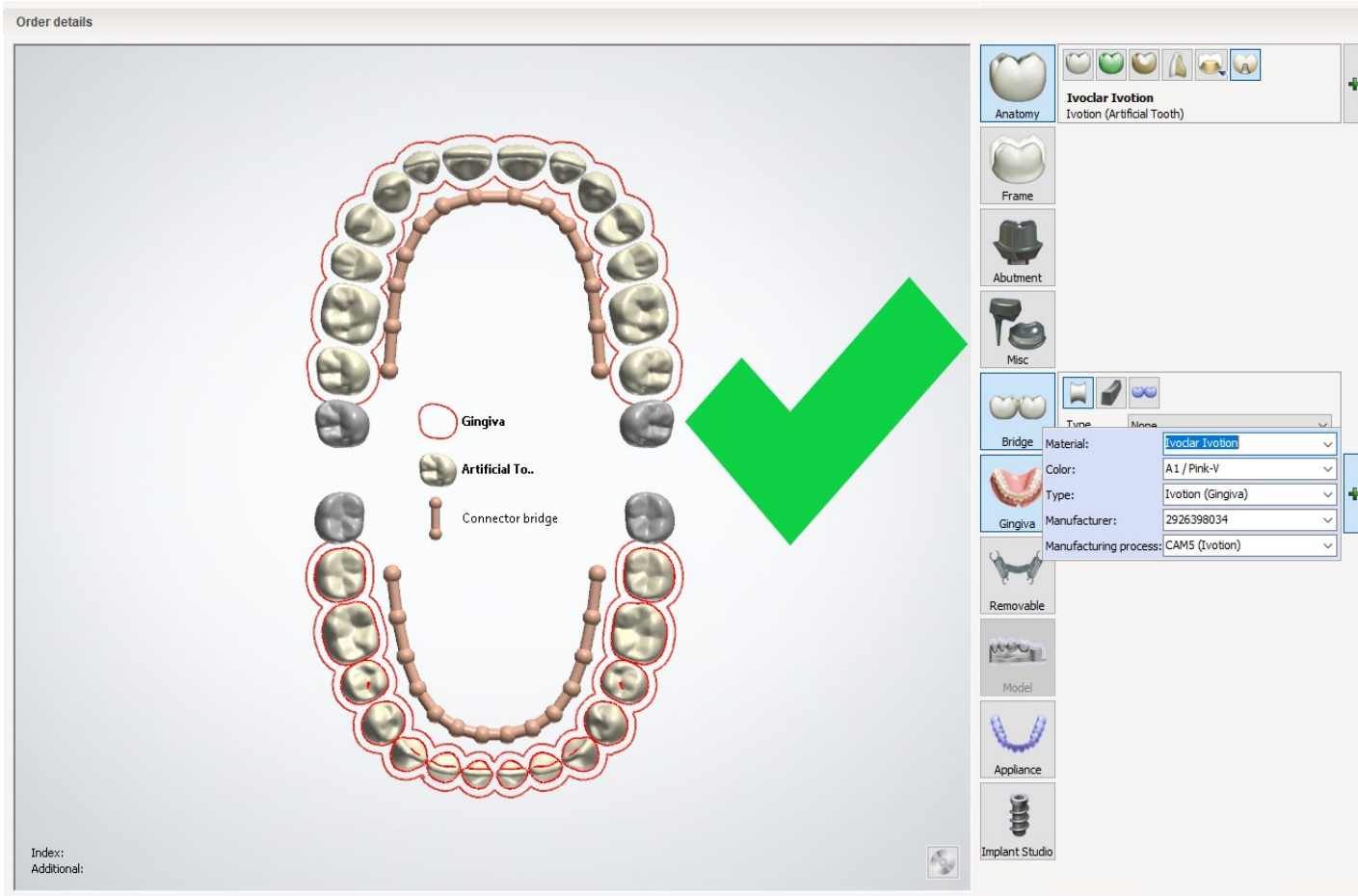
Output

- Output Files: One Milled Piece
- Output Format: CAM5 files for milling

Redesign Options

- Number of redesigns allowed : 1
- Number of Bite Adjustments * New Impressions: 1
- Number of changes of Mould * Teeth Library: N/A, A new case needs to be submitted.

Order Set Up – Ivotion Denture



Anatomy: Artificial Teeth
Material: Ivoclar Ivotion

Gingiva Type: Ivotion Gingiva
Material: Ivoclar Ivotion

Turn Around Time: 24 Hours

Types of files we accept:

- 3Shape Order (DS Versions Allowed: 2021-2024)

Scans Needed:

- Object Type: Model
 - Type of Scans we Accept: Stone Models – Scans Closed (With bases)
 - ✓ Scans Needed: Upper, Lower and Bite with VDO.
- Object Type: Digital Impression
 - Type of Scans we Accept:
 - IOS/Digital Impression - Intra Oral
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.
 - Impressions: Reference Dentures
 - ✓ Scans Needed: Upper, Lower and Bite.
 - ✓ For the bite scan we need the upper and lower together on one scan.

Current Teeth Libraries

- Default Library: Ivoclar Blueline
- Other Libraries Available: Ivoclar DCL, Vertex, Nobileum

Materials

- Stratasys TrueDent

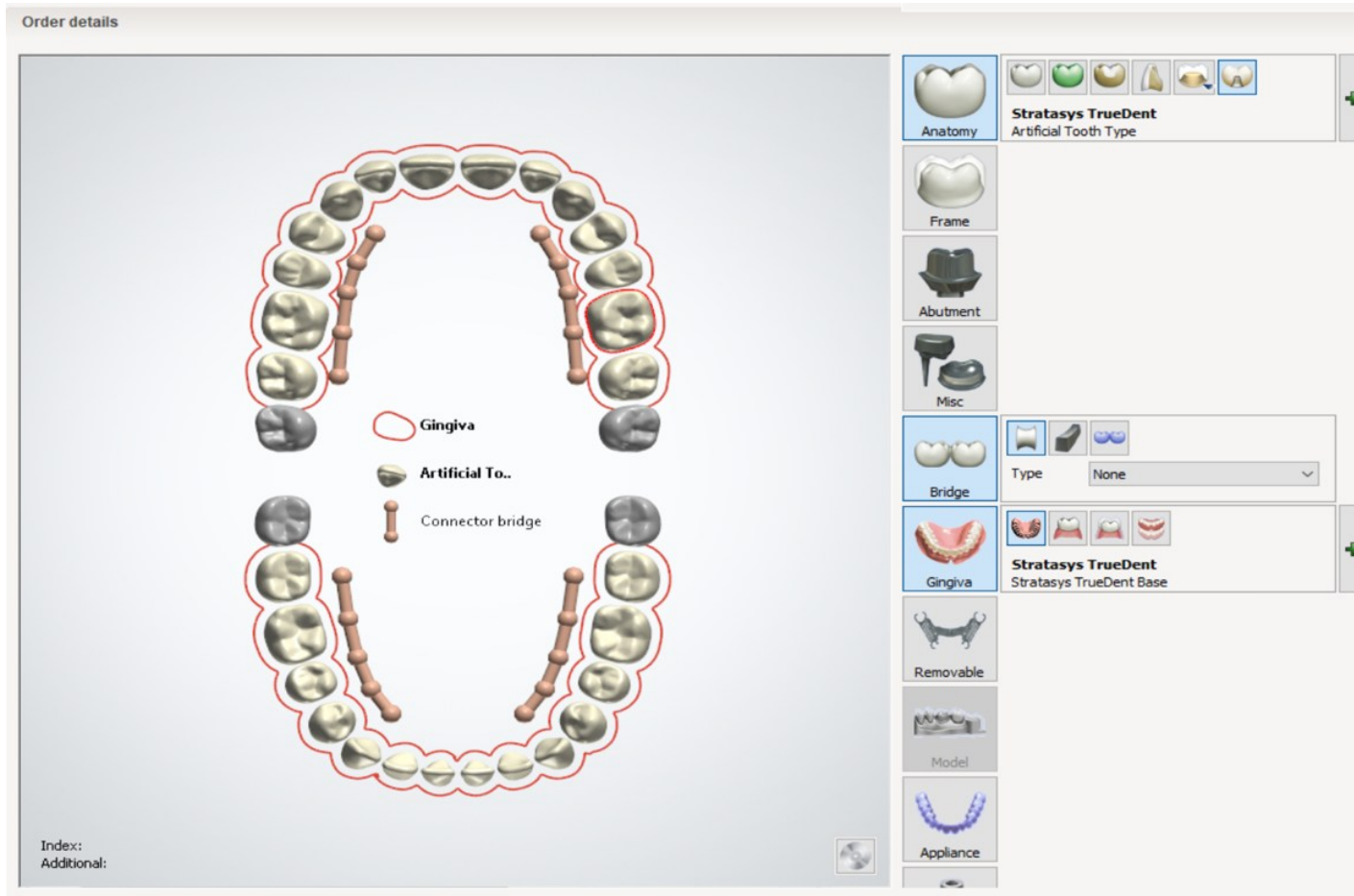
Output

- Output Files: Try-in and Final
- Output Format: STLs (for printing) and .3MF

Redesign Options

- Number of redesigns allowed : 1
- Number of Bite Adjustments * New Impressions: 1
- Number of changes of Mould * Teeth Library: N/A, A new case needs to be submitted.

Order Set Up – Denture Stratasy

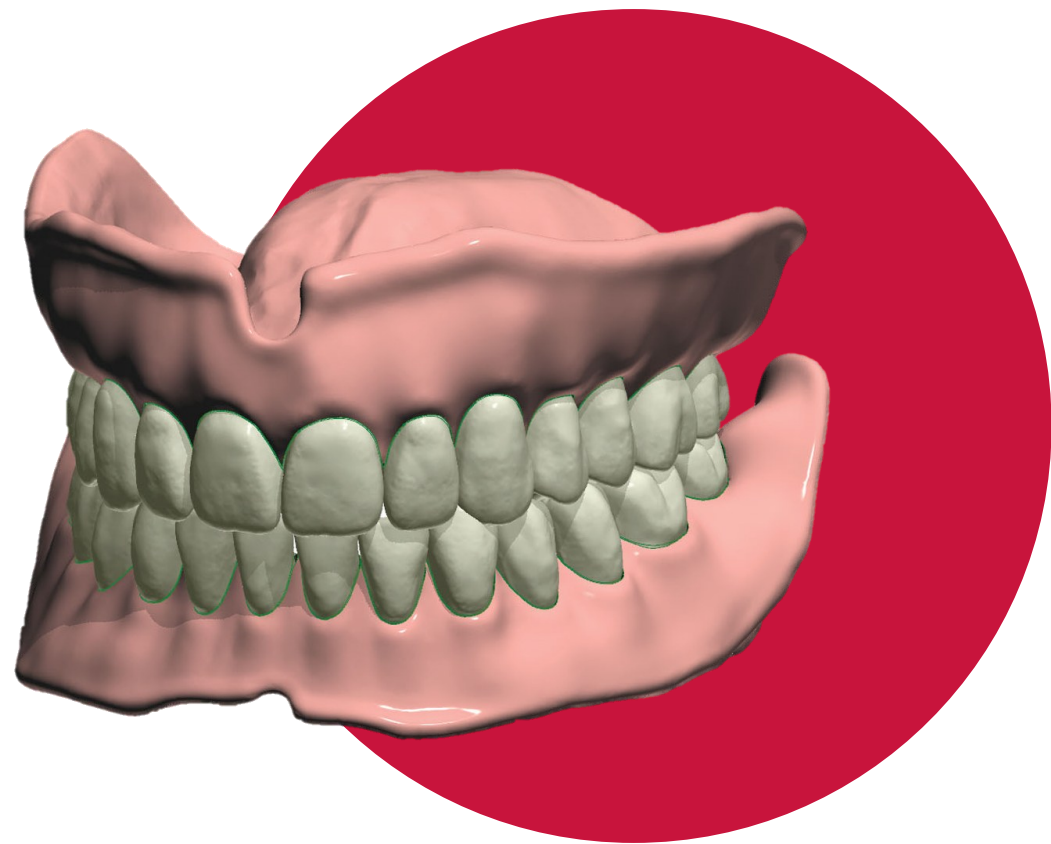


Anatomy: Artificial Teeth
Material: Stratasy TrueDent

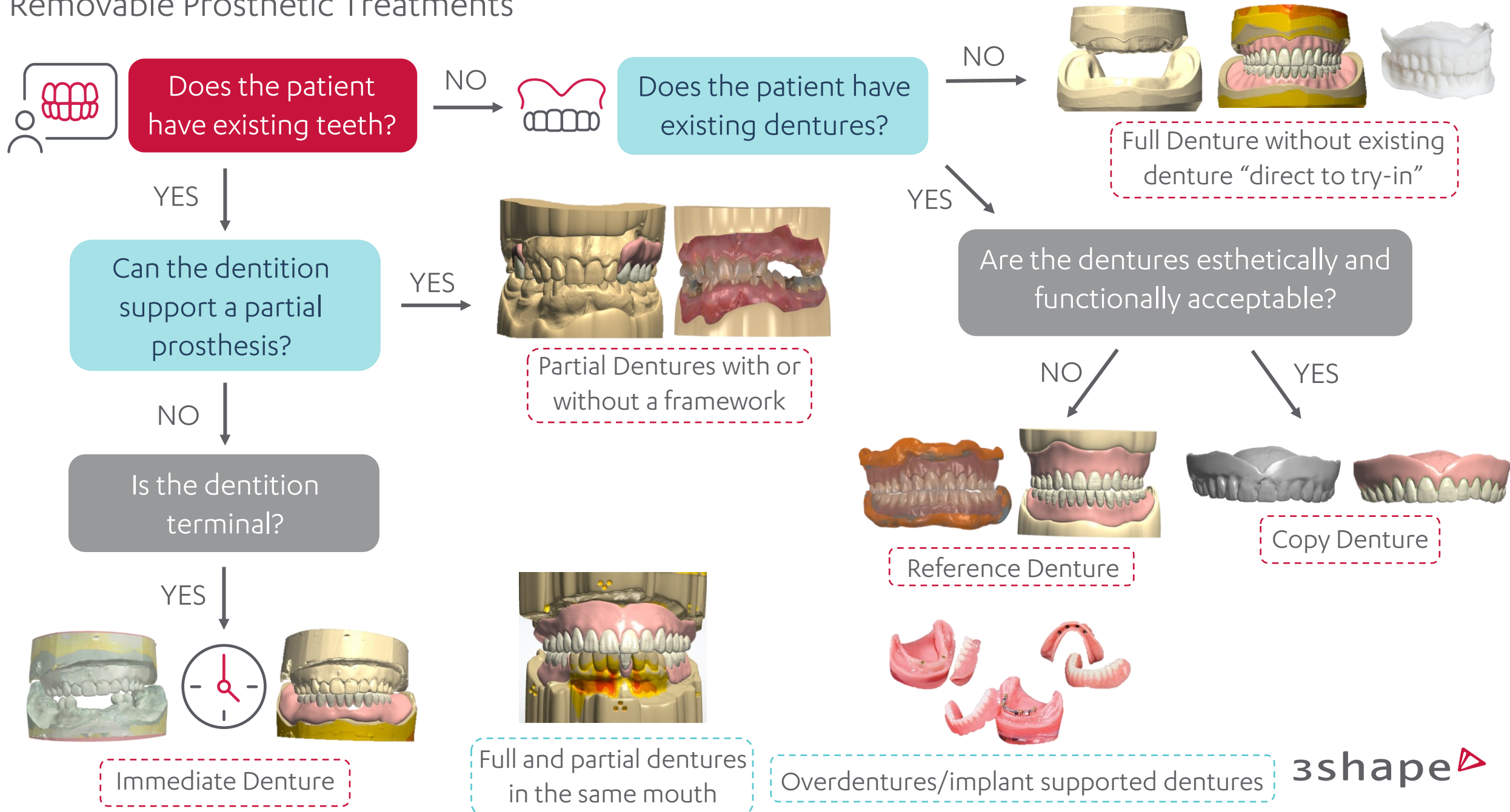
Gingiva Type: Stratasy TrueDent Base
Material: Stratasy TrueDent

Successful Denture Workflow

By 3Shape Design Services



Removable Prosthetic Treatments

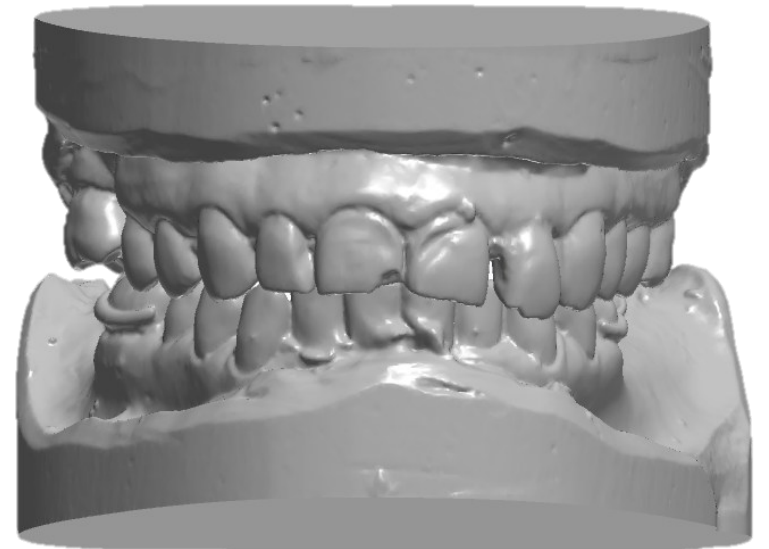


Importance of an Opposing Scan in Denture Design

- Occlusion & Bite Alignment: Ensures proper fit and alignment, preventing discomfort and uneven wear.
- Functional Balance: Distributes chewing forces evenly to avoid pain or gum damage.
- Aesthetic Considerations: Matches size, shape, and alignment for a natural appearance.
- Accurate Fit: Accounts for unique anatomical features, ensuring comfort.

For edentulous patients (no teeth):

- Occlusal Plane & VDO: Helps establish a balanced occlusion.
- Bite Registration: Ensures correct alignment when the mouth is closed.
- Support & Stability: Maximizes ridge support for secure denture fit.
- Symmetry & Aesthetics: Creates a natural, symmetrical look.



Impression Criteria for Dentures

To ensure optimal retention, stability, and proper occlusion in denture designs, high-quality impressions are essential. Accurate impressions lead to a final prosthesis that offers long-term comfort and functionality for patients.

Maxillary Impression Requirements

For maxillary dentures, the impression must accurately capture the entire denture-bearing area, including:

- **Palate:** Ensures a proper seal and fit.
- **Alveolar Ridges:** Critical for denture support.
- **Hamular Notches:** Key for secure retention and avoiding movement.

In addition, the following areas must be clearly defined:

- **Buccal and Labial Vestibules:** Guide proper denture extension.
- **Frenum Attachments:** Ensure that the denture does not impinge on soft tissues.
- **Posterior Palatal Seal Area:** Important for enhancing suction and overall retention.

Impression Criteria for Dentures

Mandibular Impression Requirements

The mandibular impression must capture:

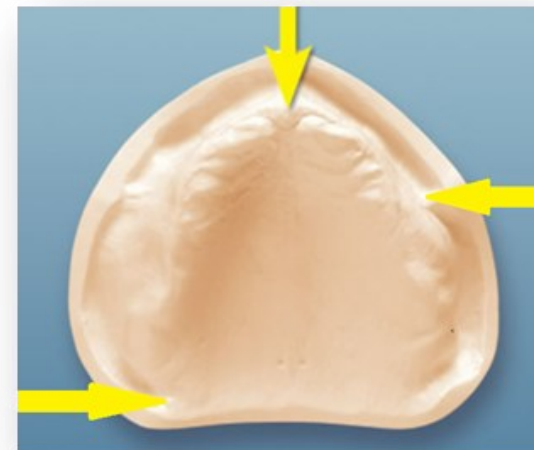
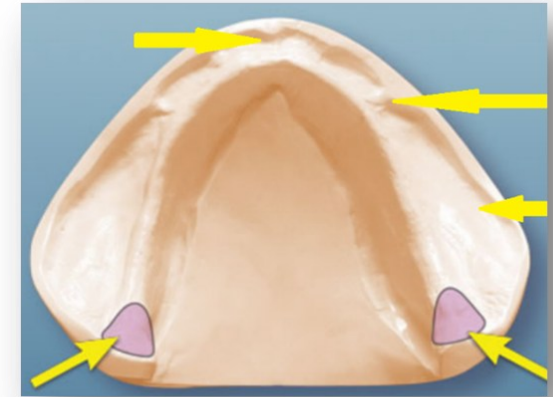
Full Arch: Covers all essential support areas.

Retromolar Pads: Ensures posterior retention and stability.

Buccal and Labial Vestibules: Key for extending the denture properly.

Frenum Attachments: To avoid soft tissue irritation.

Oblique Ridge and Lingual Mylohyoid Ridge: Necessary for stability and retention in the lingual and posterior regions.



Scan Requirements and Best Practices

IOS Scanning with Retractors: Clinicians must use intraoral scanners (IOS) with nonmetallic edentulous retractors to reduce interference from the tongue and surrounding muscles.

Complete Anatomical Capture: Ensure that all relevant anatomical landmarks are captured. Incomplete scans or scans with artifacts may result in a nonfunctional denture.

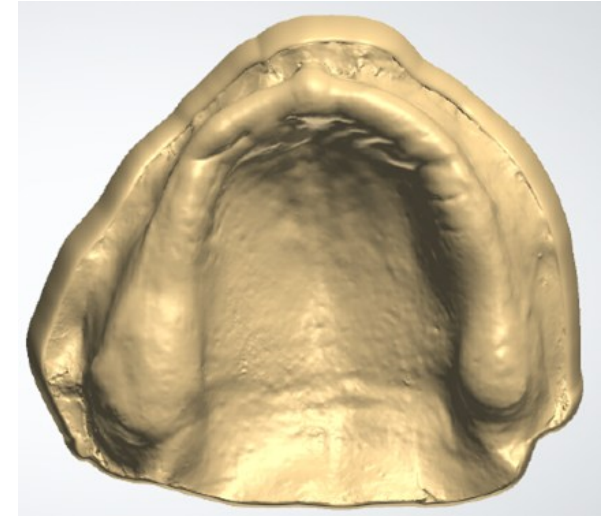
IOS Scan using retractors



All Anatomical Landmarks



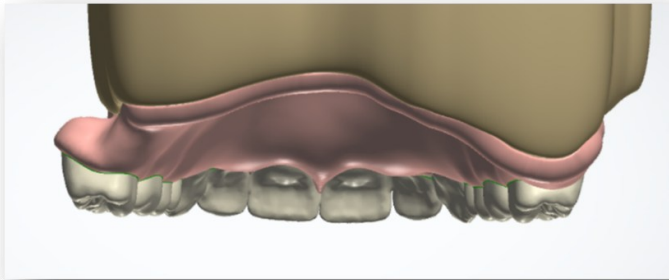
Ready to Design



Scan Requirements and Best Practices

Incomplete scans or those with artifacts result in nonfunctional dentures, as our system often cannot process them.

Using these scans for monoblock try-ins only worsens the issue, as they typically fail to meet the minimum requirements for a custom tray for wash impressions.



Suggested Solutions

Trios Scanners: These scanners, with their advanced memory and camera capabilities, are ideal for capturing edentulous oral cavities.

Nonmetallic IOS Retractors: Minimize soft tissue and tongue interference, allowing for clearer scans of all anatomical landmarks.

