ClinicCAD

ME-UG-702i
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Symbols

No.	Symbol	Definition
1		Consult instructions for use on the website*
2		Consult instructions for use or consult electronic instruction for use
3		Caution
4		Warning
5		Prescription only (USA)
6		Date of manufacture
7		Manufacturer
8		Tips
9		Authorized representative in the European Community/European Union
10		Medical device
11		Serial number

No.	Symbol	Definition
12	CE 2797	This system complies with the regulatory requirements of Medical Device Regulation 2017/745 regarding medical device.
13	CH REP	Authorized representative in Switzerland
14	KR	Country of manufacture: Republic of Korea
15		Importer

**If a printed paper version of the user manual is required, it will be provided free of charge upon request to the manufacturer's contact information listed on the last page. The user manual in paper form will be supplied within a maximum of 7 days after receiving the user's request.*

Overview and General Information

Overview

Medit ClinicCAD is an inclusive dental CAD application designed for both CAD experts and novices. It provides an intuitive workflow for creating restorations. The app simplifies processes with automated one-click design for premolar and molar single crowns, utilizing pre-operative scans and prepared tooth data to ensure precise, patient-specific results. With Medit ClinicCAD, users can design the following restorations:

- crown (with screw holes and handles)
- bridge (with pontics)
- eggshell crown or bridge
- veneer
- coping
- inlay/onlay
- cervical inlay
- Maryland bridge

Product Name	CAD/CAM Software
Trade Name	Medit ClinicCAD
Model Name	MA-ACC
UDI-DI	(01)08800026700203
UDI-PI	(10)1.1.0
Basic UDI-DI	88000267MA-ACC7W

⚠ Caution

Medit ClinicCAD is a CAD software intended to support the digital modeling of dental restorations using the provided tools; it uses the patient's anthropometric data to generate the output. It does not perform any interpretation or modification of the patient's scanned data; therefore, it does not substitute medical review, advice, or treatment from a trained professional.

Device Functional Benefits

1. Shorter chair time
2. Fewer remakes and returns
3. Higher predictability
4. Improved patient satisfaction

Performance

- **Margin Fit Accuracy**
  Performance objective for margin fit accuracy is set to <100µm, based on state-of-the-art literature
- **Internal Fit Accuracy**
  Performance objectives for internal fit accuracy are set to <100µm, based on state-of-the-art literature
- **Morphological Accuracy (Copy feature)**
  Performance objectives for morphological accuracy when using the Copy feature are set to <200µm, based on state-of-the-art literature
- **External Fit Accuracy (Library feature)**
  Performance objectives for external fit accuracy when using the Library feature are set to <100µm, based on state-of-the-art literature

Intended Use

Medit ClinicCAD is a software developed to allow users to design crowns, inlays, copings, veneers, and eggshell-type restorations based on available intraoral data. It enables users to align the scan data to the occlusal plane, draw margin lines, align tooth library data on the scan, duplicate scan data, design prostheses, and create eggshell-type crowns.

Medit ClinicCAD provides tools for digitally designing prostheses for missing teeth. Be advised that prostheses designed by individuals who are not trained dental professionals may have detrimental effects on the patient's oral health.

The program must not be used for purposes other than those described in its intended use.

⚠ Caution

The Medit ClinicCAD software application does not modify the patient's anthropometric scan data, which remains accessible to healthcare professionals, as depicted through the Medit Scan software's 3D graphical representation tools.

Note

Medit ClinicCAD may provide an optional export/upload connector to third-party cloud-based printing software (SprintRay's RayWare Cloud) for file transfer only which is not required to achieve the intended use, does not control any external device or process. Medit does not assume responsibility for issues related to the functionality, compatibility, or performance of third-party software. For any problems or inquiries related to the third-party software, including but not limited to technical issues, updates, or licensing, please contact the relevant manufacturer.

Indications

This software is used to design dental prosthetics—including crowns, copings, veneers, inlays/onlays, and cervical inlays—based on 3D oral scan data, for patients considering prosthodontic treatment due to dental defects such as missing teeth or partially missing dentition.

Contraindications

The software cannot be used for purposes other than to create the following:

- crown
- coping
- veneer
- inlay/onlay
- cervical inlay
- Maryland bridge

Intended User Profile

Dental professionals such as dentists, dental hygienists, and dental technicians.

Intended Patient Population

Patients who require fixed prosthetic treatment due to tooth loss or localized dentition defects (e.g., missing or partial teeth). There is no specific age limit for use, provided that clinically appropriate oral scan data can be obtained and assessed by a qualified clinician.

Clinical evidence for the pediatric population is currently limited. Consequently, the safety and performance of the device in pediatric patients have not been fully established.

Patient Safety Advisory

Improperly designed restorations (crown, inlay, etc.) can potentially have a detrimental impact on a patient's dental health and teeth, causing discomfort or other oral issues.

Consequently, though the software can facilitate diagnostic and treatment planning processes, all decisions must be made by a skilled dental professional with a comprehensive understanding of the software's functionality and data interpretation. There are ample opportunities at each stage of the restoration design process to identify and rectify any inaccuracies or errors that may lead to serious injuries. The dental professional must closely monitor the processes of designing and decision-making.

The final prosthesis is always reviewed and adjusted by a qualified clinician before being applied to the patient, thus lowering the actual clinical risk.

Security Risk Management and Error Handling

After the issue has been improved, if it is necessary to update the program, such as releasing a new installation file or applying some patch files, it is officially distributed through the head office sales/SE personnel, along with the application guide, to the person in charge of the corporation or the issue site.

Responses to security issues may be further announced on the website if necessary.

During the issue handling and recovery process, temporary operational restrictions may occur to ensure system stability and data integrity:

- Patient data may be temporarily inaccessible until the recovery process is completed.
- Clinical workflows may be interrupted; normal operations will resume once administrative actions have been completed. Patient data will not be automatically deleted during this process.

- A warning message will be displayed, and additional data entry will be restricted until the issue is resolved.
- User sessions may be automatically logged out to prevent unauthorized access.

Security Response Procedure

1. Reporting security issues
2. Share initial analysis results and progress
3. Issue delivery
4. Issue response plan / delivery
5. Issue response plan / share results

System Requirements

Windows

CPU	Intel Core i5 2.6 GHz or higher
RAM	16 GB or higher
Graphics Card	NVIDIA GeForce GTX 1060 (2 GB) or higher
OS	Windows 10 64-bit, Windows 11 64-bit

macOS

CPU	M1/M2 or higher
RAM	8-core or higher
Chip	16 GB or higher
OS	Sonoma 14 or later

Network Requirements

1. Network Type: wired LAN or Wi-Fi (WPA2 or higher)
2. Bandwidth: minimum 100 Mbps (1Gbps recommended)
3. Protocol: IPv4

4. Port: TCP 443
5. Latency: average below 50ms

Security Requirements

1. Authentication: Password must be 8-16 characters long, including a combination of at least three of the following: letters, numbers, and special characters. Passwords are accepted in English only.
2. Encryption: TLS 1.2 or higher, HTTPS transmission
3. Antivirus & Patches: keep the operating system and antivirus up to date

This software continuously monitors for security events such as unauthorized access, tampering attempts, and data integrity errors.

Unauthorized Access Prevention:

Only individuals who have been granted Admin account privileges in Medit Link can access patient information and internal servers. During the registration process, each user is assigned account permissions to manage and prevent unauthorized access.

Cybersecurity Information

ClinicCAD does not access any patient PII/PHI from Medit Link. In this system, the communication and API exchanges use scan data files identified only by the patient's Case ID rather than any PII/PHI.

Preparations and Handling Before/During Device Use

- Product installation procedure: managed via the Cloud
- Mandatory user validation when creating Medit Link Account:
  - Create a user account in Medit Link
  - Send a user validation email
  - User confirms the validation
  - User logs in
- Troubleshooting guide: https://support.medit.com/hc/en-us

Required Facilities, Training, and User Qualifications

- Local network administrators/operators must have IT expertise (network, server, OS security configuration).
- Cloud services are managed on AWS by Medit administrators (AWS certified).

Information to Verify Proper Installation and Safe Operation

- ClinicCAD Updates

    - Update through the App Box in Medit Link. (The latest ClinicCAD installer file will be downloaded and installed.)
    - Run ClinicCAD to check the installed version.
    - If security-related updates are required, install the updated ClinicCAD version in the same way.
- Cloud Services: Managed and monitored through AWS Trusted Advisor with regular updates to apply required security measures.
- Data and Settings Backup/Restore
    - Data is managed locally via Medit Link and backed up to the Cloud.
    - Backups/restores can be performed by downloading data as needed.
    - Original IOSC files are retained for up to 6 months only.
    - User logs are retained for 3 months and can be manually deleted.
    - Stored data can be deleted from the Case Box in Medit Link, and the responsibility for such deletion rests with the user who performs it.
    - Cases can be transferred using the Case Converting Tool in the Settings menu of Medit Link.
    - When a user account is deleted, all user data (e.g., personal information, usage logs such as log-in and feature usage) and database data are permanently removed and cannot be restored.
- Integrity and Verification of Software Security Patches
    - The executable file of ClinicCAD is automatically digitally signed during installation and verification, so users do not need to take any additional action.

IT Network Precautions

Guidelines

Execution of the health software on an IT-network could result in previously unidentified risks to patients, users, or third parties. The responsible organization is advised to identify, analyze, evaluate, and control these risks.

Hazard Situations

- Always ensure that your system is protected by the latest version of antivirus software and an active firewall.
- Connecting the network to any device other than Medit ClinicCAD may result in potential virus infections or data tampering. Verify that the network is operating under appropriate administrative control before proceeding.
- Even if automatic backup is configured, no backup will be performed if the software is not running or if the designated backup location is unavailable.

Subsequent changes to the IT network could introduce new risks and may require additional analysis. Such changes include:

1. Modifications to the IT network configuration.

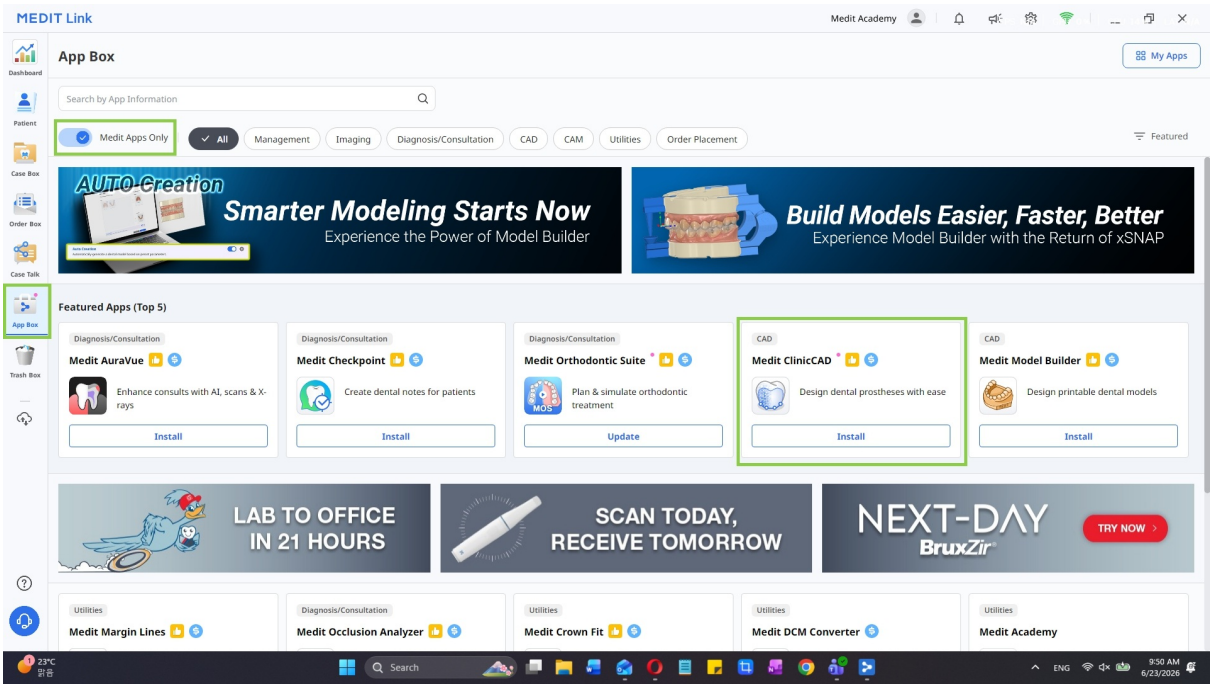
2. Adding items (hardware, software platforms, or software applications) to the IT network.
3. Removing items from the IT network.
4. Updating software applications on the IT network.
5. Upgrading software platforms or software applications on the IT network

In the event of a cybersecurity incident, if the cybersecurity detection software identifies a threat, the user must report it to the manufacturer and to the competent authority of the Member State.

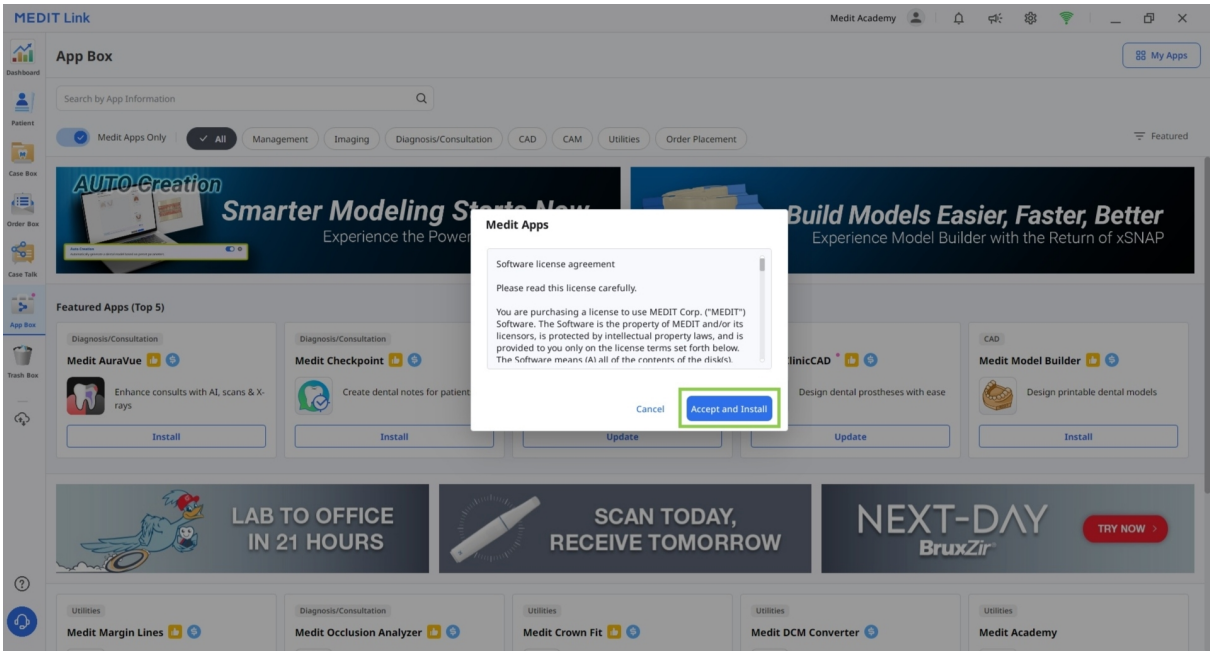
Installation Guide

1. Log in to your Medit Link account and go to the App Box on the left-hand menu.

2. Find the Medit ClinicCAD app and click "Install."



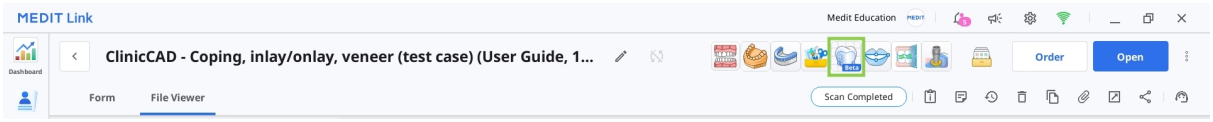
3. Read the Software License Agreement and confirm app installation by clicking "Accept and Install."



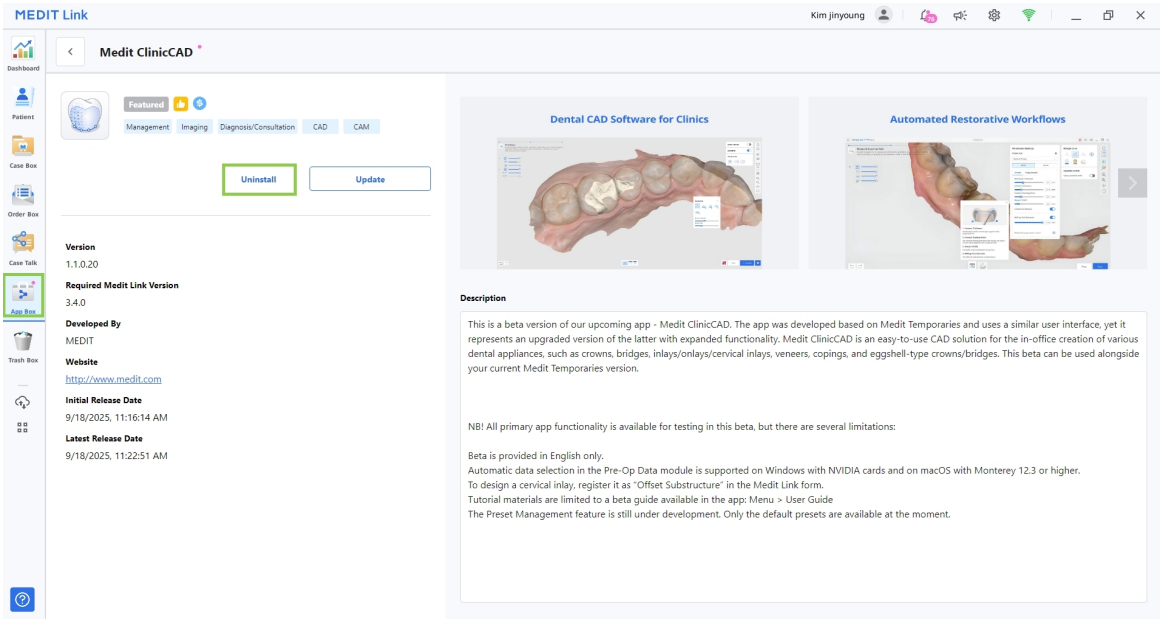
4. The app will be downloaded and installed automatically. It may take several minutes to finish the installation process.

> ⚠ Caution
>
> Do not turn off the PC or close Medit Link during the installation process.

5. Once the app is installed, you can run it from any case in Medit Link by clicking the app icon in the top right corner of the Case Detail window.



6. To uninstall the program, open App Box and locate the Medit ClinicCAD app. Select the app card to open its details page, then click “Uninstall.”



Data Management

Preparing Data

Medit ClinicCAD lets users design restorations using both prepared and pre-op scan data. To use the app, data for at least one arch must be available.
Prepared data can be used to design any restoration, while pre-op data alone allows the design of only eggshell-type crowns and bridges.

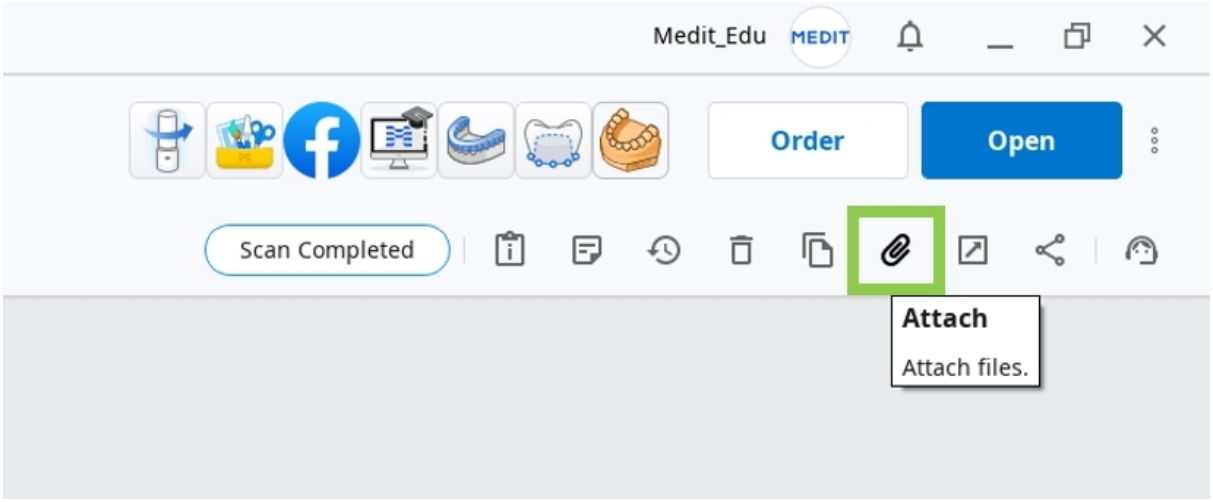
- If needed, the pre-op data can be imported together with the prepared one and used for reference when editing the restoration.
- If the case has separate scan data for the maxilla/mandible and the abutment, the two will be automatically combined. After running the app, the combined data will be available in the Assign Data window. The new file will have either of these titles: Maxilla with Abutment or Mandible with Abutment.
- If the case has dynamic occlusion data captured in Medit Scan for Clinics, it will be automatically imported into the app. It can be used for reference when adapting and adjusting the restoration.
- Additional scan data needed for reference during the design process can be imported into the program at any time using the “Import Additional Data” option in the Side Toolbar.

The user must gather all the data for the project under the same case before running the app. There are two ways to add data to a Medit Link case.

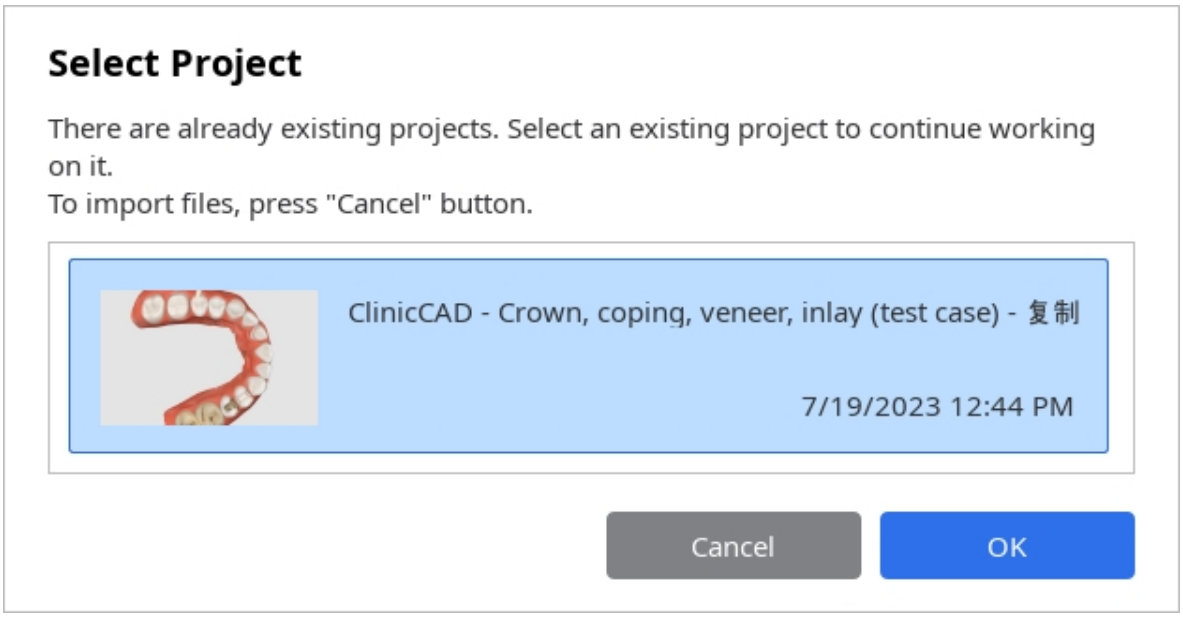
1. Complete all necessary scans in Medit Scan for Clinics or Labs, and all acquired data will be automatically saved to the case.

Use the "Solid" option when scanning data in Medit Scan for Labs.

2. Load data from a local folder using the "Attach" feature in the Case Detail window.



Users can also continue working on previously saved projects if the program is opened from the same case again.



Note

Projects that were created in Medit Temporaries are not supported by Medit ClinicCAD.

Caution

Medit ClinicCAD doesn't modify or interpret the original 3D data for medical use; the software only provides the anatomical geometries to create virtual models of the restorations.

Supported Input Data

- Data type: 3D scan data (oral scan or model scan)
- Data Format: STL, OBJ, PLY
- Limitation: 2D image data cannot be used. Only commonly used 3D formats (STL, OBJ, PLY) are allowed as input data.

Supported Scanners

- Open-type oral and model scanners ("Open-type" refers to scanners/model scanners that output data in open formats such as STL, OBJ, or PLY.)

3D Data Control

Users can control the 3D data using a mouse alone or both the mouse and keyboard.

3D data control using a mouse

Zoom	Scroll the mouse wheel.	
Zoom Focus	Double-click on the data.	
Zoom Fit	Double-click on the background.	
Rotate	Right-click and drag.	
Pan	Hold both buttons (or wheel) and drag.	

3D data control using a mouse and keyboard

	Windows	macOS
Zoom		
Rotate		
Pan		

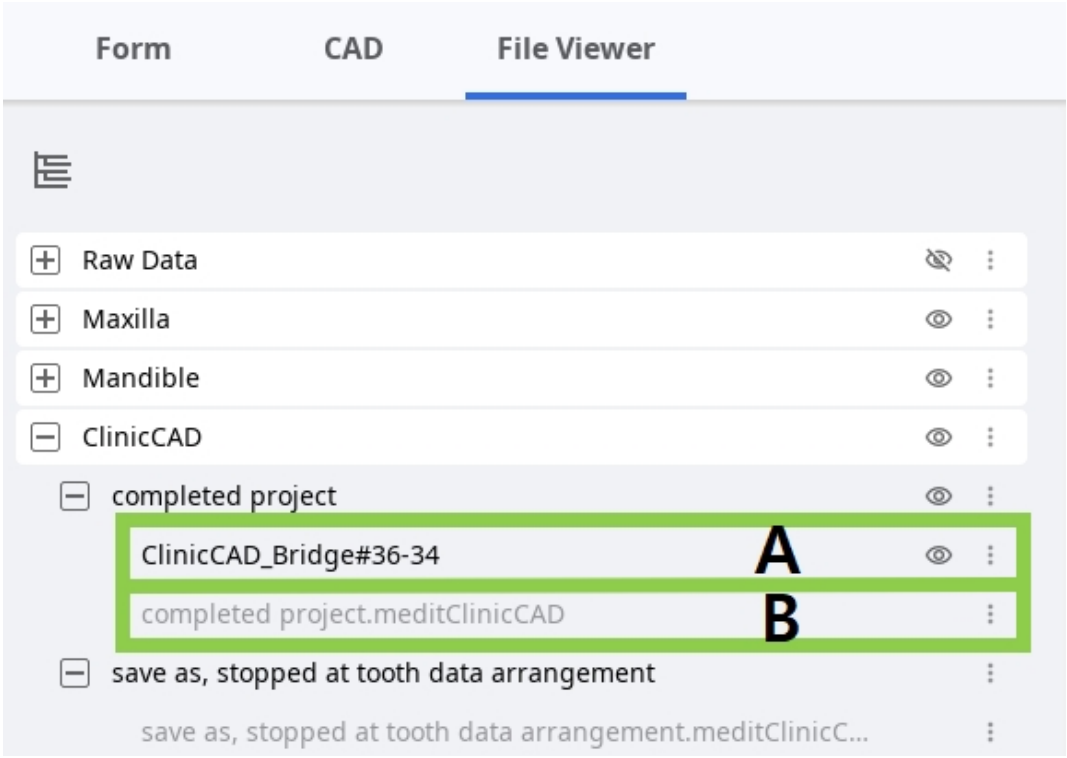
Saving Data

There are several ways to save the project data.

1. **"Complete" button in the final step**

> **Paid Feature**
> Saving and exporting the completed restoration design as an STL file is a paid feature. Pricing may vary based on your scanner ownership status and location.
> For more details about payment, please visit the Medit Help Center or click here.

The "Complete" button can be used after the restoration design is finished. It creates two files in the Medit Link case: the project file(B) and the restoration design file(A). The latter can be further used for printing or milling the restoration.



Tip: Complete Button Options

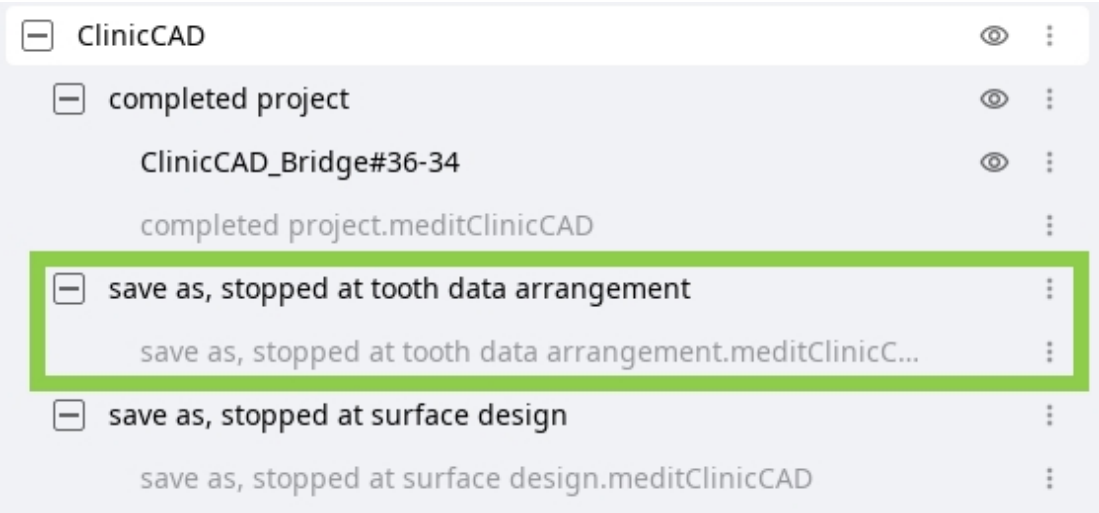
This feature is available only in the final step. The gear icon next to the "Complete" button provides additional options for how the project can be saved:

- Choose "Include Construction File" if a construction info file is needed for milling or CAM software.
- Choose "Export to PC" to automatically export created data to a designated folder on a computer.

2. **"Save" or "Save As" options in Menu**

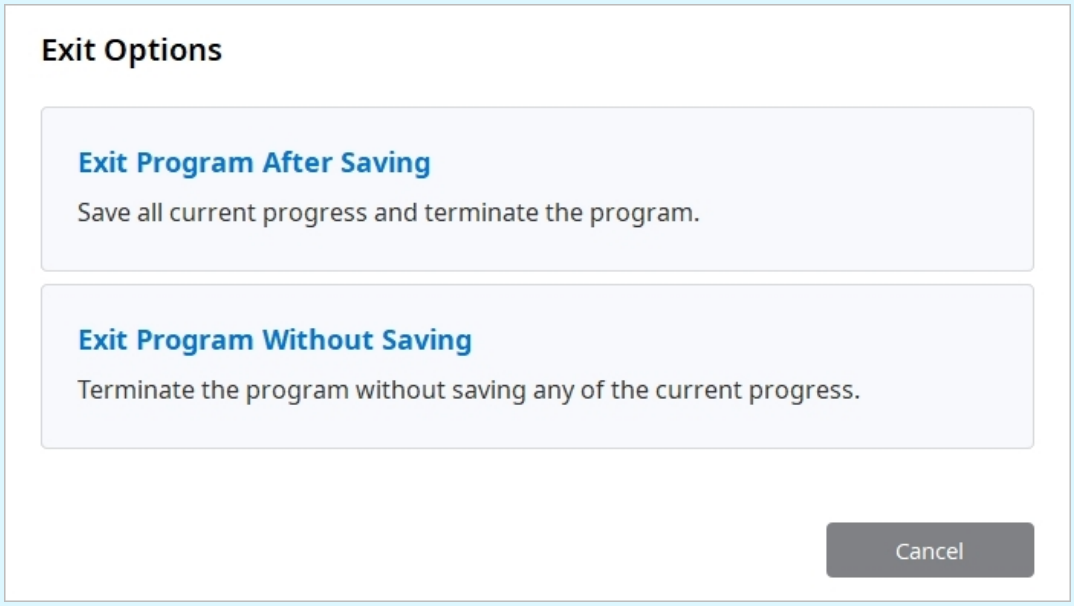
These two options in the program menu help users manage the project file by creating a new one or updating an existing one.
The project file is generated every time you run the app and can be used across all Medit software. It records work progress, allowing users to temporarily stop and save an unfinished project to resume later.

The "Save As" option is used to save an unfinished project or save the current project under a new name, while the "Save" option allows the overwriting of the project file for the currently opened project.



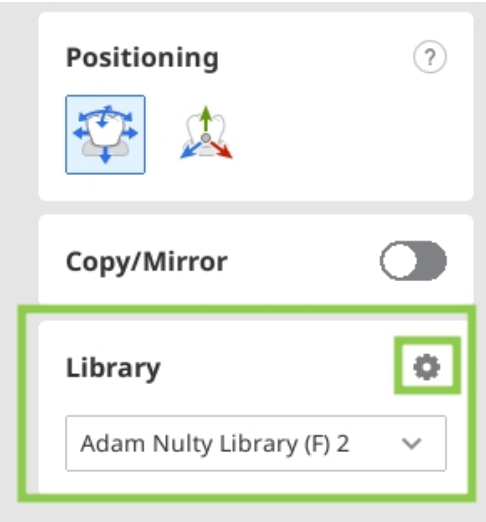
Note

Users are also prompted to save changes in the project file when they terminate the program.



Library Management

Teeth libraries are provided when designing restorations based on the scan data of already prepared teeth (Prepared Data Module). There are 6 default libraries, but users can expand the list of available libraries via Library Management.



The Libraries Management feature provides tools for managing the list of available libraries and editing library data. To use this feature, click the gear icon in the Library toolbox.

Note

The library list can be expanded to a maximum of 50 libraries. The complete list of libraries is stored locally, so if logged in on a different computer, only the default libraries will be available.

Tip

If the teeth data were exported as a library from Medit Ortho Simulation, it will be automatically added to the list of libraries upon launching Medit ClinicCAD.

How to manage libraries list

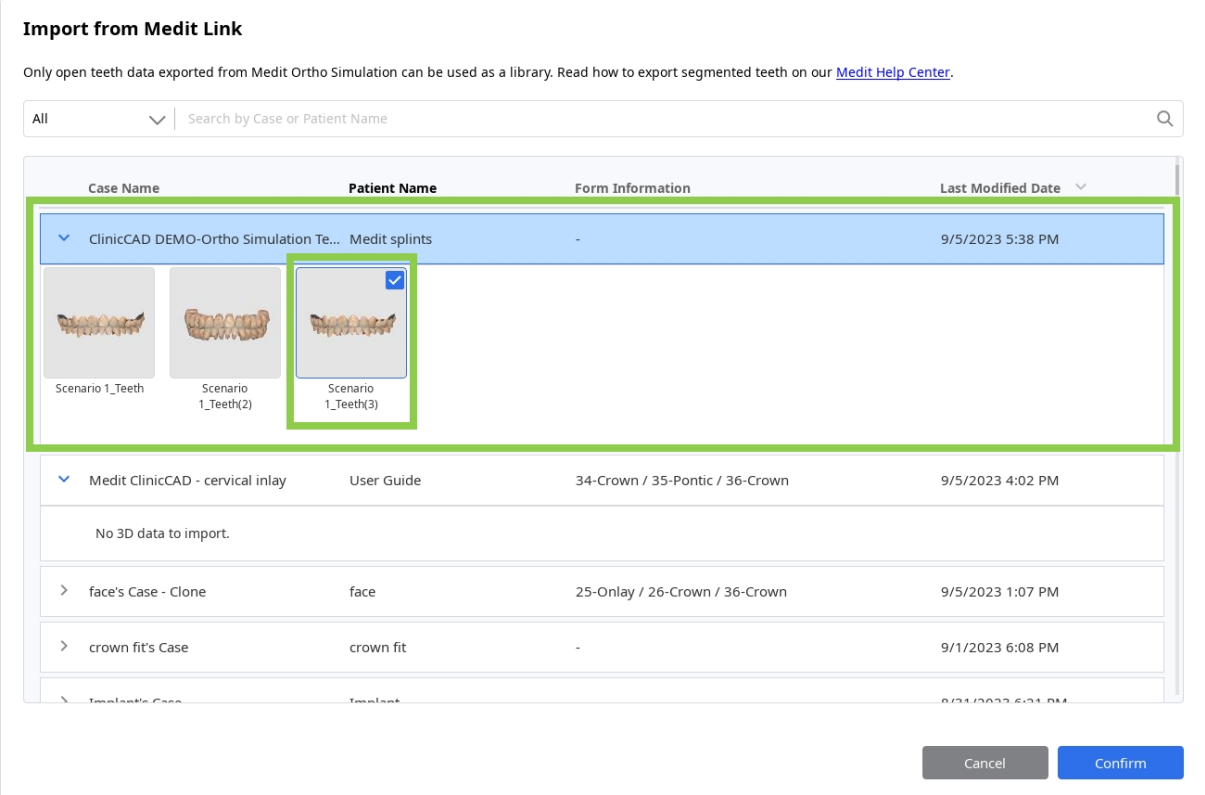
Users can add, delete, export, and modify libraries in the list using the tools provided in the management widget on the right. The default libraries can be modified only after cloning.

	Import from PC	Import the teeth library stored on your computer. **Note** This feature supports only Medit ClinicCAD libraries saved in .meditLib format.
	Export	Export the teeth library to the local PC or Medit Link.
	Clone	Create a copy of the library.
	Delete	Delete the library.
	Rename	Change the name of the library.
	Reset	Restore the library data by undoing all sculpting.

⚠ Cautions

- Verify library file format and compatibility before import.
- Confirm the exported file's integrity after saving.
- Validate tooth data before creating a new library.
- Clone validated and error-free libraries.
- Confirm that deletion cannot be undone.

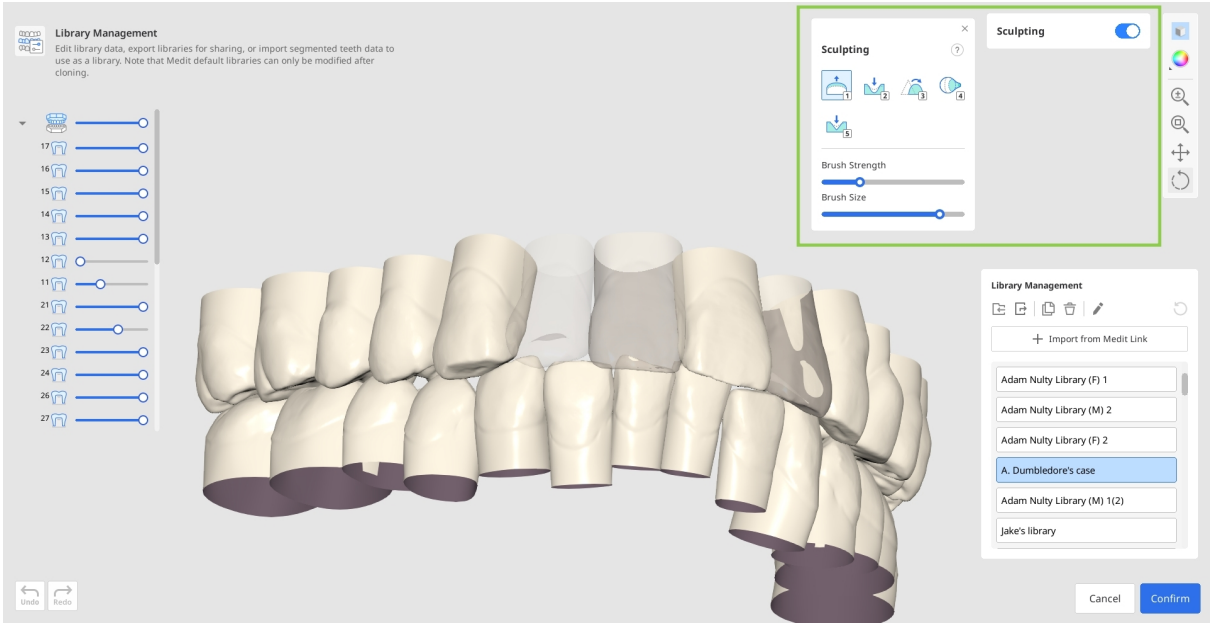
There is one more option for adding a library to the list - "Import from Medit Link." This feature allows users to browse Medit Link cases for segmented teeth data and import it as a library into the app.



How to edit library data

Teeth data of a library can be edited using "Sculpting." With the provided tools, users can add, remove, smooth, or morph the data of the selected tooth.

The visibility of the tooth in the Data Tree can be adjusted for a more comfortable editing process. To edit the default library, it must first be cloned.



⚠ Warning (Sculpting: Remove)

Excessive material removal may cause critical anatomical loss and clinical misfit.

⚠ Caution (Sculpting: Remove)

Carefully validate removal areas to preserve necessary anatomical structures.

⚠ Warning (Sculpting: Smooth)

Over-smoothing can flatten essential details and compromise restoration fit.

⚠ Caution (Sculpting: Smooth)

Limit smoothing to necessary areas and verify anatomical fidelity after the operation.

⚠ Warning (Sculpting: Morph)

Improper morphing may distort occlusal relationships and clinical anatomy.

⚠ Caution (Sculpting: Morph)

Always review morphological changes to maintain restoration function and fit.

⚠ Warning (Sculpting: Groove)

Excessive grooving may weaken structural integrity and cause clinical failure.

⚠ **Caution (Sculpting: Groove)**

Apply grooving only where clinically indicated and verify strength post-modification.

⚠ **Warning (Sculpting: Add)**

Excessive addition may distort the occlusal relationship and the shape of the prosthesis.

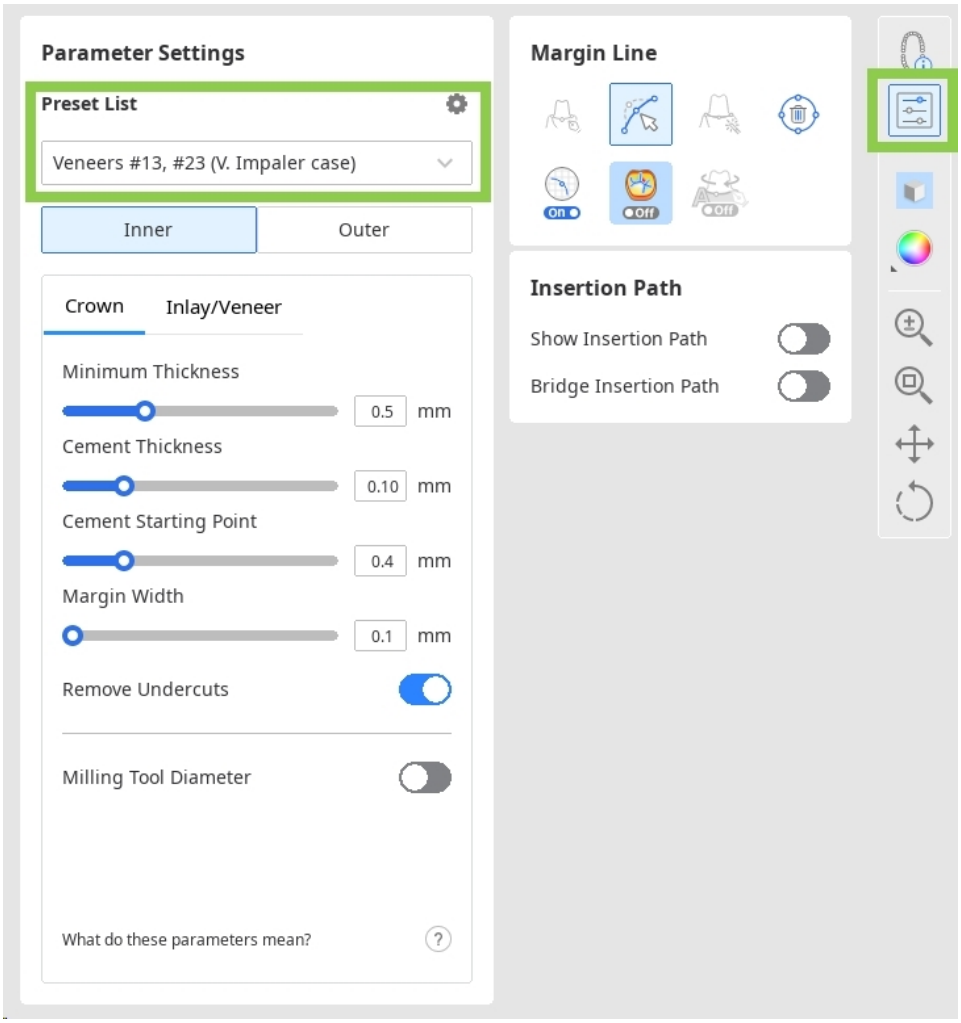
⚠ **Caution (Sculpting: Add)**

Check whether the added area affects the function of the prosthesis.

Preset Management

In Medit ClinicCAD, users can manually configure printing parameters or use presets. The list of available presets is provided in the Parameter Settings widget.

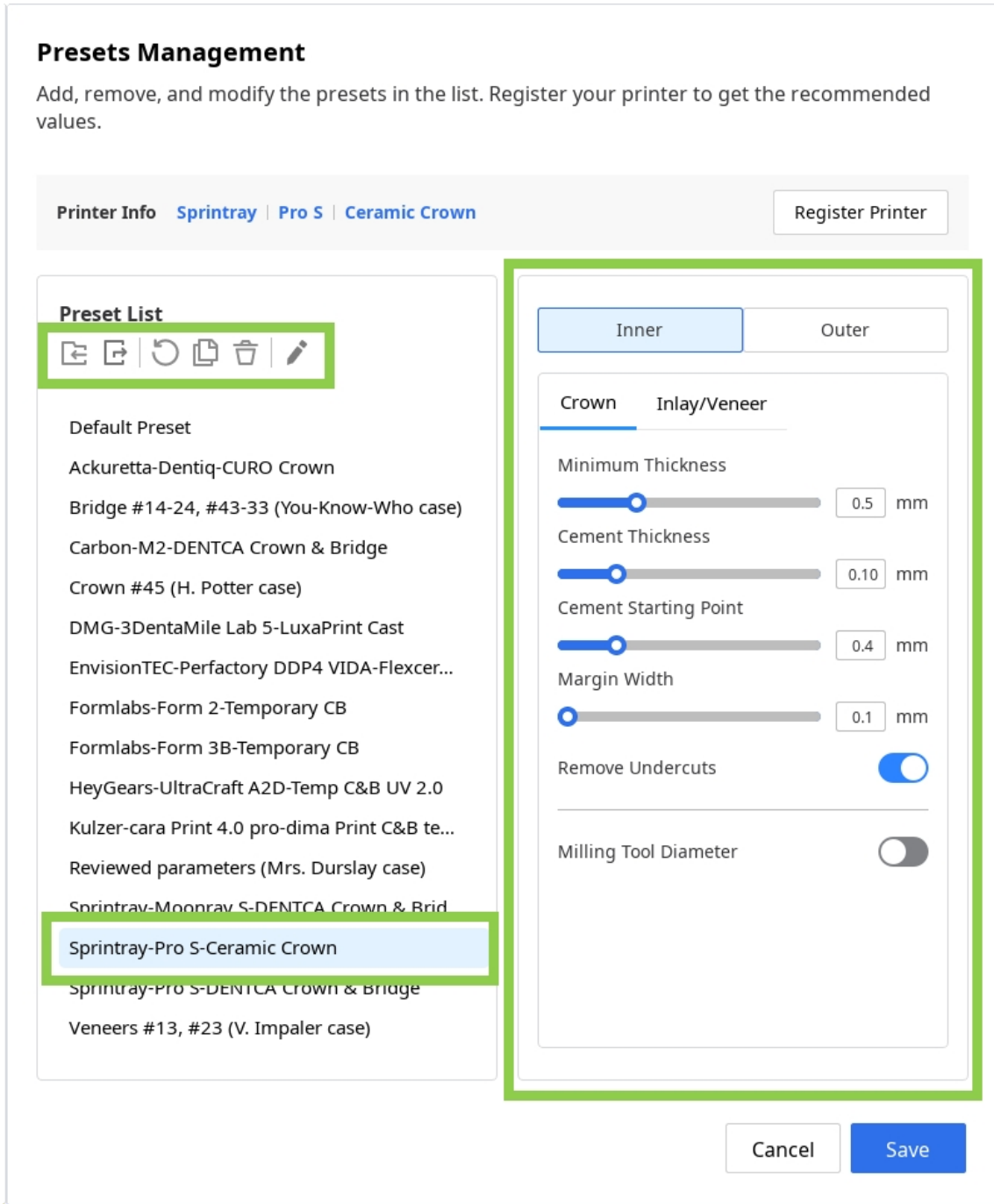
If the user doesn’t register their 3D printer upon the initial launch of the app, only the default preset will be available. To expand and control the preset list, use the Presets Management feature (the gear icon next to Preset List).



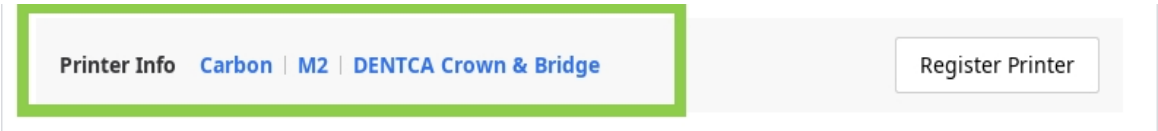
The Preset Management feature allows to control the preset list, edit the available presets, import preset files received from another user, or get the recommended preset by registering 3D printers.

How to manage the preset list

Users can export, delete, rename, and edit the values of the preset selected in the list on the left.



- After changes were made, the preset values can be restored to the recommended ones via “Reset.”
- For easier management, you can clone any preset to duplicate the existing one and then modify it for a specific use.
- If a preset file is received from another Medit user, it can be added to the list by importing it from the local storage.
- Even if the original name of the recommended preset is changed, it will always be shown at the top in “Printer Info.”



Warnings

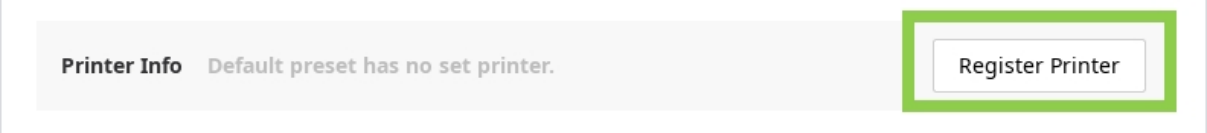
- Exporting incorrect presets may propagate errors in future restorations.
- Incorrect preset modifications can compromise restoration outcomes.

Cautions

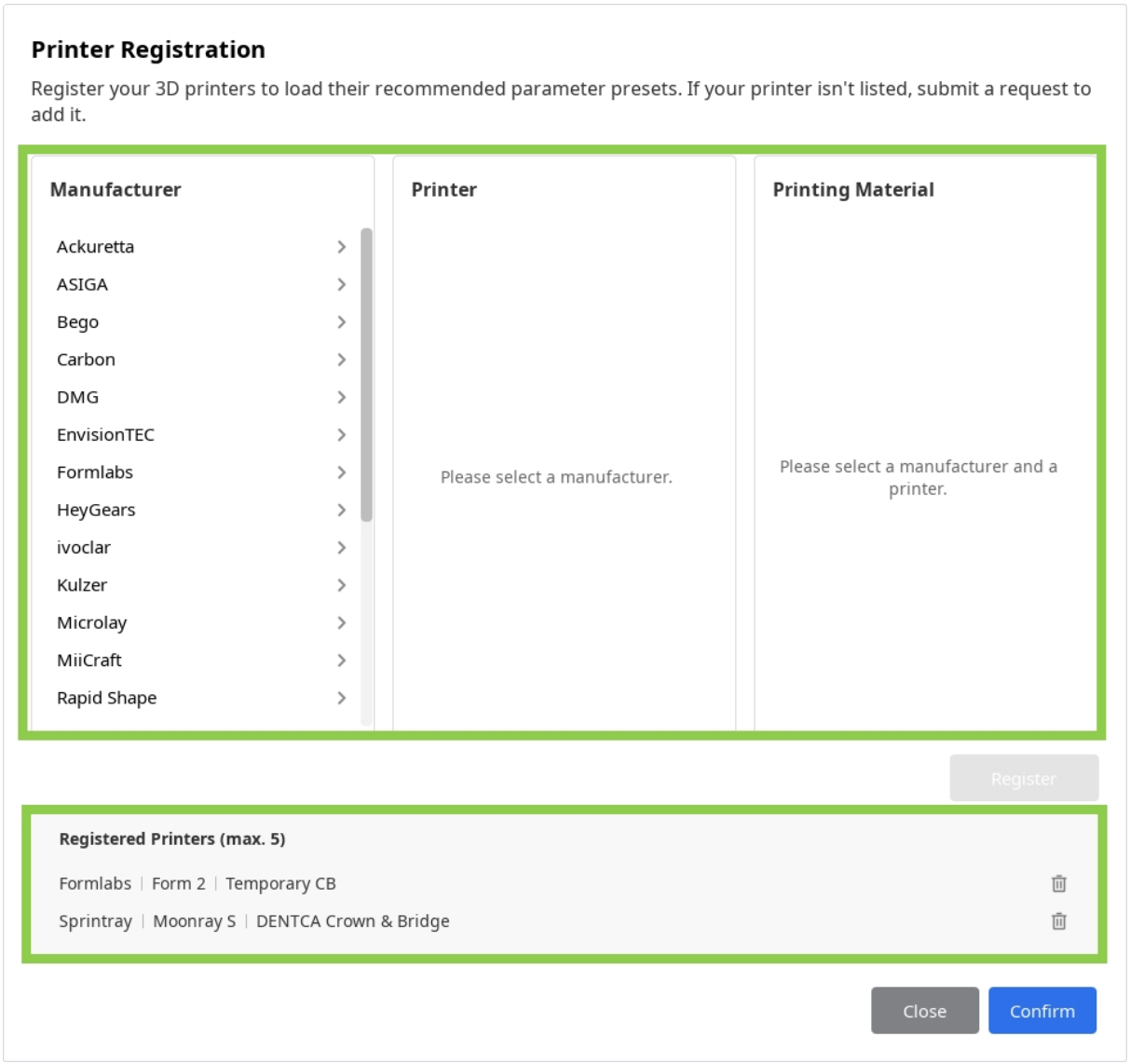
- Verify preset contents before export to ensure design consistency.
- Deleting critical presets may disrupt standardized workflows.
- Back up important presets before deletion.
- Misleading preset names may cause clinical application errors.
- Use clear, descriptive naming conventions when renaming presets.
- Verify original preset accuracy before cloning.
- Review and validate edited values before saving changes.

How to get recommended preset

If printer registration was skipped upon the initial app launch, it can be done later using the “Register Printer” button.



To register a printer, user must select the manufacturer, printer, and printing material in the window shown below. Up to 5 printers can be registered. Printer registration will be completed after clicking “Confirm,“ and a preset with recommended values will be added to the list.



Tip

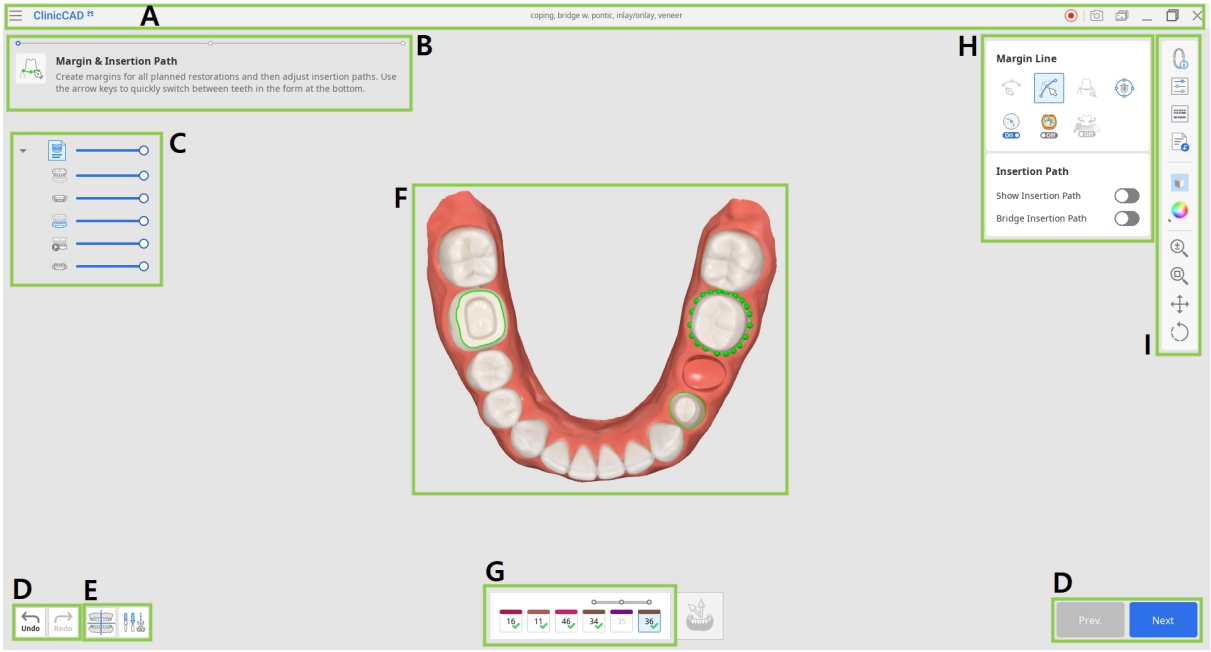
If your printer isn’t listed, scroll down in the manufacturer section and click “Printer Request.“

Cautions

- Incompatible printers can lead to manufacturing failure.
- Confirm material compatibility with selected equipment.

User Interface

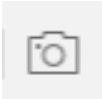
User Interface at a Glance



A	Title Bar
B	Guide Message
C	Data Tree
D	Action Control Buttons
E	Data Alignment & Editing Tools
F	3D Data
G	Teeth Form
H	Toolboxes
I	Side Toolbar

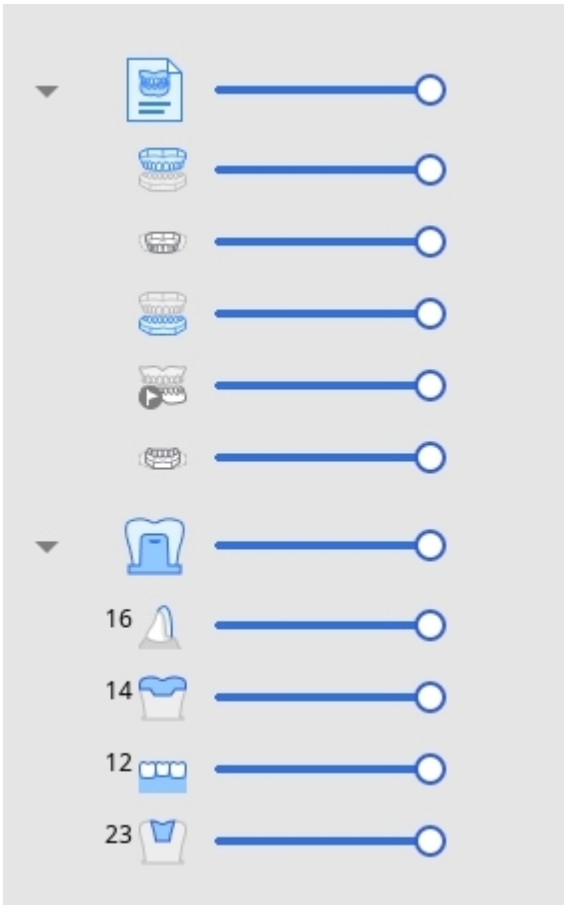
Title Bar

The Title Bar is the ribbon at the top of the application window that contains basic controls on the right and the menu on the left. It also displays the app name and the opened case name.

	Menu	Manage the opened project, access available assistance resources, and check app details.
	Help Center	Go to the Medit Help Center page dedicated to this app.
	Start/Stop Video Recording	Start and stop the video recording of the screen.
	Screenshot	Take a screenshot. Capture the app with or without the title bar using automatic selection, or click and drag to capture only the desired area.
	Screenshot Manager	View, export, or delete the screenshots. Upon completion, all captured images will be saved to the case automatically.
	Minimize	Minimize the application window.
	Restore	Maximize or restore the application window.
	Exit	Close the application.

Data Tree

The Data Tree is located on the left side of the screen and displays a list of data organized into groups. Data can be shown or hidden by clicking the corresponding icon in the tree, or its transparency can be adjusted using the associated slider. All data within the Data Tree is organized under two main groups: Scan Data Group and Restorations. The structure may vary slightly depending on the objectives of a specific step or tool. The image below provides an example from the final step.



Scan Data Group

- Maxilla
- Dynamic Maxilla
- Mandible
- Pre-op for Mandible
- Dynamic Mandible

Restorations

- Veneer #16
- Onlay #14
- Bridge #12-21
- Inlay #23

Action Control Buttons

There are five buttons that control the overall work process. They are located in both bottom corners of the application window.
The “Complete” button will appear at the final step only.

Undo	Undo the previous action.
Redo	Redo the previous action.
Prev.	Go back to the previous step.

Next	Apply changes and move to the next step.
Complete	Complete the design process and save the restoration to Medit Link.

Side Toolbar

The Side Toolbar is located on the right side of the screen; it offers a number of tools that may be required at any step of the design workflow.

Management Tools

	Form Info	Show or hide the form information registered in Medit Link. In the first step, you can also edit it.
	Parameter Settings	Adjust the parameters for creating the inner and outer surfaces of the restoration.
	Shortcut Keys	View and manage keyboard shortcuts
	Import Additional Data	Bring in additional 3D data to serve as a reference or aid in the designing process.

Display Tools

	Grid Settings	Show or hide the grid (overlay on/off). Click multiple times to control overlay options. The grid is intended only for visual guidance; it does not generate or represent any quantitative measurement data.
	Data Display Mode	Change between different data display options. (Glossy/Matte/Matte with Edges/Monochrome/Monochrome with Edges)

Analysis Tools

	Contact Areas with Adjacents	Turn on to show the areas of contact between restoration and adjacents. Use while sculpting the outer surface of the restoration to add or remove material to ensure optimal fitting. This feature provides color-based visualization only and does not generate quantitative measurement data.

	Contact Areas with Antagonists	When on, this function shows the areas of contact between the restoration and the antagonists. Turn on when sculpting the outer surface of the restoration to check the occlusion. This feature provides color-based visualization only and does not generate quantitative measurement data.
	Switch Deviation Display Area	Switch deviation display scale between all data and contact area only. This feature provides color-based visualization only and does not generate quantitative measurement data.
	Minimum Thickness	Turn on to see thin areas on the restoration. Use while sculpting to make sure that the restoration is not too thin to print or mill. The minimum thickness tool provides only qualitative warnings; it does not generate any quantitative measurement data.

Data Control Tools (for touch screen/mouse)

	Zoom	Zoom in and out by click-and-drag.
	Zoom Fit	Zoom to fit data to the screen.

	Pan	Move data by click-and-drag.
	Rotate	Rotate data by click-and-drag.

Toolboxes

Toolboxes beside the Side Toolbar are different at every step. Each toolbox represents a task that can be performed in this step and provides all the necessary features for completing it.
Below are the explanations for the features provided in Toolboxes across the entire app.

Margin Line

	Manual Creation	Manually create a margin line based on the selected points.
	Edit	Add, move, or delete the control points to edit the margin line. Hold down the Ctrl key for freehand editing of the line.
	Auto Creation	Automatically create a closed margin line based on the selected point.
	Delete	Delete the margin line.

	Section View	Display the section of the area where the mouse is located. This feature is only intended to assist with shape visualization; it doesn't provide measurements in legally recognized units.
	Curvature Display Mode	See the curvature of the data through the Color Map. This feature is only intended to assist with shape visualization; it doesn't provide measurements in legally recognized units.
	Dynamic View Change	Turn on Dynamic View Change to automatically rotate data according to the view direction. Note Available only when using Manual Creation.

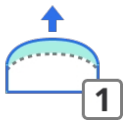
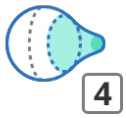
Positioning

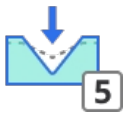
	Free Move/Scale	Move the tooth freely without any constraints. Use shortcut keys to rotate and scale it.
	3D Manipulator	Scale, move, or rotate the tooth along axes.

Selection

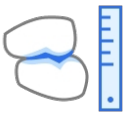
	Smart Single Tooth Selection	Automatically select the area of a single tooth, leaving out gingiva parts. Click and drag the mouse on the tooth.
	Brush Selection	Select all entities on a freehand-drawn path on the screen. Only the front face is selected.
	Brush Deselection	Deselect all entities on a freehand-drawn path on the screen. Only the front face is deselected.
	Clear All Selection	Clear all selected areas.

Sculpting

	Add	Add material to the restoration. Hotkey: 1
	Remove	Remove material from the restoration. Hotkey: 2
	Smooth	Smooth parts of the restoration. Hotkey: 3
	Morph	Morph the material on the restoration by dragging it with your mouse. Hotkey: 4

	Groove	Remove material from the restoration with a sharp blade to create grooves. Hotkey: 5

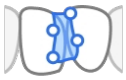
Adaptation

	Adapt to Adjacents	Adapt the restoration to adjacents.
	Adapt to Antagonists	Adapt the restoration to antagonists.
	Adapt to Gingiva	Adapt pontic to gingiva.

Note

The adaptation features apply user-specific parameters; they do not calculate or report actual measured values.

Connectors

	Move	Drag the center point to adjust the connector's position and cross-section area.
	Edit	Add, move, or delete the control points to reshape the connector.

	Allow Small Connectors	Create smaller connectors based only on overlap areas. When enabled, connectors smaller than the minimum cross-section defined in Parameter Settings are allowed.
	Add/Remove	Add or remove connectors between registered units as needed.

Screw/Handle (tools for element control)

	Auto Set	Automatically place the chosen element at an optimal spot.
	Set Toward You	Turn all elements to face toward you.
	Delete All	Delete all elements. To delete one, right-click it.
	Move	Change the element's position by dragging it.

Design Review

	Margin & Insertion Path	Adjust the margin and insertion path as needed. Changes will affect only the inner surface, leaving the outer one unchanged.

	Tooth Data Arrangement	Adjust tooth data positioning as needed. Changes will affect only the outer surface, leaving the inner one unchanged. Available only when creating single crowns automatically.
	Dynamic Occlusion	Review the restoration design using the available mandibular movement recordings.

Workflow

Data Assignment

After launching the application, the user enters the data assignment window, where one of five available modules must be selected and the necessary scan data assigned for the current project. These modules (or workflows) represent the core use cases of Medit ClinicCAD: two dedicated to restoration design, one for creating diagnostic wax-ups, one for building a custom teeth library, and one for temporary restoration with a pontic as a core element.

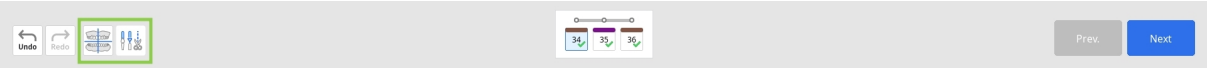
Each workflow guides the user through a structured sequence of steps, beginning with data assignment and progressing toward the intended design outcome. To proceed, the user must select a module and assign at least one data set to the target arch.

Pre-Op Data	• Design eggshell-type crowns and bridges • Supports design based on preoperative data ⚠ **Caution** This module will be disabled if a veneer, coping, inlay, onlay, or wax-up is registered in the Medit Link form.

Pre-Op Data	• Design eggshell-type crowns and bridges • Supports design based on preoperative data ⚠ **Caution** This module will be disabled if a veneer, coping, inlay, onlay, or wax-up is registered in the Medit Link form.
Prepared Data	• Design single crowns, bridges with pontics, veneers, inlays, onlays, copings, and Maryland bridges • Supports design based on prepared data with the use of teeth libraries • Supports "Auto Creation" mode for single crowns (premolars and molars only) • Supports “AI Design“ mode for the AI-generation of single inlays (premolars and molars only) • Supports workflow for designing cervical inlay* • Users can import preoperative data for reference via the Assign Data window *For more information on how to design cervical inlays, refer to the Appendix of this guide.
Diagnostic Wax-Up	• Create wax-up design models for the target restorations • Available only when a wax-up was registered in the Medit Link form • Preoperational data must be available

Custom Teeth Library	• Create a library by segmenting teeth directly from the scan data available in the Medit Link case • Build a library by importing pre-segmented individual tooth data files

After assigning the scan data, the user enters the first step of the workflow. Regardless of the selected module, this step includes two data management tools in the bottom left corner: Data Alignment and Data Editing. Although optional, these tools allow users to review and refine the imported scan data, ensuring greater accuracy and better results when designing the restoration in the subsequent steps.

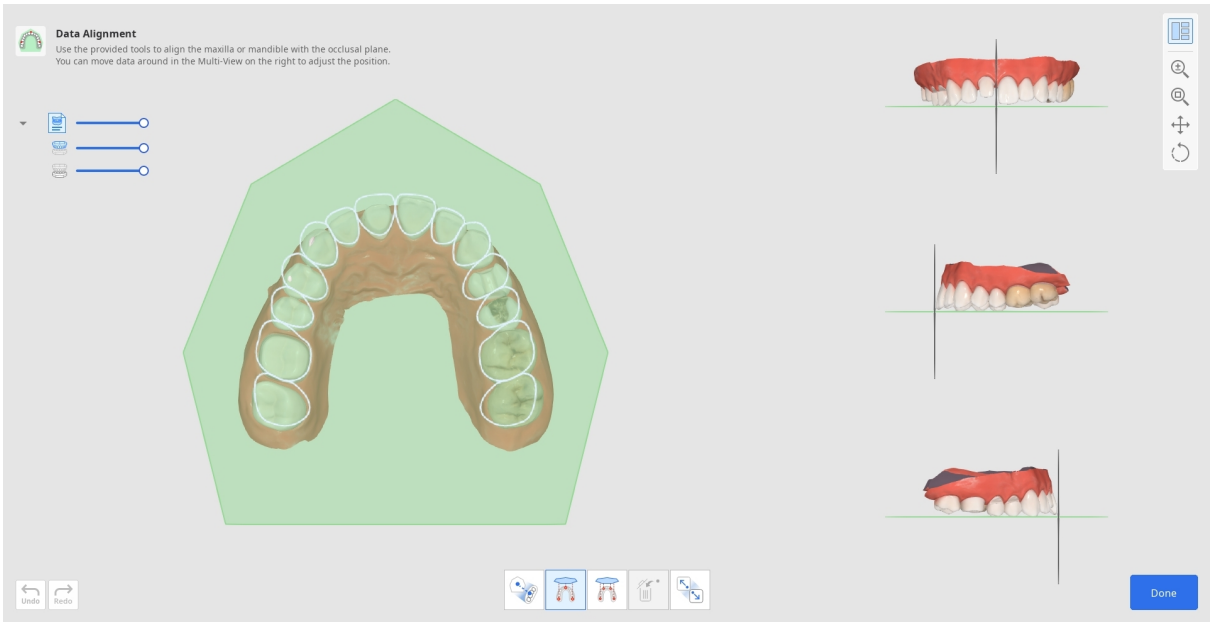


⚠ Caution

Returning to the first step to use either of these two tools will result in the loss of any progress made in designing the restoration.

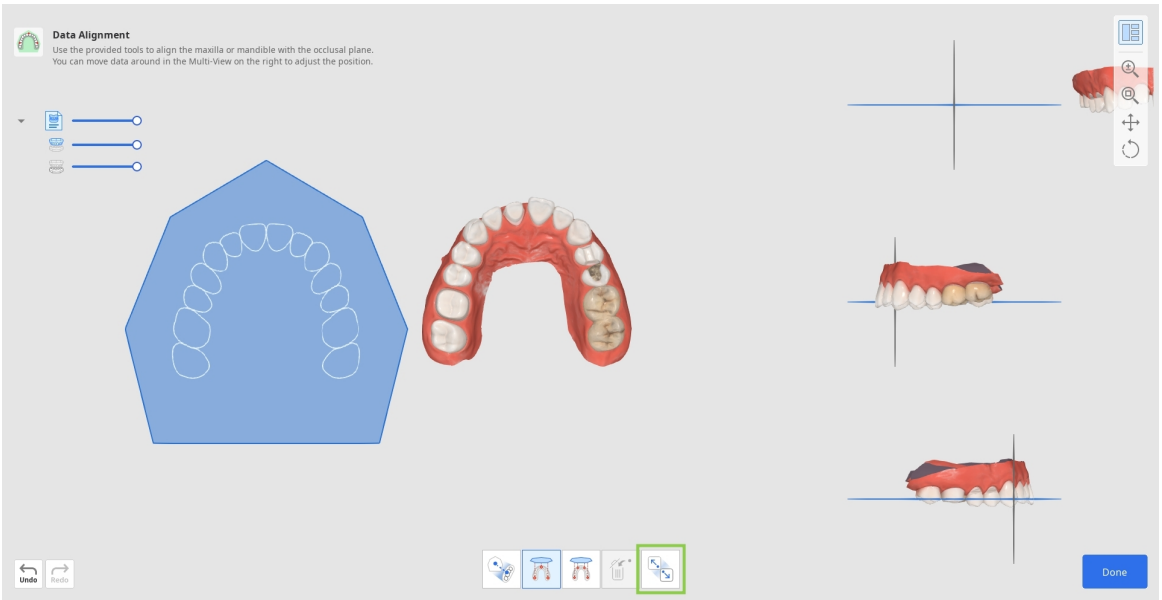
Data Alignment

Proper data alignment with the occlusal plane is crucial to ensure the accuracy of subsequent automated processes. In most cases, the scan data is automatically aligned upon import. However, if the alignment fails for any reason, the user will be prompted to complete the alignment manually.

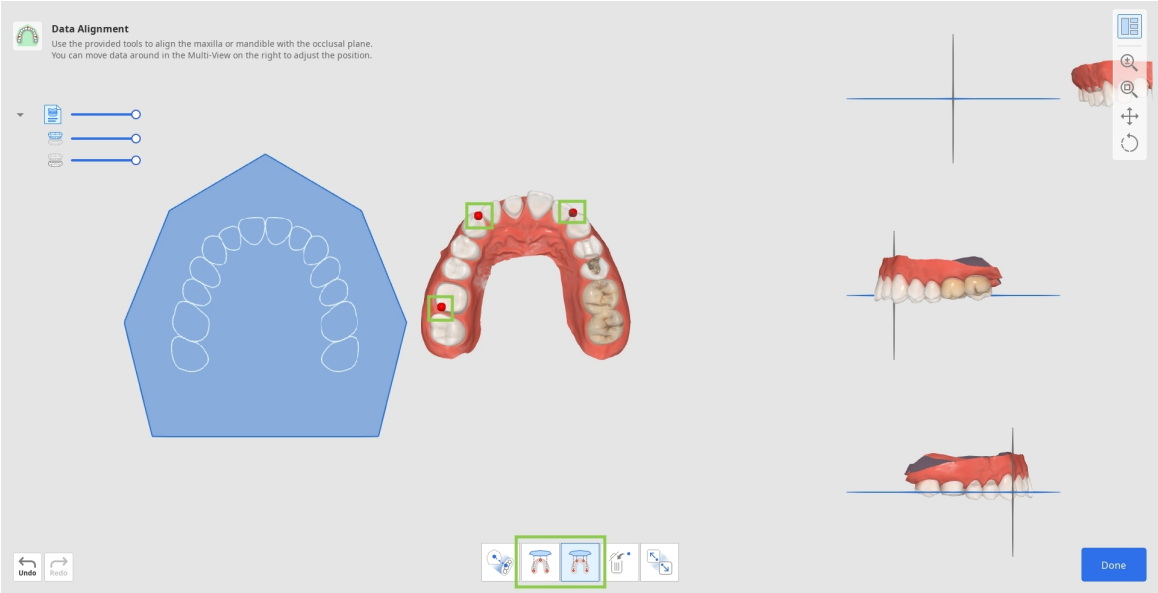


> **Caution**
>
> Please review the automatically aligned data, as the results of automatic alignment may cause unintended errors and potential clinical risks.

1. To realign data manually, start by clicking "Detach Data" in the toolbox at the bottom.



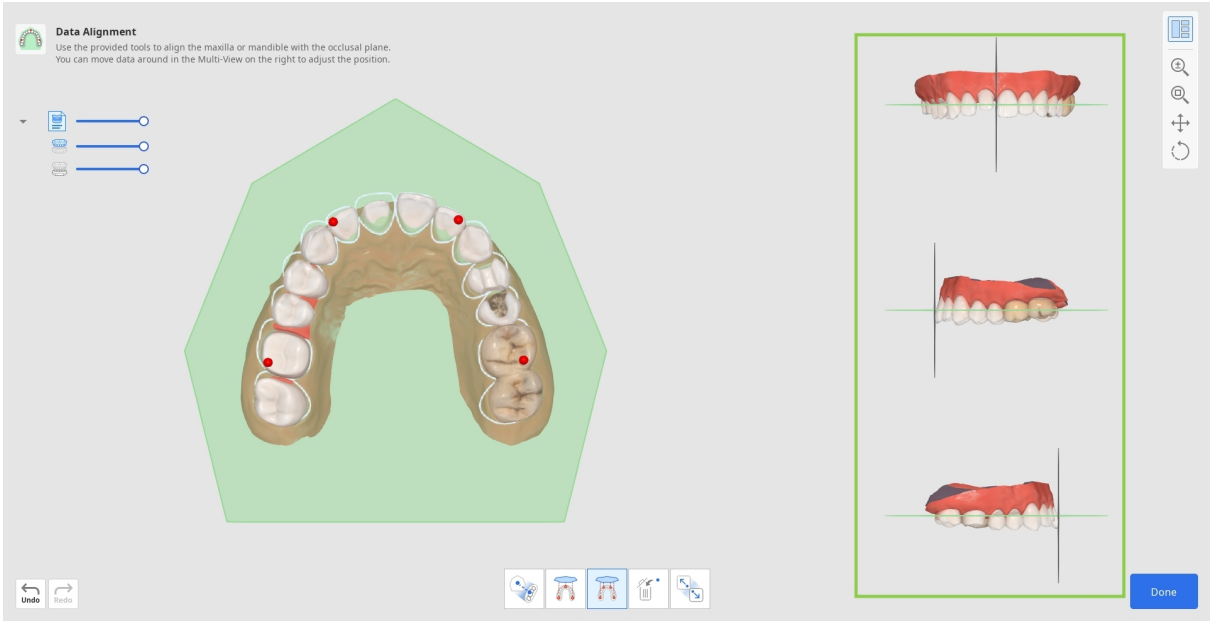
2. Then, using either "Align by 3 Points" or "Align by 4 Points," set the corresponding number of points on the data.



- If you set the point incorrectly, use "Delete Point" to remove the last added point.

- If working with half arch data, use the "Half Arch Alignment" feature to ensure a more accurate alignment process.

3. Check the data alignment in the Multi-View on the right. If needed, adjust it by right-clicking to rotate and using both mouse buttons to move.



4. When finished, click "Done" in the bottom right corner to return to the first workflow step.

Data Editing

The Data Editing feature offers tools for refining imported scan data, removing the need for preparation in other programs. Clean scan data will ensure a faster work process and more accurate design results. Using the provided tools, users can trim the excessive or unneeded data parts, modify the data surface, and fill holes if any are present.

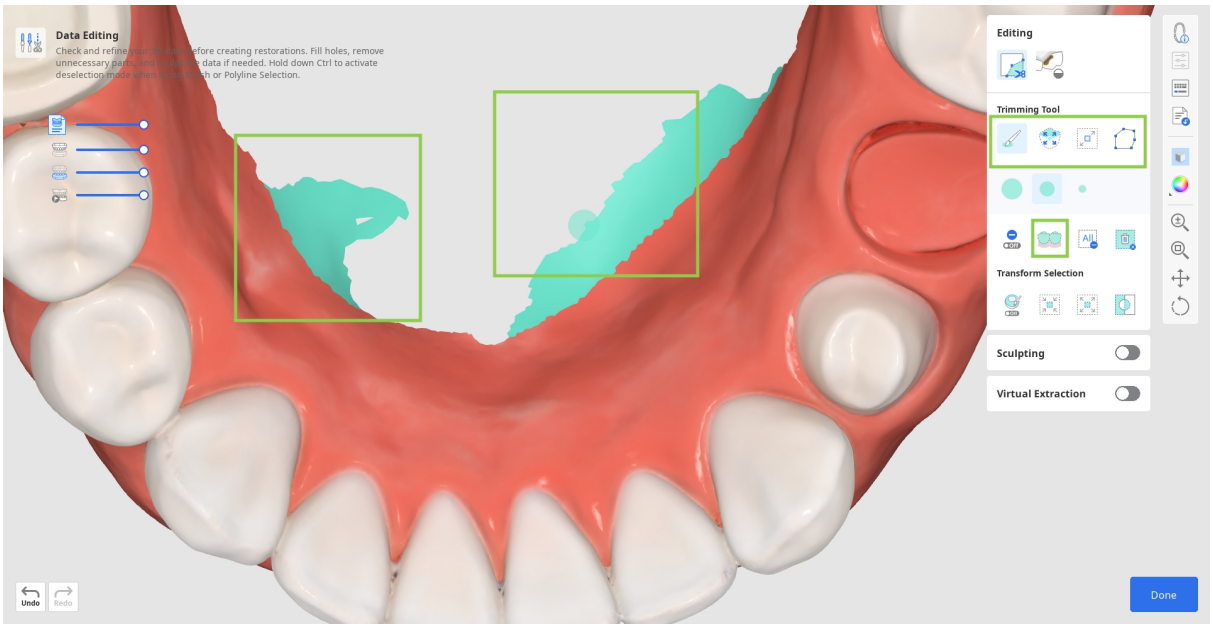
How to trim data

Trimming tools are automatically activated once the user enters.

1. Start by choosing a selection tool to help you designate parts of the data that need to be removed.

	Smart Teeth Selection	Automatically select all teeth of the arch, leaving out gingiva parts.
	Brush Selection	Select all entities on a freehand-drawn path on the screen. Only the front face is selected. The brush comes in three sizes.

	Smart Single Tooth Selection	Automatically select the area of a single tooth, leaving out gingiva parts. Click and drag the mouse on the tooth.
	Polyline Selection	Select all entities within a polyline shape drawn on the screen.
	Flood Fill Selection	Select the connected area based on the mouse movements.

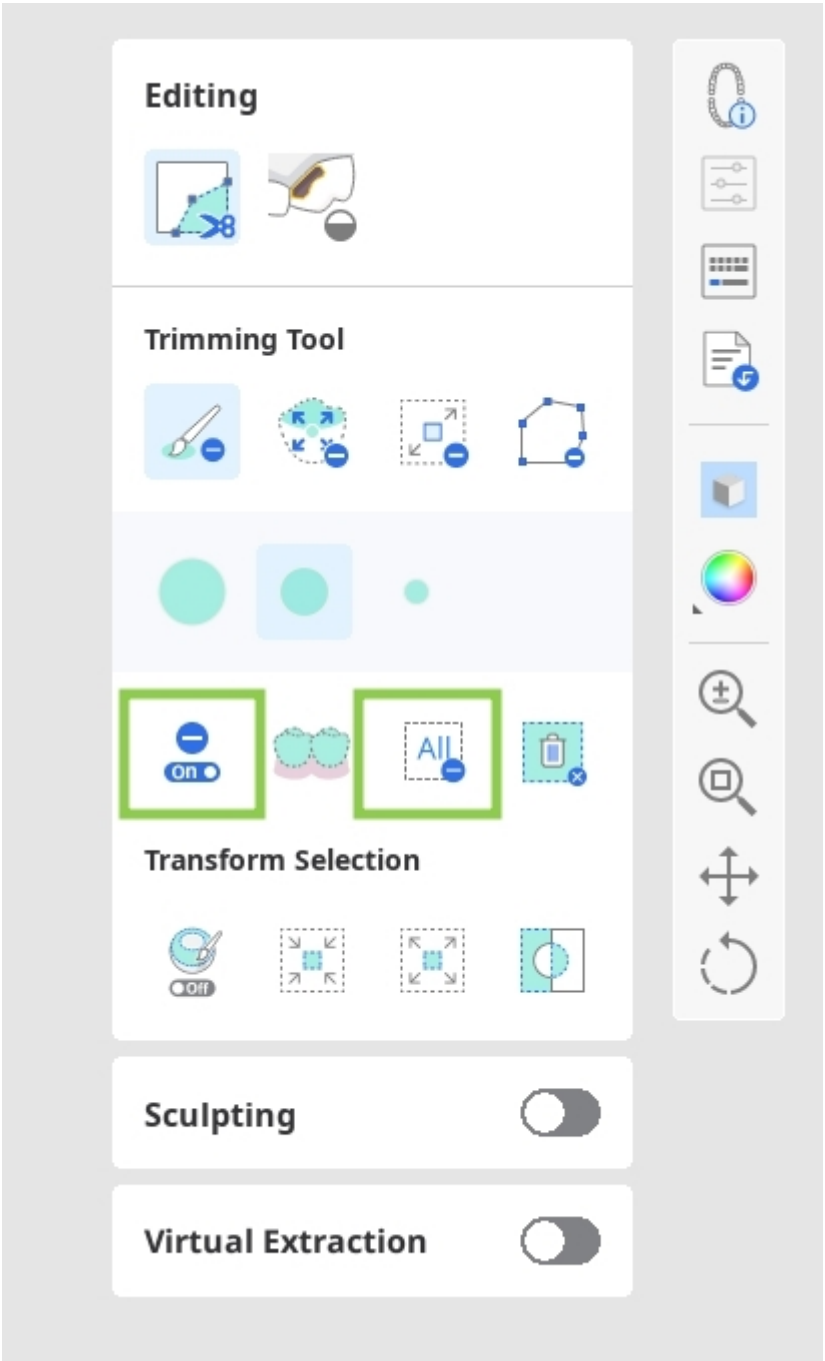


2. If needed, modify the selected area using the following tool options.

	Autofill Selected Area	Automatically fill in entities of the selected area.
	Shrink Selected Area	Reduce the selected area each time you press the button.

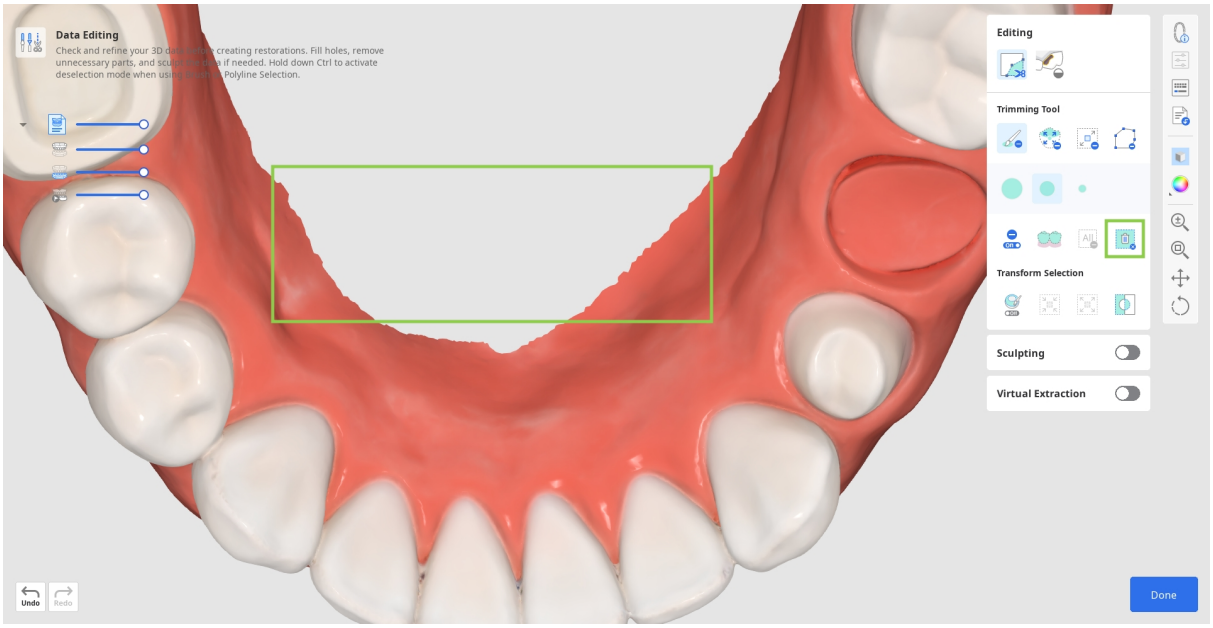
	Expand Selected Area	Expand the selected area each time you press the button.
	Invert Selected Area	Invert the selection.

- You can also turn on "Deselection Mode" to modify selection manually or use "Clear All Selection" to automatically deselect everything.



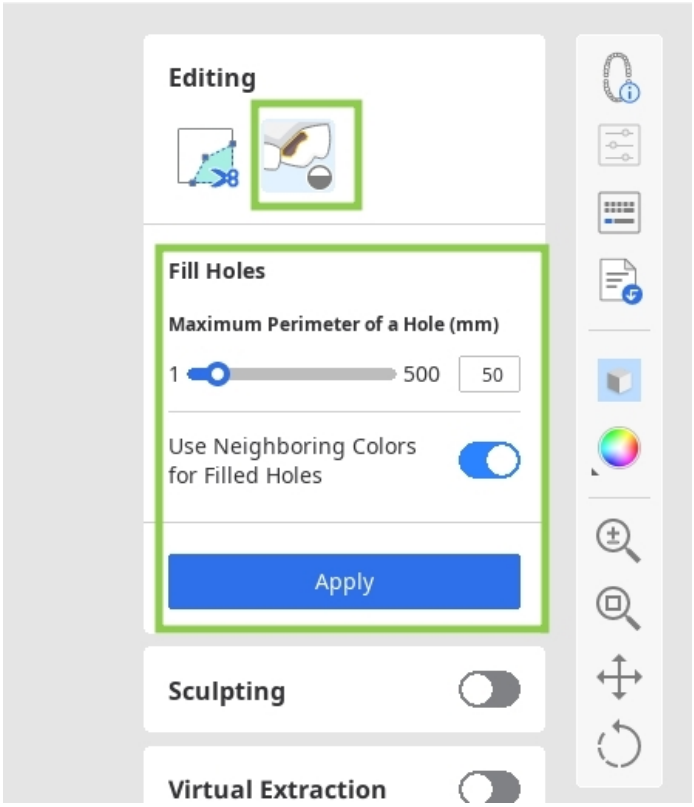
> ⚠ **Caution (Autofill Selected Area)**
>
> Please review the autofilled selections, as they may cause unintended errors and potential clinical risks.

3. To complete the trim, click "Delete Selected Area."



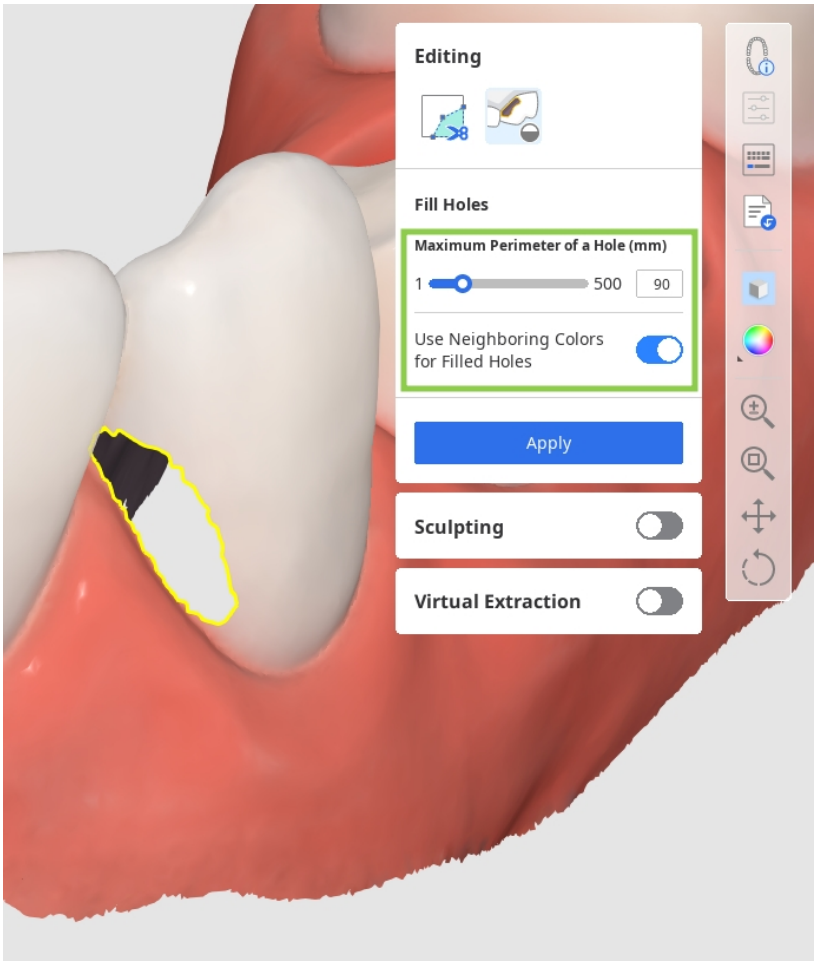
How to fill holes

1. Change to the "Fill Holes" tool.



2. Find an area where data is missing and adjust the "Maximum Perimeter of a Hole" slider.

If the "Use Neighboring Colors for Filled Holes" option is on, the program will use the matching color palette to fill the area; otherwise, it is filled in grey.

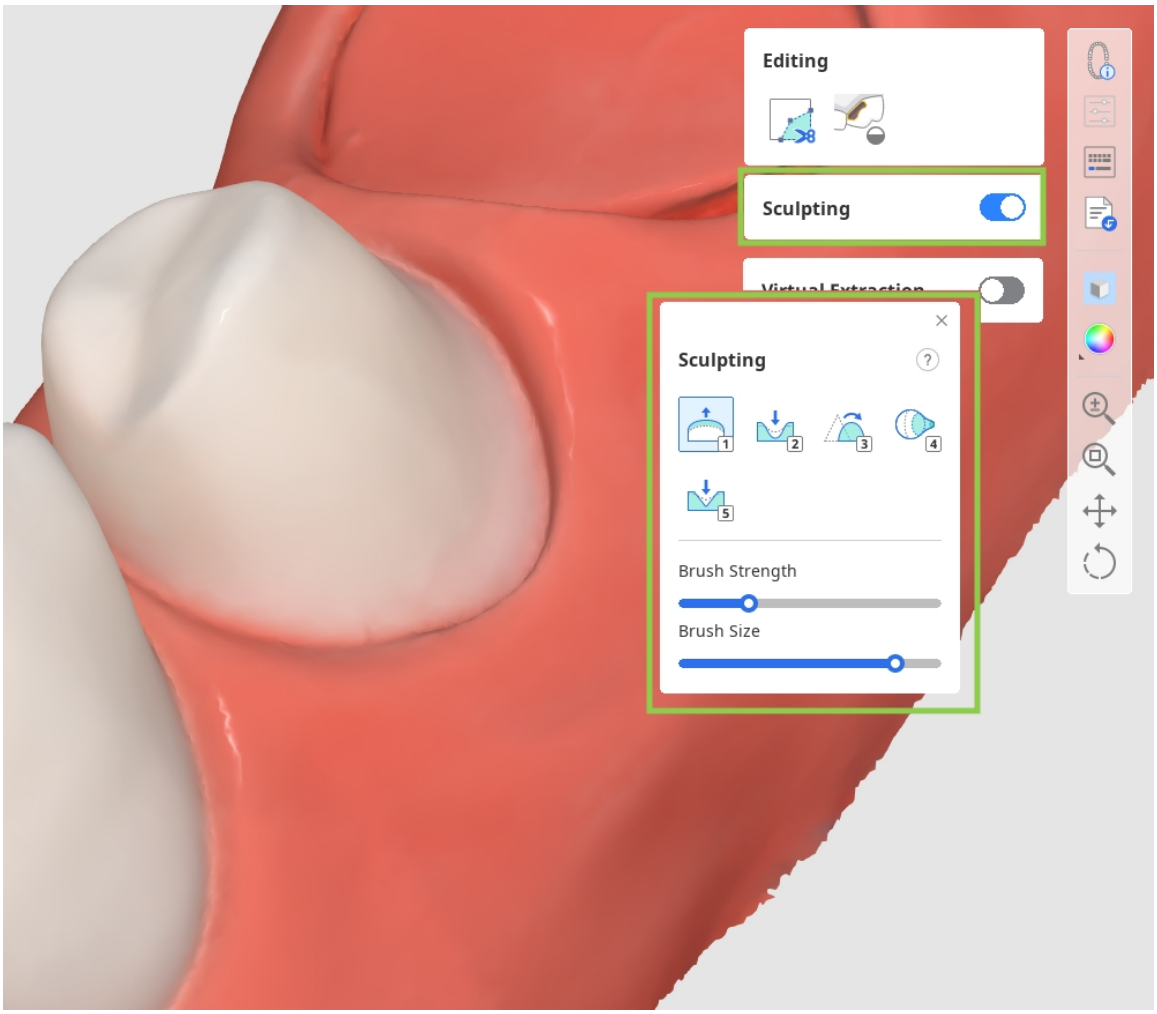


3. Click "Apply" to fill the holes with the new mesh.

How to sculpt data

Find the area of data you want to modify, then use the provided tools to add or remove data or to smooth and morph parts of it. You can also sculpt a more anatomical occlusal surface by using the "Groove" option.

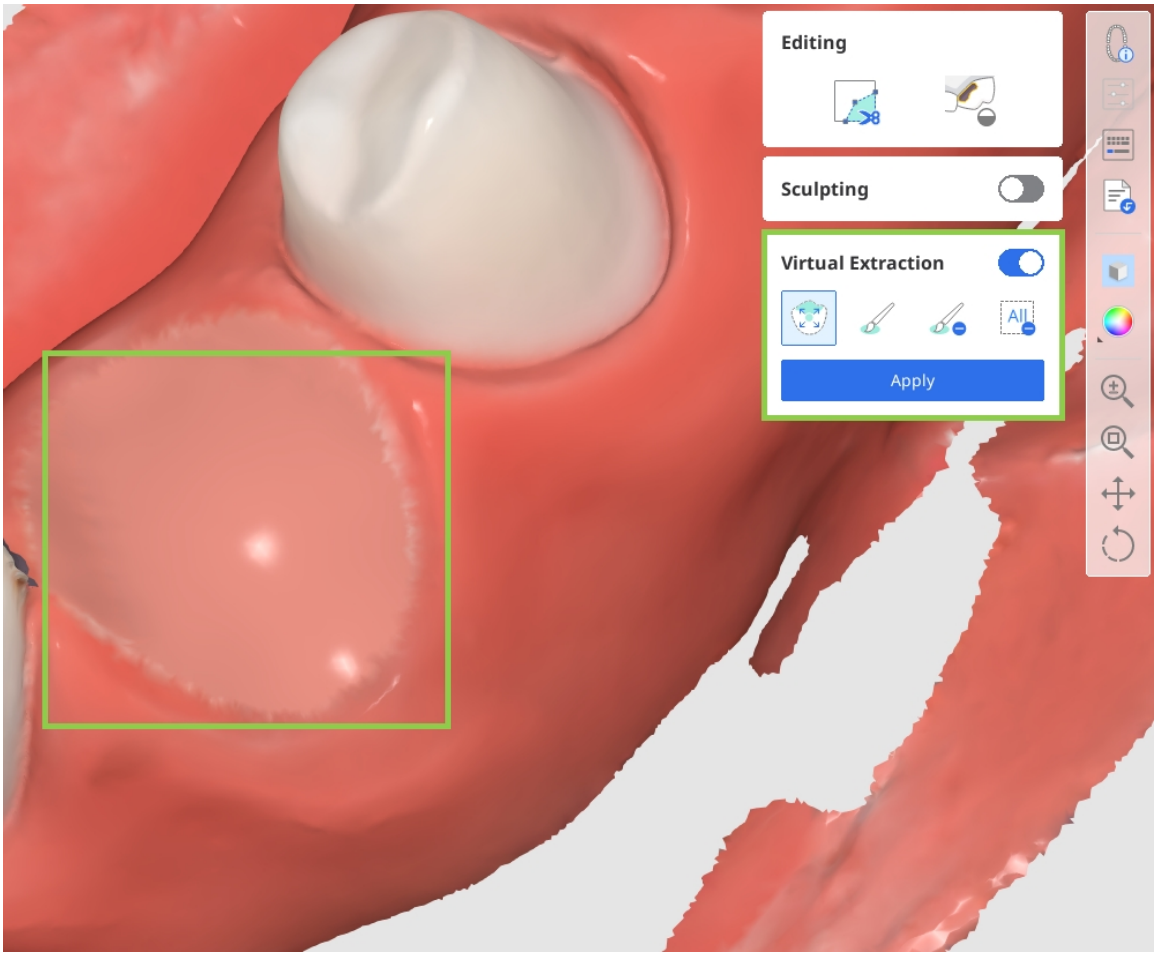
Note that the strength and size of the sculpting brush is adjustable.



When finished, click "Done" in the bottom right corner to return to the first workflow step.

How to extract teeth

Turn on the “Virtual Extraction” feature. Select the tooth you want to remove using the provided tools, then click “Apply” to complete the extraction. Afterward, check for any holes in the gum data or nearby teeth, and use “Fill Holes” to repair them.


Editing
Sculpting
Virtual Extraction
All
Apply

Pre-Op Data Module

The general workflow for creating ‘eggshell’ crowns and bridges consists of three steps: **Tooth Selection > Margin & Insertion Path > Final Design.** If the user chooses to use library data for crown creation instead of preoperative data for a specific tooth, an additional step—Tooth Data Arrangement*—is included in the workflow.

Note

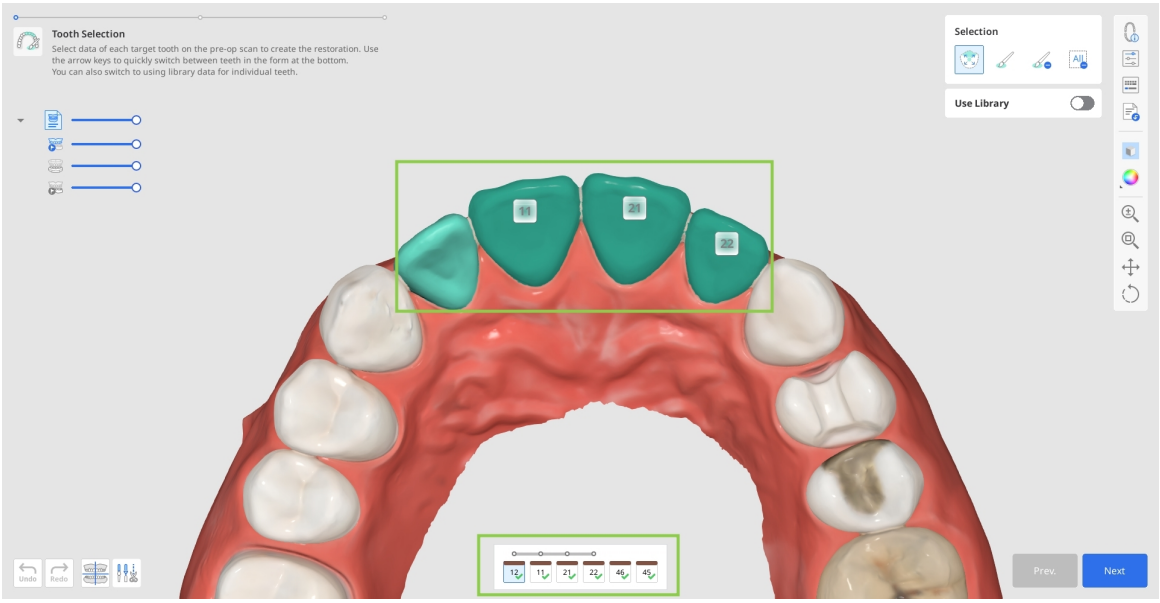
Read how to use the Tooth Data Arrangement step in the **Workflow > Prepared Data Module > Tooth Data Arrangement.**

Tooth Selection

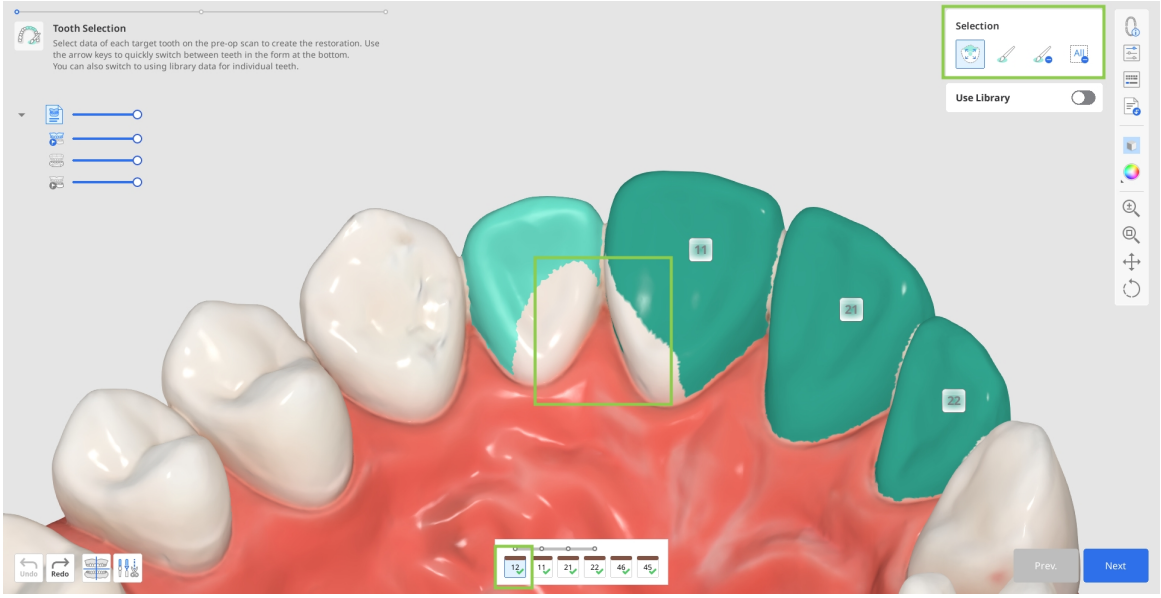
This is the first step in designing eggshell-type crowns and restorations. The goal of this step is to select preoperative data corresponding to each tooth registered in the Medit Link form and reuse it later to generate the restoration.

1. Upon entering this step, the data for the tooth numbers listed in the form at the bottom is automatically selected.

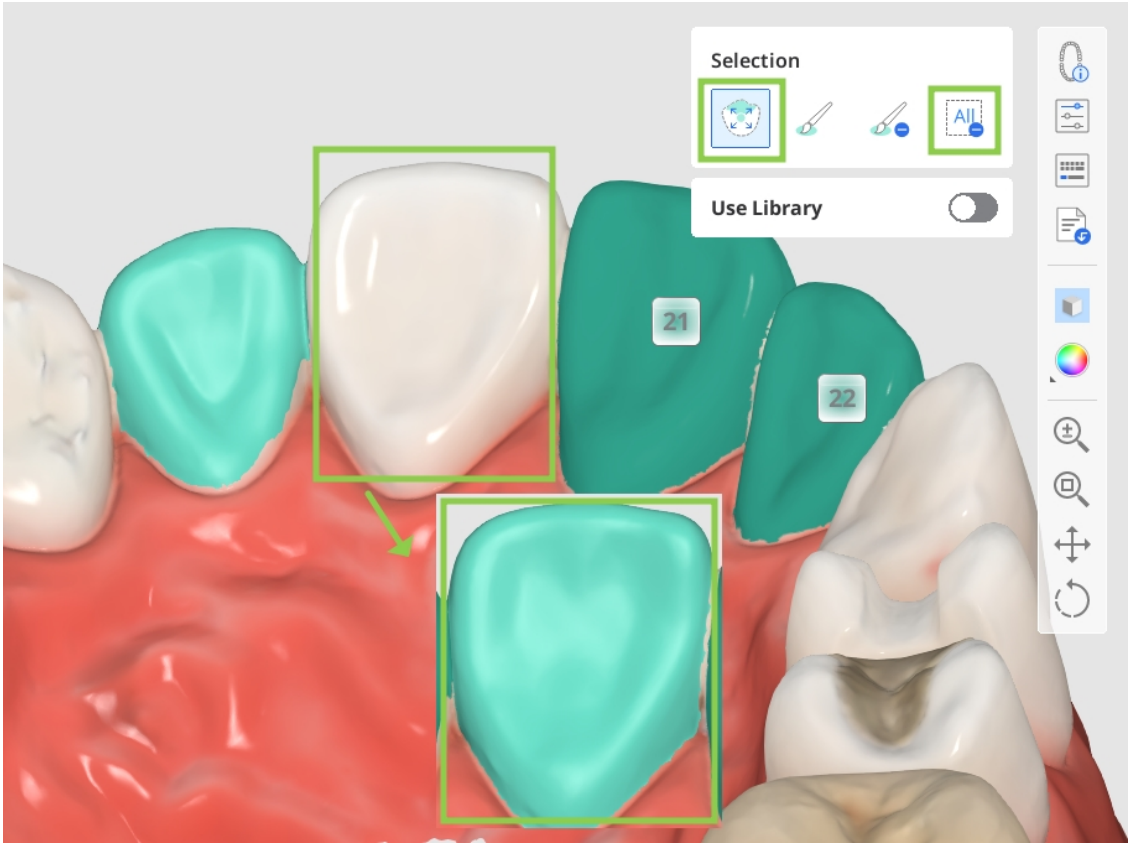
> **Note**
>
> Automatic selection is not supported for scan data of the stone model.



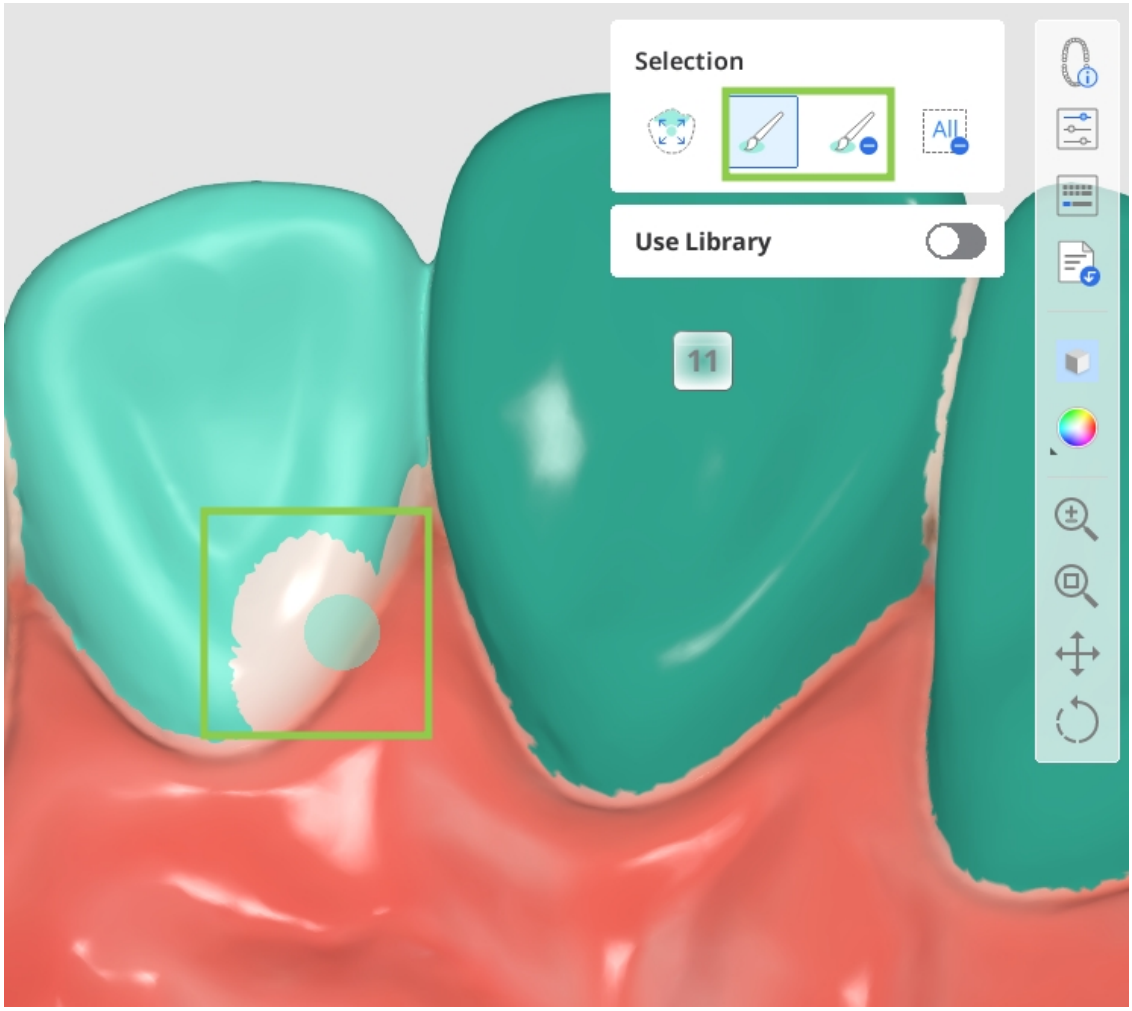
2. Review the accuracy of the automatic data selection to ensure the correct generation of the restorations' outer surfaces in the following steps. If editing is needed, select the target tooth number in the form and make adjustments using the selection tools.



- You can reset the data selection for a specific tooth using "Clear All Selection" and then accurately reselect that tooth with "Smart Single Tooth Selection." For this, click and drag the mouse over the tooth data.



- Or you can make minor corrections to the selection with “Brush Selection” or “Brush Deselection.”



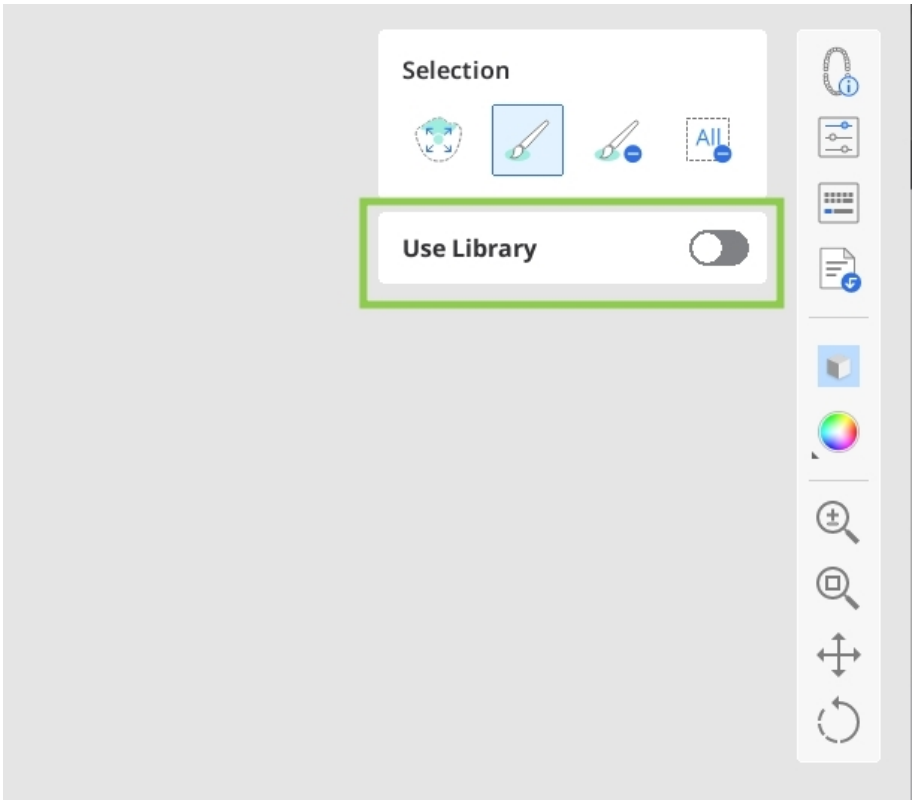
Warning (Smart Single Tooth Selection)

Incorrect auto-selection can capture adjacent structures and affect restoration design.

Cautions

- Over-selection can include unintended anatomical regions.
- Accidental deselection of critical areas may require re-selection of the area.
- Must ensure that deselecting all selected areas will clear all the displayed areas.

3. If you intend to use the teeth library instead of the preoperative data for any of the target restorations, select the corresponding tooth number from the list at the bottom and enable the 'Use Library' toggle. This will add an additional step to your workflow later: Tooth Data Arrangement.

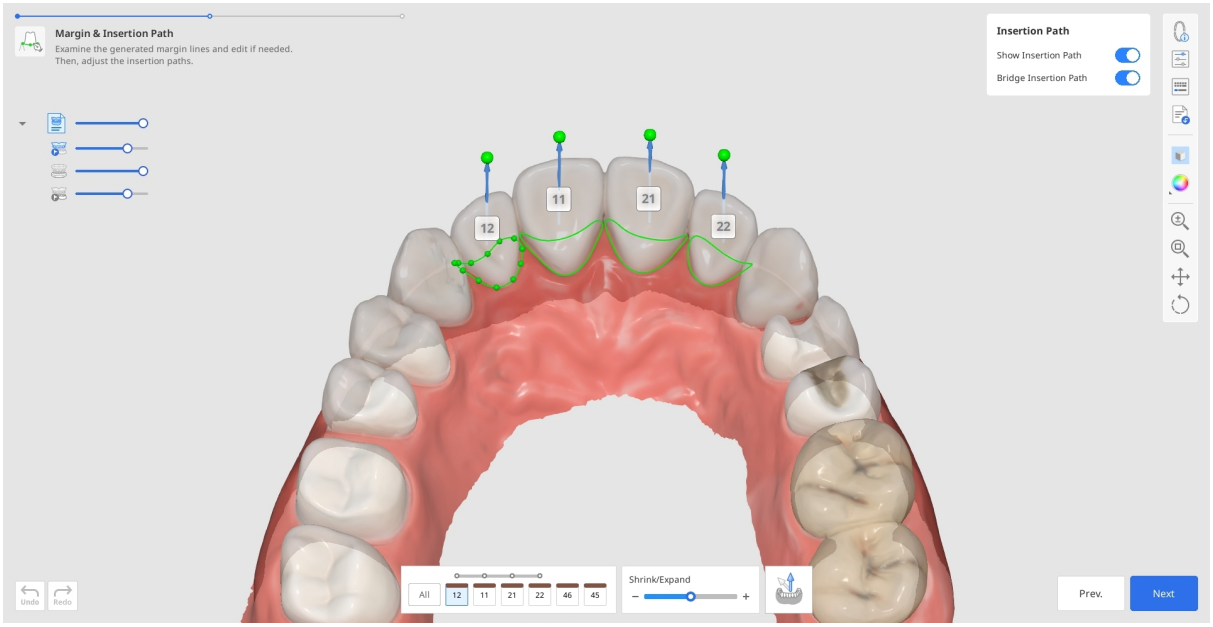


4. When done, click “Next” or press the space bar to move to the next step.

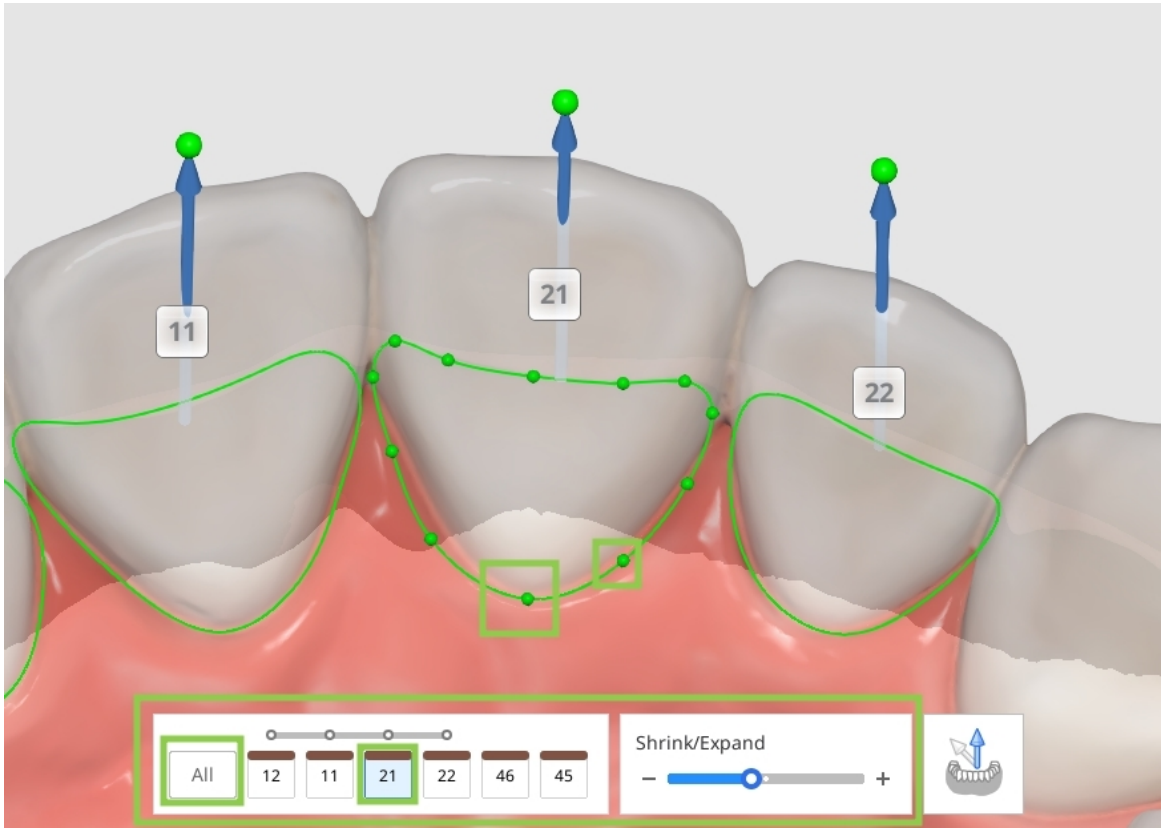
Margin & Insertion Path

The purpose of the second step is to establish the margin lines and set the insertion path for future restorations.

1. The margin lines will be created automatically upon entering this step. You must review the generated margin lines and edit them if needed.



- To edit the margin lines, use the “Shrink/Expand” slider at the bottom. You can shrink or expand the margin for all teeth at once or for a specific tooth number by specifying it in the form at the bottom.
- You can also edit the margin line by adding, moving, or deleting the control points. Click to add a point, right-click it to delete, and drag it to move.



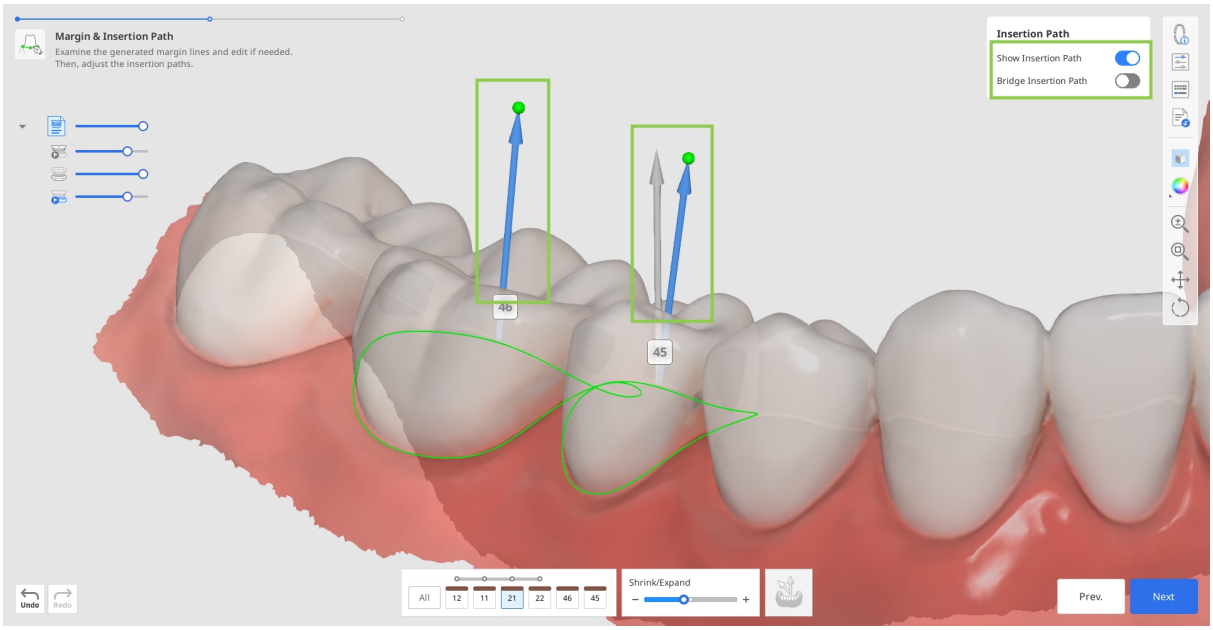
Caution (Shrink/Expand)

Avoid excessive use of the feature, as it may cause failure in selecting the correct area or compromise the fit and design of the restoration.

2. The insertion path will be automatically detected. Review the detected insertion path, and if adjustments are needed, drag the insertion path arrow to modify its direction. The gray arrow will show the originally detected direction.

Tip

You can turn off "Bridge Insertion Path" individually and set the path for each crown in a bridge.

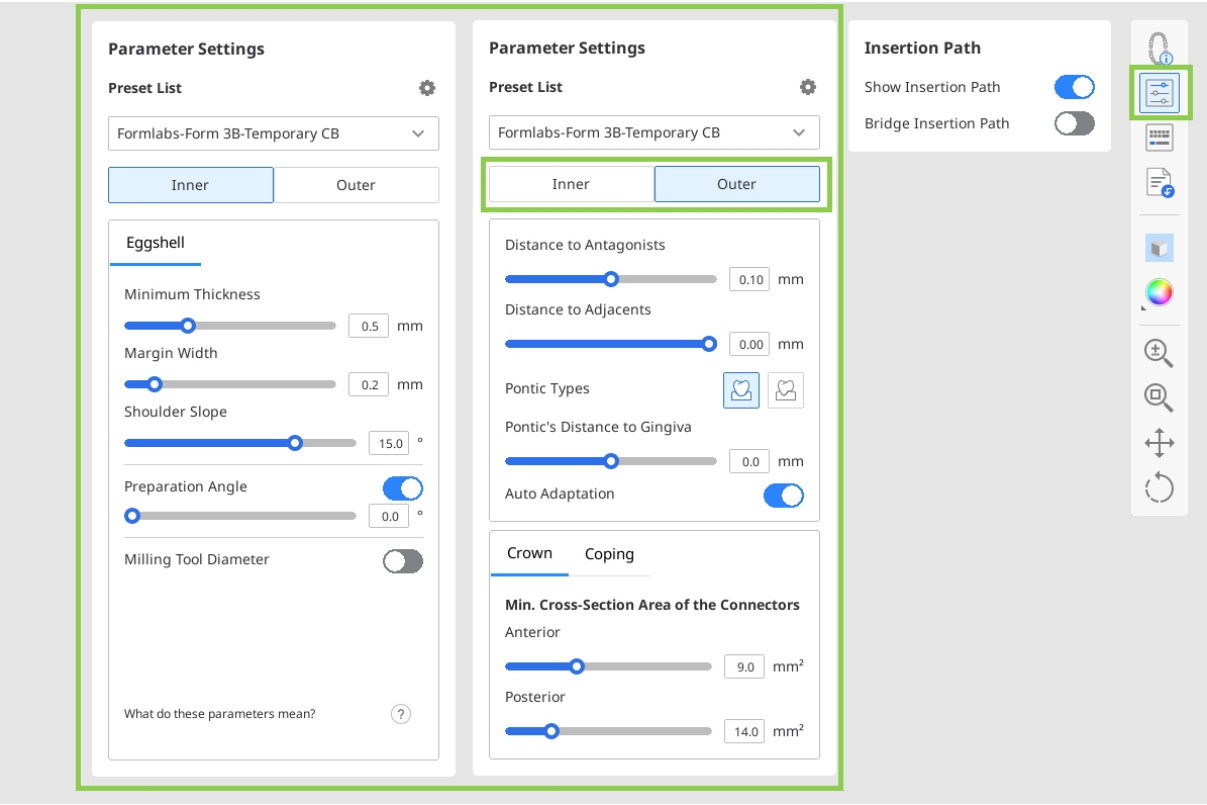


Caution

Incorrect insertion direction may affect the quality of the prosthesis.

- Alternatively, you can rotate the 3D data and click “Set Arrow to Your Viewpoint” at the bottom.

3. In this step, you can also review the parameters for the restoration’s inner and outer surfaces before they are applied in the next step. By default, your most recently used parameters will be applied. Click “Parameter Settings” in the Side Toolbar to see the details.



- You can manually configure the parameter values or use the recommended preset for your particular printer.

> Note
>
> Read more on receiving recommended presets and managing the preset list in the **Data Management** > **Presets Management** chapter of this guide.

4. When done, click "Next."

> Note
>
> If you choose to use the library instead of preoperative data in the first step, you will then proceed to the additional Tooth Data Arrangement step. Please refer to the **Workflow > Prepared Data Module > Tooth Data Arrangement** section of this guide for detailed instructions on how to use that step.

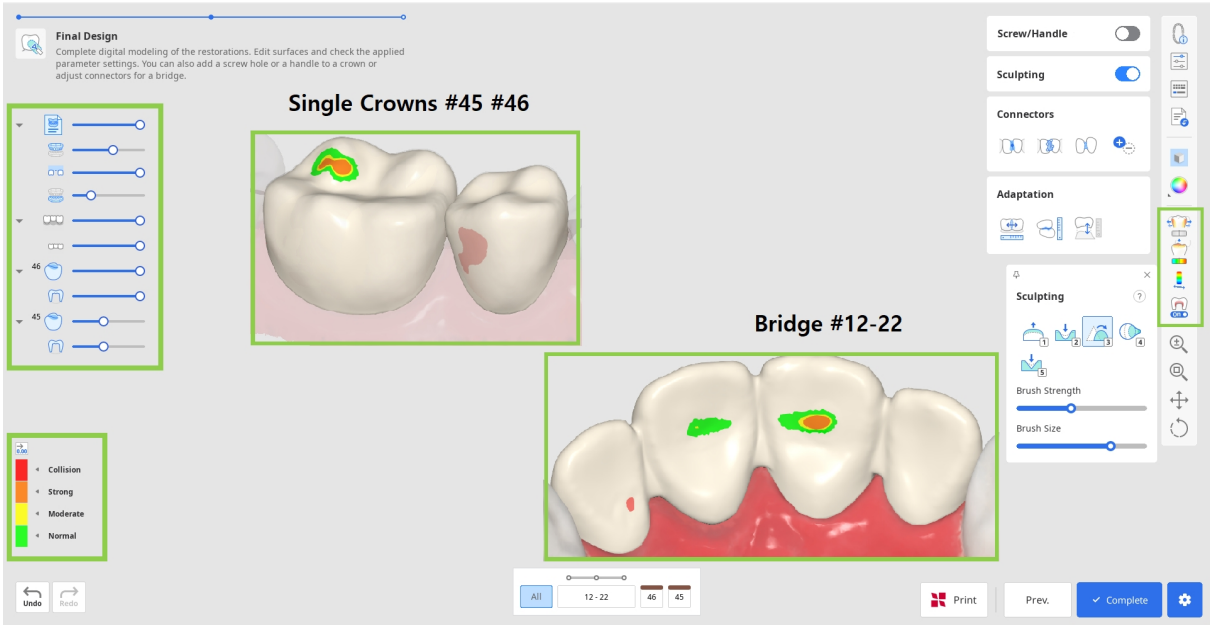
Final Design

This is the final step in designing the restorations. In this step, the user should review the design of the created restorations, make any necessary edits, and check the applied parameters before proceeding with printing. There are also two additional tasks that can be performed in this step: editing the bridge connectors and adding optional design elements to a crown.

1. Start by reviewing the created restorations. Turn on the analysis tools in the Side Toolbar to see where sculpting of the outer surfaces might be needed. ”Contact Areas with Adjacents” and “Contact Areas with Antagonists” will show the contact points with neighboring teeth through colors. ”Minimum Thickness” will point out areas of the crowns that are too thin in red. Add more material in these areas using sculpting tools.

Tip

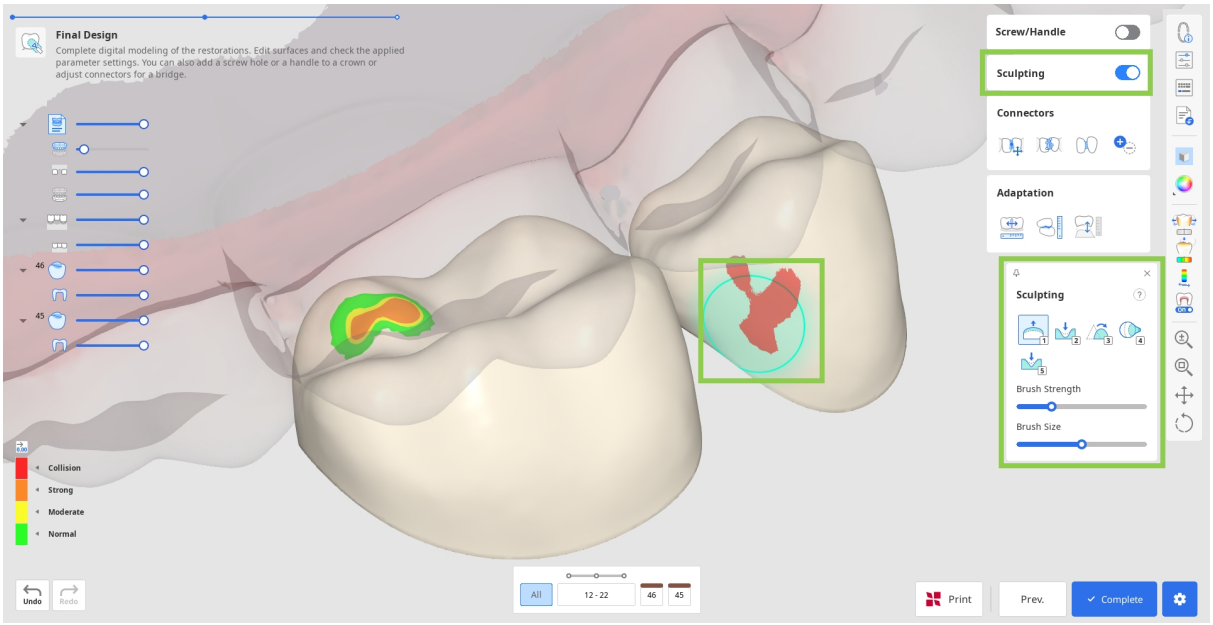
Control data visibility in Data Tree for easy review of contact points and restoration fit.



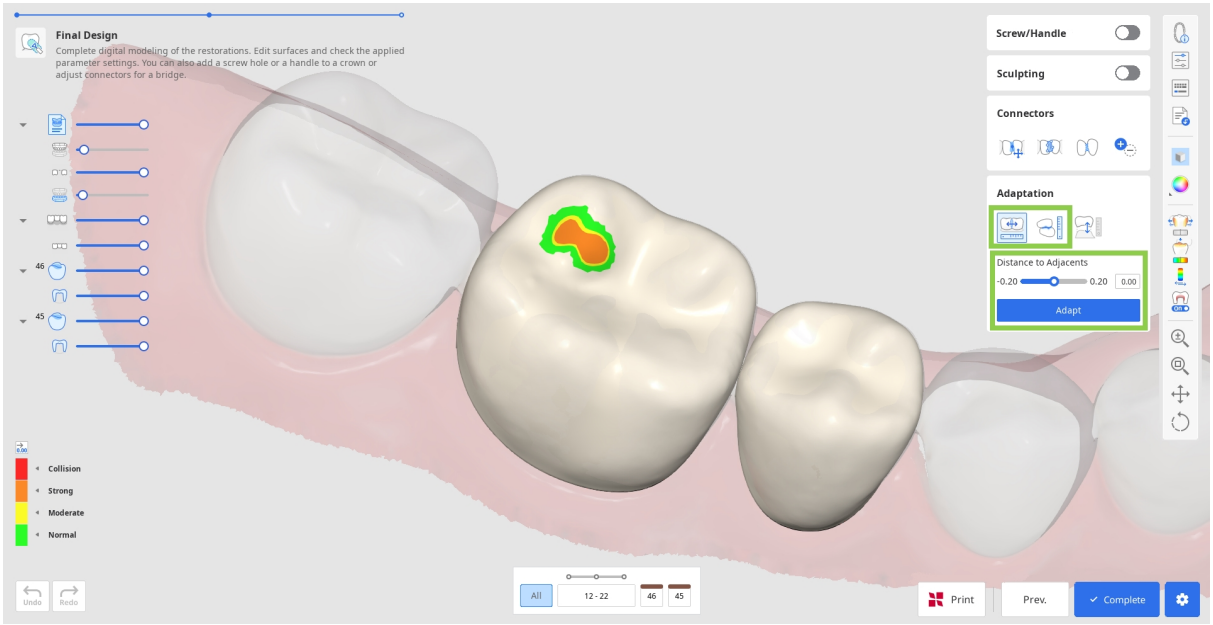
2. Correct any design flaws using “Sculpting.” You can add, remove, smoothen, morph, and carve out material on the restoration’s outer surface. Choose a sculpting tool, adjust the brush strength and size, and then modify the required areas. Use the “Groove” option to create grooves easily.

Tip

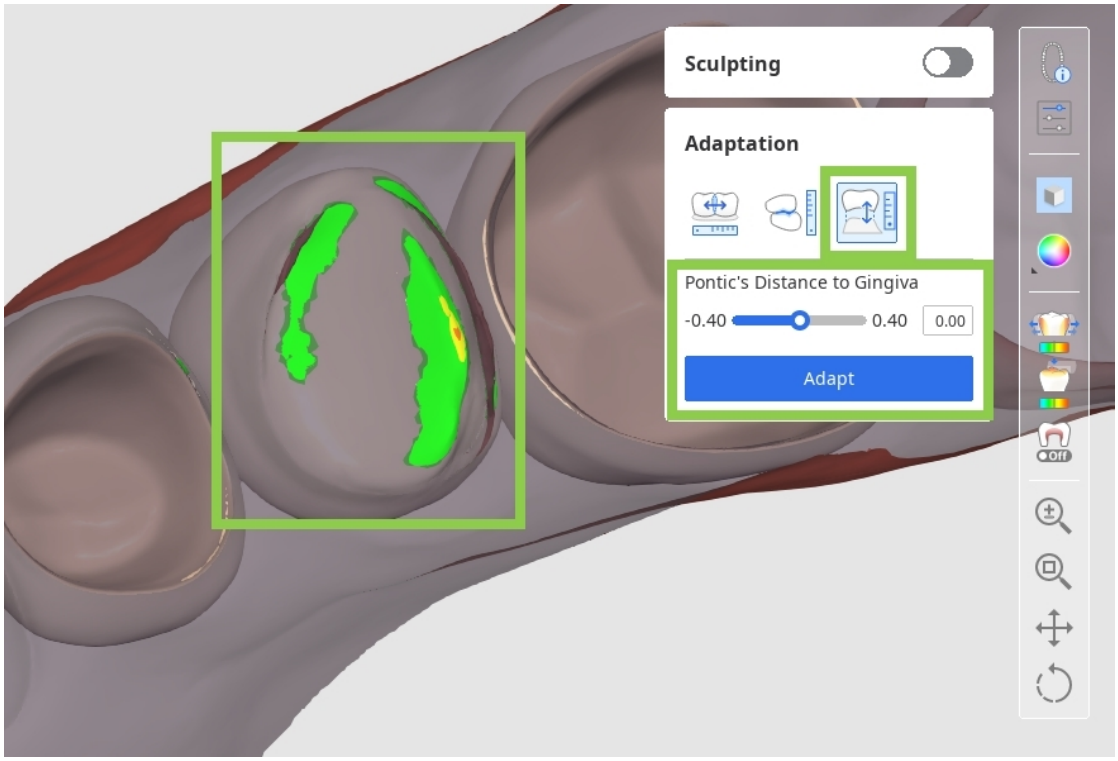
Click the question mark in the "Sculpting" widget to see the shortcuts.



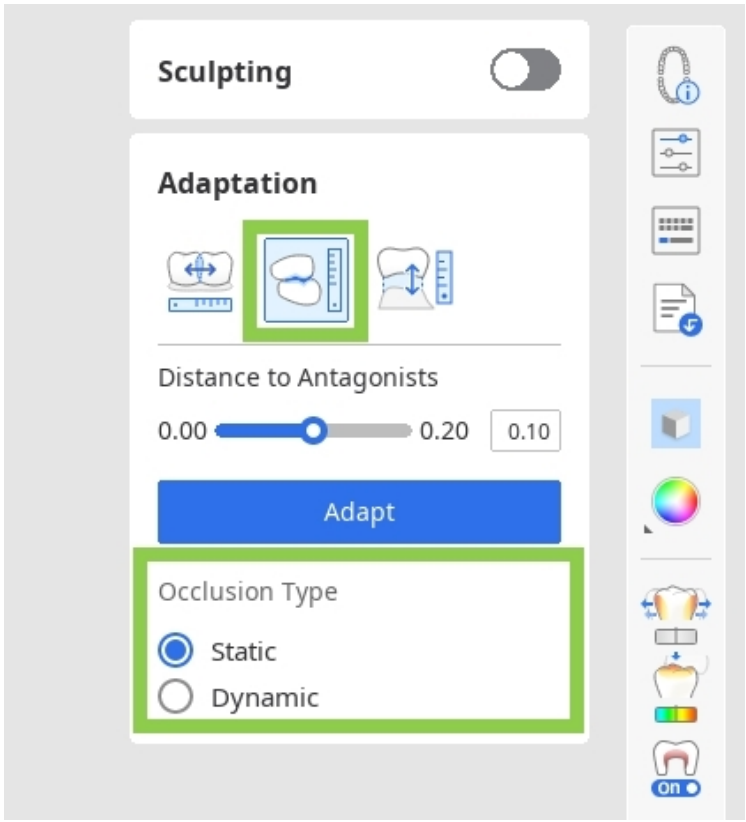
3. Any substantial sculpting might require additional review of the restoration fit and previously set parameters. Use “Adaptation” to make quick adjustments; you can adapt the restoration to adjacents and antagonists by a set distance.



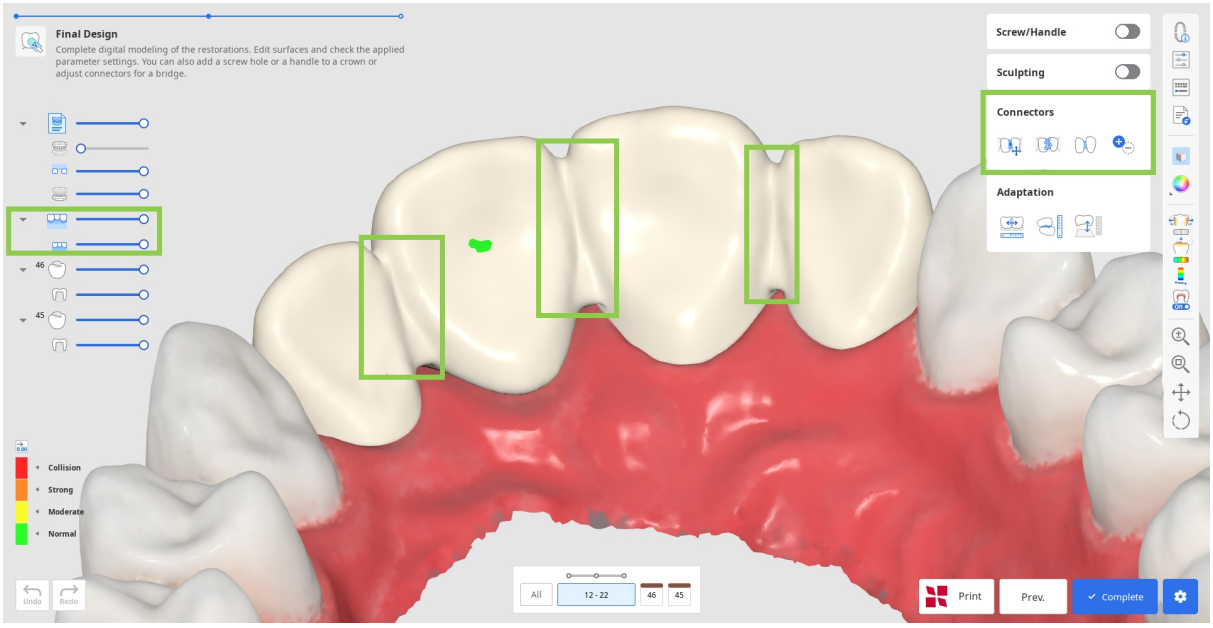
- If your bridge has a pontic, you can adjust its distance to gingiva using the Adaptation Tools in this step. Choose the “Adapt to Gingiva” feature, set the desired distance, and click “Adapt.”



- If dynamic occlusion data was imported, you can choose whether to adapt to antagonists based on ‘static’ or ‘dynamic’ occlusion.

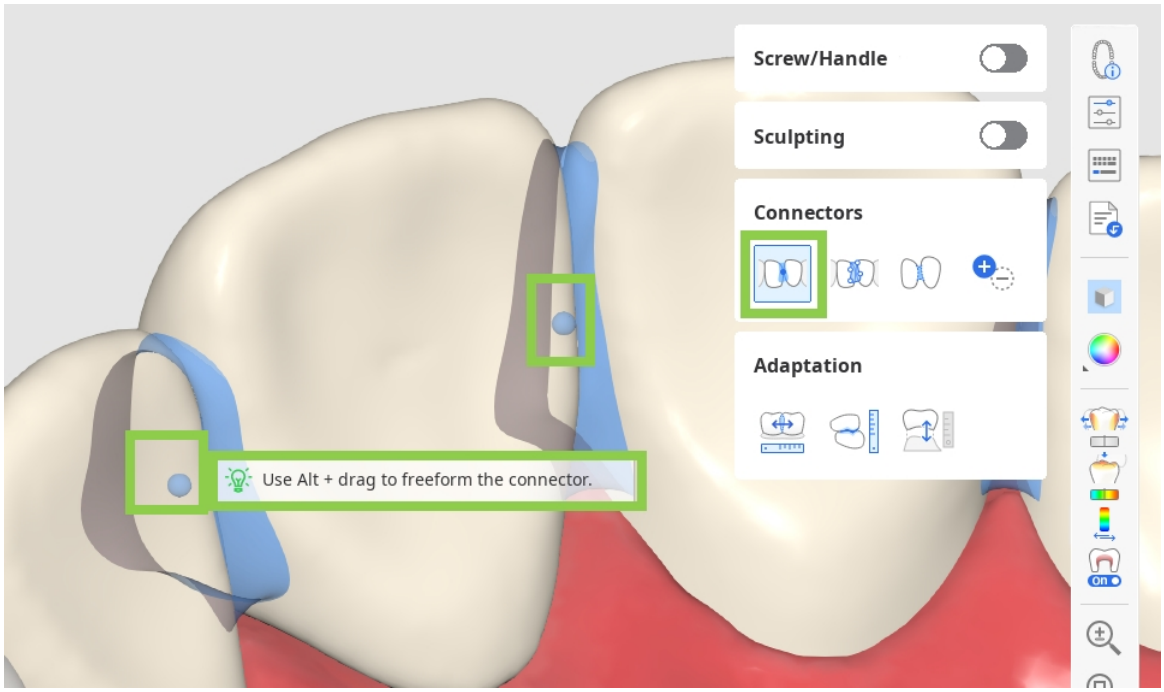


4. If you are working on a bridge, the data of each individual element will be combined into one by adding connectors. Edit the connectors using the “Move,” “Edit,” “Allow Small Connectors,” or “Add/Remove” tools.



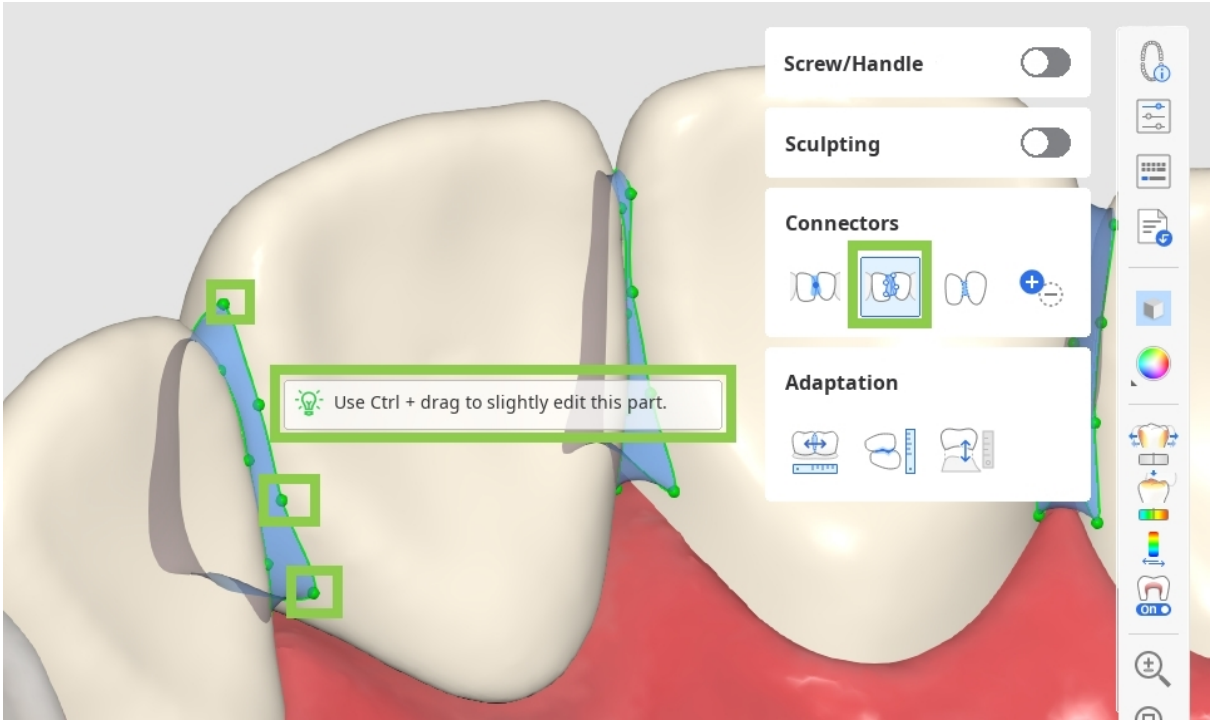
- When using ”Move,” drag the center point of a connector to readjust the connector’s position and cross-section area automatically.

> Tip
>
> Hold down Alt/Option to quickly freeform the connector with a mouse.

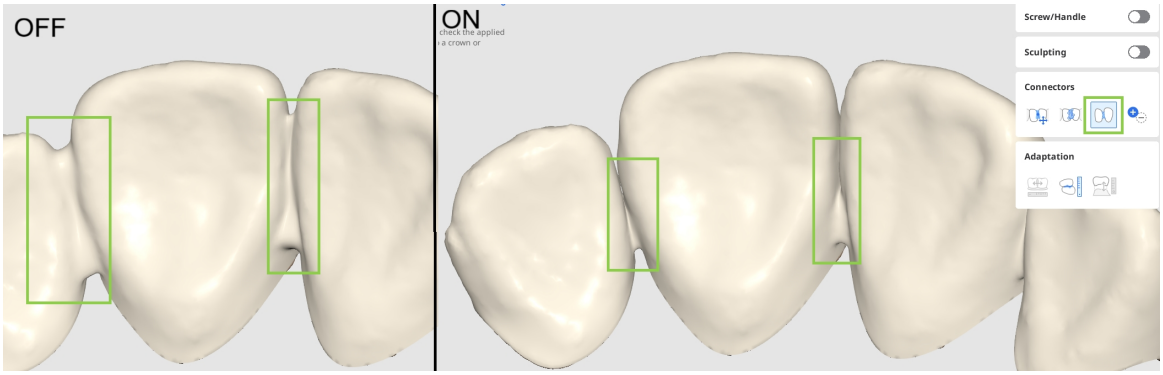


- When using ”Edit,” margins of the connector on both teeth will appear. You can reshape the connectors by editing those margins. Similar to editing the tooth’s margin line, click to add a point, right-click it to delete, and drag the points to move.

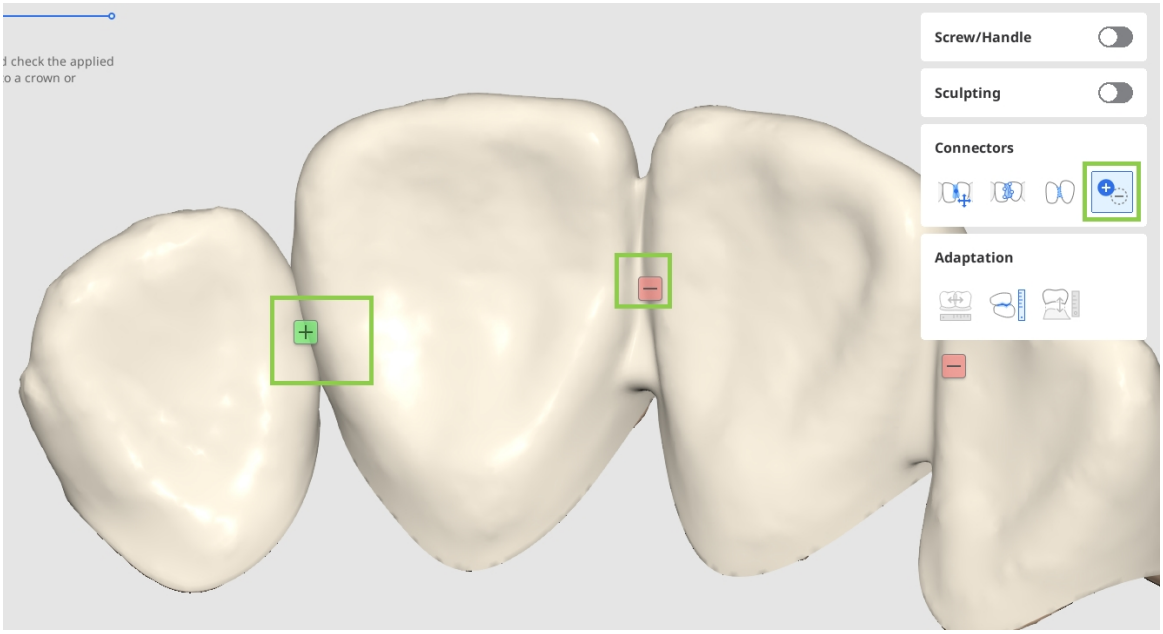
> Tip
>
> Hold down Ctrl/Command to quickly make minor changes in the margins.



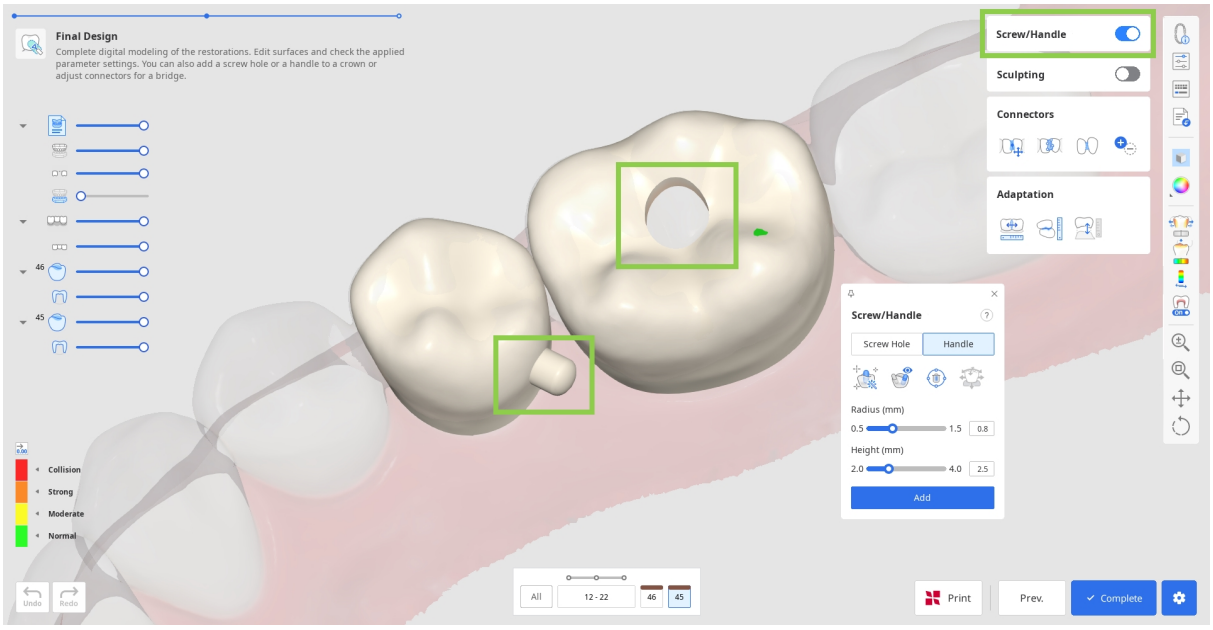
- When “Allow Small Connectors” is enabled, the program ignores the minimum cross-section area defined in the Parameter Settings. Instead, it creates connectors solely based on the actual contact points between adjacent teeth.



- Turn on “Add/Remove” to manage connectors between all registered units, regardless of form information. This allows you to separate a bridge into single units or connect single units into a bridge.



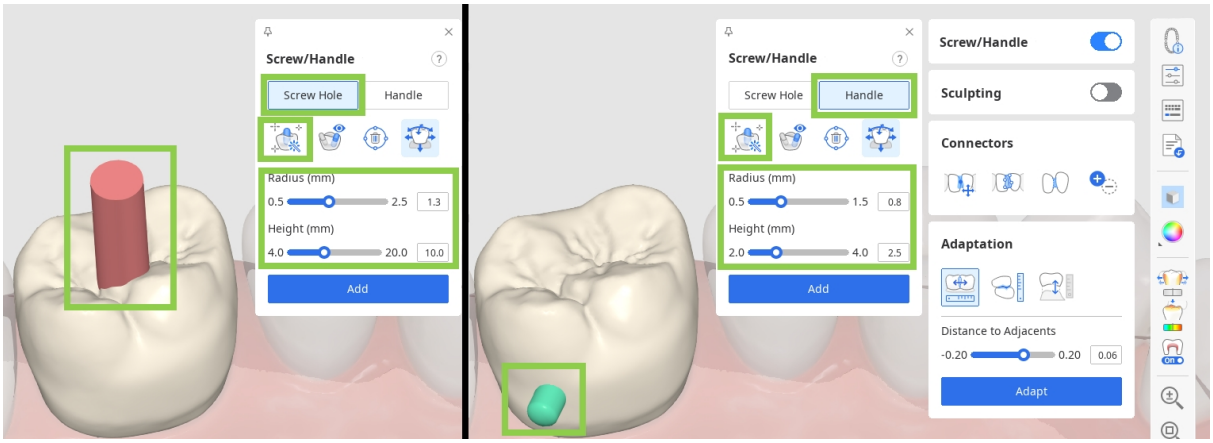
5. If you are working on a crown design, you can add screw access holes or handles with “Screw/Handle.”



- Start by choosing what element you want to add and click “Auto Set.” This will automatically place the cylinder to create an element in the most optimal place—a handle on the lingual side and a hole in the center. Then, adjust the radius and height of the cylinder below and click “Add.”

Tip

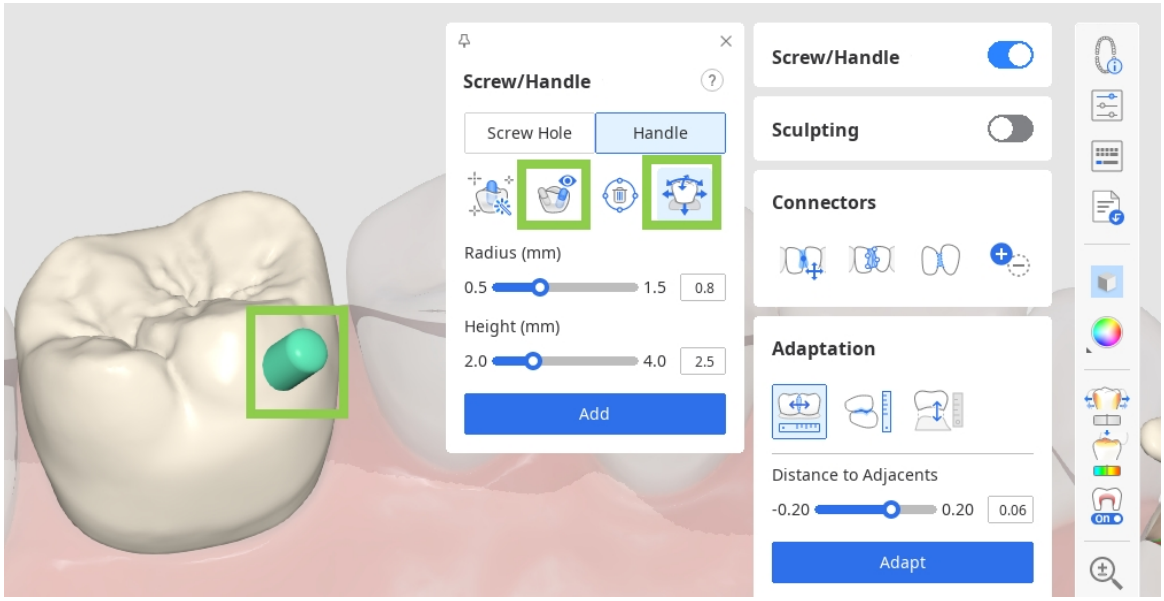
The cylinder for creating an element can also be placed manually in your chosen spot with a double-click.



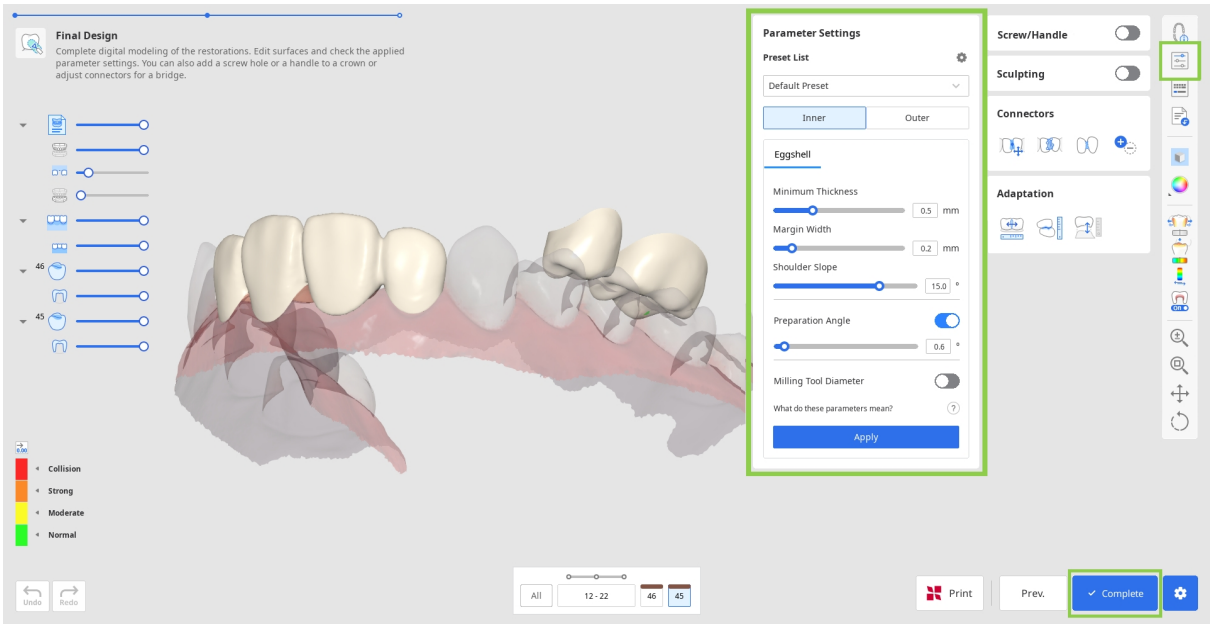
Caution

Check that the screw/handle is not positioned in a functionally important area of the restoration.

- You can also quickly move the cylinder around with a “Move” tool and change its direction by rotating the data and then setting it to your view with “Set Toward You.”



6. Lastly, review the inner and outer parameters in “Parameter Settings” before saving your design and sending it to printing.

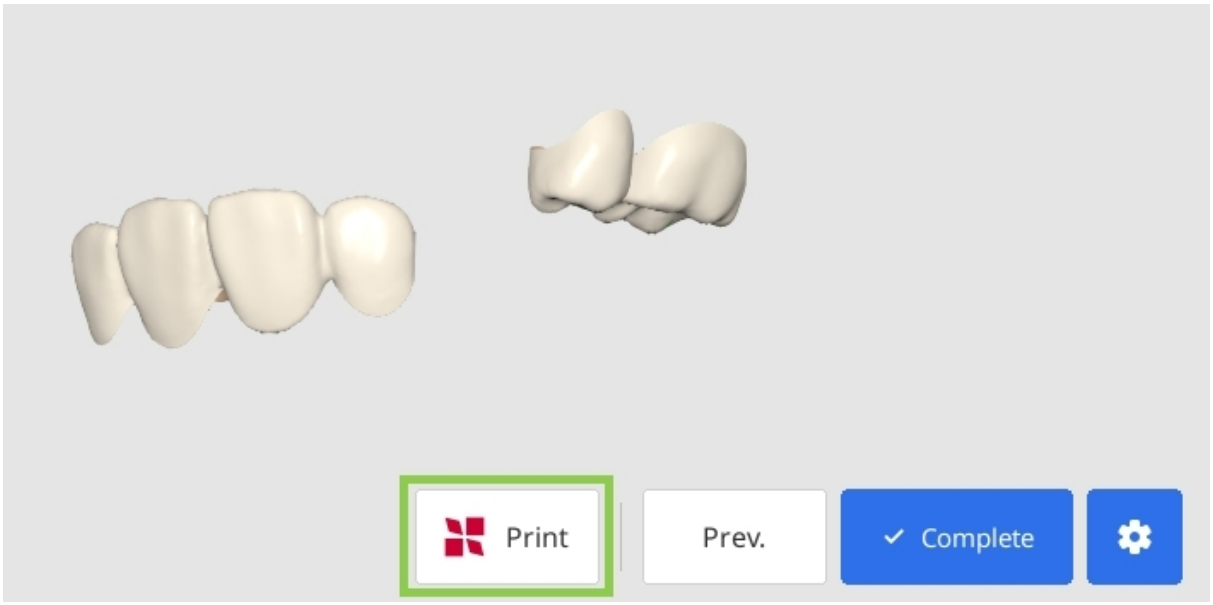


> **⚠ Caution**
>
> Incorrect parameter settings may affect the fit of the restoration; ensure that the parameters are set correctly.

7. To save your restoration designs, click “Complete” at the bottom right corner.

> **Paid Feature**
>
> Saving and exporting the completed restoration design as an STL file is a paid feature. Pricing may vary based on your scanner ownership status and location.
> For more details about payment, please visit the Medit Help Center or click here.

8. If you have a SprintRay 3D printer, you can transfer your restoration design from this step right into the RayWare Cloud. For this, use the “Print with SprintRay” at the bottom and follow the guidance on the screen. You must already have a RayWare Cloud account to use this feature.



⚠ Caution

If you encounter difficulties connecting to RayWare Cloud, please refer to the following troubleshooting guidelines:

- check your internet connection
- verify your login credentials (username and password)
- review your restoration design

If the issues persist, please reach out to SprintRay support.

Prepared Data Module

The workflow in this module depends on the target restoration. The table below shows which steps are included in the workflow for each restoration type.

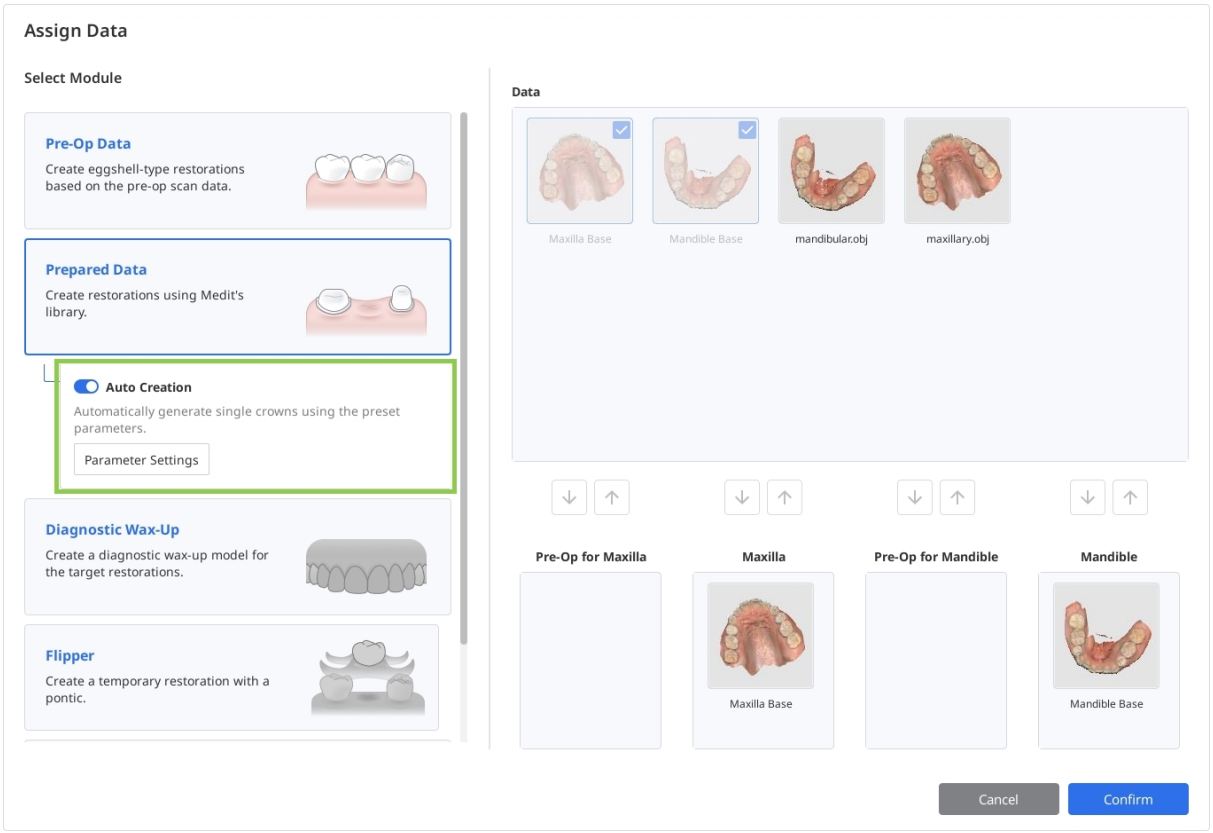
	Margin & Insertion Path	Tooth Data Arrangement	Final Design
Bridge	O	O	O
Crown	O	O	O
Veneer	O	O	O
Inlay/Onlay	O	O	O
Coping	O	X	O
Maryland Bridge	O	O	O
Cervical Inlay*	O	X	O

**The workflow for the cervical inlay is explained separately in the Appendix.*

Auto Creation for Single Crowns

This module also supports the automatic creation of single crowns for premolars and molars based on preset parameters. To use this feature, the form in Medit Link must contain only single crowns. In the Assign Data window, activate the “Auto Creation” toggle and review the preset parameters in the settings.

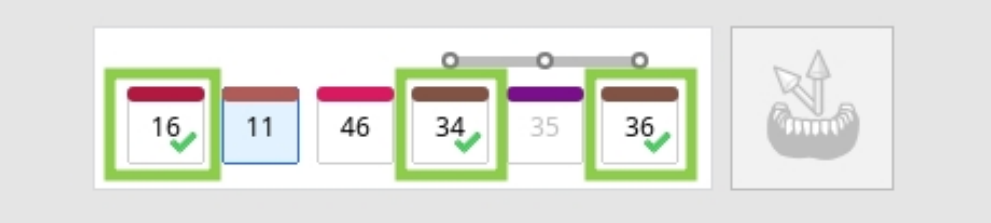
After the data assignment, users will enter the Final Design step, where they can review and customize the generated crowns.



Margin & Insertion Path

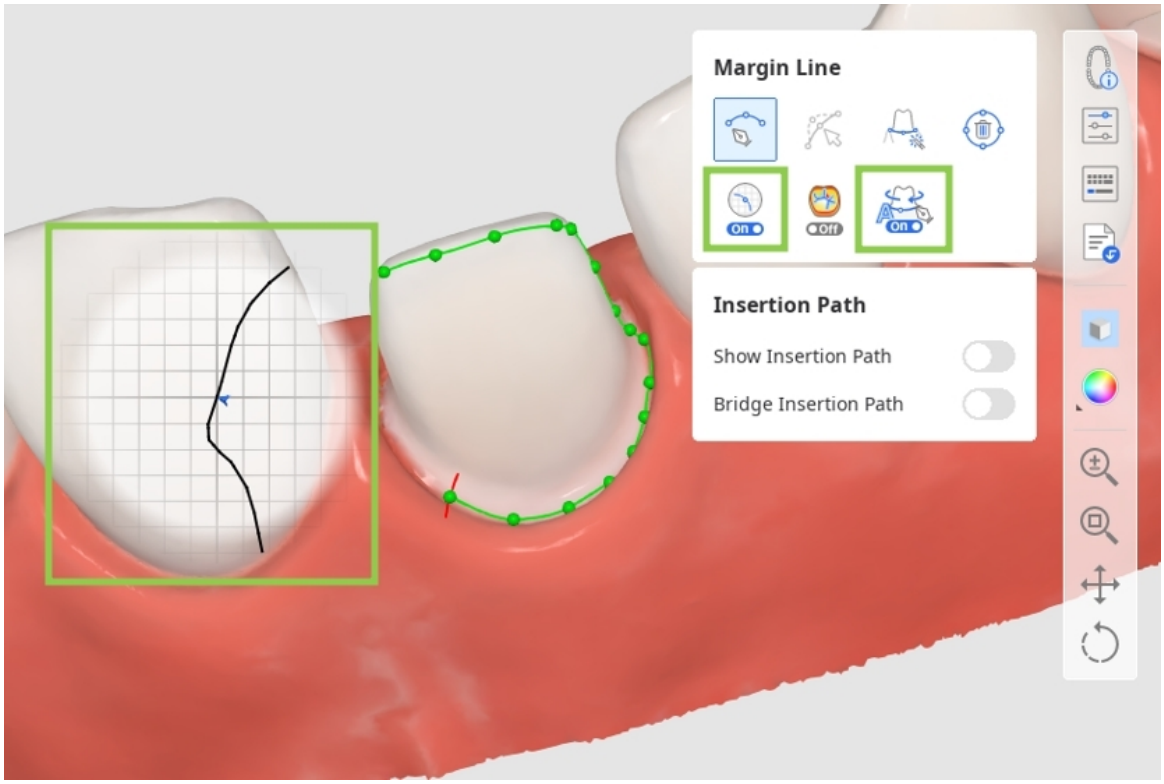
In the first step, users must draw margin lines for all teeth numbers entered in the form and then set the insertion path for each restoration.

1. Start by checking the teeth form at the bottom. If a tooth number has a green check mark, the margin line for this tooth has already been created or was imported from the case.
Margin lines for copings, crowns, inlays, and onlays are created automatically.



2. Then, select a tooth number that doesn't have a margin yet and draw it using the "Auto Creation" or "Manual Creation" tool.
"Auto Creation" draws a margin based on a single user-defined point; "Manual Creation" draws a margin based on multiple points.

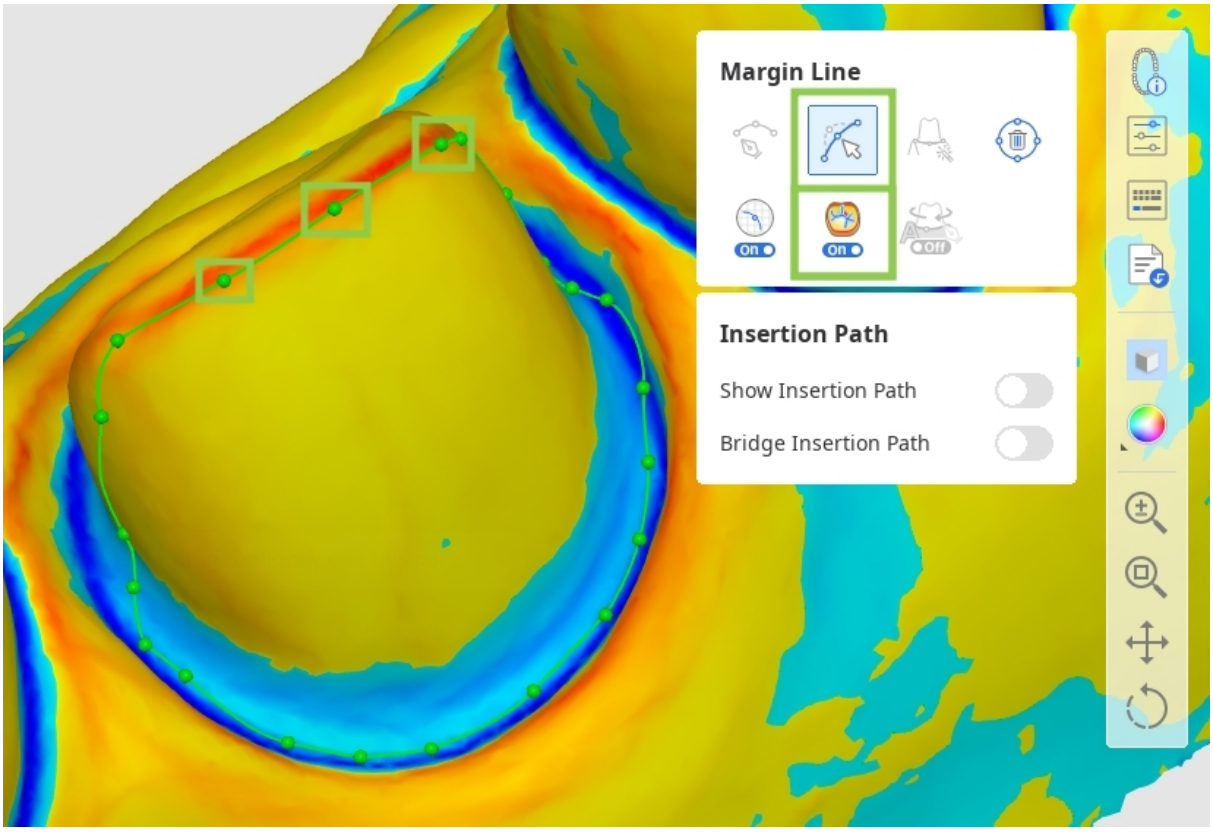
- Turn on "Section View" or "Dynamic View Change" to assist you when drawing the margin manually.



3. All margins can be edited by adding, moving, or deleting the control points. Click to add a point, right-click it to delete, and drag it to move.
While editing, you can turn on "Curvature Display Mode" to better understand the depth.

Tip

Hold down the Ctrl/Command key and drag the mouse to make minor freehand corrections quickly.



Warning (Edit)

Verify margin continuity and anatomical conformity after editing.

Cautions

- Reference anatomical landmarks when creating margins manually.
- Review and manually correct automatically created margins if needed.
- Ensure that deleting the margin cannot be undone. A new margin must be created after deletion.
- Analyze as a supplementary indicator to determine the boundary between the gingiva and the tooth.

4. You can work on the insertion path only after margins for all target teeth have been created.
Turn on "Show Insertion Path" and adjust the automatically set path by dragging the insertion path arrow.
The grey arrow will indicate the original direction.

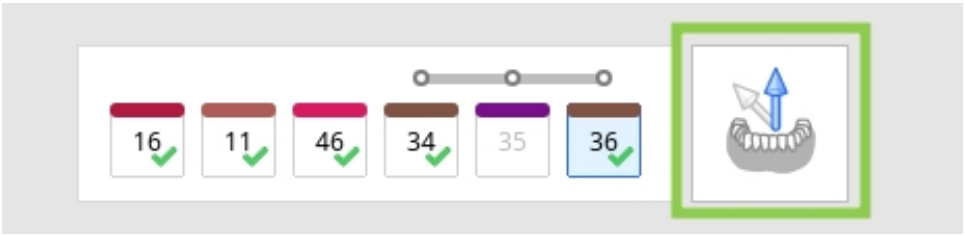
Tip

Turn off "Bridge Insertion Path" to individually set the path for each crown in a bridge.

⚠ Caution

Undercuts marked in blue affect the inner surface of the prosthesis. Ensure the undercut areas are properly captured according to the insertion direction.

- Alternatively, you can rotate the 3D data and click “Set Arrow to Your Viewpoint” at the bottom.



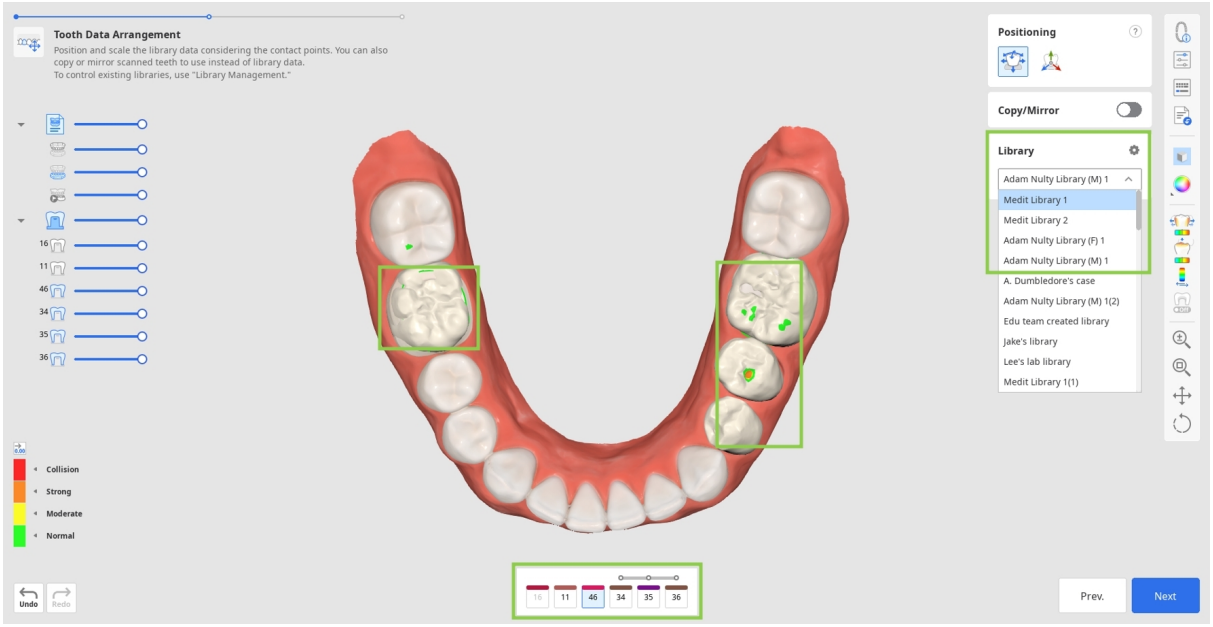
5. When done, click "Next" or press the space bar to move to the next step.

Tooth Data Arrangement

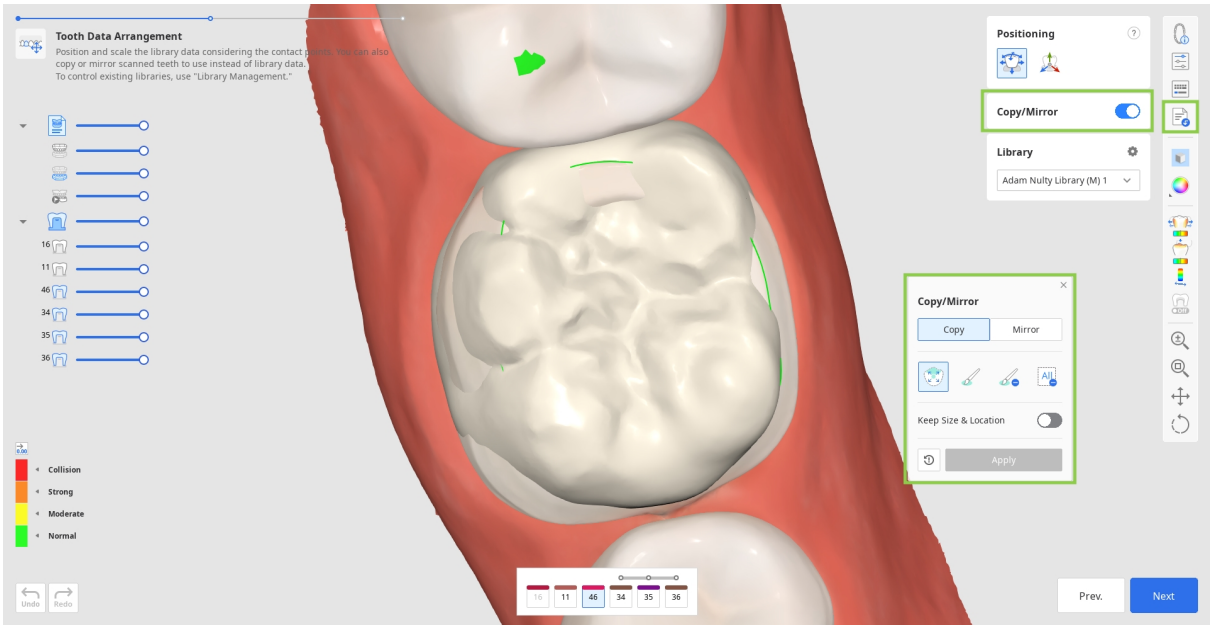
In this step, the user must arrange the tooth data to create restorations. They can use either tooth library data or any available preoperative or reference scan data.

1. When you enter this step, tooth data from the selected library will be automatically assigned to all the target teeth specified in the form. There are 6 default tooth libraries, and you can choose which one to use in the Library toolbox on the right.

> Note
>
> You can also expand the list of available libraries to 50 or modify the library data in "Library Management." For more details on this feature, go to **Data Management >** Library Management.



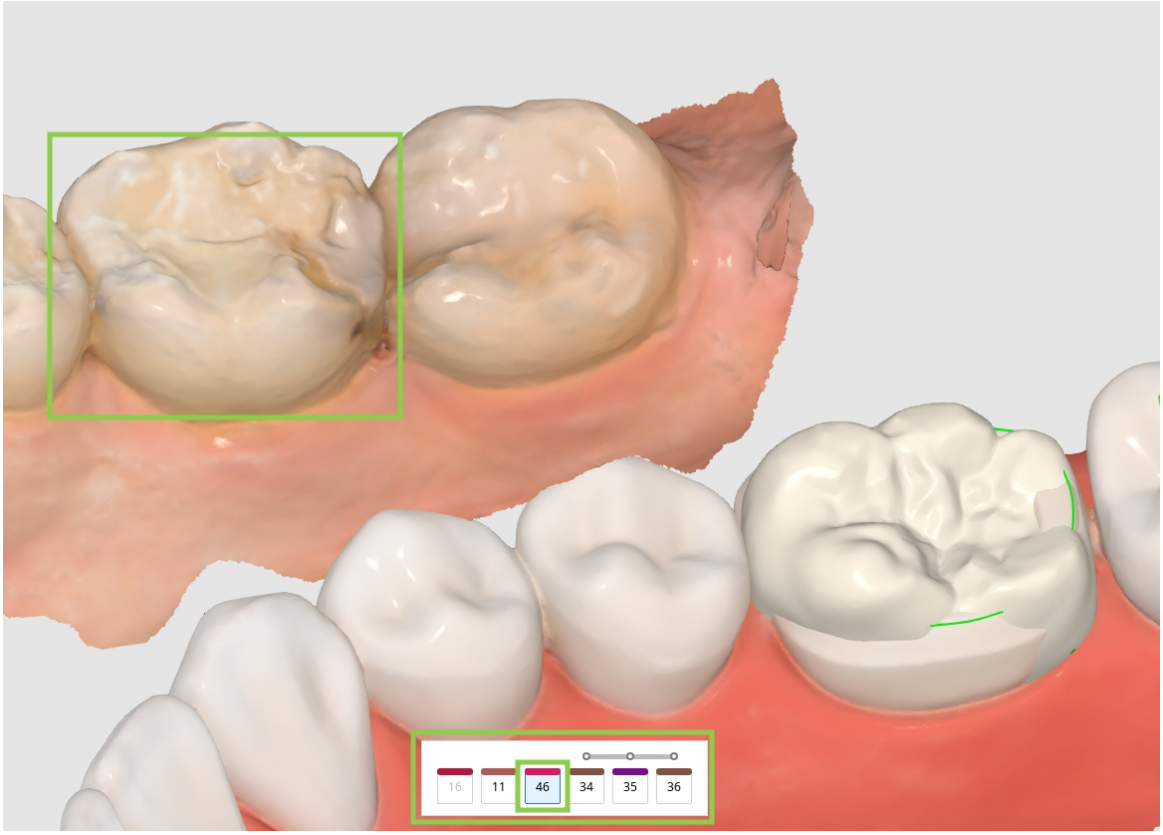
2. Alternatively, you can duplicate other available data to use it instead of the library one. For duplication, you can use either the pre-op data imported via the Assign Data dialog in the beginning or any other reference scans you load via "Import Additional Data" in the Side Toolbar. The latter lets you import additional data from other Medit Link cases or any locally stored data. To duplicate the data, use the "Copy/Mirror" tool. ”Copy” creates an exact replica of a scanned tooth, while “Mirror” creates a symmetrical one. Note that the copied or mirrored data will be applied only to the single tooth currently selected in the form at the bottom, allowing you to retain the library data for other teeth.



Caution

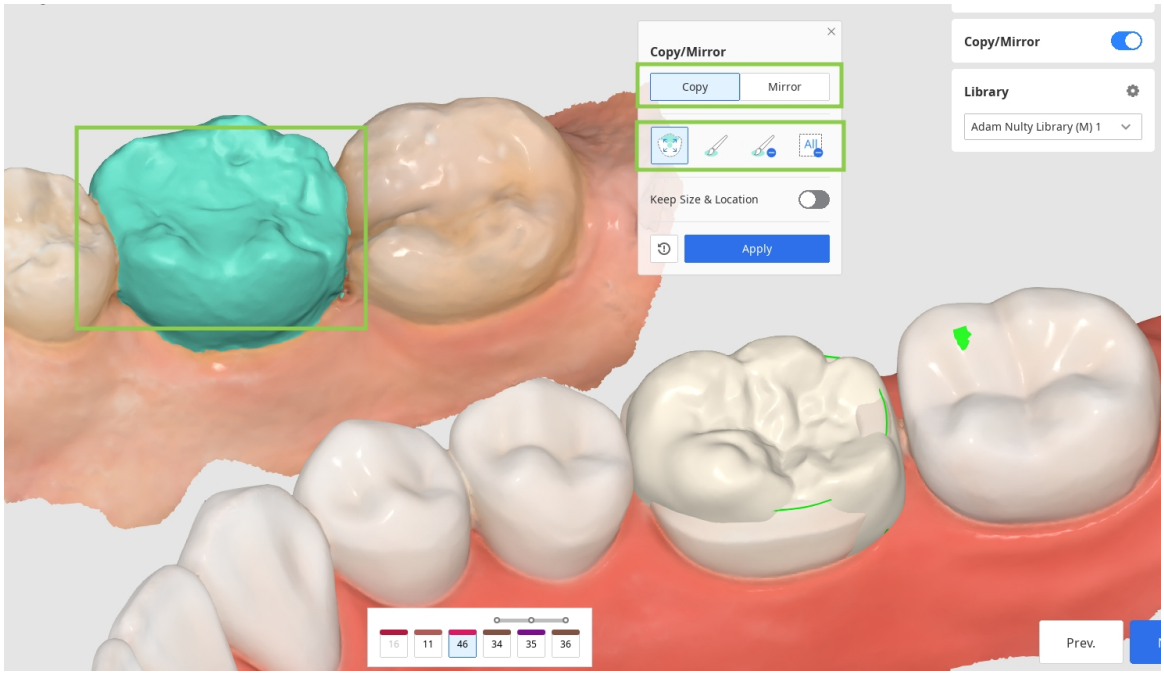
Validate mirrored anatomy against adjacent structures after using the tool.

- Start by selecting a tooth number for which you want to use the duplicated data in the form at the bottom and finding the data you will be duplicating (use the Data Tree to make it visible).

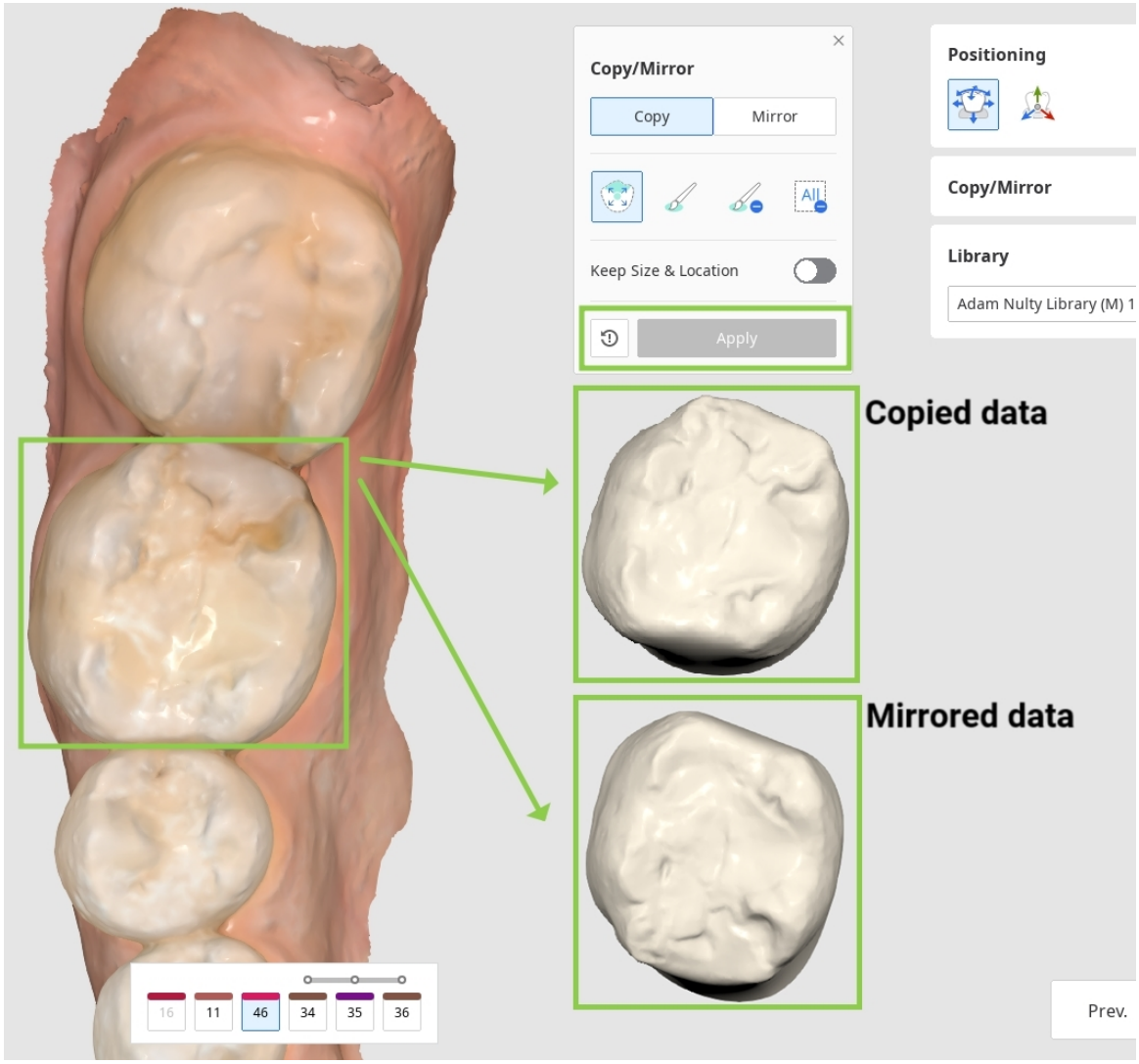


- Then, choose "Copy" or "Mirror" in the floating widget and select the desired tooth data using the provided tools.

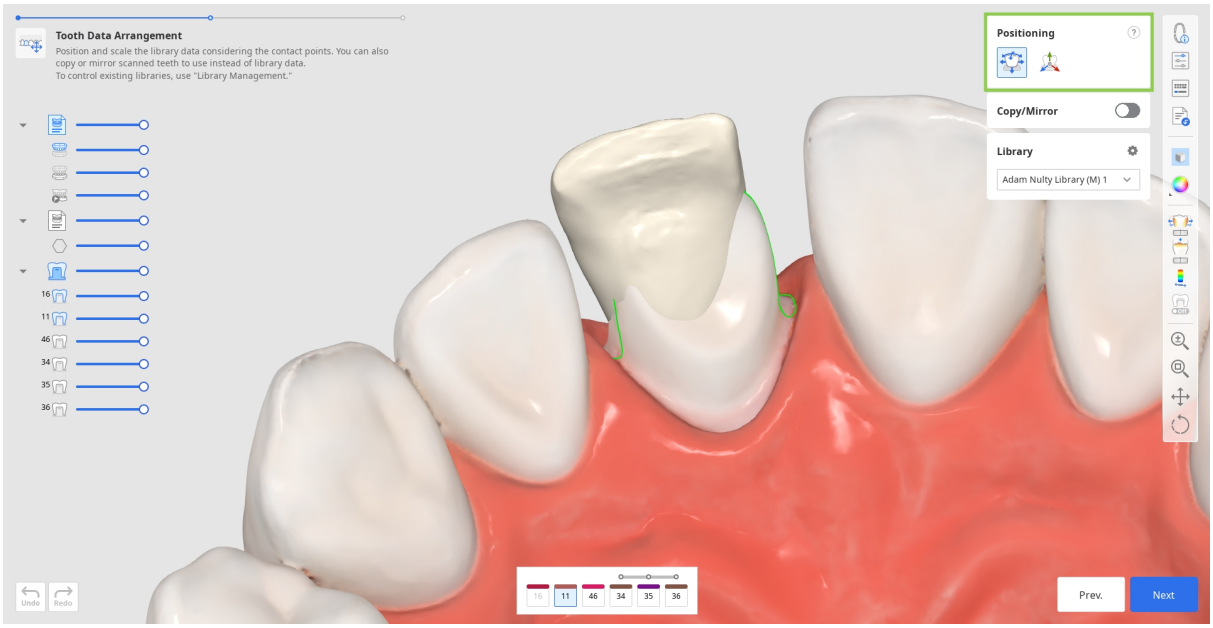
> **Tip**
>
> When copying data, note that the "Keep Size & Location" toggle allows you to create a duplicate of the same size and location as the original. If not turned on, the copied data will be placed onto the designated target tooth.



- Click "Apply" to substitute the library data with the designated data. If you want, you can return to using the library data by clicking "Reset."

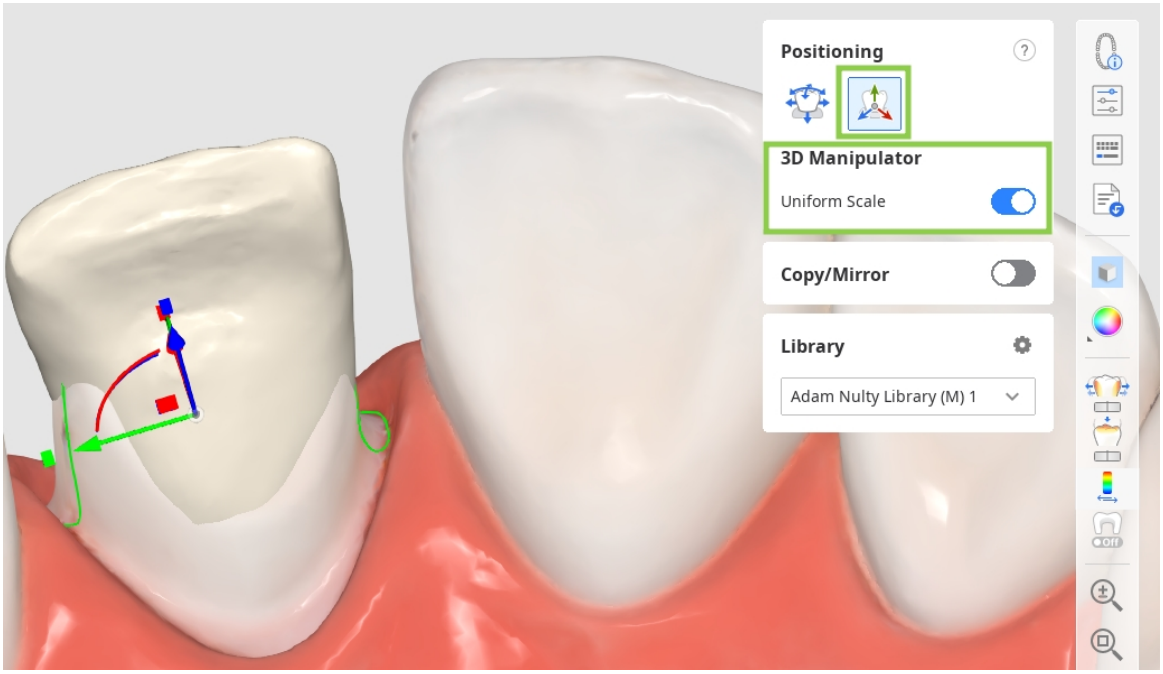


3. When you have arranged the tooth data for all your target teeth, adjust the data's placement using the "Positioning" tools. You can move, scale, or rotate the tooth data to ensure it is positioned properly.



- Use "Free Move/Scale" if you want to control data movements with no restrictions. To move data, use the mouse. For other actions like rotating and scaling, check the keyboard shortcuts under the question mark in the toolbox.

- Use "3D Manipulator" if you want to make precise or small adjustments to the data positioning. This feature lets you control data along the axis.



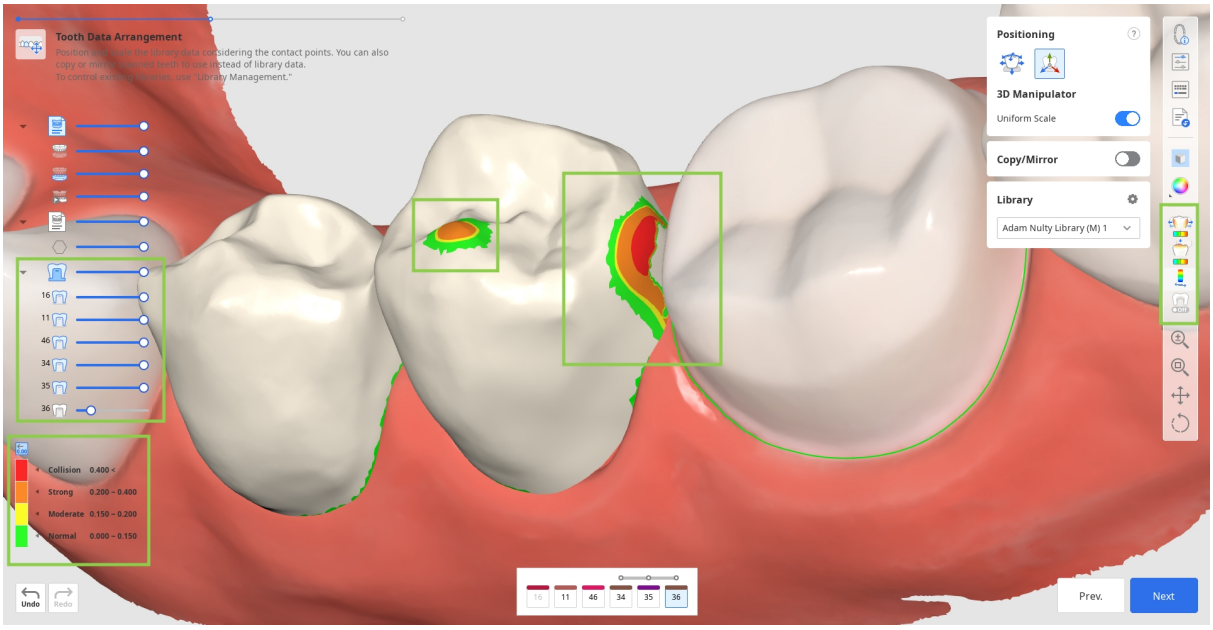
Cautions

- Revalidate position after free manipulation.
- Apply controlled transformations along intended axes only.

4. You should consider the contact points with other teeth when positioning the tooth data. To evaluate the contact between the restoration and its opposing or adjacent teeth, refer to the color bar in the bottom left corner.

Tip

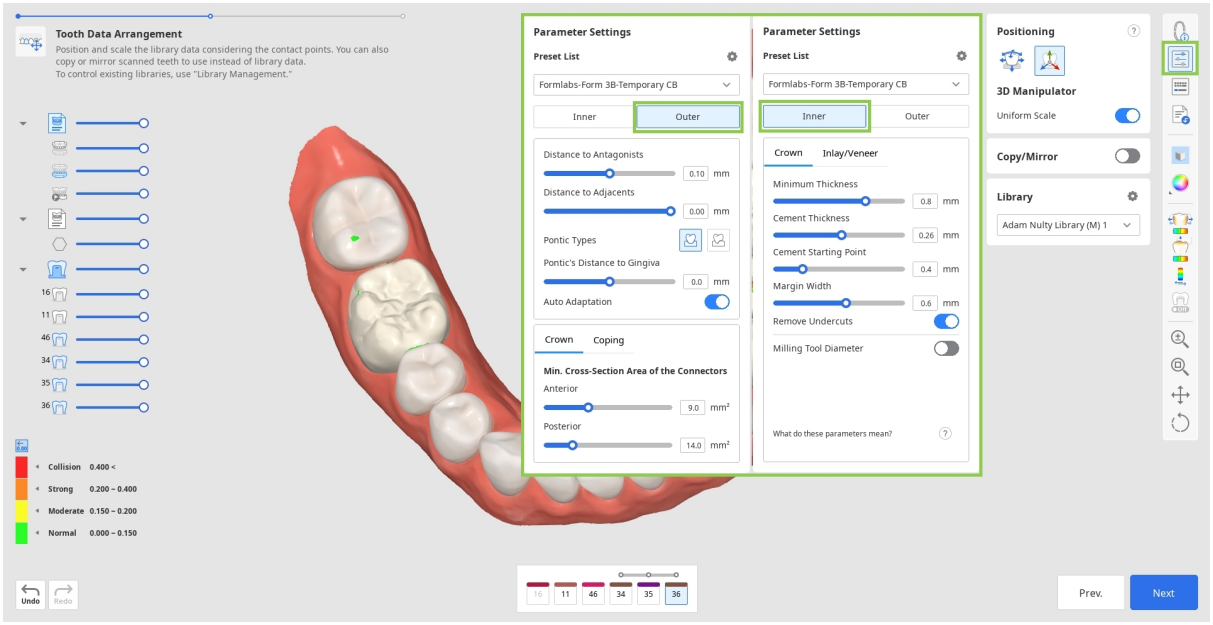
Try adjusting data visibility in Data Tree for more comfort when reviewing the contact points.



5. In this step, you can also review the parameters for the restoration's inner and outer surfaces before they are applied. To do this, click the "Parameter Settings" feature in the Side Toolbar on the right. You can use the recommended presets for your specific printer or manually adjust each parameter. By default, the most recently used parameters will be set up for you.

Tip

For more details on receiving and managing recommended presets, go to **Data Management >** [Preset Management.](#)



6. When done, click "Next."

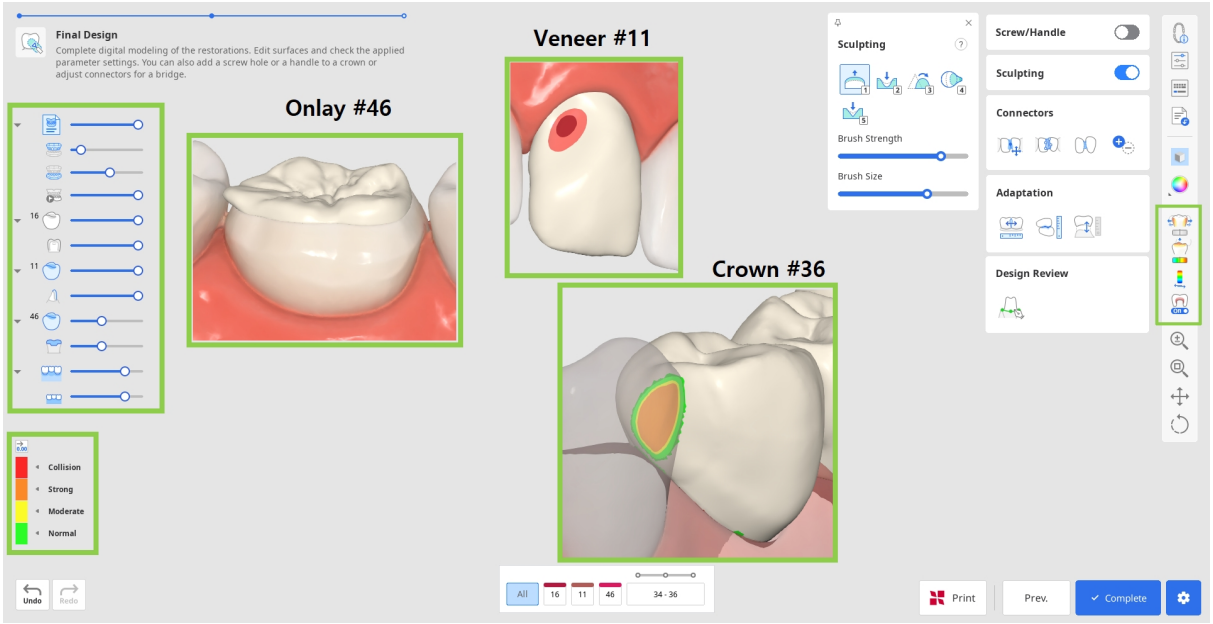
Final Design

This is the final step in designing the restorations. In this step, the user should review the design of the created restorations, make any necessary edits, and check the applied parameters before proceeding with printing. There are also two additional tasks that can be performed in this step: editing the bridge connectors and adding optional design elements to a crown.

1. Start by reviewing the created restorations. Turn on the analysis tools in the Side Toolbar to see where sculpting of the outer surfaces might be needed. ”Contact Areas with Adjacents” and “Contact Areas with Antagonists” will show the contact points with neighboring teeth through colors. ”Minimum Thickness” will point out areas of the crowns that are too thin in red. Add more material in these areas using sculpting tools.

Tip

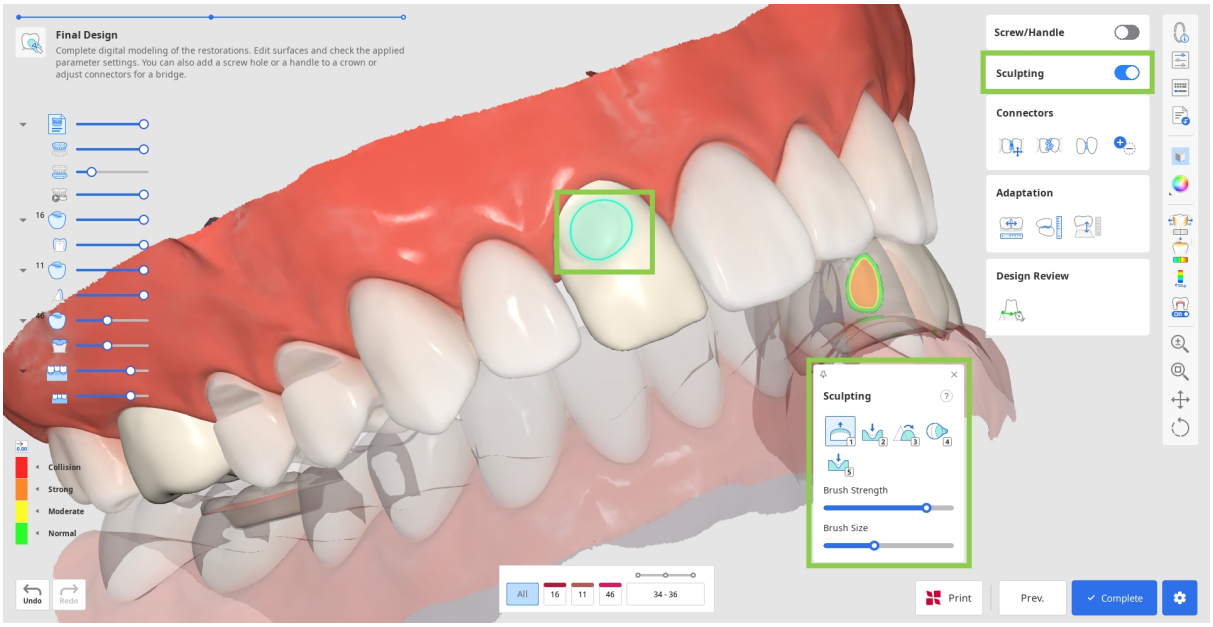
Control data visibility in Data Tree for easy review of contact points and restoration fit.



2. Correct any design flaws using “Sculpting.” You can add, remove, smoothen, morph, and carve out material on the restoration’s outer surface. Choose a sculpting tool, adjust the brush strength and size, and then modify the required areas. Use the “Groove” option to create grooves easily.

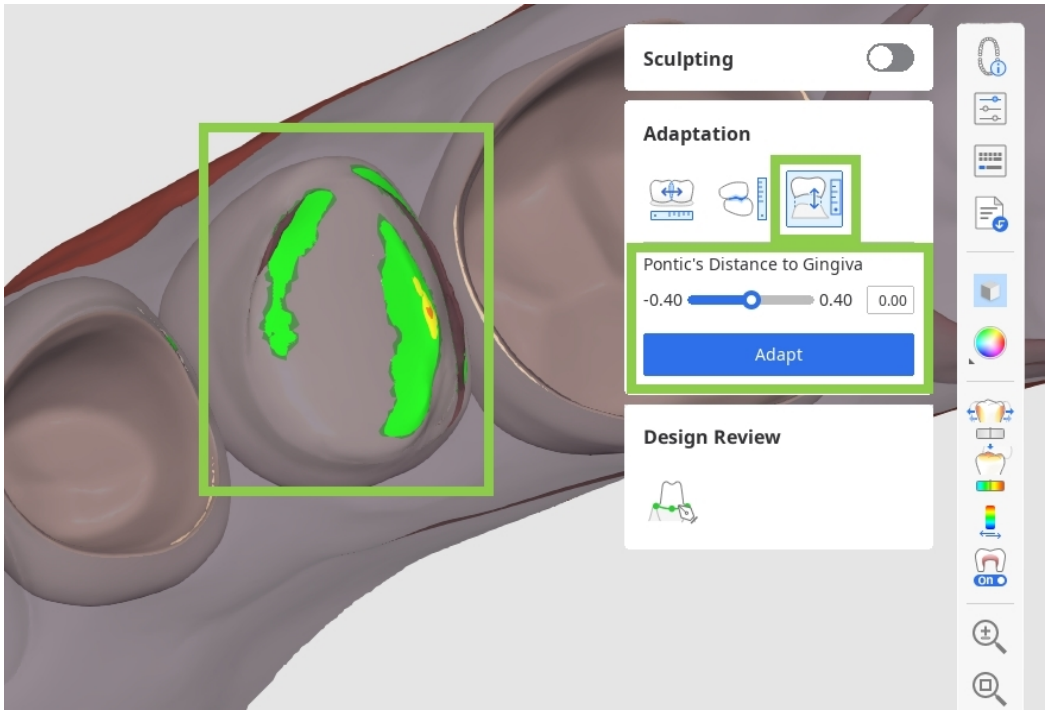
Tip

Click the question mark in the "Sculpting" widget to see the shortcuts.

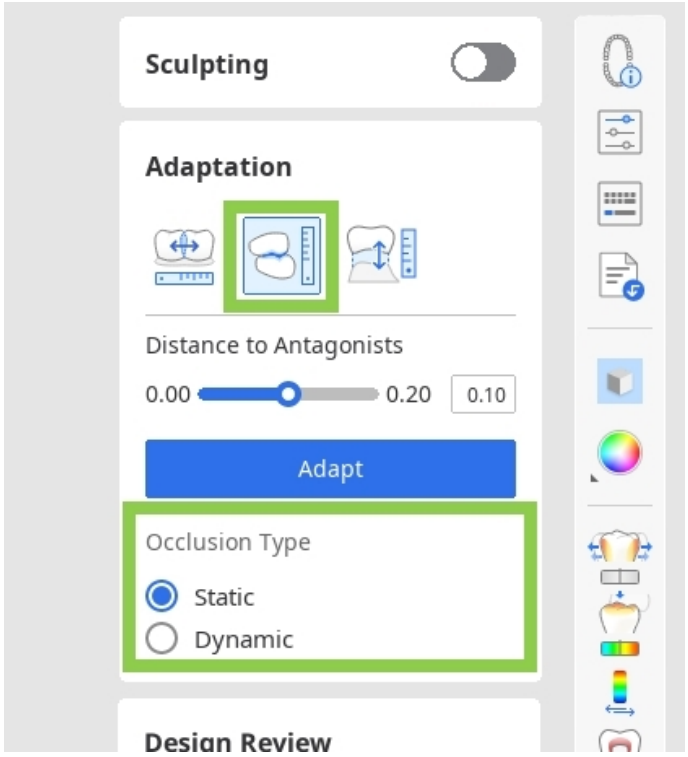


3. Any substantial sculpting might require additional review of the restoration fit and previously set parameters. Use “Adaptation” to make quick adjustments; you can adapt the restoration to adjacents and antagonists by a set distance.

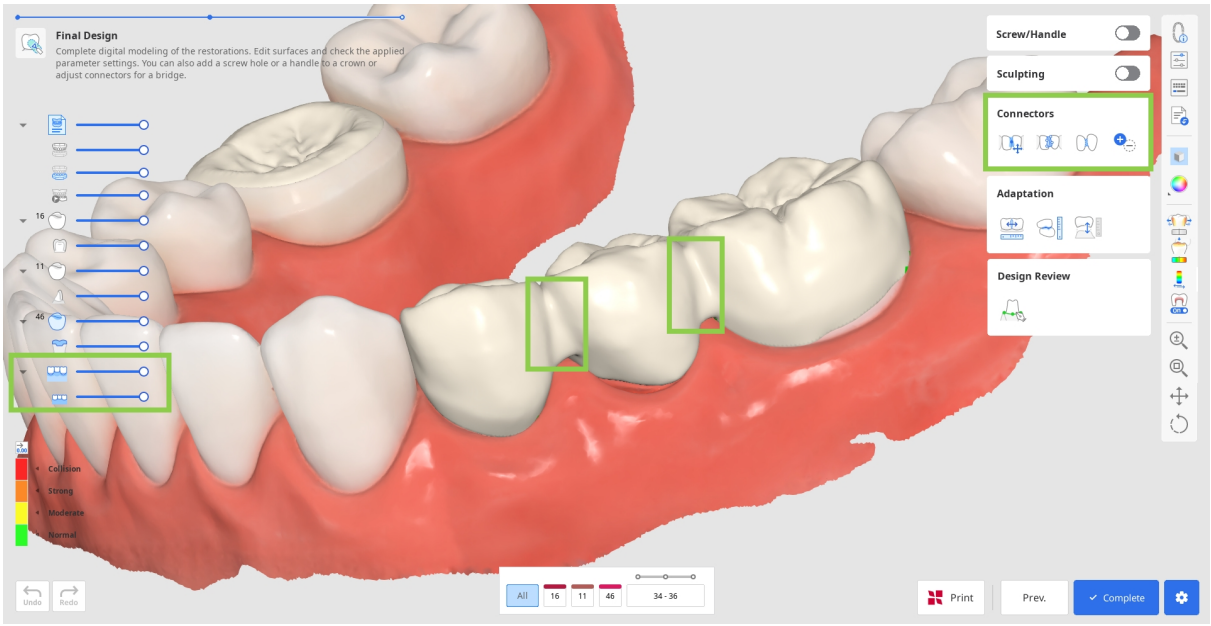
- If your bridge has a pontic, you can adjust its distance to gingiva using the Adaptation Tools in this step. Choose the “Adapt to Gingiva” feature, set the desired distance, and click “Adapt.”



- If dynamic occlusion data was imported, you can choose whether to adapt to antagonists based on ’static’ or ‘dynamic’ occlusion.

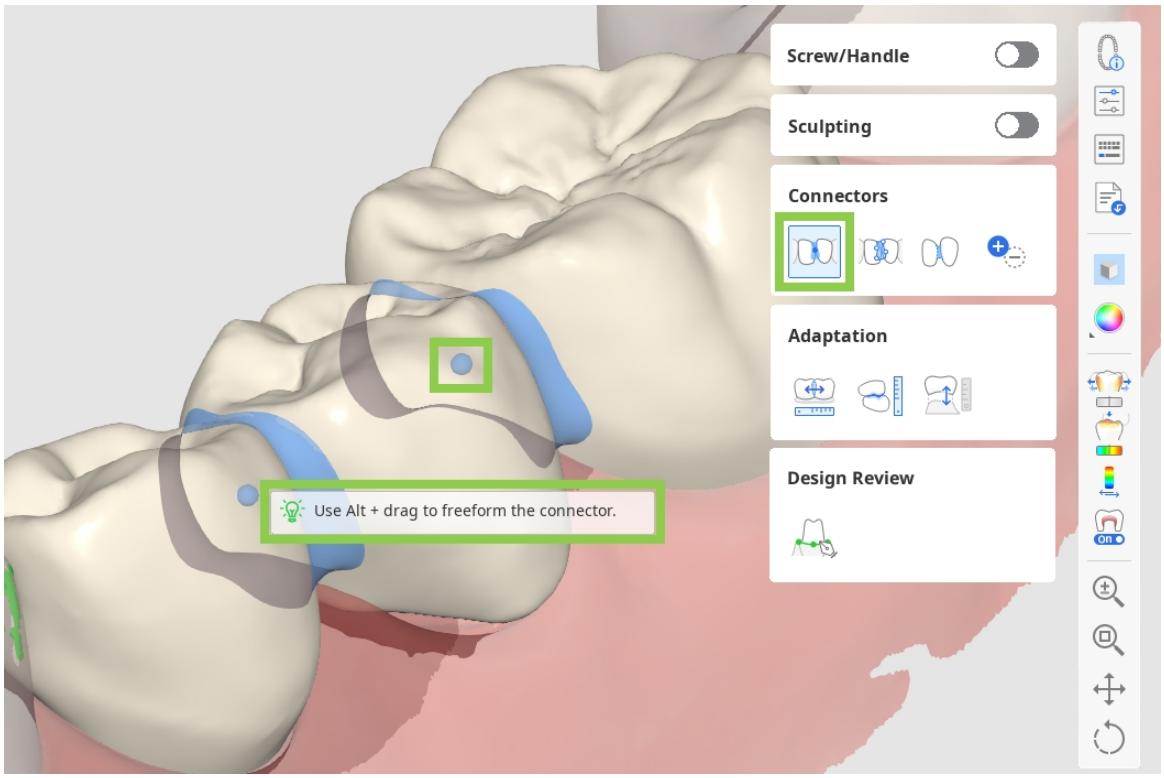


4. If you are working on a bridge, the data of each individual element will be combined into one by adding connectors. Edit the connectors using the “Move,” “Edit,” “Allow Small Connectors,” or “Add/Remove” tools.



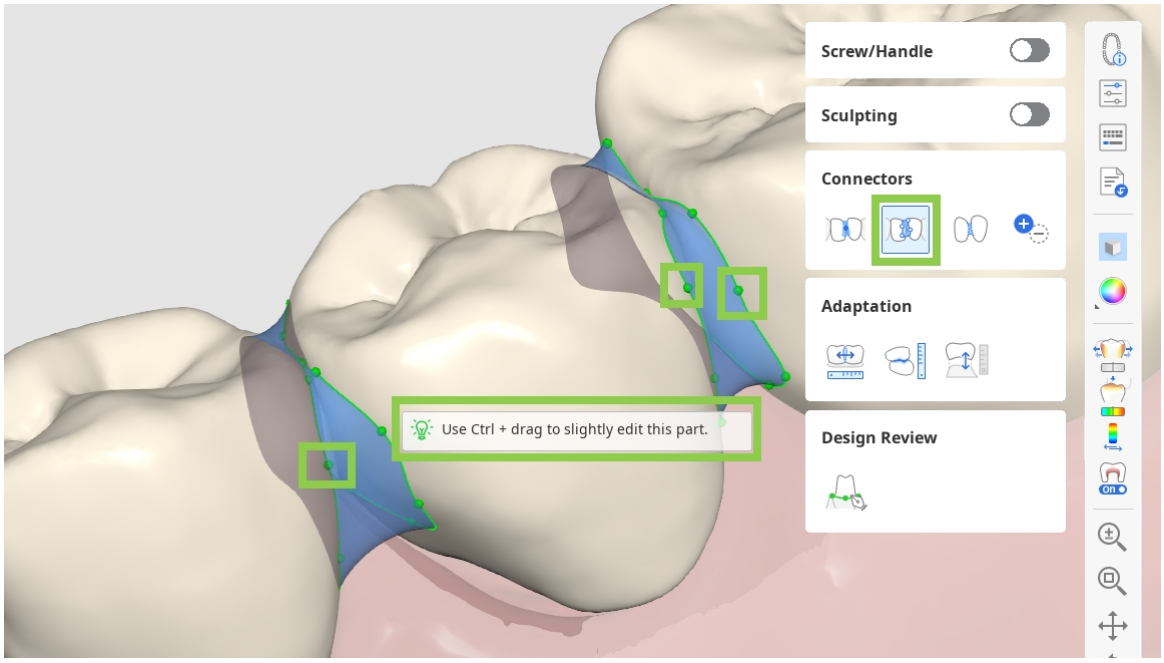
- When using ”Move,” drag the center point of a connector to readjust the connector’s position and cross-section area automatically.

> **Tip**
>
> Hold down Alt/Option to quickly freeform the connector with a mouse.

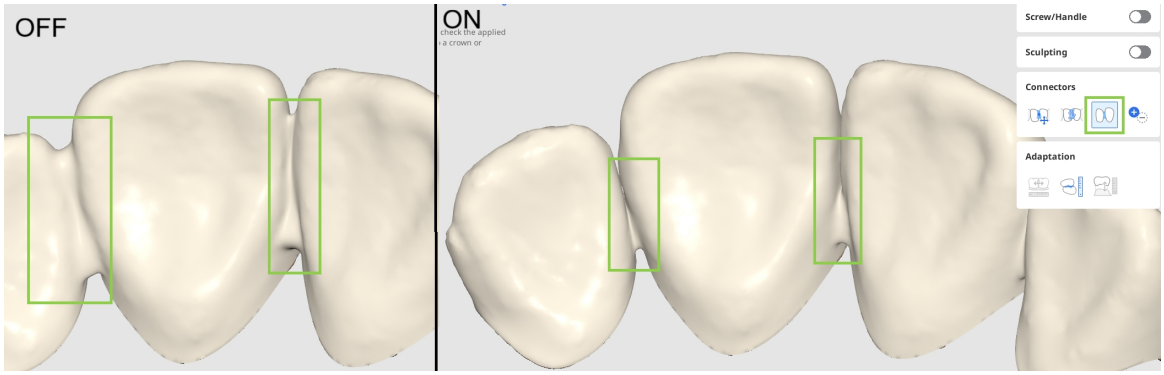


- When using ”Edit,” margins of the connector on both teeth will appear. You can reshape the connectors by editing those margins. Similar to editing the tooth’s margin line, click to add a point, right-click it to delete, and drag the points to move.

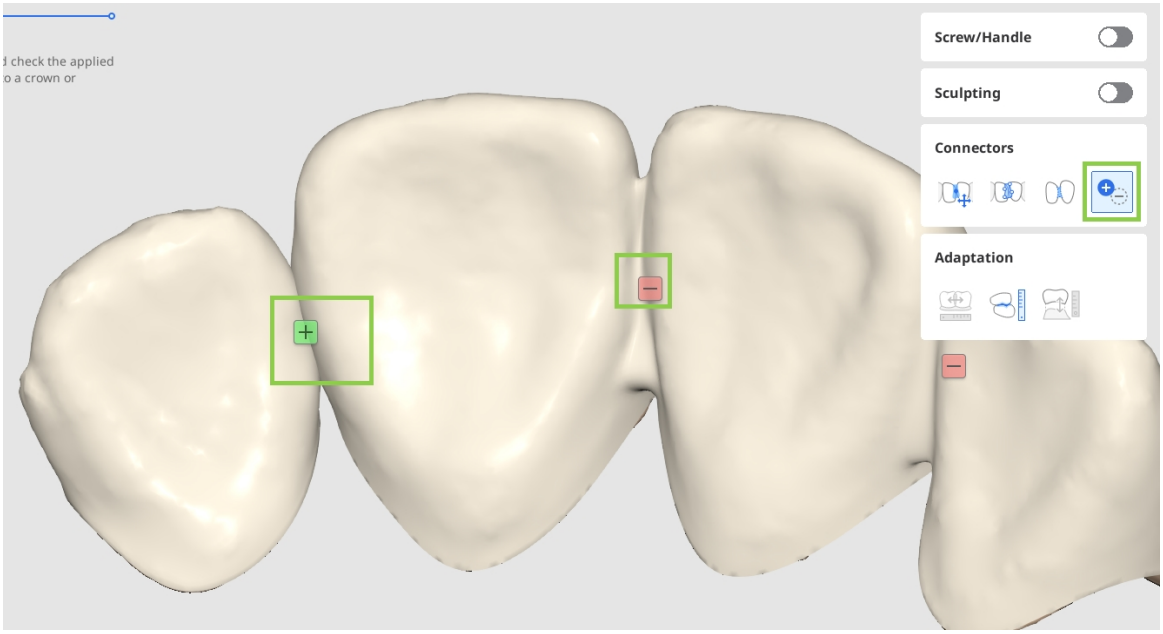
> Tip
>
> Hold down Ctrl/Command to quickly make minor changes in the margins.



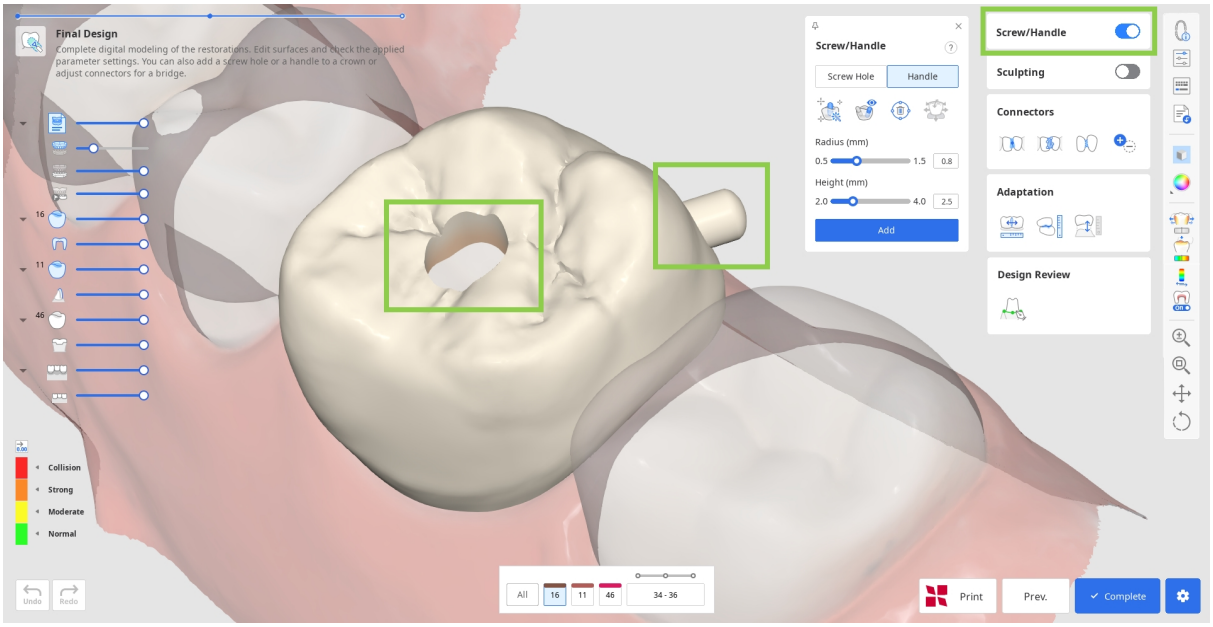
- When “Allow Small Connectors” is enabled, the program ignores the minimum cross-section area defined in the Parameter Settings. Instead, it creates connectors solely based on the actual contact points between adjacent teeth.



- Turn on “Add/Remove” to manage connectors between all registered units, regardless of form information. This allows you to separate a bridge into single units or connect single units into a bridge.

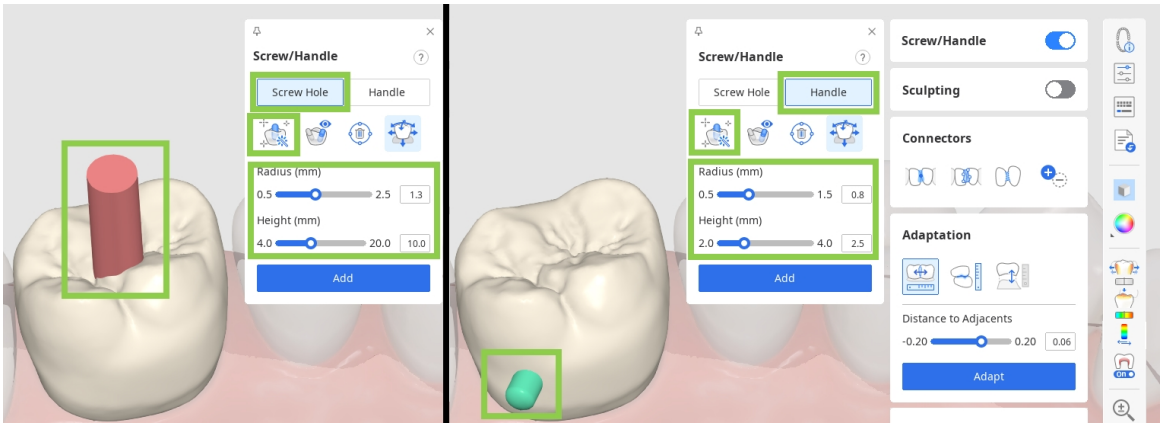


5. If you are working on a crown design, you can add screw access holes or handles with “Screw/Handle.”



- Start by choosing what element you want to add and click “Auto Set.” This will automatically place the cylinder to create an element in the most optimal place—a handle on the lingual side and a hole in the center. Then, adjust the radius and height of the cylinder below and click “Add.”

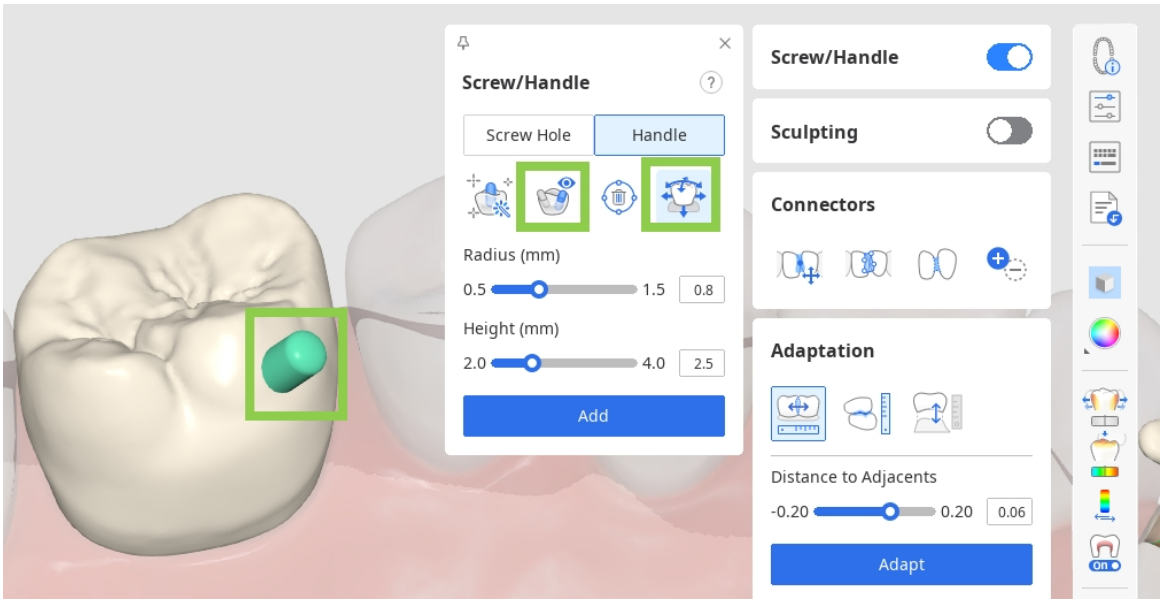
> Tip
>
> The cylinder for creating an element can also be placed manually in your chosen spot with a double-click.



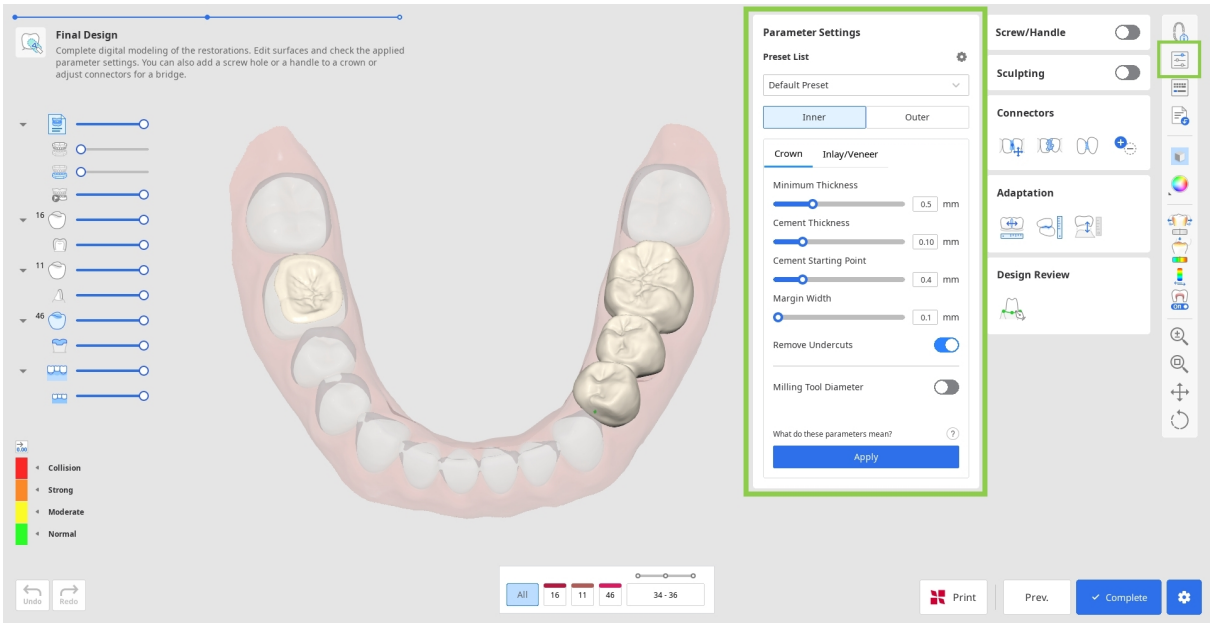
⚠ Caution

Check that the screw/handle is not positioned in a functionally important area of the restoration.

- You can also quickly move the cylinder around with a “Move” tool and change its direction by rotating the data and then setting it to your view with “Set Toward You.”



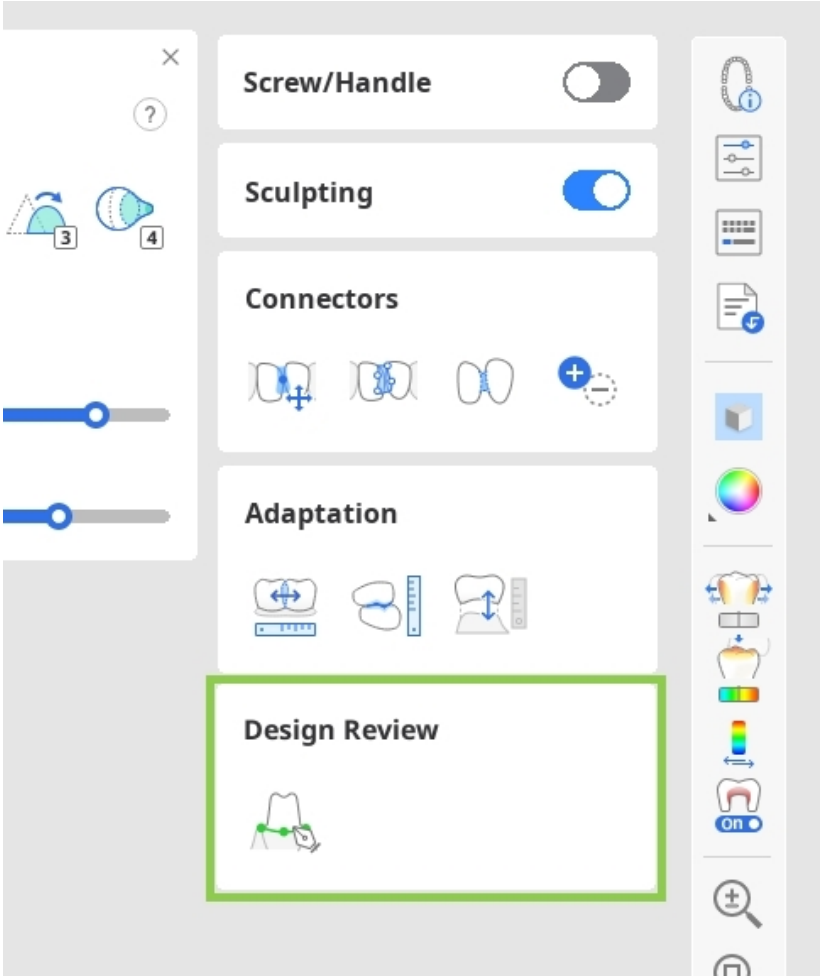
6. Next, review the inner and outer parameters in “Parameter Settings” before saving your design. Both inner and outer parameters can be adjusted in the corresponding tabs.



⚠ Caution

Incorrect parameter settings may affect the fit of the restoration; ensure that the parameters are set correctly.

7. Before saving or printing, make sure to review your created restorations. If you need to correct the inner surface but want to preserve the work on the outer surface, use the 'Margin & Insertion Path' in the Design Review toolbox instead of going back. This feature will take you back to the margin line creation step while keeping the outer surface design intact, even after making changes.



Note

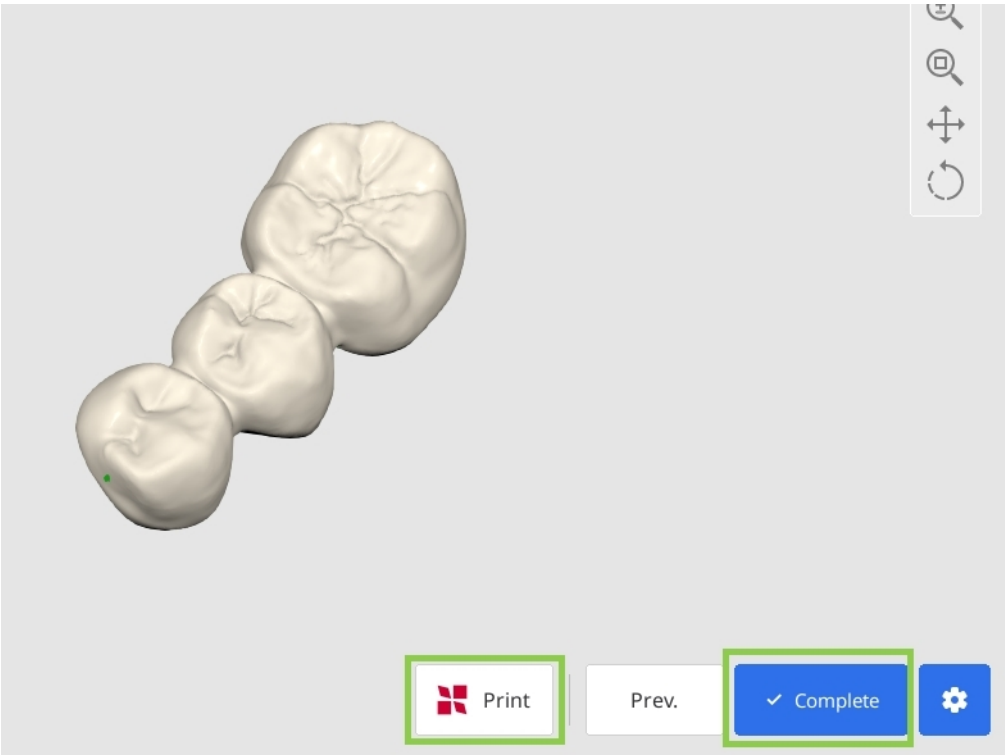
When creating single crowns using “Auto Creation,“ two features will be provided in the Design Review toolbox:

- Margin & Insertion Path: Allows you to correct the margin line and insertion path to adjust the inner surface while preserving the outer surface design.
- Tooth Data Arrangement: Enables you to adjust the positioning of library data to modify the outer surface while maintaining the inner surface.

Note

If mandibular movement recordings are available in the Medit Link case, you can simulate and review the dynamic occlusion using the “Dynamic Occlusion” feature in the Design Review toolbox.

8. When all design work is finished, you can either save your designs to the Medit Link case via “Complete“ or proceed to printing using SprintRay printer via “Print with SprintRay.“



Paid Feature

Saving and exporting the completed restoration design as an STL file is a paid feature. Pricing may vary based on your scanner ownership status and location.
For more details about payment, please visit the Medit Help Center or click here.

Caution

If you encounter difficulties connecting to RayWare Cloud, please refer to the following troubleshooting guidelines:

- check your internet connection
- verify your login credentials (username and password)
- review your restoration design

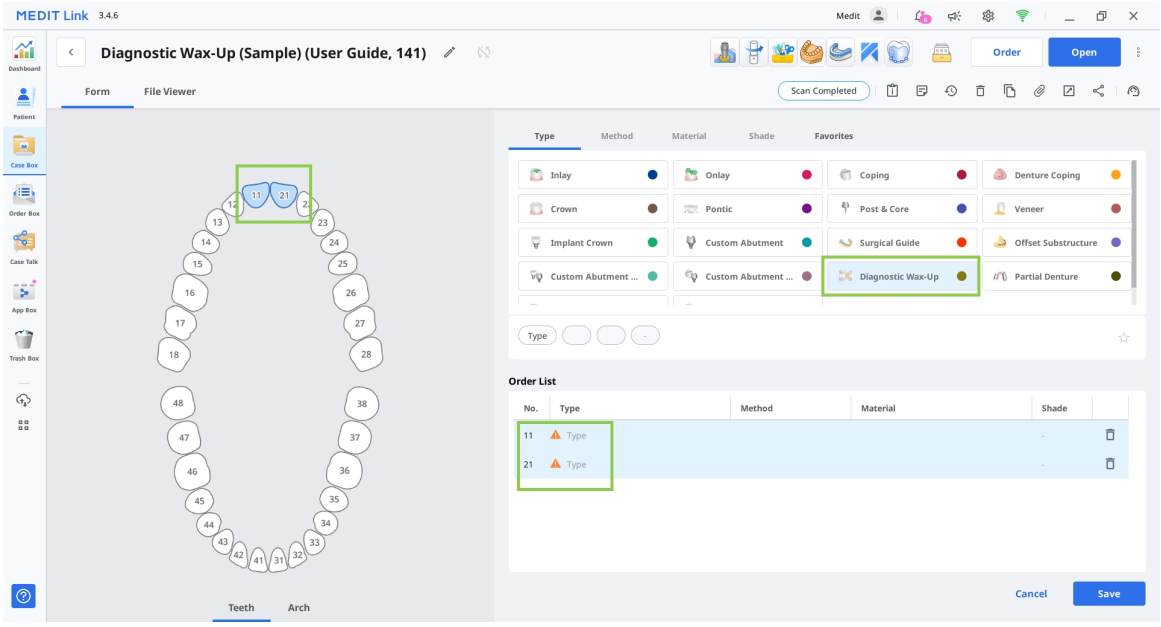
If the issues persist, please reach out to SprintRay support.

Diagnostic Wax-Up Module

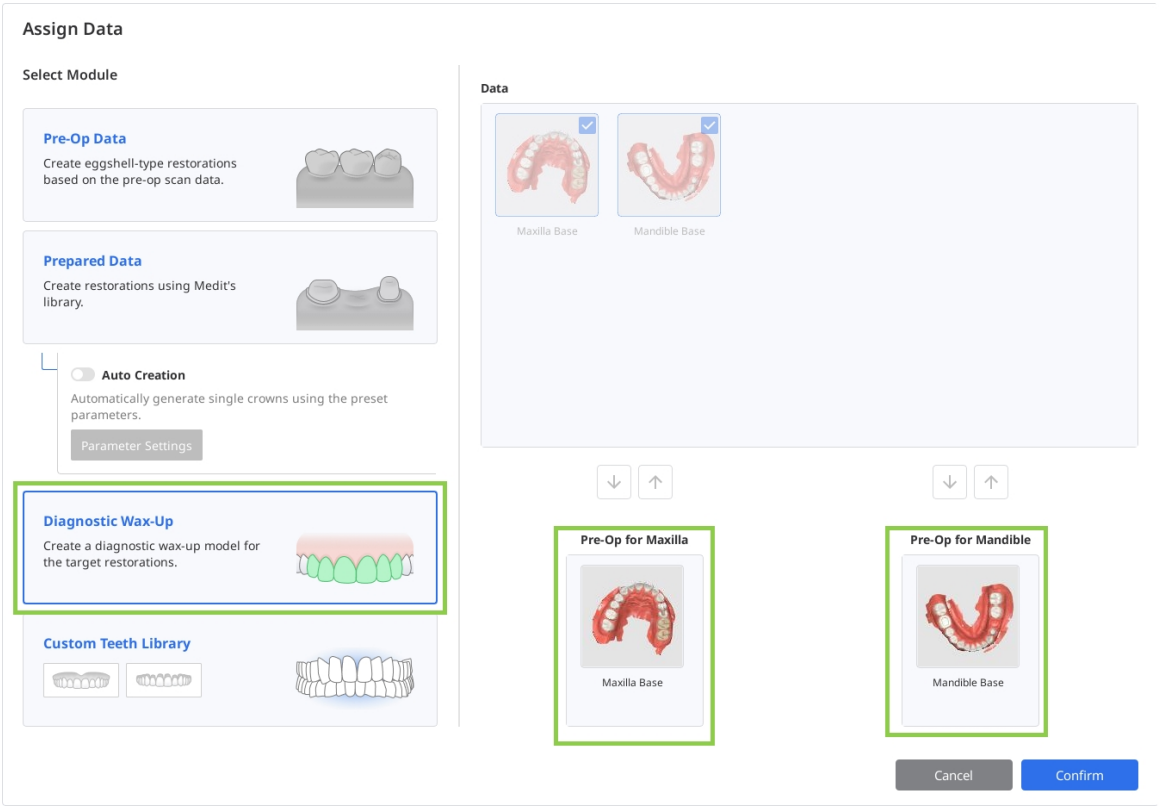
This workflow is specifically designed for the fast and efficient creation of diagnostic wax-ups. It enables users to design the outer surface of future restorations and then print them together with the arch data. The entire workflow consists of just two steps.

1. This module is available only when the form information in Medit Link specifies the correct product type: Diagnostic Wax-Up. Make sure to assign it to all teeth that are designated as targets for the project. Then save the form and run Medit ClinicCAD.

> **Tip**
>
> You can also launch the app with an empty form, but you'll be asked to complete it when the app opens.

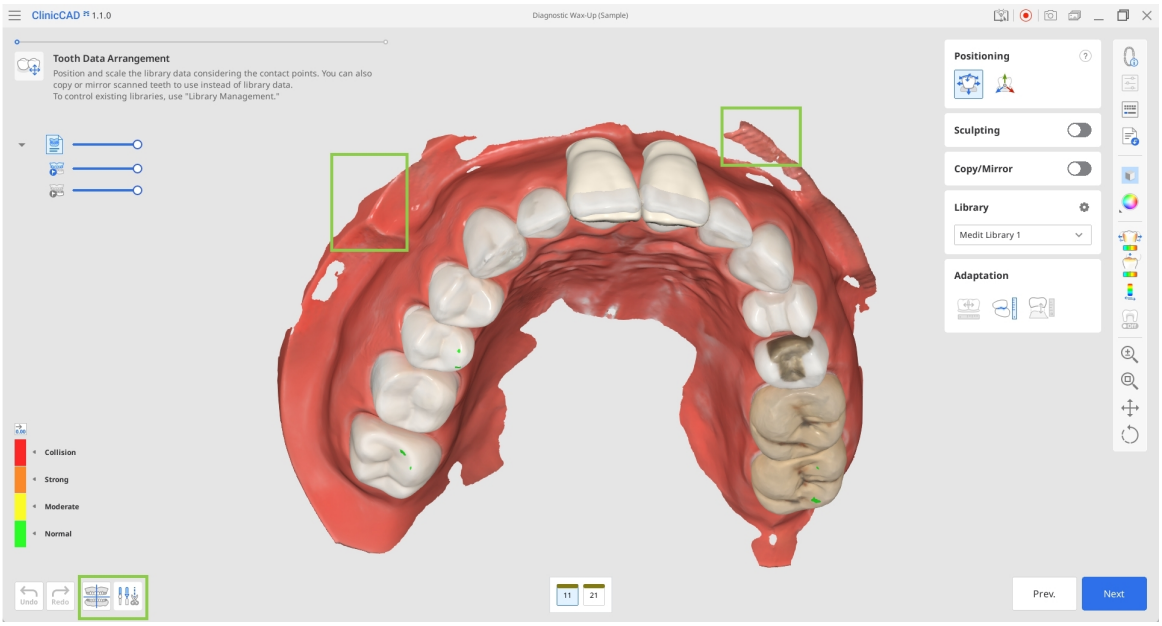


2. In the Assign Data dialogue, select “Diagnostic Wax-Up“ and assign data for at least one arch. Click “Confirm.“



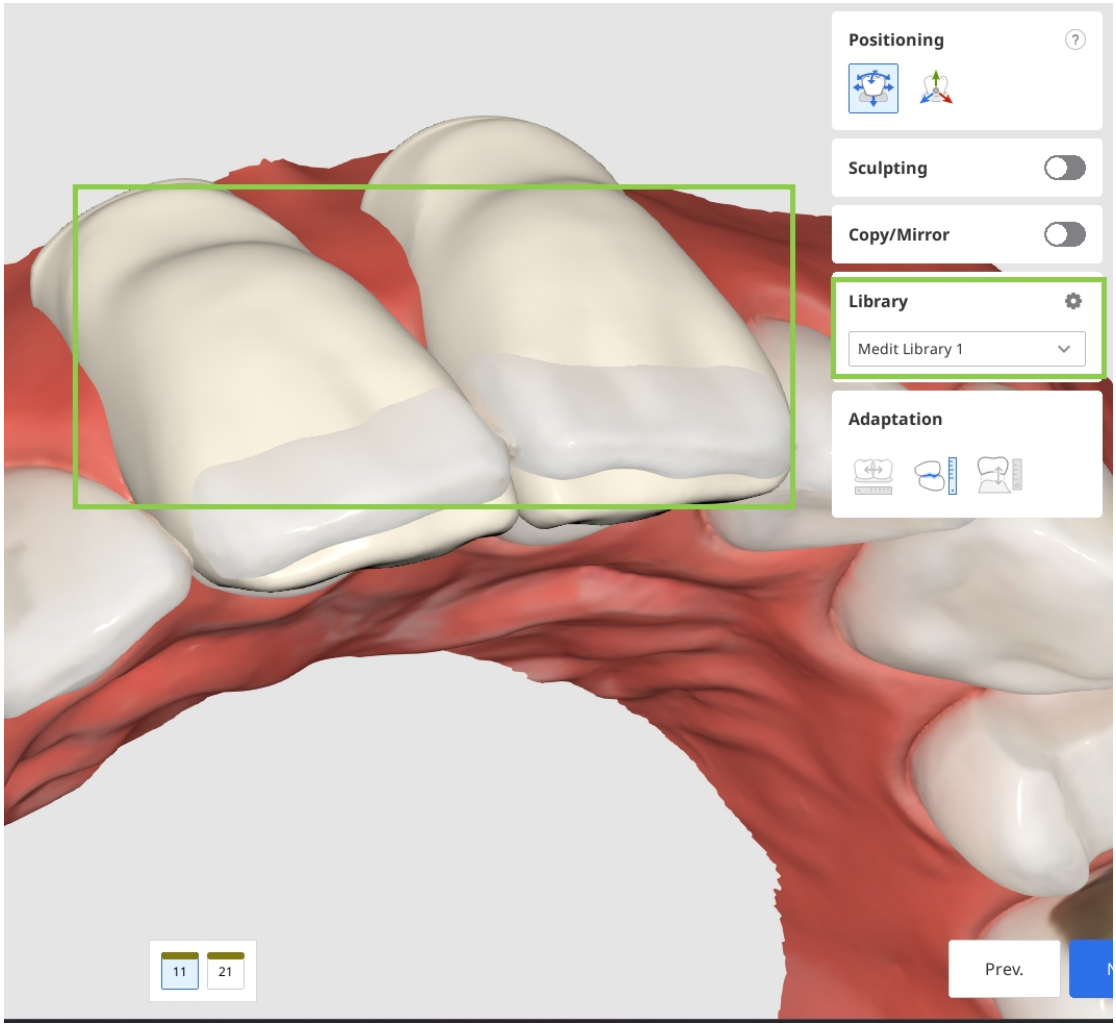
3. After importing the data, you will proceed to the Tooth Data Arrangement step. Before starting the wax-up, review your scan data for any unnecessary soft tissue or misalignment. If needed, use the “Data Alignment” and “Data Editing” modes located in the bottom left corner to make the necessary adjustments.

> **Note**
>
> Read how to use “Data Alignment“ and “Data Editing“ in the **Workflow** chapter of this guide.

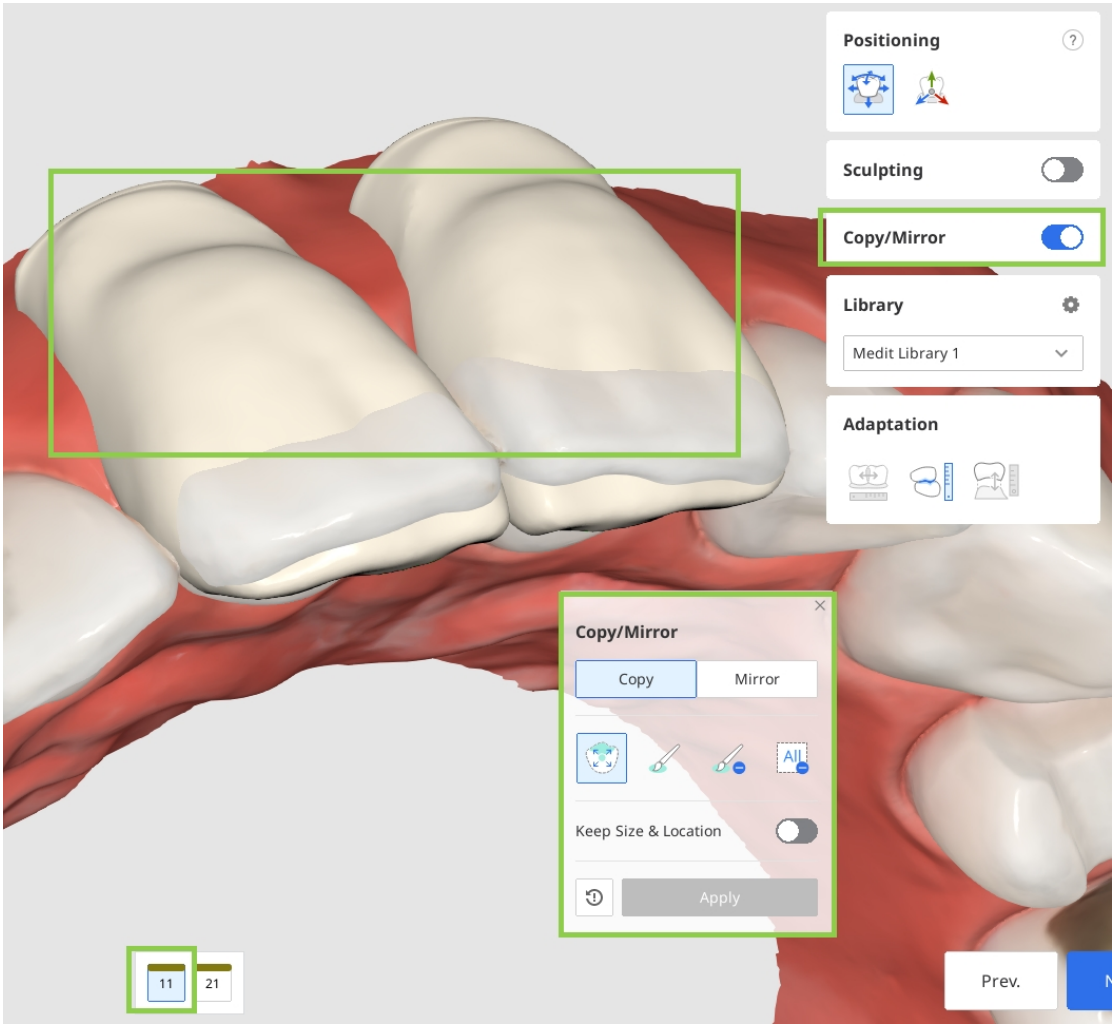


4. You can create the target restorations either by using the teeth library data or by duplicating a tooth from the imported scan data.
    - The library data will automatically appear for the designated target teeth. You can change the selected library in the Library Toolbox on the right.

> **Note**
>
> For more details on managing available teeth libraries, refer to the **Data Management** chapter of this guide.

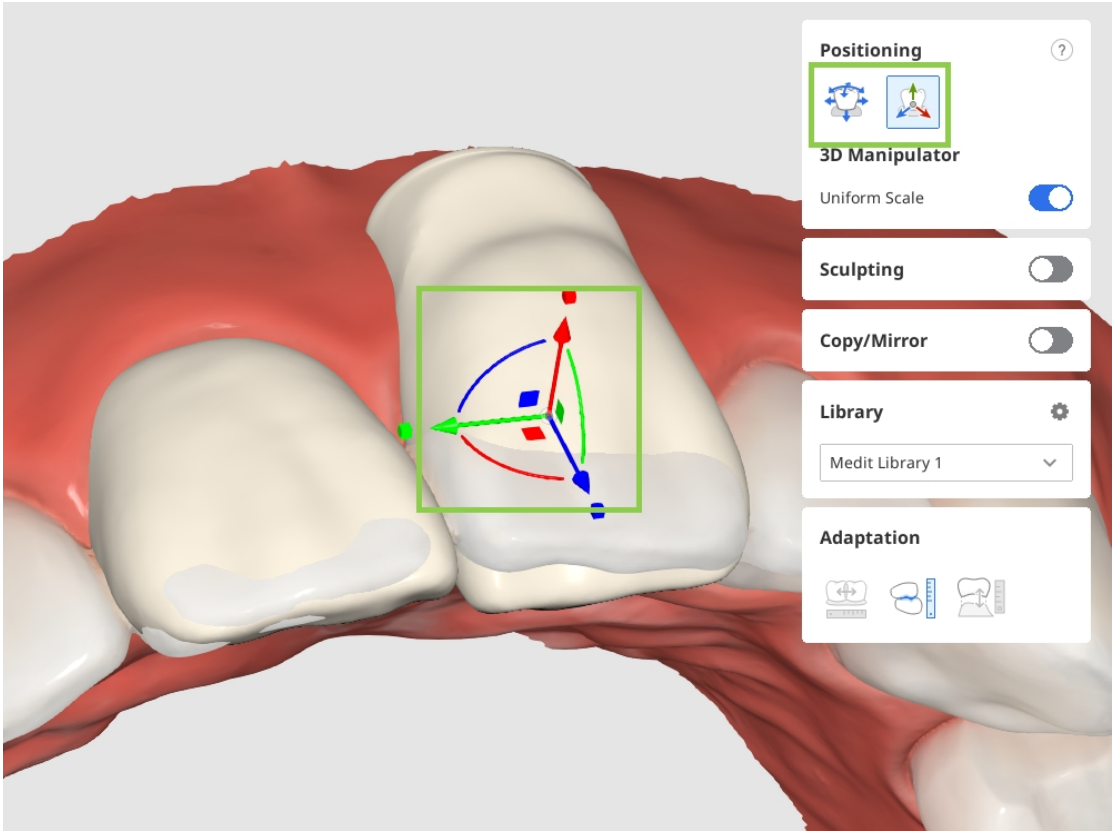


- For duplication, you can use either the pre-op data imported via the Assign Data dialog in the beginning or any other reference scans you load via "Import Additional Data" in the Side Toolbar. The latter lets you import additional data from other Medit Link cases or any locally stored data. To duplicate the data, use the "Copy/Mirror" tool. ”Copy” creates an exact replica of a scanned tooth, while “Mirror” creates a symmetrical one. Note that the copied or mirrored data will be applied only to the single tooth currently selected in the form at the bottom, allowing you to retain the library data for other teeth.
  Start by selecting the target tooth in the form at the bottom, then choose either the “Copy” or “Mirror” option. Next, use the available selection tools to define the data to be duplicated, and click “Apply.”



5. When you have arranged the tooth data for all your target teeth, adjust the data's placement using the "Positioning" tools. You can move, scale, or rotate the tooth data to ensure it is positioned properly. Make sure arranged tooth data is not sticking out on the gingiva side.

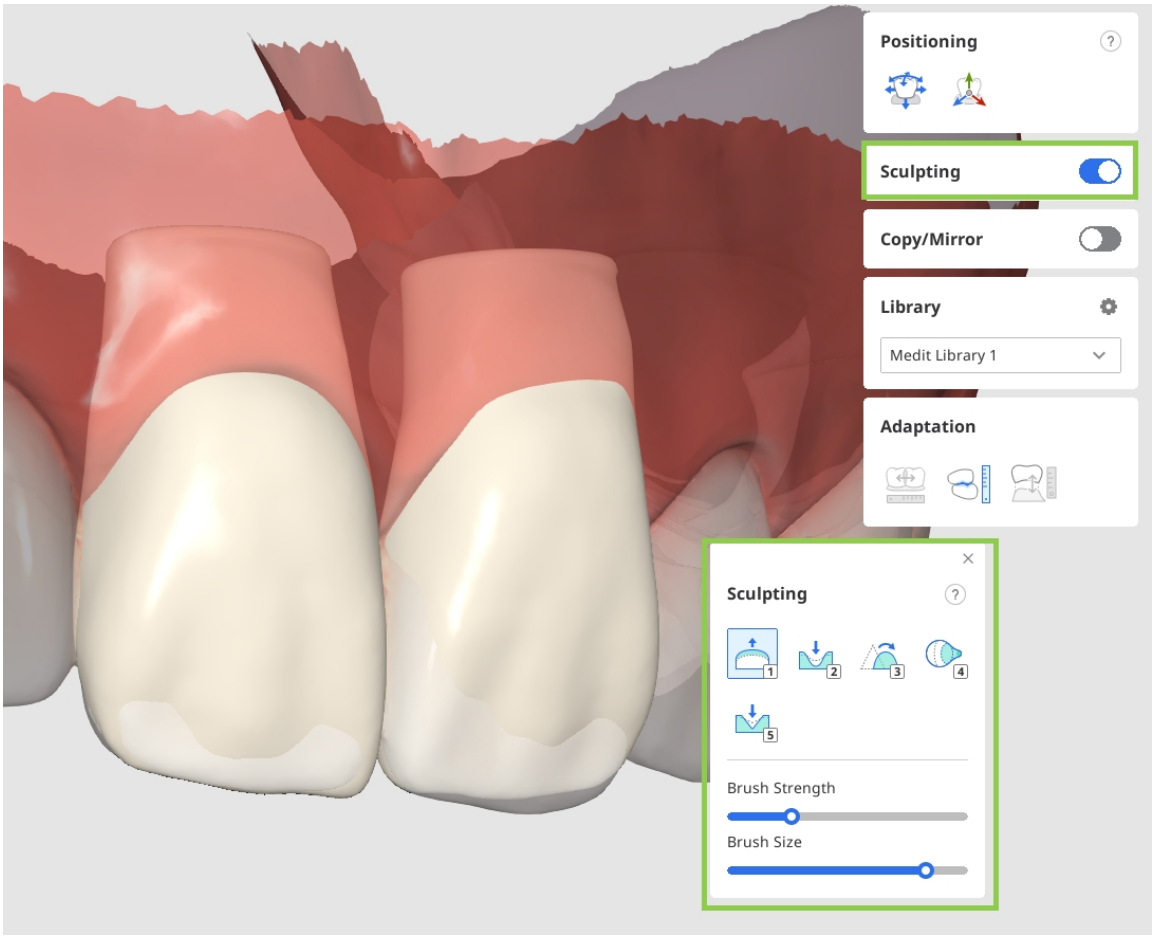
- Use "Free Move/Scale" if you want to control data movements with no restrictions. To move data, use the mouse. For other actions like rotating and scaling, check the keyboard shortcuts under the question mark in the toolbox. Use "3D Manipulator" if you want to make precise or small adjustments to the data positioning. This feature lets you control data along the axis.



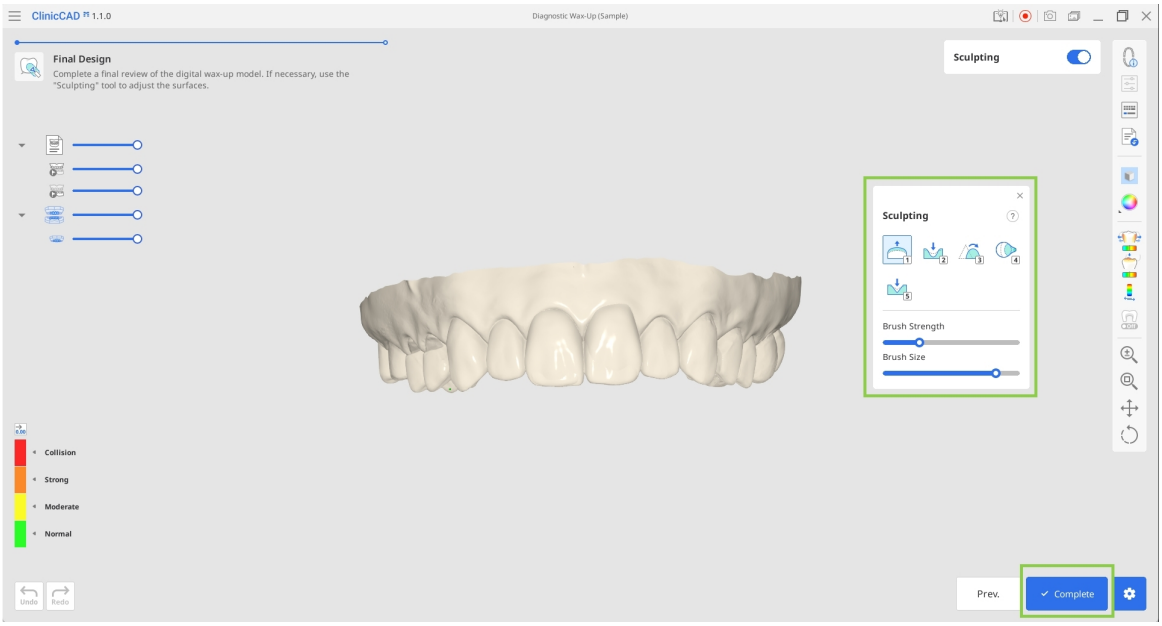
Note

Use the Contact Area with Adjacents/Antagonists features in the Side Toolbar to assist with data positioning.

6. Once all tooth data has been arranged and positioned, sculpt the data if necessary.



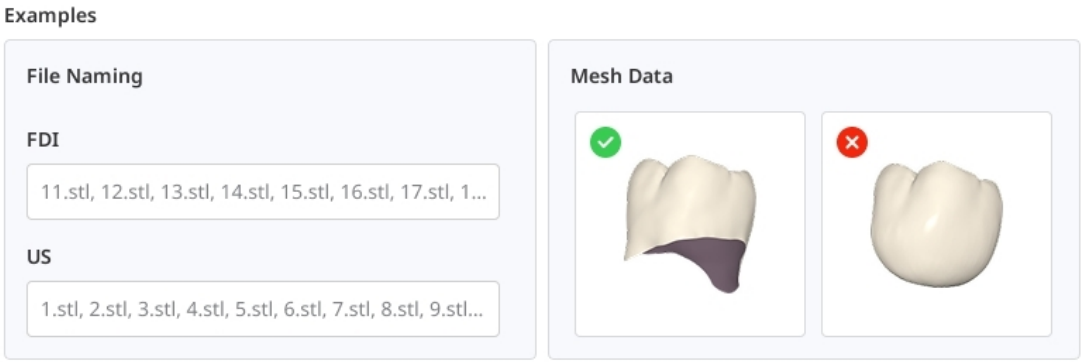
7. When all done, click “Next“ to move to the final workflow step.
8. In the final step, your arranged restoration data will be merged with the arch data into a single dataset. Review the combined mesh carefully, and if necessary, make final sculpting adjustments. When finished, click “Complete” to save the result to the Medit Link case.



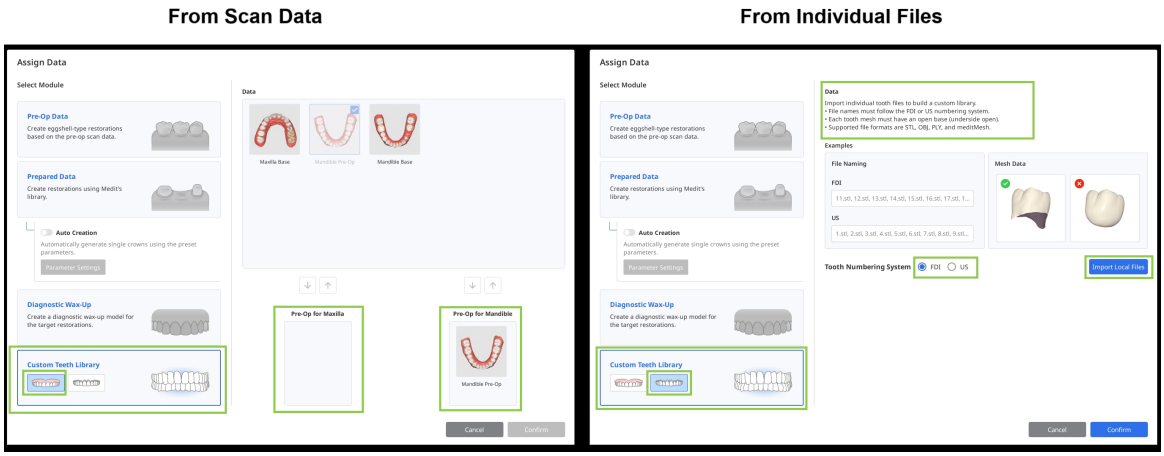
Custom Teeth Library Module

This module allows users to create their own custom teeth libraries, which can later be used for restorations. Custom libraries can be generated either from scanned data or from the existing dataset of individual tooth files.

1. Start by choosing the type of data you will use to create your custom library—scan data or individual files—and prepare that data accordingly.
   - Scan Data: Pre-operational scan data available in the corresponding Medit Link case.
   - Individual Data: Dataset of individual tooth files that are available locally. File names must follow the FDI or US numbering system. Each tooth mesh must have an open base (underside open). Supported file formats are STL, OBJ, PLY, and MeditMesh.



2. In the Assign Data dialog, select “Custom Teeth Library” and choose either “Scan Data” or “Individual Files.” If you are using data from a Medit Link case, assign the data as maxilla and mandible. If you are using individual files, select the what tooth numbering system was used and import all available files using “Import Local Files.”



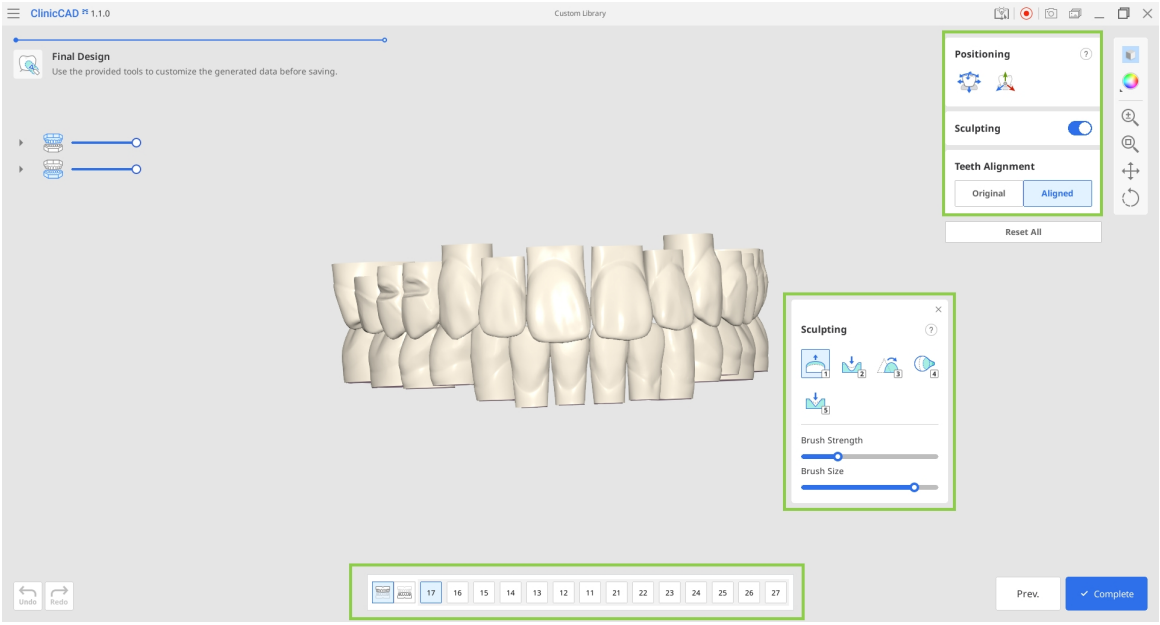
Library From Scan Data

1. Once the scan data is imported, the application will automatically identify and segment each tooth. Review the results carefully to ensure that every tooth number has been assigned correctly and that the corresponding data is properly selected.
   If any tooth requires correction, select its number in the form at the bottom, then reassign its data using the available selection tools.

> **Note**
>
> If needed, use the “Data Alignment” and “Data Editing” modes located in the bottom left corner to make the necessary adjustments to scan data. Read how to use “Data Alignment“ and “Data Editing“ in the Workflow chapter of this guide.

2. When all teeth are correctly selected, click “Next.“

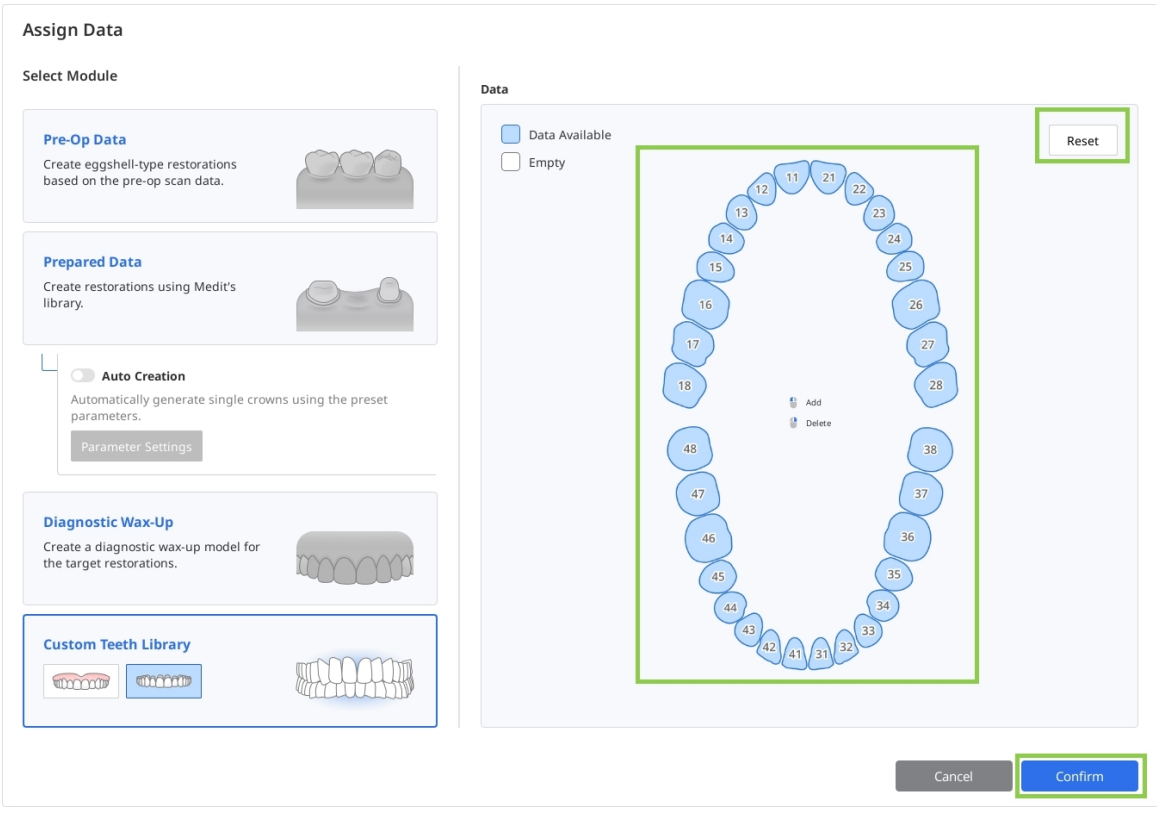
3. Your teeth library will be generated in the final step. Review the data to determine if any teeth need to be repositioned or sculpted. Make sure to select the target tooth in the form below before adjusting its position or sculpting it. You can also choose to align the teeth either according to the original scan or along the jaw curve.



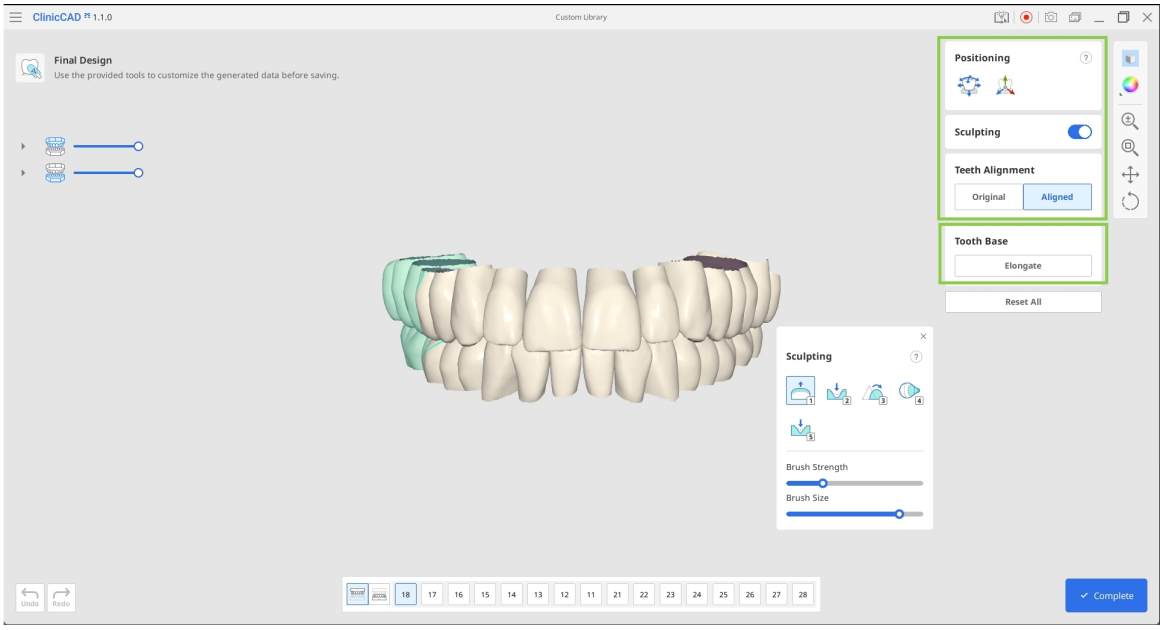
4. When all done, click “Complete“ to save the library to the Medit Link case.

Library From Individual Files

1. Once the files are imported, a chart will display the available tooth data. Confirm that all desired teeth have been imported. If you need to reupload the data, click “Reset” at the top.



2. You will then enter the final step, where you can reposition and sculpt the imported data, adjust its alignment, and modify the tooth base by extending its length.



Note

Use the “Elongate” feature to extend the base of all tooth data. Each click adds approximately 3–4 mm. A longer base may be necessary if the library will be used in cases with significant gum recession.

3. When all done, click “Complete“ to save the library to the Medit Link case.

Appendix

Designing Cervical Inlay

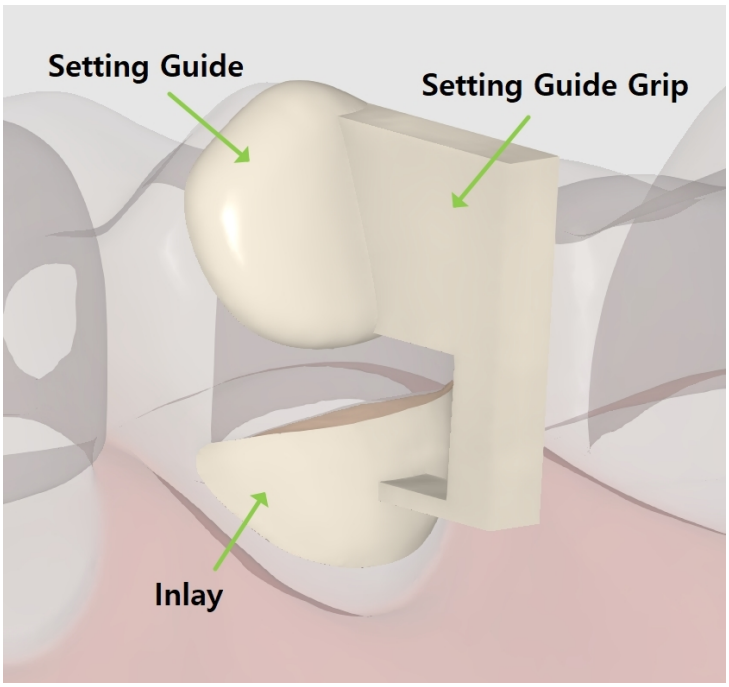
In Medit ClinicCAD, users can create inlays for treating cervical abrasions; we refer to them as 'cervical inlays.'

Tip

There are several reasons why inlays may be more advantageous than resin fillings:

- more secure bond in areas of extensive cervical loss
- less discoloration over time
- more durable than traditional fillings
- eases and shortens the treatment process

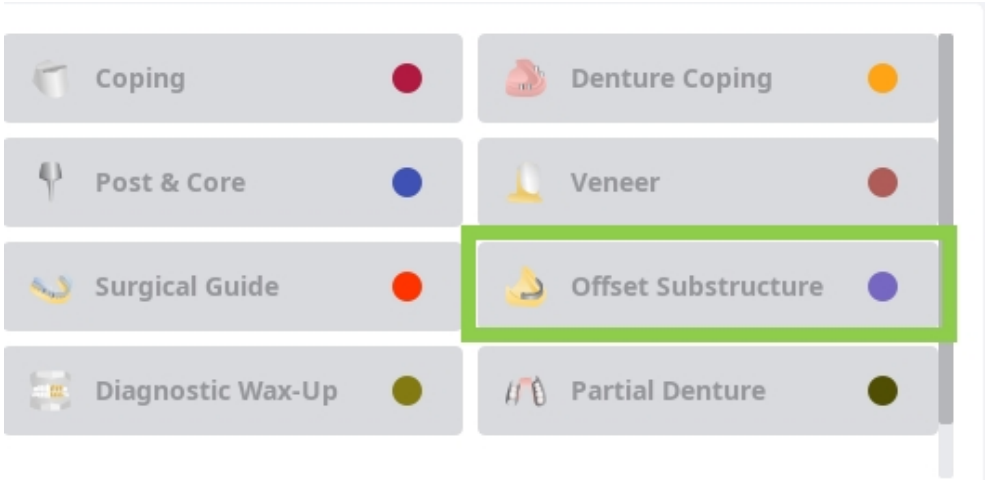
The final design of a cervical inlay includes three components: an inlay, a setting guide, and a setting guide grip.



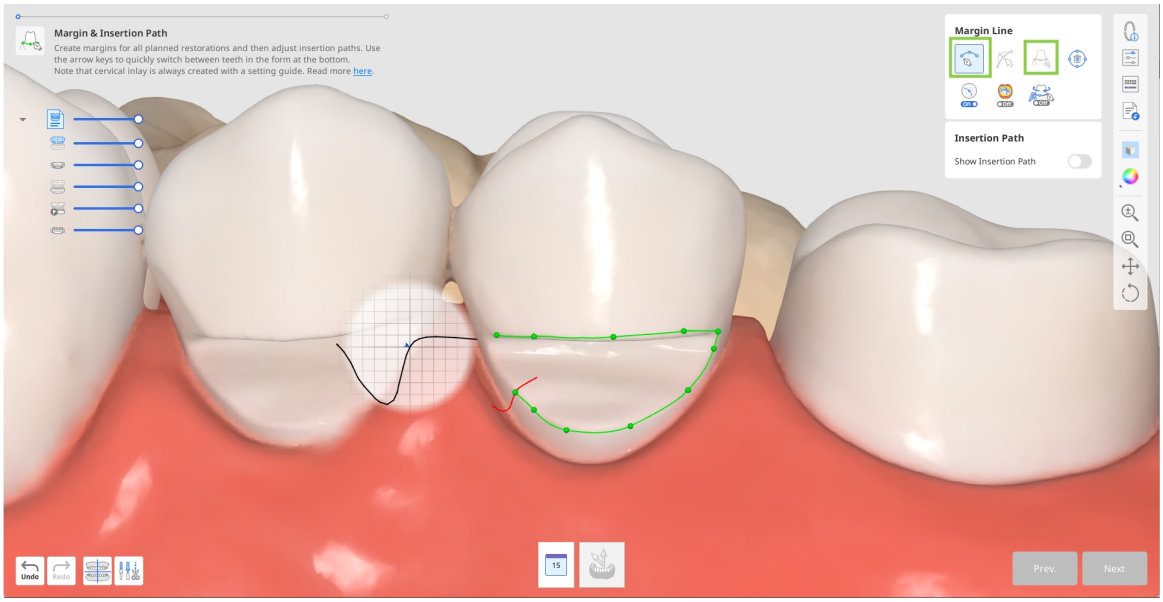
The setting guide and the grip are designed to assist restoration placement and can be easily removed afterward. The setting guide is an obligatory element that is created automatically about 1 or 2 mm from the abrasion area. If needed, users can modify it by editing its margin. The setting guide grip is optional and can be added at the final step.

The cervical inlay workflow includes only 2 steps: **Margin & Insertion Path → Final Design.**

1. To begin, register your inlay as "Offset Substructure" in the Medit Link form. Then, run the app and select the Prepared Data module.

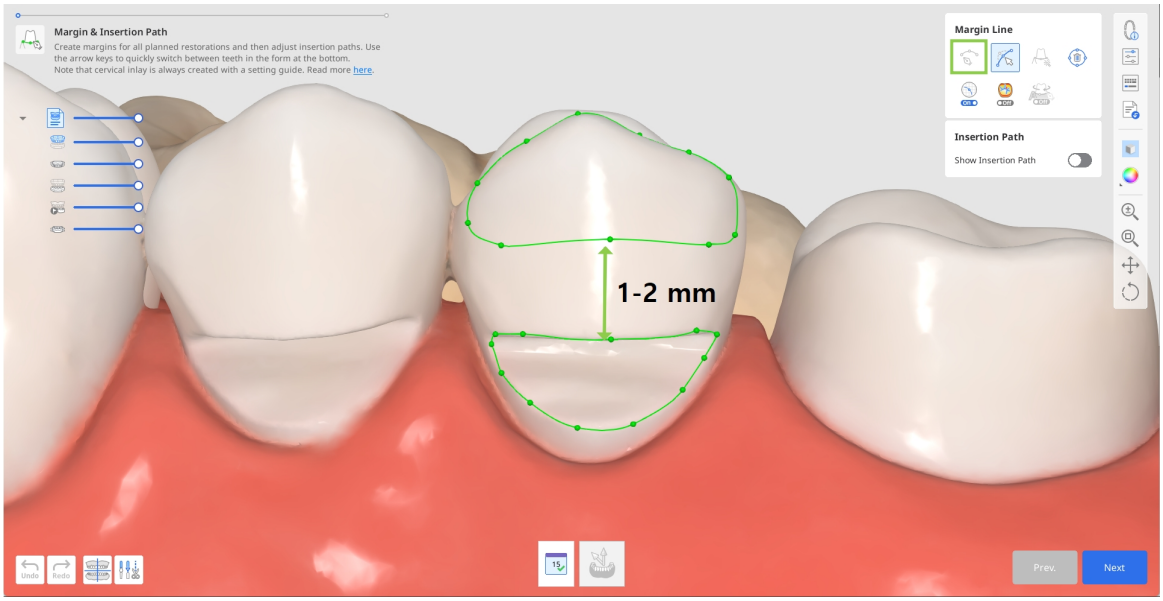


2. In the first step, draw a margin for the inlay using the “Auto Creation” or “Manual Creation” tool. ”Auto Creation” draws a margin based on one clicked point; “Manual Creation” draws a margin based on multiple points.

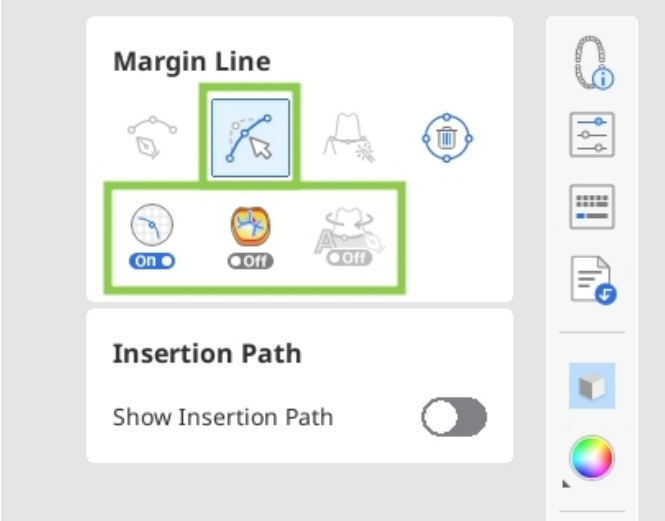


3. The setting guide margin will be created automatically.
   If automatic creation fails, manually draw the setting guide margin, leaving about 1 or 2 mm between the two.

> ⚠ **Caution**
>
> The mm values in this document are recommended design parameters, not measurement outputs from the software.



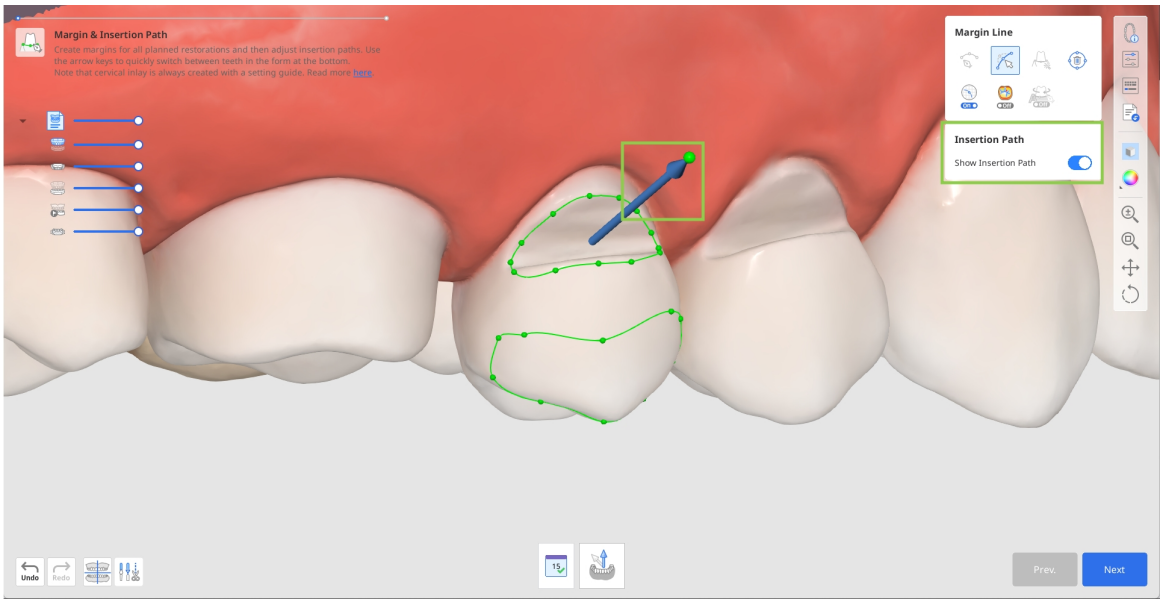
a. If needed, edit the created margins with the “Edit” tool. Utilize the other provided margin line tools to assist you in creating a more precise margin.



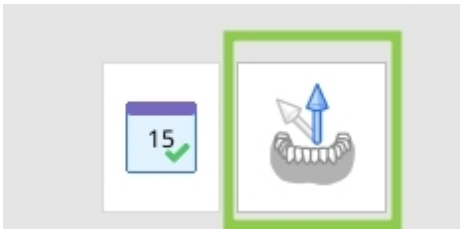
Tip

When editing, hold down the Ctrl/Command key and drag the mouse to make minor freehand corrections quickly.

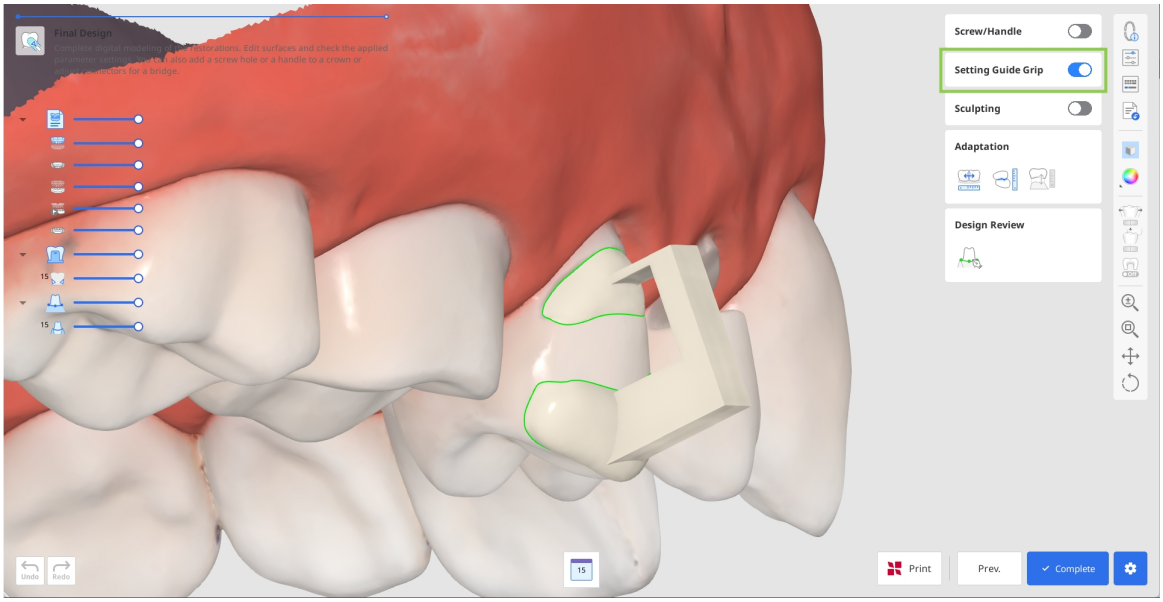
4. After the margins are created, the insertion path arrow will appear. Adjust it to face toward you by dragging it with a mouse and click "Next."



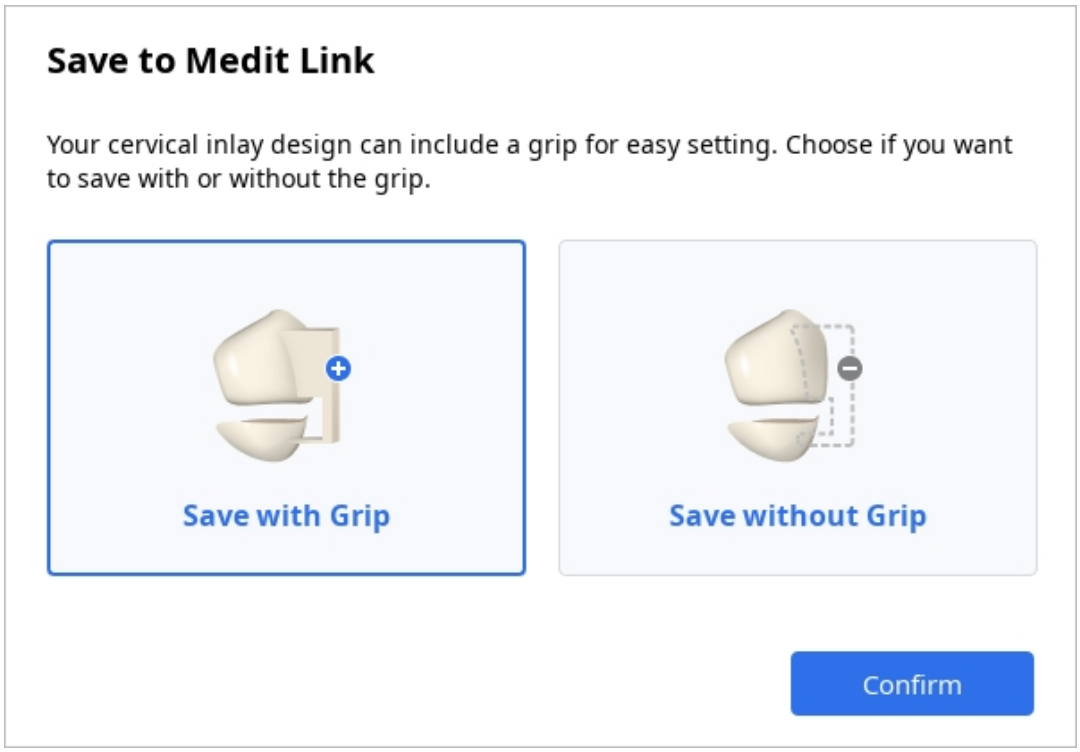
   a. Alternatively, you can rotate the 3D data and click “Set Arrow to Your Viewpoint” at the bottom.



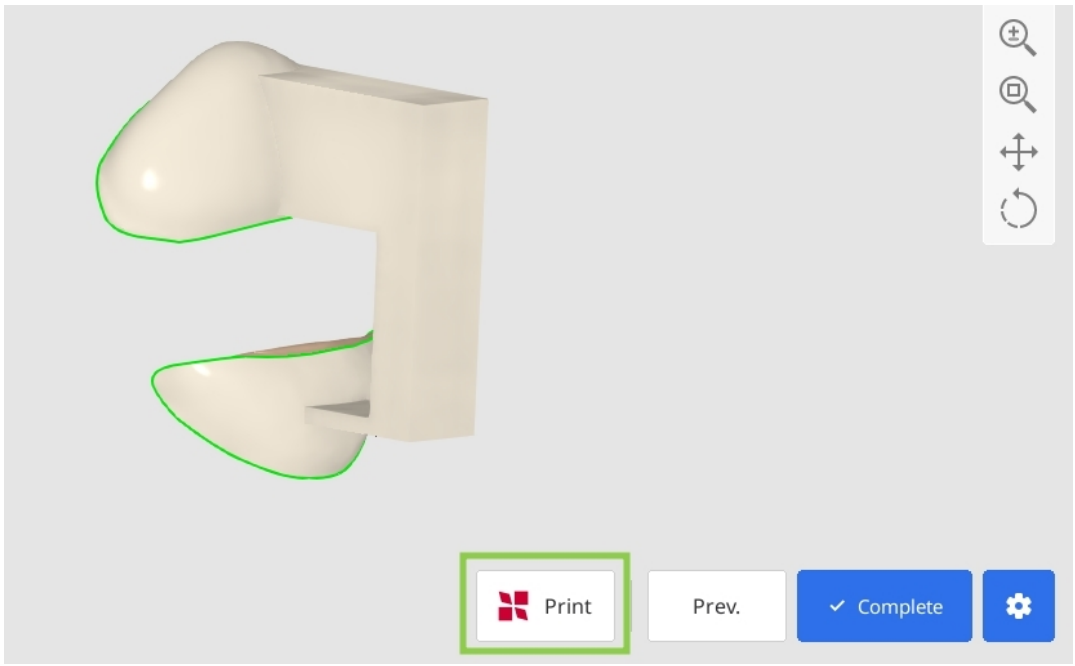
5. In the next step, you can add the grip that will assist in holding the inlay design when setting. For this, turn on "Setting Guide Grip" on the right.
   Or you can substitute the grip for supports later in your printer software.



6. Click "Complete" to pay for the export of your design and save it to Medit Link. The app will double-check with you on the creation of the grip.



7. If you have a SprintRay 3D printer, you can transfer your restoration design from this step right into the RayWare Cloud. For this, use the “Print with SprintRay” at the bottom and follow the guidance on the screen. You must already have a RayWare Cloud account to use this feature and pay for the design before proceeding with printing.



> ⚠ **Caution**
>
> If you encounter difficulties connecting to RayWare Cloud, please refer to the following troubleshooting guidelines:
>
> - check your internet connection
> - verify your login credentials (username and password)
> - review your restoration design
>
> If the issues persist, please reach out to SprintRay support.

Recommended 3D Printer Specifications

This software and workflow have been validated based on a 3D printer with the following performance specifications:

- Printer Type: 405 nm DLP 3D printer
- XY Resolution: approximately 95 µm or less
- Layer Thickness: adjustable within the range of 50–170 µm
- Dimensional Accuracy: approximately 130 µm (reference value: 129 ± 16 µm)
- Supported File Formats: STL, OBJ, SPR

Any 3D printer with performance specifications equal to or higher than the above can perform similarly to Pro95S, a manufacturer-validated device.

If using a different 3D printer, verify that the device meets the above requirements. If necessary, contact the manufacturer or perform your own print quality evaluation.

List of Validated CAM Equipment

The list of validated CAM equipment and the corresponding parameter settings may be updated based on manufacturer verification results. Please check our website or contact customer support for the latest information.

Company Name	Product Name	Printer Type	Material Type*	Parameter Settings
SprintRay Inc.	Pro 95S	405 nm DLP 3D printer	Ceramic Crown	Min. thickness 0.5 mm; cement thickness 0.11 mm; cement starts at 0.8 mm; margin width 0.1 mm

**This workflow has been validated based on dental-use resins designated by the manufacturer and the materials used according to the resin manufacturer's Instructions for Use (IFU). If using other materials, the user must independently evaluate whether they meet the performance requirements above and are clinically appropriate.*

Notice of Adverse Event Report

The user and/or patient should report any serious incidents that have occurred in relation to the device to the manufacturer and the competent authority of the Member State in which the user and/or patient is established.

Report to manufacturer at:

Telephone: +82-02-2193-9600

Website: www.medit.com

email: support@medit.com

Report to local authority at:

FDA MAUDE http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfMAUDE/search.CFM https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRES/res.cfm
MHRA (Medicines & Healthcare products Regulatory Agency): Medical device alert https://www.gov.uk/drug-device-alerts
BfArM : Medical device alert https://www.bfarm.de/SiteGlobals/Forms/Suche/EN/kundeninfo_Filtersuche_Formular_en.html
MFDS (Ministry of Food and Drug Safety) : Medical device alert http://www.mfds.go.kr/brd/m_548/list.do https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfRES/res.cfm
European_EUDAMED https://ec.europa.eu/tools/eudamed/#/screen/search-device

European_EUDAMED https://ec.europa.eu/tools/eudamed/#/screen/search-device
Australia https://apps.tga.gov.au/prod/mdir/mdirsummary.aspx?sid=new
Canada https://www.canada.ca/en/health-canada/services/drugs-health-products/medeffect-canada/adverse-reaction-reporting.html
Brazil https://notivisa.anvisa.gov.br/frmLogin.asp
Japan https://www.estrigw.pmda.go.jp/Iryo/Login/Index?ReturnUrl=%2fIryo
Taiwan https://qms.fda.gov.tw/tcbw/main/ap/index.jsp
Switzerland https://www.swissmedic.ch/swissmedic/en/home/medical-devices/reporting-incidents---fscas/users---operators.html

Error and Warning Messages

Title	Message
Information	If you apply these changes, the previous results will be lost.
Information	You cannot adapt past the restoration's inner surface. Adjust the adaptation distance or sculpt the restoration and try again.
Information	Could not adapt the restoration to the adjacents. Use sculpting tools to add more material on mesial/distal sides.
Information	Could not perform "Smart Adaptation." There are either no overlapping areas or no adjacent teeth. Return to Quick Mode and use sculpting tools to add more material to the occlusal surface and mesial/distal sides.
Warning	Using this feature will reset your work progress on the restorations. Do you still want to continue?
Information	Changing this area will reset your current work progress on this tooth. Do you still want to continue?
Information	Your current parameter settings specify a milling tool size. If you intend to mill your restoration, you may need a construction info file. Would you like to include this file when saving the final design?
Information	Could not create the following connectors: #2-3.

Title	Message
Warning	The changes you made will reset your work progress on the restorations. Click "Confirm" to apply the changes and proceed using the revised information.
Warning	The changes you made will reset your work progress on the restorations. Click "Confirm" to apply the changes and proceed using the revised margin and insertion path.
Caution	The crown design might deform if the connector is expanded onto the lingual or facial sides. Do you still want to continue?
Warning	Current alignment can cause issues when designing restorations. Do you still want to continue?
Information	No overlapping areas to remove.
Information	You cannot adapt if the minimum thickness cannot be upheld. Try setting a smaller value for adaptation distance.
Adaptation Failed	Cannot adapt the restoration to the antagonists because of the very small contact area. Utilize sculpting tools to add more material on the occlusal surface marked with green color.
Information	No overlapping areas to remove.
Warning	The results of recent modifications will be lost if you change the connectors.
Information	The cross-sectional area of some connectors is below the set minimum. Modify the orange connectors or change the minimum value in Parameter Settings.

Title	Message
Warning	If you modify the connectors, the screw holes and handles you added will be lost.
Caution	The crown design might deform if the connector is expanded onto the lingual or facial sides. Do you still want to continue?
Information	Could not create the following connectors: #2-3.
Information	Could not create the outer surface of the restoration. Try reselecting the tooth and try again.
Information	Failed to automatically create a margin line for the setting guide. Draw it manually, leaving about 1 or 2 mm between the setting guide and the abrasion area.
Information	"Auto Set" is not supported for inlays, onlays, and veneers. If required, you can manually place an element on these restorations with a double click.
Caution	You cannot place a new element if it overlaps with the existing one. Try setting it nearby with a double click.
Warning	If you change the element before clicking "Add," all your current work will be lost. Do you still want to continue?
Information	Failed to add the chosen element here. Place it in a different spot and try again.
Data Alignment Error	The program was unable to automatically align the data with the occlusal plane. Please align the data manually.

Title	Message
Warning	Current alignment can cause issues when designing restorations. Do you still want to continue?
Information	Could not create the following connectors: #2-3.
Information	Please select a tooth and a product type to proceed.
Information	Not all of the registered products can be designed using Medit ClinicCAD. The app will run considering only the supported product types.
Information	The assigned data cannot be used because of its quality. Try rescanning or assigning different data.
Warning	Using this feature will reset your work progress on the restorations. Do you still want to continue?
Warning	Changing this area will reset your current work progress on this tooth. Do you still want to continue?
Information	The area doesn't seem to be selected correctly. Please try again.
Information	"Preset Management" is not supported by your current Medit Link version or is unavailable due to a server disconnection. Consider the following solutions: • Updating Medit Link to 3.1.4 or a later version. • Running the app again after switching to online mode in Medit Link.

Title	Message
Download Failed	We were unable to connect to the server. Please try again later.
Information	The parameter values were changed and no longer match the chosen preset. Would you like to overwrite values of the chosen preset?
Information	The area doesn't seem to be selected correctly. Please try again.
Warning	Failed to create a connector.
Warning	Failed to create a connector.
Warning	Could not create restorations for the following teeth: #2, #3. Try one of the following solutions: • adjusting the margin line • reselecting teeth data (Pre-Op Data Module) • adjusting library data positioning (Prepared Data Module)
Information	You cannot create a bridge using inlays, onlays, veneers, or cervical inlays. The app will treat these products as single restorations.
Warning	If you change the element before clicking "Add," all your current work will be lost. Do you still want to continue?
Information	Your request has been submitted.
Information	Please select a tooth and a product type to proceed.

Title	Message
Warning	Using this feature will reset your work progress on the restorations. Do you still want to continue?

Authorized Representative

Contact information for the manufacturer's authorized representatives is provided below.

Australia	**Sponsor:** LC & Partners Pty Ltd Level 25, 100 Mount Street, North Sydney, NSW, 2060 Australia
Taiwan	**Taiwan Medical Device License Holder:** 產品名稱:"美迪特" 電腦輔助贋復物設計軟體 (未滅菌) 許可證字號:衛部醫器輸壹登字第a00333號 軟體版本:詳見軟體內版本資訊 製造業者名稱:Medit Corp. 製造業者地址:9F,10F,13F,14F,16F 8, Yangpyeong-ro 25-gil, Yeongdeungpo-gu, Seoul 07207, Republic of Korea 醫療器材商名稱:邵博士顧問有限公司 醫療器材商地址:新北市淡水區中正東路二段27號5樓

Back cover

eIFU download link:

https://support.medit.com/hc/en-us/articles/53571022051737-Medit-Apps-PDF

Medit webpage:

https://www.medit.com

Importers for European Union According to the MDR 2017/745

Medit Europe GmbH

Lindleystraße 8A, 60314 Frankfurt am Main, Germany

+49 170 9082391

CE
2797

EU REP Meditrial Srl

Via Po 9 00198, Rome Italy

ecrep@meditrial.eu

CH REP Meditrial Europe Ltd

Banhofstrasse 23 6300 Zug, Switzerland

Medit Corp.

9F, 10F, 13F, 14F, 16F, 8, Yangpyeong-ro 25-gil, Yeongdeungpo-gu, Seoul, 07207, Republic of Korea

Tel: +82-2-2193-9600

Contact for Product Support

Email: support@medit.com

Tel: +82-2-2193-9600

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