Aidite

cameo KrystaFree
(CAD/CAM) User Instruction



Aidite

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Everyone with a healthy and beautiful smile

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DIRECTORY

Product description

- Translucency 01
- Specification 01
- Product advantages 01

Application range 01

Preparation standard 02

Production process 03

- Scanning 03
- Designing 03
- Nesting 08
- Milling 11
- Grinding and Polishing 11
- Staining and Glazing 15
- Translucency Reduction Plan 16
- Acid Etching Protocol 17

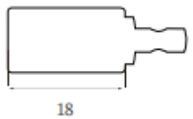
1 Translucency

ST：Ultra high translucency

2 Specifications

Specifications

18*13*15



3 Product advantages

1) Suitable for CAD/CAM equipment.
2) No need for sintering, short tooth making cycle.
3) Good adhesive performance.
4) Low wear on natural teeth.
5) Zero shrinkage, no deformation during glazing and baking.
6) Good edge stability, no edge breakage during milling.

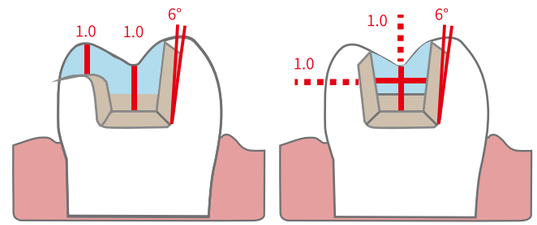
Application range

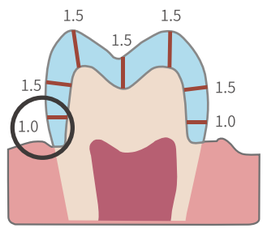


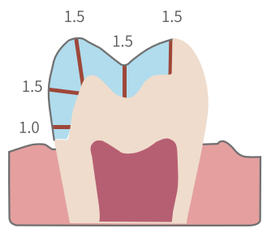
Preparation standard

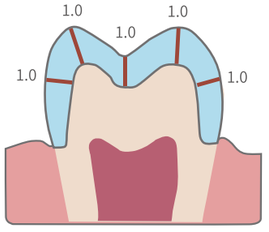
1. Shoulder preparations should not be prepared at corners and sharp edge areas. Shoulder preparations must be rounded Inner edge or bevel.
2. It is required to reserve 1mm space for cutting edge preparation to ensure that the ceramic block can achieve the ideal grinding effect during CAD / CAM processing.
3. If possible, it is best to prepare only the enamel layer of the incised edge,

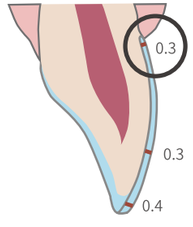
Please prepare teeth according to the diagram

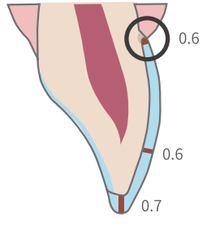


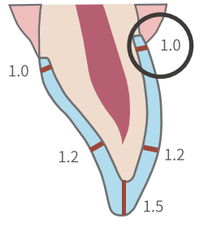












1 Scannining

Support the traditional process and scanning, to obtain the corresponding data in the mouth, and scan the data to the CAD design software, repair the design.

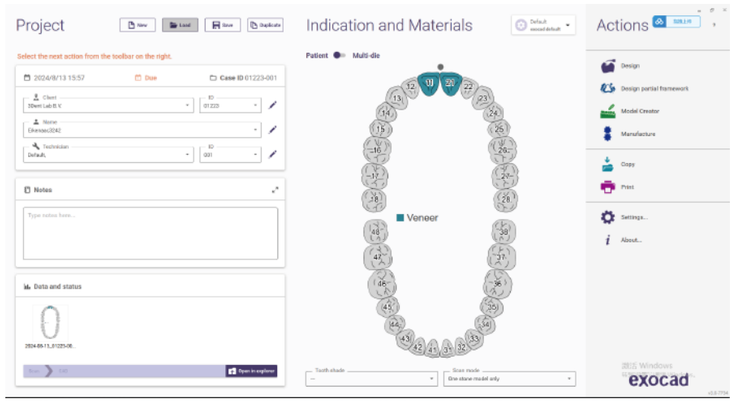


2 Design

The following uses EXO CAD design software as an example to design the inlay, single crown, veneer and triple bridge.

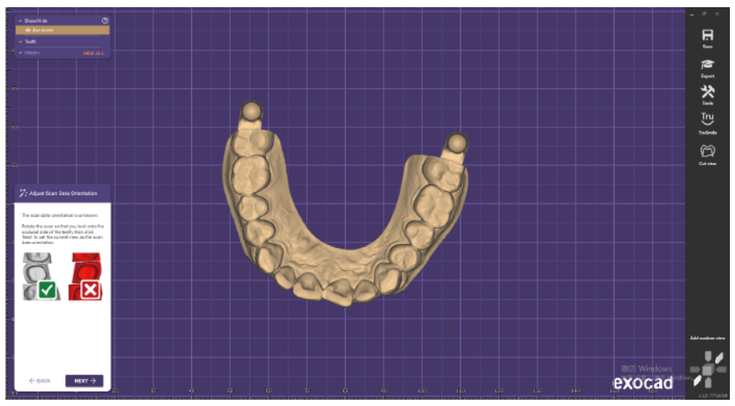
① New digital order

Input customer, patient name, technician and note information, Click on the target tooth to select the restoration type and other information.

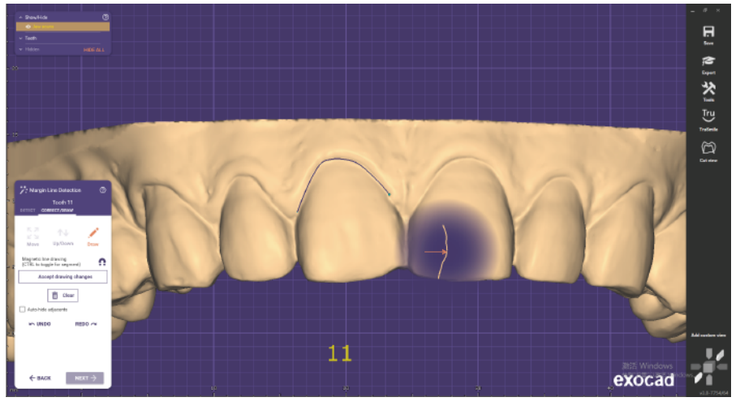


② Import scan data of upper and lower jaw model .

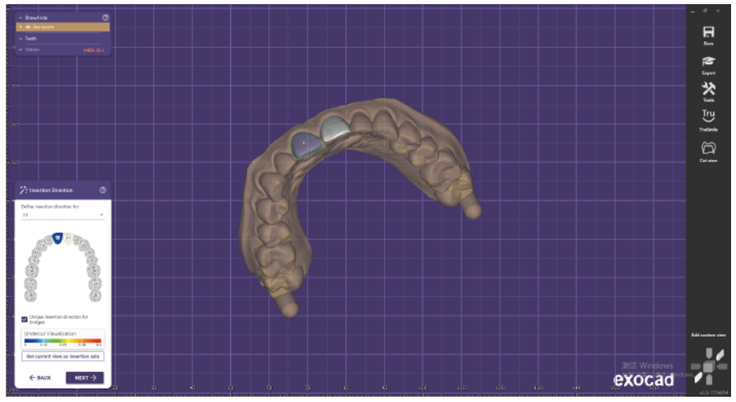
③ Set the view direction.



④ Draw the edge line along the neck edge shoulder.

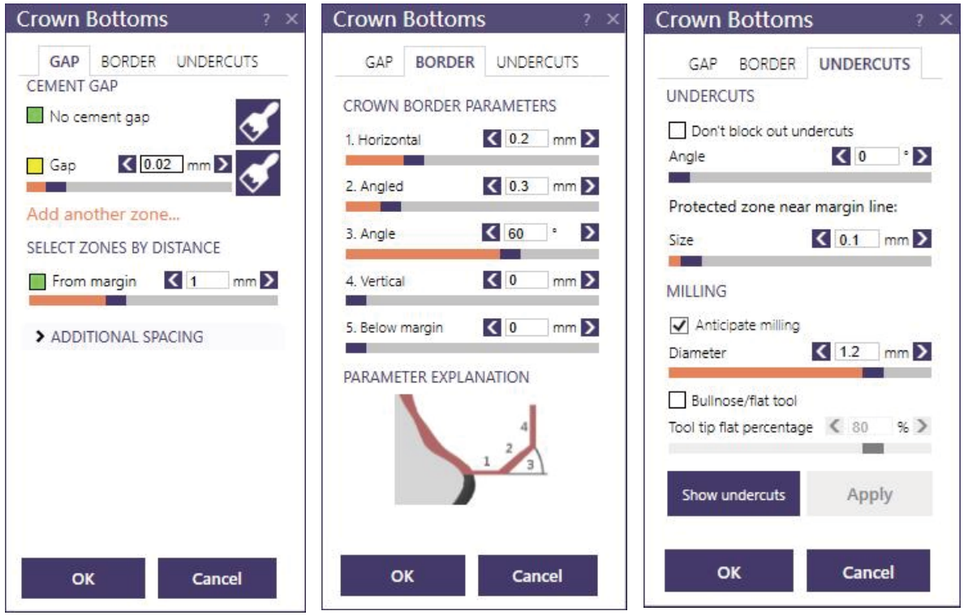


⑤ Setting the positioning direction: red is the recessed area. When setting the positioning direction, it is necessary to avoid recessed area as far as possible. If unavoidable, it is necessary to make the recessed part of red as even as possible.

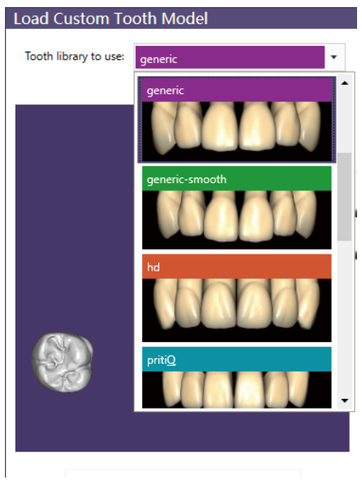


production process

⑥ Setting the parameters at the bottom of the crown: adjust according to the model conditions and cutting machine and other equipment conditions.



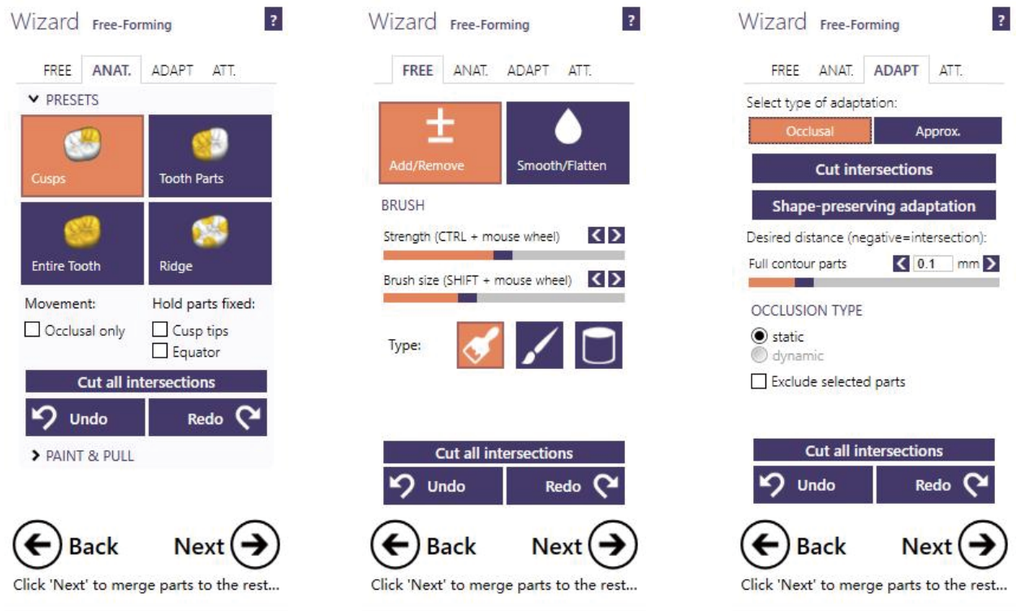
⑦ Load personalized dental morphology: the desired dental morphology can be selected from the dental database.



⑧ Alignment of teeth: multiple view directions should be observed and adjusted from the lip, maxillofacial, near and far.



⑨ Free modeling: four different parts of the drag, plus/minus/smooth options to adjust the shape of the teeth.



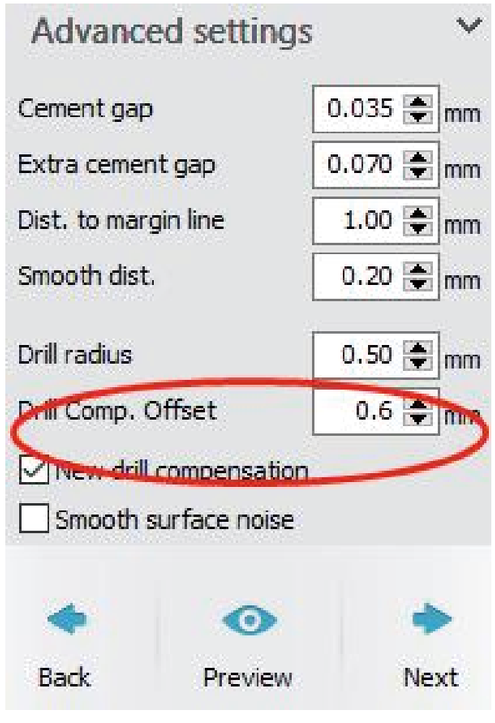
⑩ Design completed.

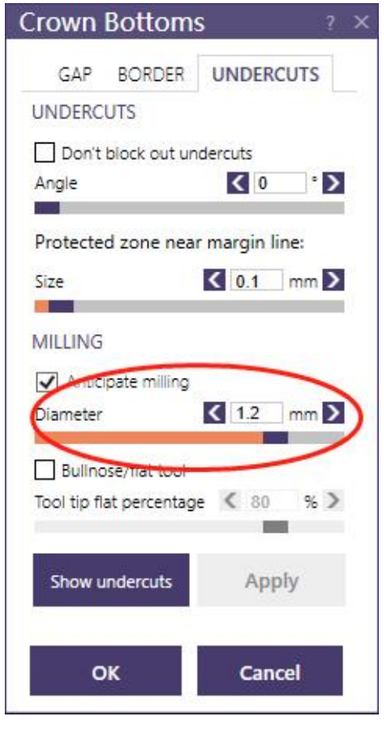


Notes:

If the abutment incisor is too sharp:

Increasing the compensation value of the needle can effectively alleviate the emplacement problem caused by the sharp incisors of the front teeth and the base teeth.

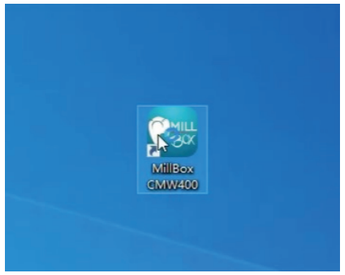




3 Nesting

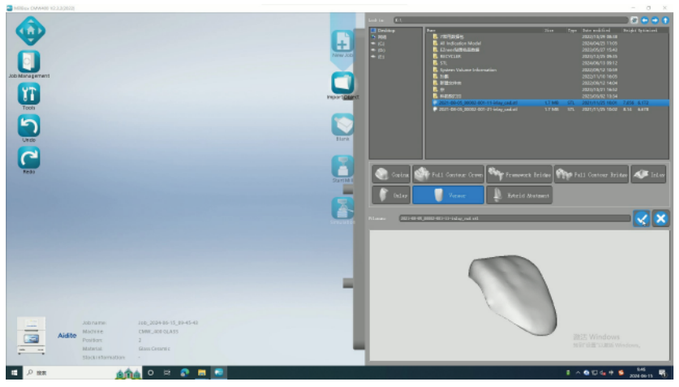
Taking Aidite CMW-400 milling machine as an example for nesting.

① Open nesting software.



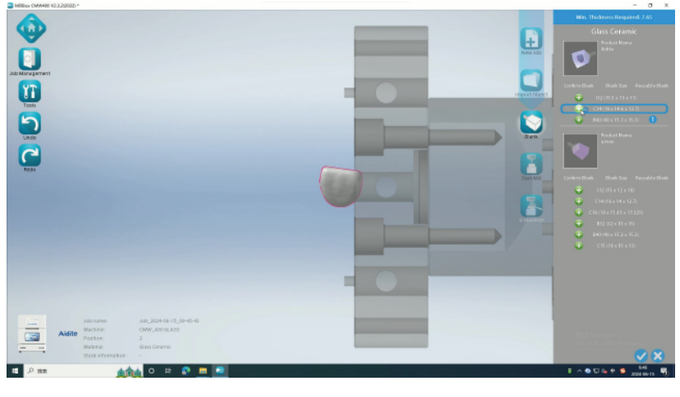
② Create a new tray.

The specification data in the software should be consistent with the actual ceramic specifications



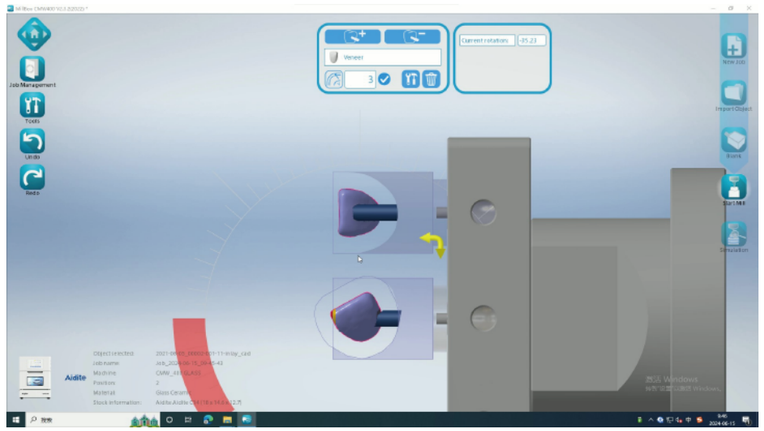
③ Import data.

Be sure to choose the appropriate restoration type.



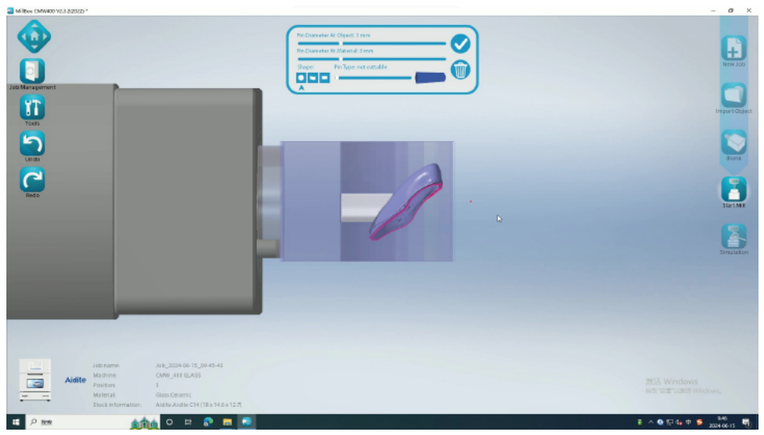
④ Adjust the Angle and position of the restorations.

The position of the restorations should be adjusted according to the position direction at design time as the milling direction.



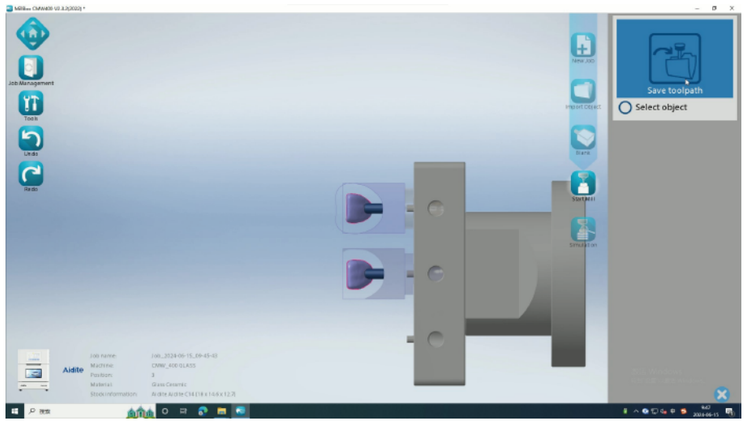
⑤ Add connecting rod.

The diameter of the connecting rod can be adjusted according to the size of the prosthesis. The diameter range is 1.2-3.0mm.The connecting rod should not be too close to the neck line and should avoid the near/far contact area.



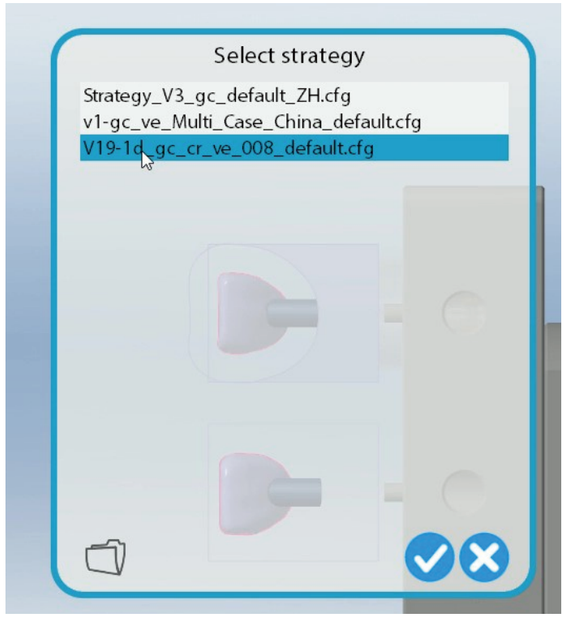
⑥ Calculate.

After the calculation is completed, use a USB flash drive to import the milling file into the milling machine and start milling.



Attention:

If using CMW-400 milling machine, please select V19 strategy calculation



4 Milling

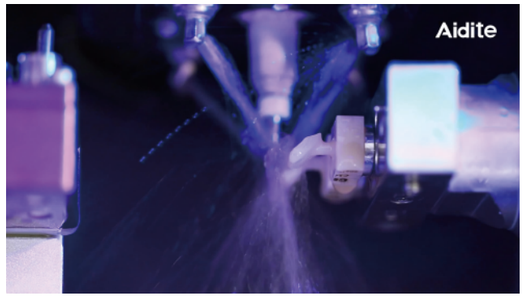
Confirmation facilities:

✓ Regular calibration, cleaning, lubrication, maintenance equipment, ensure no shaking while cutting or sound, Please replace the parts in time if there is any problem.

✓ Please record the number of mills made by the milling needle. A set of needles can generally mill 15-20 restorations.

✓ Must check whether the needle order is installed correctly.

✓ Must assure cutting fluid concentration and liquid level is achieved, and can completely in the needle tip position.





Milling considerations:

✓ When installing porcelain pieces must check whether the porcelain pieces of iron handle is installed, can appear otherwise cutting data is not accurate.

✓ Must keep enough air pressure.

5 Grinding and Polishing

✓ Please use the Aidite Cameo KrystaFree special polishing set. lt is important to use the right grinding tools to polish and adjust the restorations.lf improper grinding toolsare used, edge marks may appear, or the temperature may be toohigh.

✓ Polishing handpiece is stable and no vibration.

✓ Need to put a piece of clean soft towel or desktop cushions,avoid teeth drop cracked or broken.

Operation steps:

① Separate the restoration.

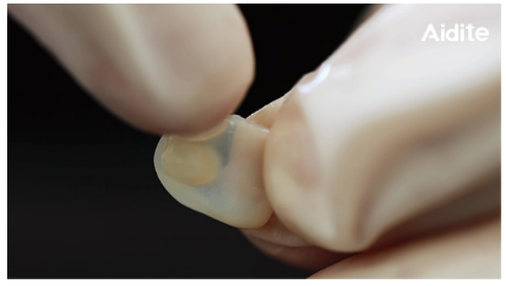
Use diamond sand pieces to separate the restoration: When milling, the sand pieces should be close to the iron handle side while avoiding the edges of the restoration to avoid damaging it.





② Remove the connecting rod.

Before polishing, dip in appropriate amount of water and apply to the part that needs to be polished to avoid excessive temperature of glass ceramics.





③ Fine grinding.

Used when wearing teeth, adjusting the position of adjacency, occlusal surface, entire surface, etc.

Polish in the same direction from right to left, resulting in fine and regular patterns. Grinding in the correct direction is more efficient, while grinding in the opposite direction is less efficient and increases head wear.

Prepare some cool water and cool it down when polishing to avoid overheating and cracking.

Use the grinding head speed to remove and spot grind, with each contact time between the grinding head and the restoration not exceeding one second, to avoid local overheating or stress concentration. Continuously polish multiple times without changing positions, and it is not allowed to polish continuously in one position.

Precautions for wearing teeth:

✓ When trying on, be sure to place it accurately, do not apply too much grinding force, and gently bite to prevent hidden cracks or fractures.



④ Rough polishing.

Use a rough polishing head to remove surface patterns and white mist, ensuring a smooth, clean, and even surface.



⑤ Specular polishing.

Use a high gloss polishing head to polish the entire surface. Make the surface more smooth and delicate, can effectively improve the overall effect.



Polishing effect





Optional solutions

6 Sintering and glazing

If glazing and staining are required, please follow the steps below.

① Cleaning the restoration.

Thoroughly clean the entire restoration using steam.

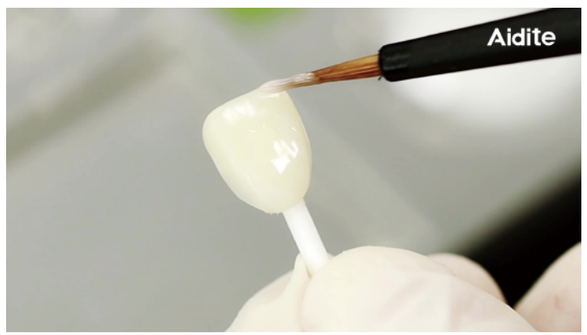


② Mix the glaze well.

Using Biomec, glazing and staining can be completed in one step, requiring only one baking.

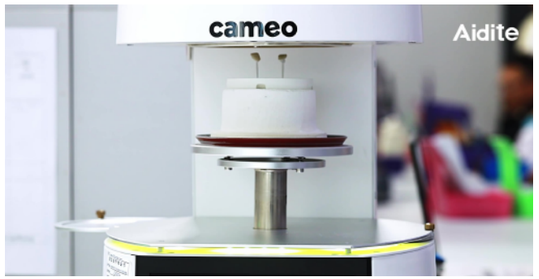


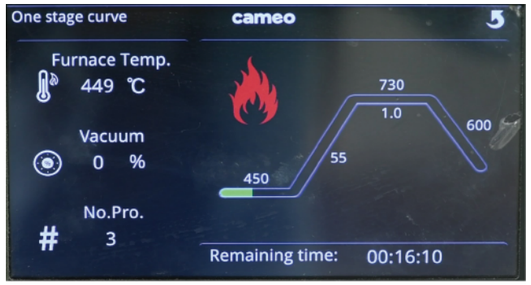
③ Brush the glaze



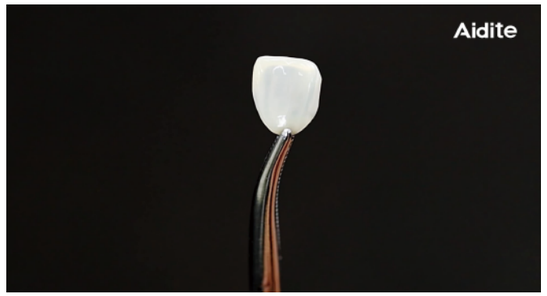
④ Baking.

The glaze baking temperature should not exceed 780 ℃ to avoid reducing the transparency of the restoration.





Glazing effect

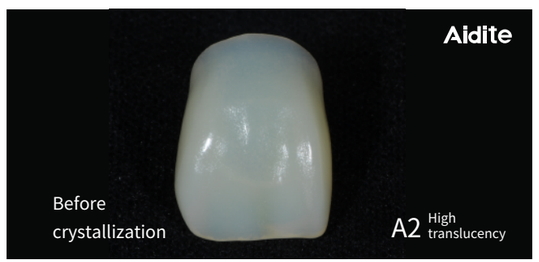


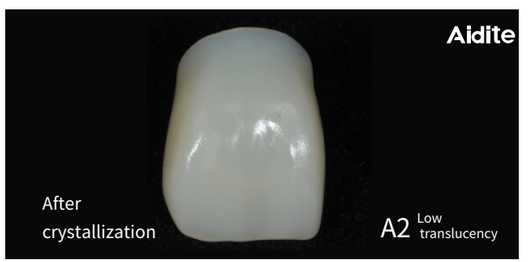


7 Translucency Reduction Plan

The product itself is high translucency effect, if you need low translucency effect, you can use the following crystallization curve for crystallization,the effect is shown in the picture.

Start temperature	Drying time	Heating rate	Maximum temperature	Holding time	Opening temperature
450°C	2min	50°C/min	840°C	3min	＜600°C





8 Acid Etching Protocol

① Scope of Application

This operating specification presents the standardized operation procedures for acid etching and bonding in clinical practice when using Cameo KrystaFree materials to fabricate veneers.

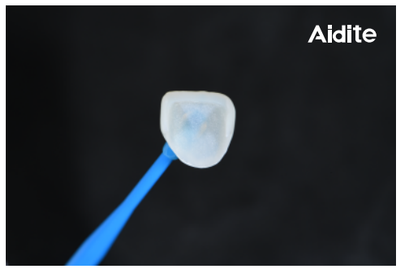
② Selection of Resin Cement

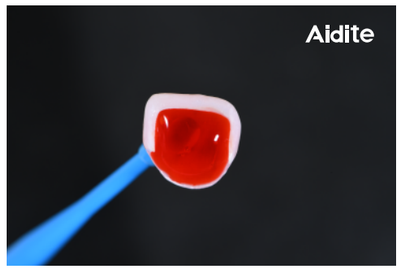
For the bonding of Cameo KrystaFree veneers, resin cements with light curing as the main curing mode should be preferentially chosen to achieve long-term aesthetic restoration results.

③ Hydrofluoric Acid Etching

When dealing with Cameo KrystaFree veneers, it is recommended to use the commonly available 4.5% hydrofluoric acid on the market to treat the tissue surface of the veneers extraorally.

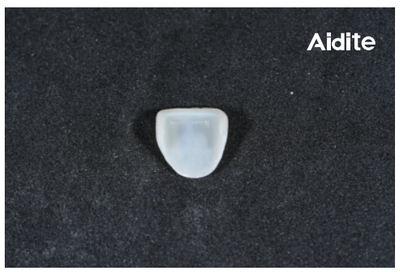
The recommended operations are as follows:





Etching time with 4.5% hydrofluoric acid: 90 - 120 seconds.

④ Effect After Acid Etching



Compared with that before acid etching, the brightness of the tissue surface will decrease, presenting a darker or matte luster.

⑤ Cleaning of the Tissue Surface

(1) After the veneers are etched with hydrofluoric acid, use 95% ethanol, acetone or distilled water for ultrasonic oscillation cleaning, and the oscillation time should be at least 5 minutes.

(2) It is recommended that doctors use 32% phosphoric acid etchant to clean the tissue surface of the veneers before bonding to ensure that the residual hydrofluoric acid is completely removed.

(3) Whether the tissue surface is completely cleaned will greatly affect the bonding strength. The presence of foreign substances on the tissue surface or the residue of other reagents may lead to the final detachment of the restoration. Therefore, please thoroughly clean the tissue surface of the veneers before bonding to ensure the success of bonding.

⑥ Treatment of the Abutment Tooth Surface

(1)Rubber Dam Isolation

- Before bonding, please use a rubber dam to isolate it from other wet parts to prevent moisture from affecting the bonding strength.
- If the edge of the abutment preparation is subgingival or flat gingiva, in order to prevent the influence of gingival crevicular fluid, please perform gingival retraction treatment before bonding

(2)Acid etching on the bonding surface of the abutment

- Use phosphoric acid to etch the surface of the abutment, keep the surface of the abutment clean before the operation



Provider: Shaws Dental Jaye Shaw



Provider: Shaws Dental Jaye Shaw

⑦ Use of Resin Cement

- Apply resin cement onto the abutment tooth and the tissue surface of the veneer, gently press down along the seating direction, and pay attention to avoiding creating gaps inside. Please conduct curing according to the light curing time of different resin cements.