

# 3D PRO ZIR MATERIAL INFORMATION

INSTRUCTIONS FOR USE - 3D pro Zir (Full arch crown bridge)

**3Dpro-zir®**

— More than nature —

Color: A1 Height: 18mm

CE 0197

Aidite



# CONTENTS

<b>Part 1: Introduction to 3D pro Zir</b>	
• Advantages	01
• Material Properties	01
• Indications for Use	01
• Colors	01
• Disc Information	02
<b>Part 2: Requirements for fabrication</b>	
• Cases	03
• Tooth preparation	03
<b>Part 3: Fabrication process</b>	
• Digital Order	04
• Scanning	05
• Designing	05
• Nesting	11
• Milling	14
• Separating and cleaning	15
• Sintering	16
• Grinding	18
• Staining/Glazing	21






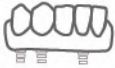


**1 Advantages**

- Coloration with perfect balance of Hue, Value and Chroma to resemble natural dentition
- Ideal formulation and manufacturing for milling
- Compared with traditional aesthetic zirconia, 3D pro Zir homogeneous blended colored zirconia has higher strength, greater translucency
- Homogenous coloration with no demarcation, keyed to 17 Vita shade guide colors
- Recommended for all restorations, single, bridges and full arch
- Wear capability as natural enamel
- Ideal opacity at gingival, ideal translucency at incisal

**2 Material Properties**

Aesthetic	57%
Sintered density	$\geq 6.0\text{g/cm}^3$
Bending strength	Cervical part 1050MPa
Fracture toughness	$5\text{Mpa}\cdot\text{m}^{0.5}$
Hardness(Hv10)	(Hv10)1250

**3 Indications for Use**

Veneer	Posterior crown	Full crown bridge	Anterior crown	Inlay
				
Full contour screw retained bridge	Full arch crown bridge	Implant		
				

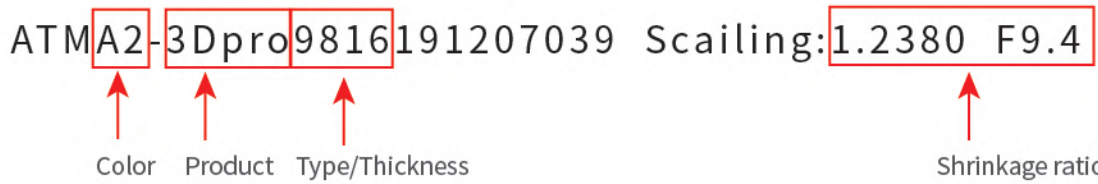
**4 Colors**

17 Colors, keyed to VITA 16 and bleach shade ( 0M2)

5 Introduction to Zirconia disc



ATMA2-3Dpro9816191207039 Scailing:1.2380 F9.4



Teeth Preparation

1. Cases requirement

- The preparation should be retentive with no sharp points.
- Restricted to 2 consecutive pontics surrounding abutments.
- Restorations are less than 8mm in height.
- No cantilevered pontics.
- Retentive preparations with no undercuts.
- Make sure the radian of arch in jaw-gingival direction is not oversized.

2. Preparation parameters

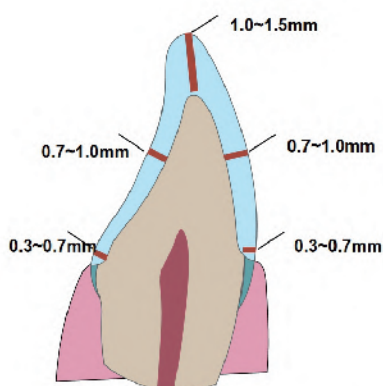
Minimum requirements for high-translucent zirconia.

	Anterior crown	
	Single crown	Below 3units bridge
Incisal/Occlusal surface(mm)	1.0-1.5	1.0-1.5
Lip side/Buccal(mm)	0.7-1.0	0.8-1.0
Adjacent(mm)	0.6-0.8	0.6-0.8
Lingual/Palatal(mm)	0.7-1.0	0.8-1.0
Shoulder(mm)	0.3-0.7	0.3-0.7

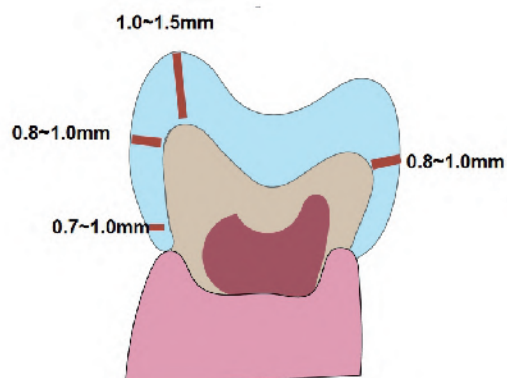
	Posterior crown	
	Single crown	Below 3units bridge
Occlusal surface(mm)	1.0-1.5	1.0-1.5
Buccal(mm)	0.8-1.0	1.0-1.5
Adjacent(mm)	0.6-0.8	1.0-1.5
Palatal(mm)	0.8-1.0	1.0-1.5
Shoulder(mm)	0.7-1.0	0.7-1.0

Remarks:

The preparation should be designed by dentist according to the requirements for esthetics and function. The data in the above table are the minimum values to maintain strength of the material.



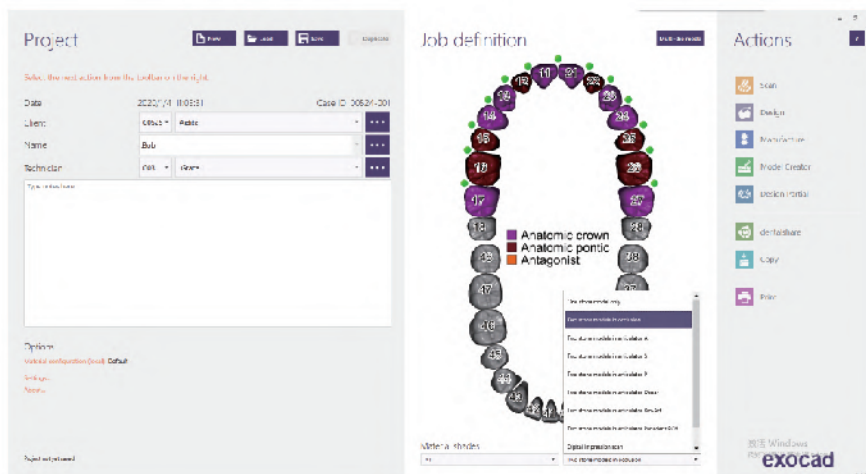
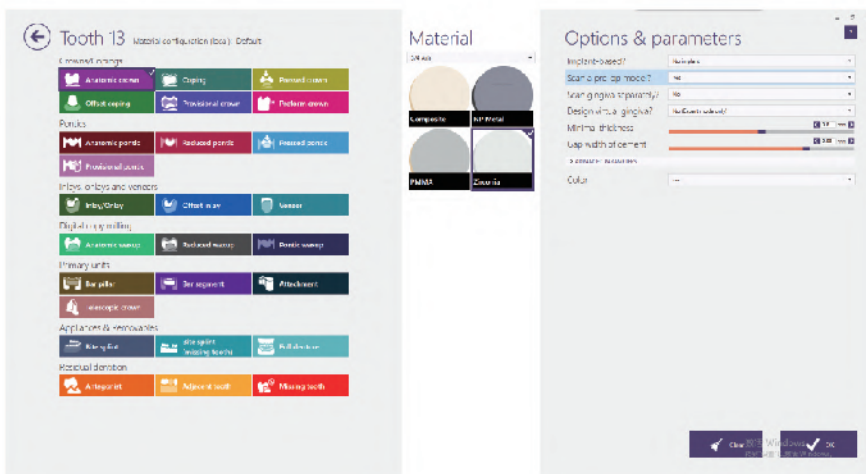
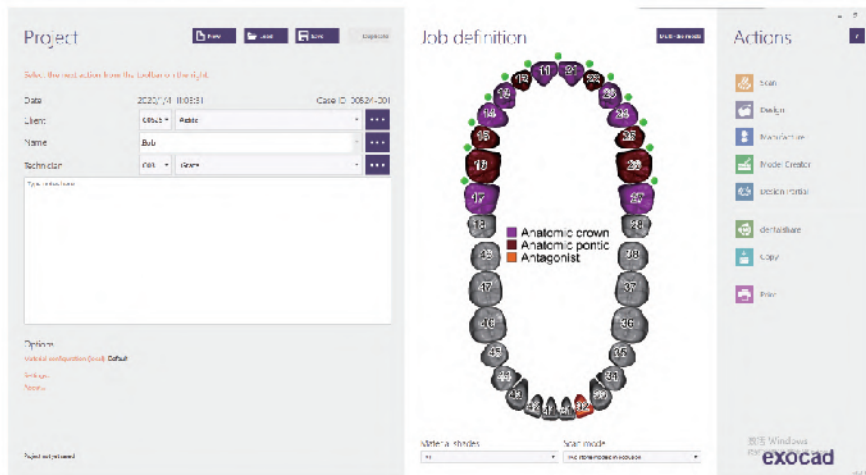
Minimum preparation guidelines for single anterior crown



Minimum preparation guidelines for single posterior crown

Opening order digitally

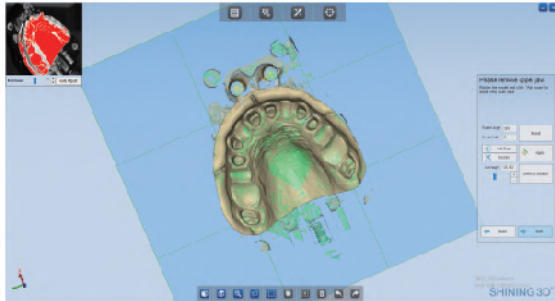
Input name of client, patient and technician and other pertinent information. Click targeted teeth and choose the information such as like type of the restoration, then save it.



## Scanning

Check scanner accuracy:

Calibrate the scanner periodically for accuracy.



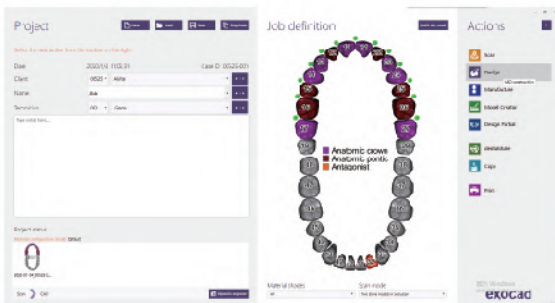
Scanning notes

- ✓ After, is scanning finished, the data must be checked for accuracy to avoid deviation from model. Be sure the split joint is done accurately.
- ✓ Be sure the model is placed accurately and solidly on the base of the scanner every time before scanning of partial model.
- ✓ The main mode and the reference mode (secondary mode) must be the same.
- ✗ The abutment must not be rotated or loose on the model.

## Designing

Designing process:

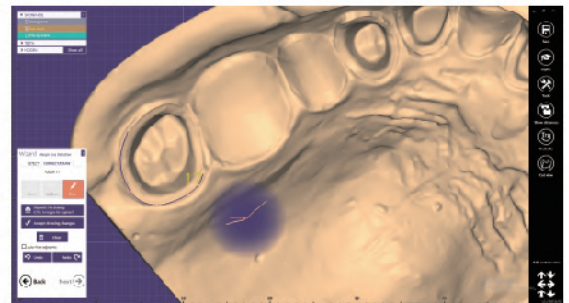
After scanning, return to the interface of designing and click design.



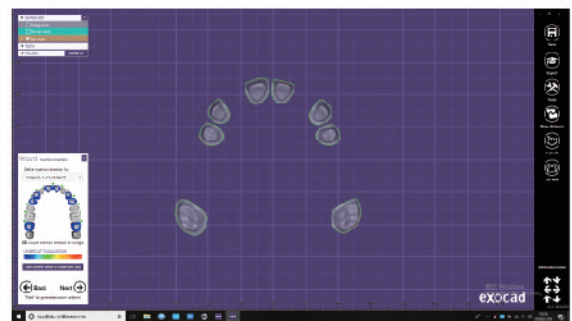
Set the guide of view:



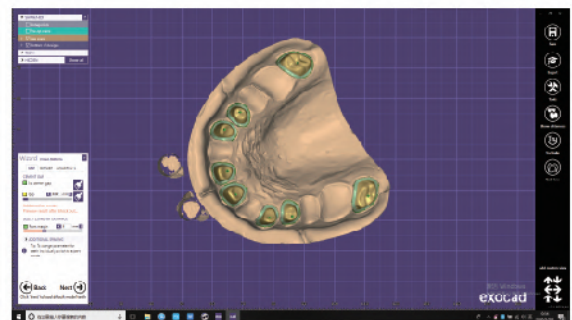
Draw the marginal line: It can be corrected by auto detecting or/and manual drawing.



Set the orientation:

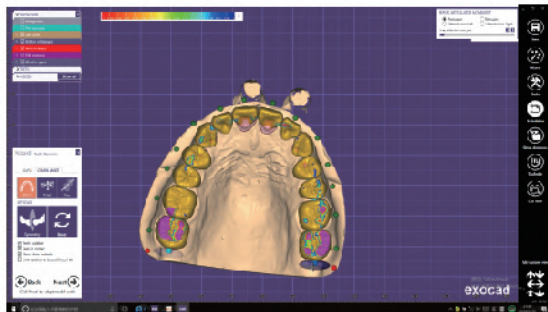


Adjust the parameter of bottom of crown: The conditions of model and equipment like milling machines should be considered.

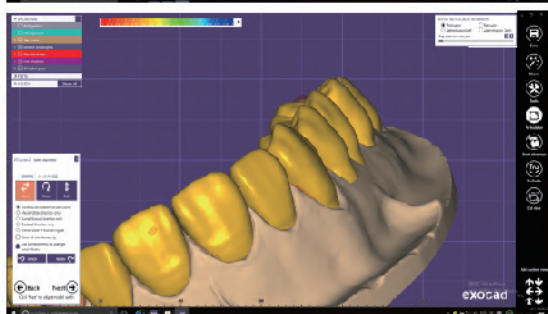
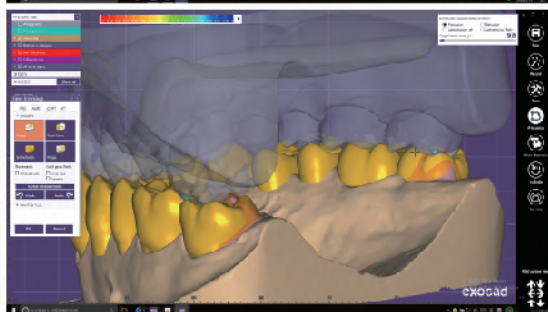
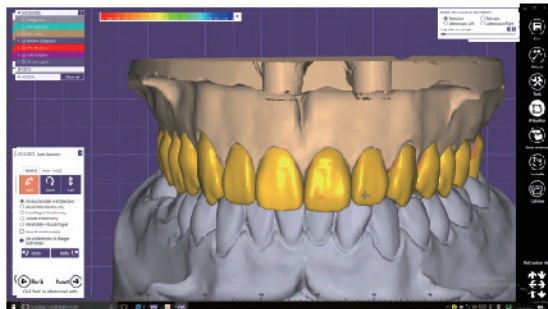


Arrange the teeth.

While making a full arch bridge, first select the chain mode to place the entire bridge. In the next adjust the specific single position.

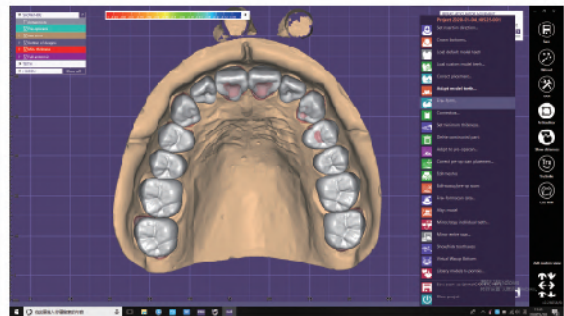


Tooth placement is very important. It should be considered from various aspects such as tooth length, tooth spacing and size, tooth long axis, overall dental arch radian, occlusion, and cusp orientation, and adjust from multiple views such as mesial/distal, occlusal surface, facial/buccal.

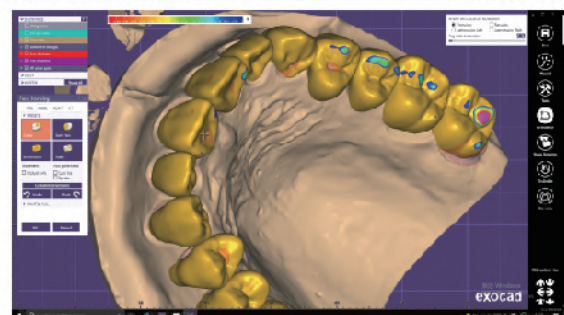
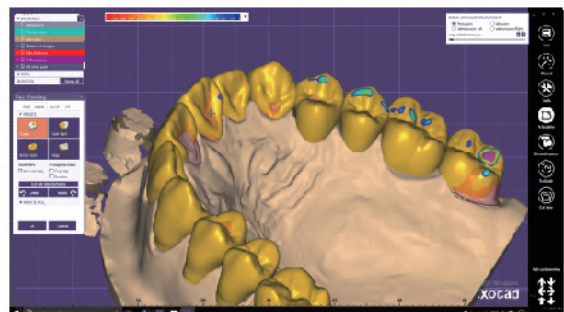


Advanced mode: After the placement is basically completed, if some areas (such as the lingual side, occlusal surface, etc.) cannot retain the original complete shape (fossa, groove, etc.) due to insufficient thickness, you can click the right menu to enter the advanced mode .

First click the right mouse button in the blank space and select Free-form.

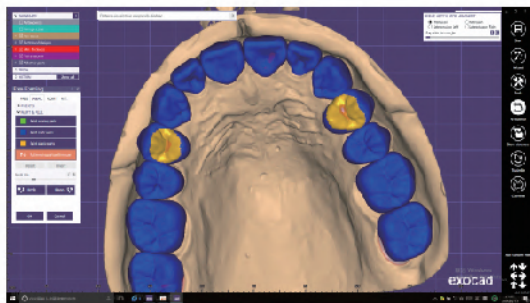


Then select the anatomical tooth tip drag function to drag and increase the area with insufficient thickness. As shown, the lingual side.





You can click the "paint / pull" option to mark the posterior fossa, so that you can only drag the fossa to prevent the drag range from affecting the overall shape



The alignment of the teeth is finished at this step.

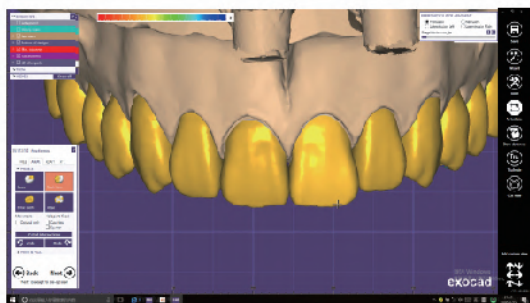
Free-form: After integration, technicians can begin to design with

## Five-step method of anterior crown.

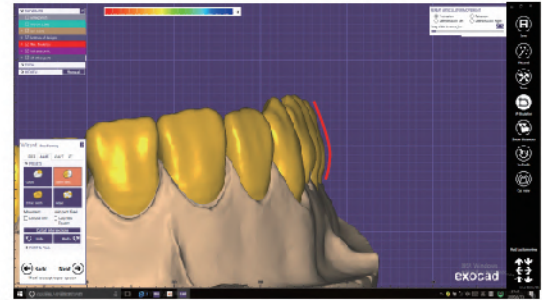
### Step 1: Outer contour treatment

Outer contour includes: length, width, high points of contour, Trilateral form, tongue juga and arch radian.

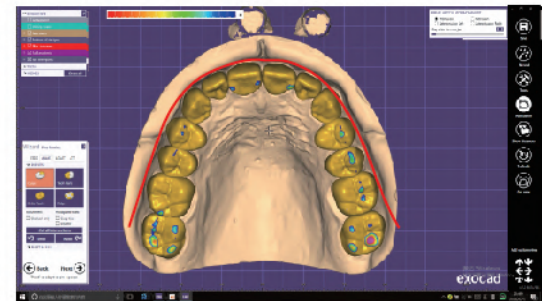
Adjust the length and width of buccal view as front view by dragging the image of tooth.



Adjust trilateral form and height of contour using this view this view



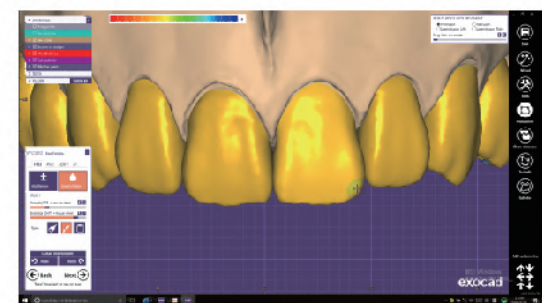
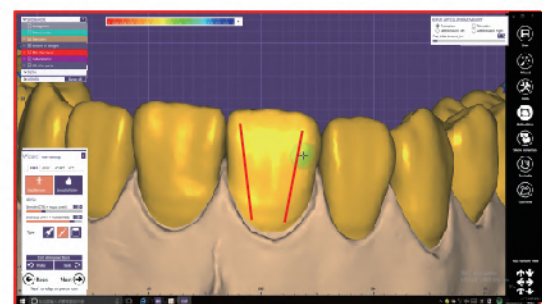
Adjust radius of arch and lingual using this view



Outer contour is finished at this step.

### Step 2: Drawing the outer peripheral ridge

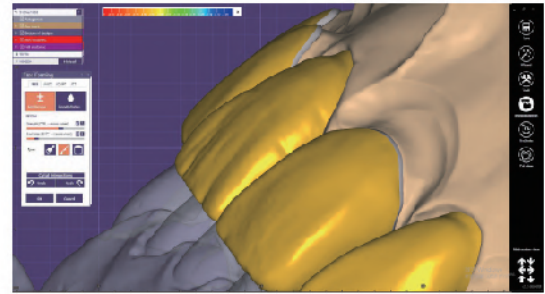
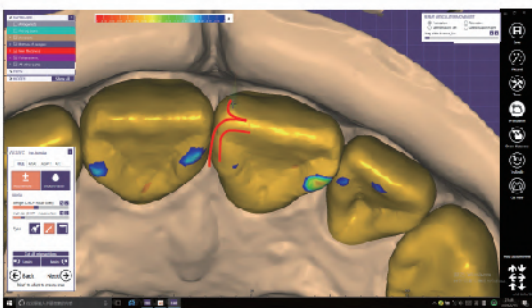
Draw the ridge through the button of increase / decrease. The intensity and range are shown in the chart. You can easily draw the line and angle. After adding the edge ridge, smooth and flatten them with the same intensity and range.



### Step 3: Incisor angle and the incisal edge

The incisor angle and the incisal edge are the indicators of the flexibility of the teeth. If they are not handled well, the teeth will be bulky and unsightly, lack of vividness.

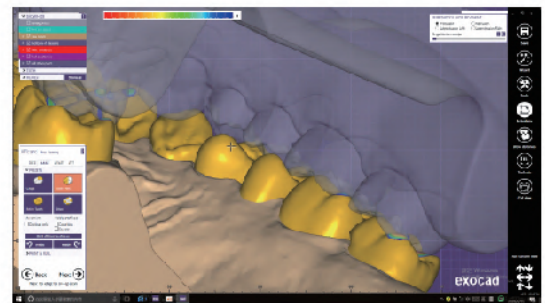
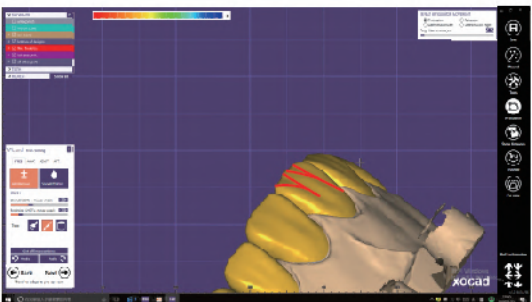
The incisor angle is composed of three lines, the lip side edge ridge angle, the lingual side edge ridge outline, and the lingual side edge ridge outline. They are unified and coordinated through the button of increase / decrease during the design process.



Check the occlusion relationship: You can use the "Partial Teeth" tool for drag adjustment.

### Step 4: Developmental grooves

Drawing developmental grooves is easy. Use "Decrease" to carve with the strokes of “从” on the right side and remove the hollow on the grooves with smooth modifier.



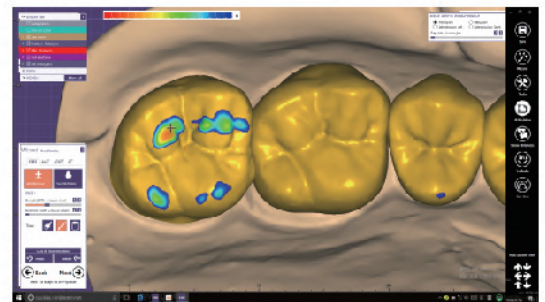
The fossa of posterior teeth: can be deepened by sculpting (tool is increase / decrease).

### Step 5: Surface texture

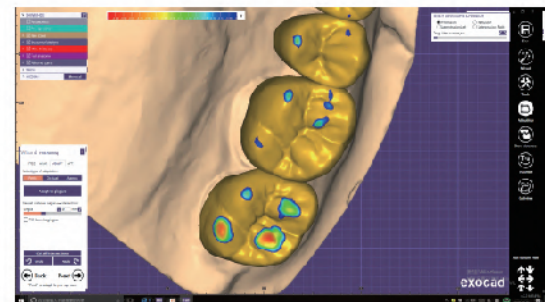
Decide whether to add surface texture according to actual case requirements.

Surface texture can be defined horizontal and vertical ones. Vertical grain generally has 3-4, distributing at the inner side of line and angle, like the right side chart.

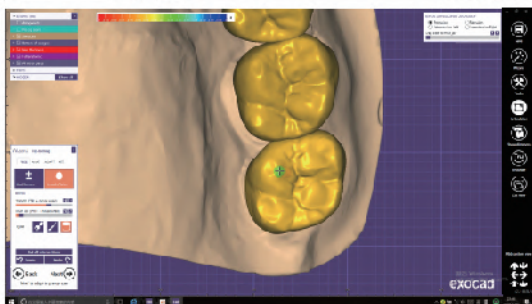
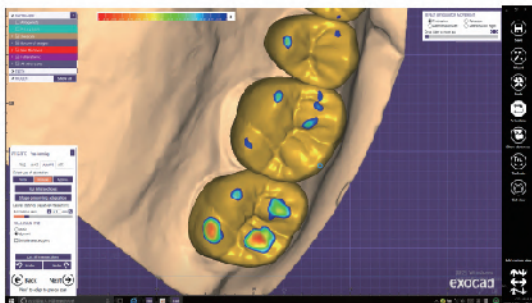
Horizontal grains is generally made 3, distributing at the vertical side with the largest and deepest one, middle side, and incisal side with a tiny one, like the chart on the right side.



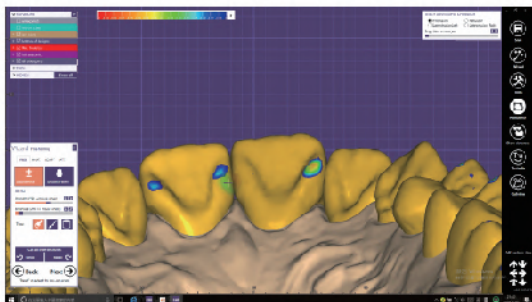
Pontics: Click to adjust the gum adjustment so that the gingival side of the pontic fits the gum.



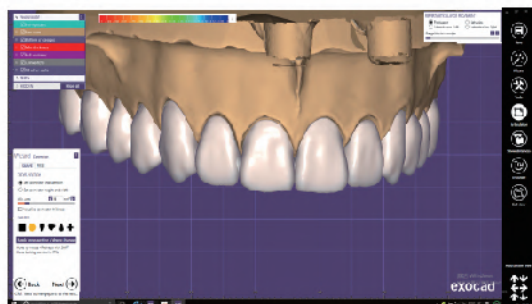
Occlusal surface: Cut off the early contact point, and then smooth the removal position.



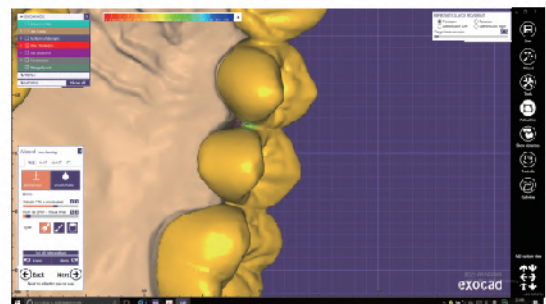
Check to close the abduction gap: select the increase function to close the abduction gap, and then do a simple smooth treatment.



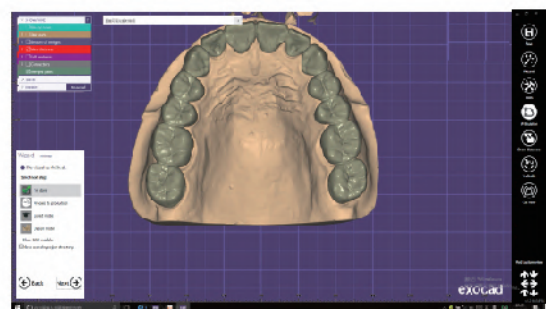
Generate cross-sectional area of bridge



Details processing: Click on the free shape of the restoration, you can continue to check and modify the details of the connector, and generally add or smooth the connector.



Finish the design: After checking everything, click "Next" to finish and save.



Designing notes

- ★ ✓ Designment shall conform with the requirement of minimum thickness and bridge design parameters.

Type of restoration	Anterior		Posterior	
	Thickness	Cross-sectional area of bridge	Thickness	Cross-sectional area of bridge
Single crown	0.6mm		0.8mm	
3-unit bridge	0.8mm	9mm <sup>2</sup>	1.0mm	12mm <sup>2</sup>
Long bridge (>4units)	1.2mm	12mm <sup>2</sup>	1.2mm	12mm <sup>2</sup>

✓ Minimize gaps to create adequate contact area and strength.

- ★ ✓ Follow the operation below if the incisal areas of abutment have sharp edges. Fill with wax at the sharp edges before scanning, or increase the compensation value of burs.



**Settings**

Name: Crown Zircon

Remove undercuts  
 Drill compensation

Difference map >

**Advanced settings**

Cement gap: 0.010 mm  
Extra cement gap: 0.030 mm  
Dist. to margin line: 1.00 mm  
Smooth dist.: 0.20 mm  
Drill radius: 0.50 mm  
**Drill Comp. Offset: 0.60 mm**  
 New drill compensation  
 Smooth surface noise

**Wizard** Crown Bottoms

**GAP** **BORDER** **UNDERCUTS**

**UNDERCUTS**

Don't block out undercuts  
Angle: 0°  
Protected zone near margin line:  
Size: 0 mm

**MILLING**

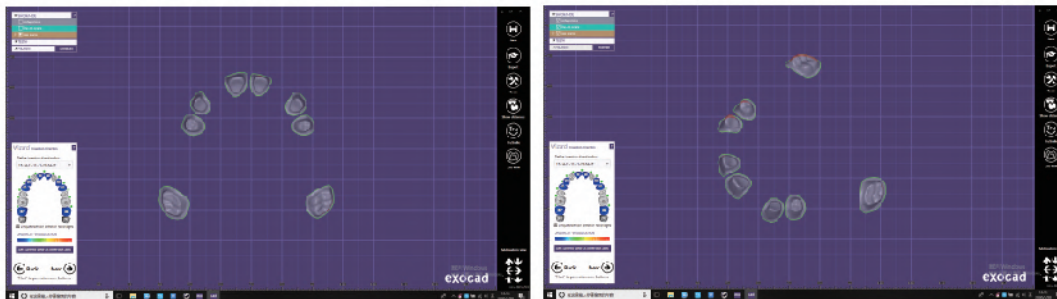
Anticipate milling  
**Diameter: 1.2 mm**  
 Bullnose/flat tool  
Tool tip flat percentage: 80%

Show undercuts Apply

- ★ ✓ If the automatically recognized margin line does not conform to the model, technician must check carefully and draw it by hand.



- ★ ✓ The common seating path of the dental bridge must be checked to avoid irregular seating.



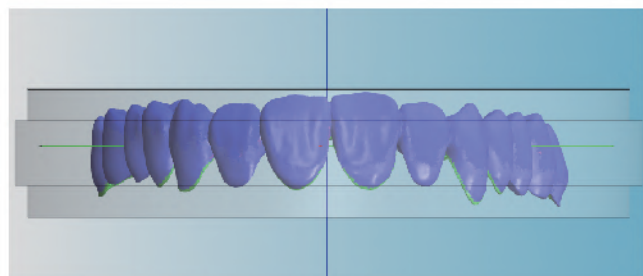
## Nesting

Notes:

- ★ ✓ Be sure to choose a zirconium puck with a thickness that is basically the same as the height of the teeth to ensure the gradual effect of tooth color and translucency. The thickness left to the top and bottom surface shall be more than 0.5mm. Adjust according to the incisal translucency and chroma necessary for good coloration.

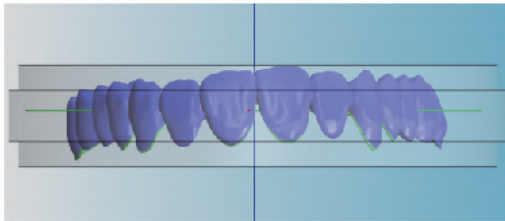
### For example:

The tooth height is 17.8mm. You need to choose a zirconium puck with a thickness of 20mm. Do not choose 22mm or greater.

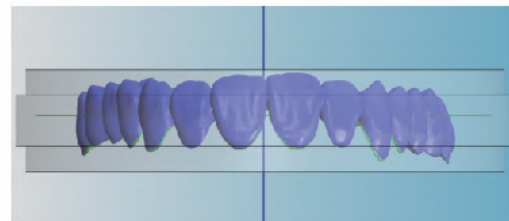


✓ Puck 20mm

✓ If the long span bridge radius is large and the incisal is not on the same horizontal line, you can make rotation adjustments as much as possible within the movable range of the nesting software.



Before rotation

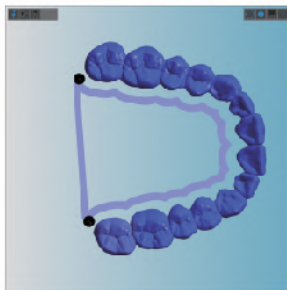


After rotation

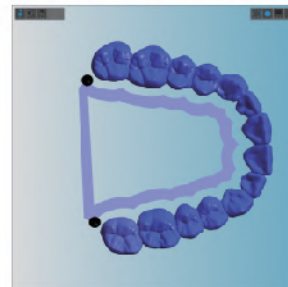
✓ It is recommended that a palatal support be added to bridge for longer spanned bridges. It is best to use a hollow design to minimize the deformation probability.



✓ Be sure to select a palatal frame that is equivalent to the mass of the long span bridge. The height and thickness of the sintering frame can be adjusted in the software.

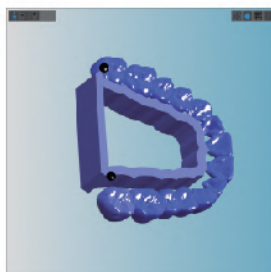


✗ Too thin

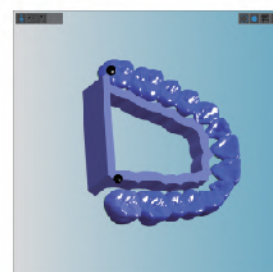


✓ Normal thickness

The mass of the palatal support can be adjusted:  
Adjust mass of palatal support

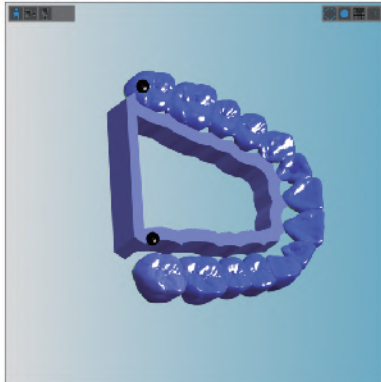


✗ Side support plate height is too high

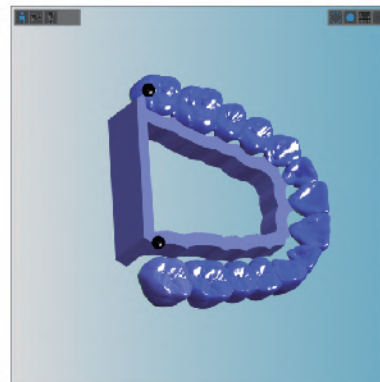


✓ Side support plate height is normal

Adjust base plate thickness

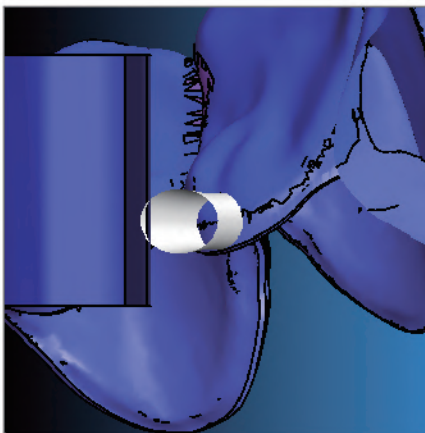


✗ Base support plate height is too low

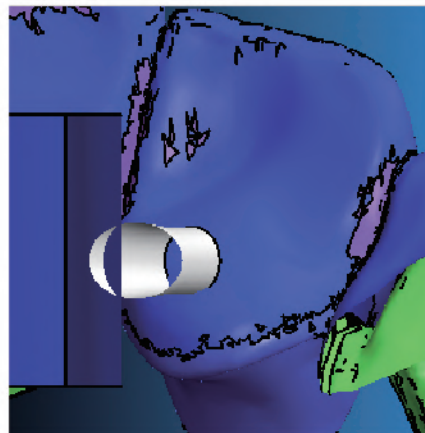


✓ Base support plate height is normal

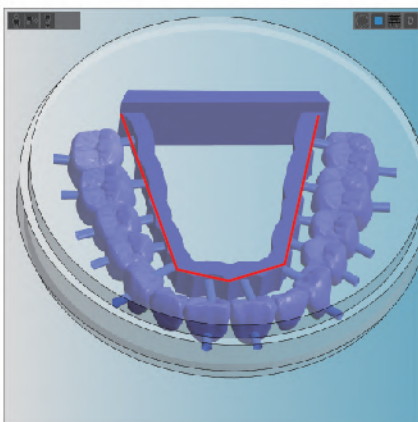
- ★ ✗ The distance between the connecting rod and the margin should not be too close, which may easily cause chipping when removing teeth from the disc. Add the connecting rod to the raised position of the tooth



✗ The connecting rod is too close to the margin



✓ Right positioning of connecting rod



- ✗ The connecting rod and the zirconium puck must not be inclined nor on the same horizontal line, especially between the long bridge and the palatal support frame. If it is inclined or not on the same horizontal line, it will easily cause shrinkage deformation or sintering fracture

## Milling

Check milling machine

- ★ ✓ The maintenance of equipment should include regular calibration, cleaning and lubrication. No vibrations abnormal noise during milling should be present. If there is a problem with the accessory, replace it in time.
- ★ ✓ Be sure to record the number of restorations being milled. Examine the milling tools for wear according to usage per sets of milled restorations. Replace accordingly.
- ★ ✓ 3D pro Zir puck needs to be milled with 5axis equipment.
- ★ ✗ Do not place the mill on an unstable table or shelf.
- ★ ✗ Do not use wet milling method, otherwise the shade and translucency may be affected.
- ★ ✗ Do not mill without vacuum.

### Milling:



1. When securing the puck in the holder, tighten the screws in a diagonal order, after the first turn is fixed, then reinforce in the second turn. Finally, check by hand if the zirconium puck is positioned correctly. It should be firmly secured, but not over tightened. Check to be sure that the incisal of disc is at the correct position and not backwards.



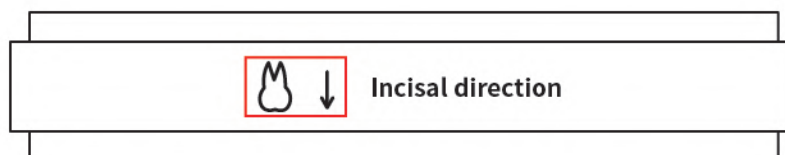
2. Confirm that all requirements are met before processing can begin



3. Milling finished.

### ★ Milling notes:

- ✓ Loading requirement: The side of the puck is marked with an arrow, and the arrow points to the incisal.



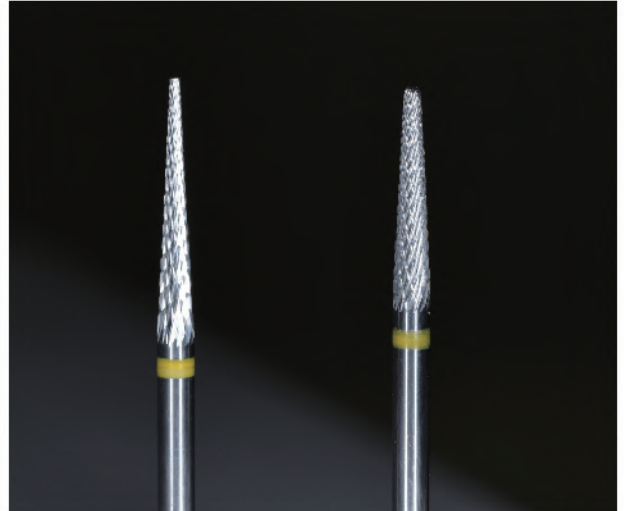
- ★ ✗ Do not use too much force when loading the puck. Do not overtighten the screws. Otherwise, the zirconium puck will be pinched or the milled restoration may crack.



## Separation and cleaning

Check tools:

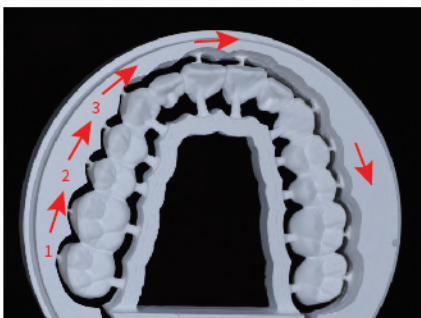
- ★ ✓ Hand piece is stable and vibration-free.
- ★ ✓ A soft towel or sponge pad needs to be placed on the table to prevent the teeth being damaged.
- ★ ✓ Use fluted tungsten steel burs to separate the connecting rod.
- ★ ✗ The grinding environment must be clean of debris. Burrs, table tops, and the surrounding environment should be clean. Adequate ventilation and dust vacuum is required. Do not breath dust particles, use a qualified mask while performing any grinding
- ★ ✗ The brush must not be contaminated by water, oil or metal debris.
- ★ ✗ The burrs should not be bent, otherwise it will cause vibration.



### Process:

#### Step 1: Remove teeth

Grind the connecting rod with medium pressure. As shown in the figure, move the bur clockwise to slowly grind the connecting rod horizontally.



Grind out the connecting rod of the outer ring in half, and then polish the remaining connecting rods one by one to avoid the last connecting rod breaking directly, which may cause cracking or damage.

### Step 2: Remove excess connecting rods

After separating the restoration from the zirconia puck, continue to use a thicker tungsten steel bur or rubber wheel to remove the excess connecting rod.



### Step 3: Clean up the powder

Use a brush or porcelain brush to thoroughly clean the powder on the surface of the restoration and inside the crown. If the cleaning is not complete, the powder will adhere to the surface of the restoration and the crown after sintering at high temperature, forming white spots and cause fit issues. This will affect the quality of restoration.



- ★ Notes for tooth removal:
  - ✓ The speed of grinding the connecting rod is 15000r / min-20000r / min.
  - ✓ The speed of removing the excess connecting rod is 15000r / min-20000r / min.
  - ✓ You can use an oil-free and water-free air gun to gently spray the powder off the surface of the restoration. The air gun should not be set at high pressure.
  - ✗ It is not recommended to remove the connecting using sharp discs. Use gentle pressure when working with green-state zirconia.

## Sintering

Check the Sintering equipment and tools:

### Sintering furnace:

- ★ ✓ The sintering furnace must use a voltage regulator to ensure stable operating voltage.
  - ★ ✓ The sintering furnace must be cleaned regularly (once a week) and kept dry.
- Cleaning method:**  
scrape off the impurities in the furnace.  
Place green-state scrap zirconia scraps into the furnace and sinter them according to the normal zirconia sintering curve.
- ★ ✓ If furnace has not been used for more than a week, it must be decontaminated before used.
  - ★ ✓ When the equipment is not in use, the furnace should be closed to ensure a dry environment inside the furnace. Please keep the operation room of the sintering equipment clean and free of dust and debris. Do not place sintering furnace in a dusty environment. Metal shavings or dust, can adversely affect the heating elements.
  - ★ ✓ The heating elements of the sintering furnace must not show damage. If there is a small amount of peeling on the surface of the heating rod (silicon-molybdenum rod), the leftover material can be burned and the sintering furnace will back to normal.
  - ★ ✓ Check the furnace temperature regularly (every 3 months) to ensure the stability of the furnace temperature.
  - ★ ✓ Be sure to sinter in strict accordance with Aidite standard curve.

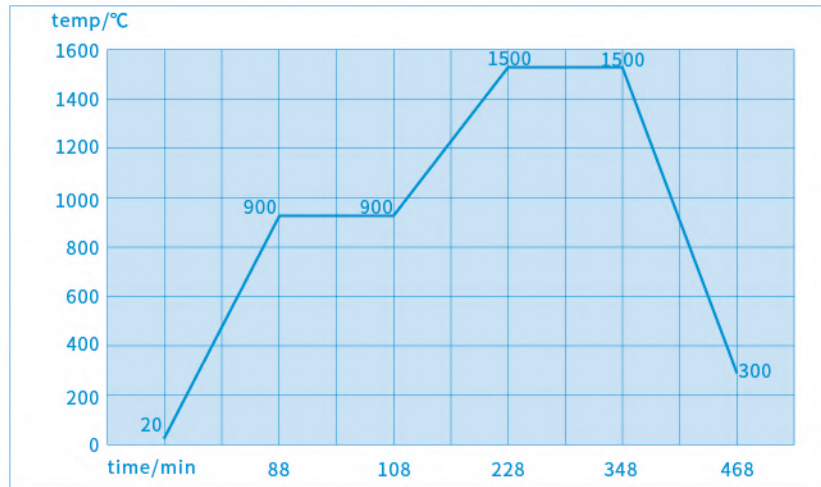


3D pro Zir Sintering Program:

Below 3 units bridge (7h) :

start temp	phase 1 heating rate	phase 1 Maximum temp	Holding time	phase 2 Maximum temp	phase 2 Maximum temp	Holding time	cooling rate	cooling to
20°C	10°C/min	900°C	20min	5°C/min	1500°C	120min	10°C/min	300°C

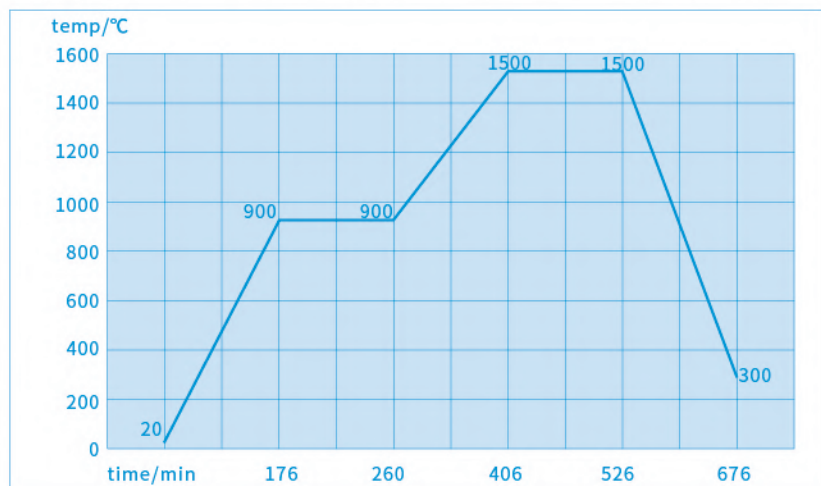
phase	temp/°C	time/min
1	20	88
2	900	20
3	900	120
4	1500	120
5	1500	120
6	300	



From 4 to 6 units bridge(10h):

start temp	phase 1 heating rate	phase 1 Maximum temp	Holding time	phase 2 Maximum temp	phase 2 Maximum temp	Holding time	cooling rate	cooling to
20°C	5°C/min	900°C	30min	3°C/min	1500°C	120min	8°C/min	300°C

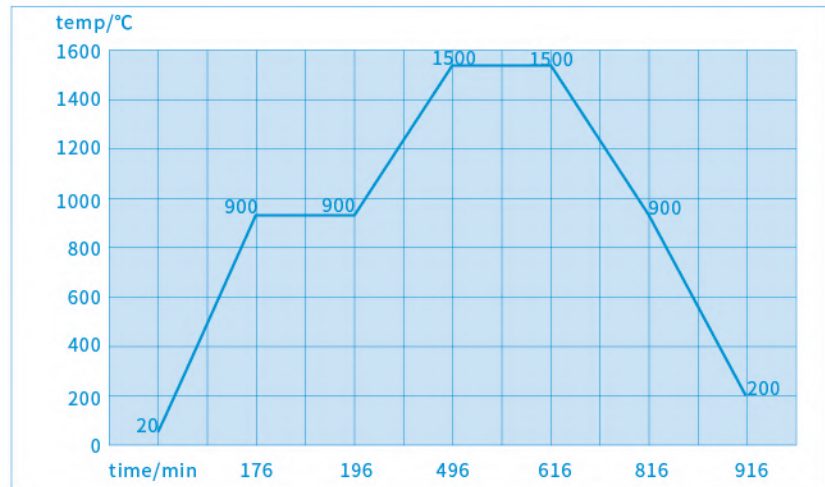
phase	temp/°C	time/min
1	20	176
2	900	30
3	900	200
4	1500	120
5	1500	150
6	300	



Above 7 units bridge (15h) :

start temp	phase 1 heating rate	phase 1 Maximum temp	Holding time	phase 2 Maximum temp	phase 2 Maximum temp	Holding time	cooling rate	cooling to	cooling rate	cooling to
20°C	5°C/min	900°C	20min	2°C/min	1500°C	120min	3°C/min	900°C	7°C/min	200°C

phase	temp/°C	time/min
1	20	176
2	900	20
3	900	300
4	1500	120
5	1500	200
6	900	100
7	200	



**Zirconium beads:**

- ★ ✓ When the zirconium beads are severely discolored, the shape is broken or damaged, , it must be replaced immediately.
- ★ ✓ If the zirconium beads are stuck together, be sure to break them apart to ensure proper bead function.
- ★ ✓ The amount of zirconium beads should completely cover the bottom of the box (2 - 3 layers).
- ★ ✓ When replacing zirconium beads, first sinter the zirconium beads with remnants of green state zirconia and conduct a normal sintering cycle.
- ★ ✓ It is recommended that Aidite Zirconium Beads be used and it is recommended to use zirconium beads with a diameter less than or equal to 1.0mm to sinter long bridges. Use zirconium beads with a diameter greater than 1.2mm to sinter single crown.

**Sintering sagger:**

- ★ ✓ Be sure to use a perforated sintering sagger to heat the restoration more evenly.

**Sintering:**

- ★ ✓ The standing sintering method is adopted to make the heating and shrinking more uniform.



Zirconium beads



Sintering finished.

### Sintering notes:

- ★ ✓ Above 6-unit-bridge sintering needs to be done with a reinforcing band to ensure the shrinkage is even.
- ★ ✓ A single crown or a bridge below 3 units can be sintered using the fast firing curve in an Aidite fast firing furnace.
- ★ ✓ The long bridge sintering curve needs to be used to prevent problems such as deformation.
- ★ ✓ If no band or sinter-supports are used for a full arch bridge, place the restoration with the occlusal surface facing down and resting slightly on the sintering beads.
- ★ ✗ Do not sinter 3D pro Zir together with restoration dipped or brushed with coloring liquids.
- ★ ✗ Furnace opening temperature shall be not more than 200°C after sintering.
- ★ ✗ Avoid direct air conditioner or fans to prevent potential fracture or cracking due to fast cooling. Take the restorations out after have cooled naturally.
- ★ ✗ Do not use quench cooling tools such as metal to contact high temperature restorations.

### Grinding

#### Check the Grinding tools:

- ★ ✓ Using special zirconia grinding tools, Aidite special zirconia grinding tools are recommended.
- ★ ✗ Do not use diamond burs to adjust mass areas of restorations, otherwise that will cause potential fracture, cracking or white spots during glazing.



#### Grinding process:

##### Step 1: Remove connecting rods

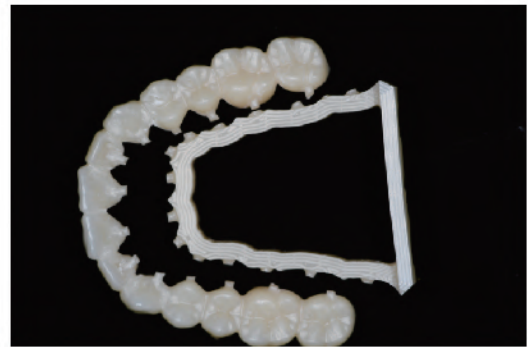
Separate restoration from sintering frame and remove the remnant connecting rods.

Use adequate water to cool during grinding. Be sure to not overheat restoration while grinding. The temperature of zirconia should not exceed 60°C. Cooling with water will ensure the temperature of zirconia will not exceed 60°C at any time.

Using correct rotation speeds grind to remove excess material. Do not grind restoration for long periods of time to avoid overheating. Grind and continuously changing position. Do not grind continuously at the same position.



Support Removal



Support removal finished



Contouring excess connecting rods

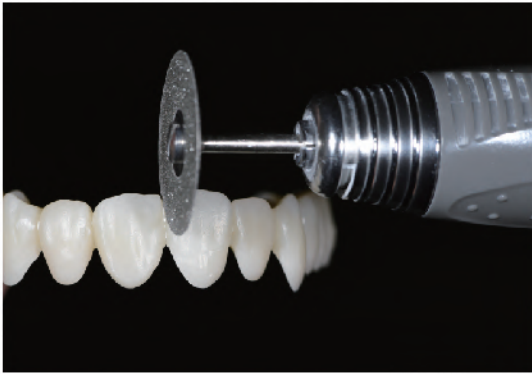


Finished

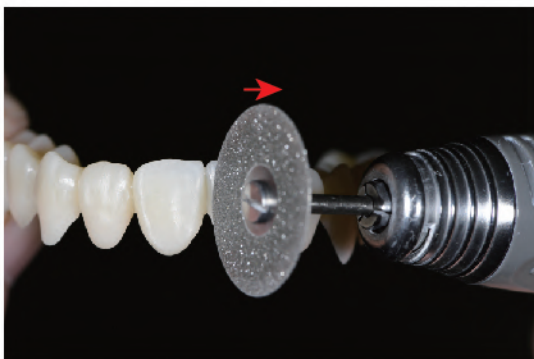
- ★ **Notes of removing connecting rods:**
- ★ ✓ Grinding speed of removal tools: 15000-20000r/min
- ✓ Revolving speed of rough grinding:
  - ★ 20000-35000r/min
  - ✓ Dip in water before grinding to prevent high temperatures
- ★ ✗ Do not grind the restoration with high pressure.
- ✗ Do not grind continuously at the same position, to avoid potential fracture or cracking caused by overheating.

### Step 2: Grinding embrasure

Suggest using sintered diamond discs to grind proximal area between teeth, similar to point grinding. Do not grind zirconia more than a few second at a time. Use edges and points to reduce overheating.



Grind outwards, to have silicon carbide particles contact incisal embrasure, and proximal area between teeth. Do not grind vertically.



Grinding direction

#### Notes of grinding embrasure:

- ★ ✓ Revolving speed: 20000r/min, keep hand piece stable in hand. Do not generate large vibrations and shocks.
- ★ ✗ Do not cut vertically which will lead to excessive pressure stress and localized overheating. Use shearing stress of sand discs to remove material.
- ★ ✗ Do not cut continuously at the same position, to avoid potential fracture or cracking caused by overheating.

Next, use Aidite special zirconia grinding tools to adjust restoration surface. Create restoration surface smooth by a 3 steps process: rough grinding, fine grinding, rough polishing.

### Step 3: Rough grinding

This process is used for fitting and, adjusting the adjacent, occlusal surface, entire surface. As well for grinding connecting rods to remove materials.

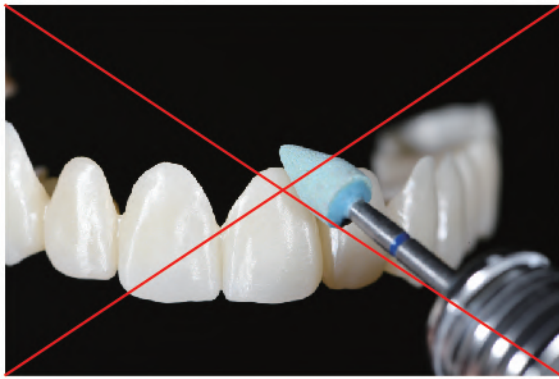
Grind in the same direction, to make the lines fine and smooth. It is effective to grind in the right direction, wrong direction grinding will lead to low efficiency and increase wear of grinding head.

Using rotation speed of grinding head and point grinding to remove, be sure to avoid overheating or stress by concentrating in one position. Grind with minimum pressure by continuously changing positions.



#### Notes of rough grinding:

- ★ ✓ Revolving speed of rough grinding: 20000-35000r/min.
- ★ ✗ Don't grind the restoration with high pressure.
- ★ ✗ Don't grind continuously at the same position, to avoid potential fracture or cracking caused by overheating.
- ★ ✗ Don't use rough grinding tools to grind cervical margin of restoration.



### Step 4: Fine grinding

Following the rough grinding step, make the surfaces smooth, uniform and delicate. It is the same as rough grinding, grinding the surface of restoration from right to left in the same direction.



Use fine grinding head to adjust the cervical margin.



### Notes of fine grinding:

- ★ ✓Revolving speed of fine grinding: 20000-35000r/min.
- ★ ✓Use fine grinding head to grind after rough grinding
- ★ ✗Do not grind the restoration with high pressure.
- ★ ✗Do not grind continuously at the same position, to avoid potential fracture or cracking caused by overheating.
- ★ ✗Do not use rough grinding tools to grind cervical margin of restoration.

### Step 5: Rough polishing

Make the surface fine and smooth to enhance the overall effect, and reduce wear to opposing teeth.

Polish slightly from right to left in the same direction.



Rough polishing tools also can be used for cervical margin adjustment to prevent chipping problems. Cake-shaped, columnar and cone shaped tools are available in three shapes.



Sharper access tools of rough polishing are suitable for polishing some area that is not easy to access, e.g. tooth cusps or incisal embrasures.



In order to reduce the wear to opposing teeth, polishing in occlusal area is necessary. Cake-shaped, columnar and cone shaped tools are available in three shapes.

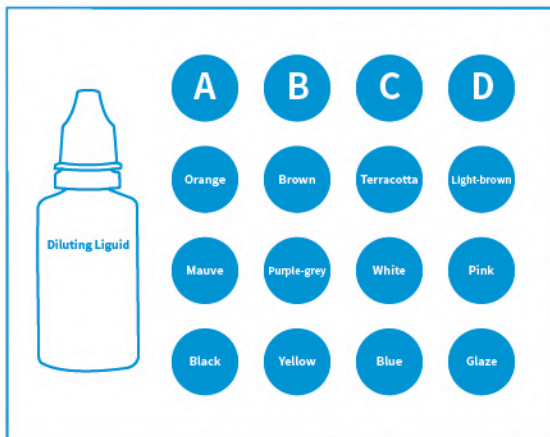


Notes of rough polishing:

- ★ ✓Revolving speed of rough polishing: 10000-16000r/min
- ★ ✓After fine grinding, use a rough polishing head to polish the neck edge
- ★ ✗Don' t use too much pressure during rough polishing. Roughly polishing matt polish is preferred.

Staining and Glazing

- ★ ✓Aidite stain & glaze kit is recommended to help achieve better esthetics and effects.

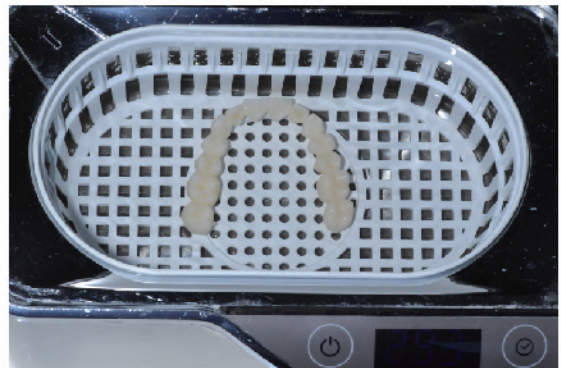


Advantages:

- 1.Easy operation
- 2.Multiple colors
- 3.Only bake technique to achieve perfect luster
- 4.Fluorescence effect
- 5.Perfect matched shades for zirconia

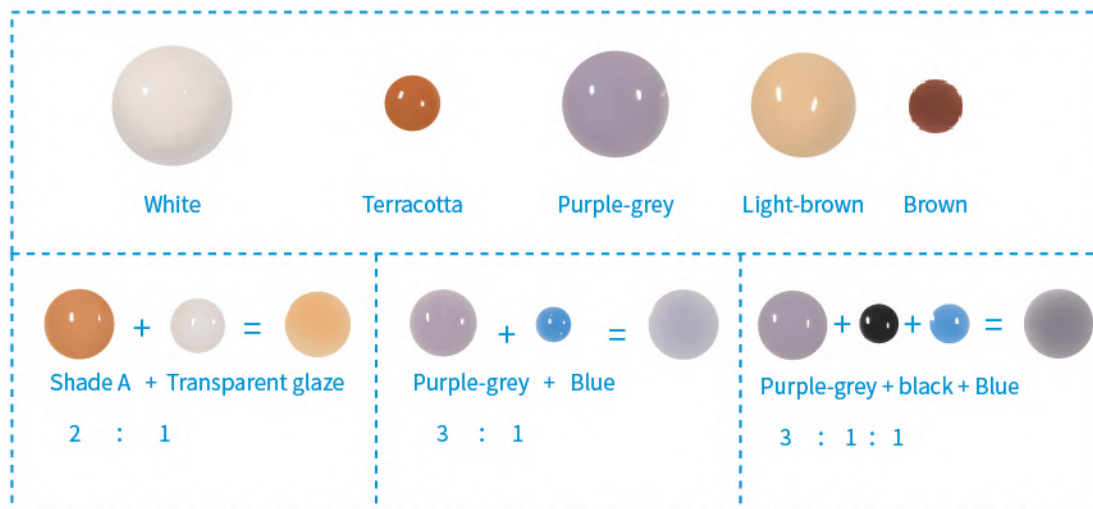
Preliminary preparation:

- ✓ After contouring and smoothing, the surface of the restoration does not be sandblasted.
- ✓ Sandblasting is not required inside the crown of a prosthesis with good mechanical retention, and sandblasting is required in the crown of a prosthesis with poor mechanical retention.
- ✓ If sandblasting is required inside the crown, use 50um white alumina oxide, sandblasting pressure of 2bars , and sandblasting distance of 10cm.
- ✓ Clean the surface of restoration by steam or ultrasonic cleaning machine before staining.



Staining process:

Color matching reference







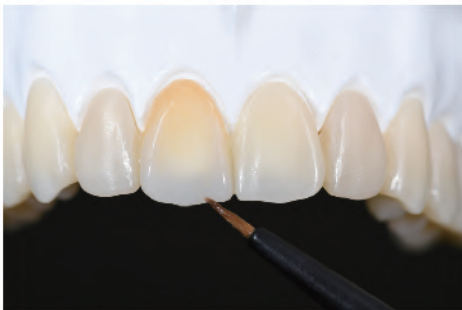
Apply terracotta at cervical.



Apply shade A+ transparent glaze 2:1 at the main body.



Apply purple-grey at the ridges.



Apply purple-grey+blue 3:1 at 1/3 incisal.



Apply purple-grey+blue+black 3:1:1 at transparent area of incisal part, development grooves, and ridges.

According to the characteristics of the individual cases, special stain effects such as white spots, enamel cracks and similar can be added to achieve the best imitating effect.

Posterior occlusal staining method:



Apply terracotta in the groove.



Apply brown in the fossa.



Apply purple grey+blue 3:1 at occlusal edge and triangle ridge.



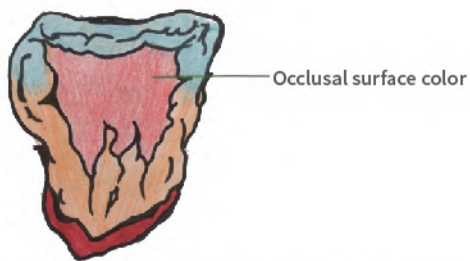
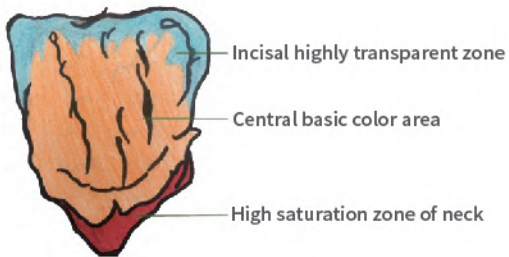
Apply terracotta or a small amount of brown in the occlusal area.



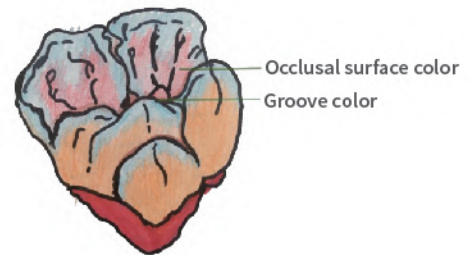
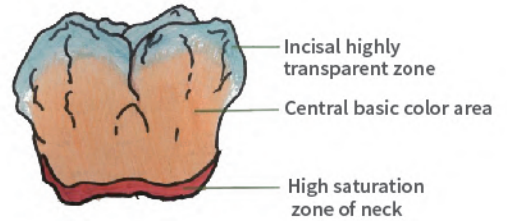
Final result.



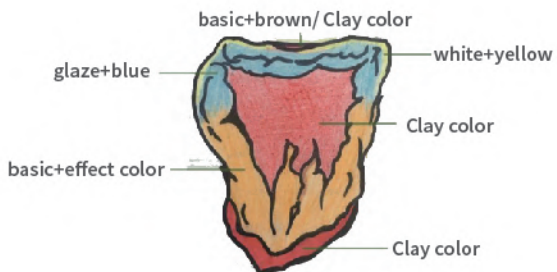
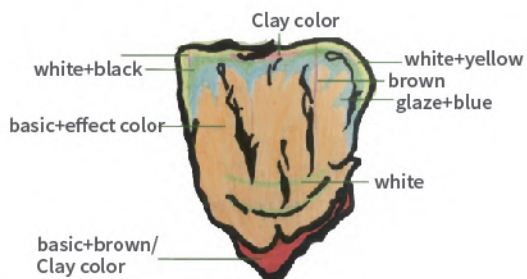
Simple staining of anterior teeth:



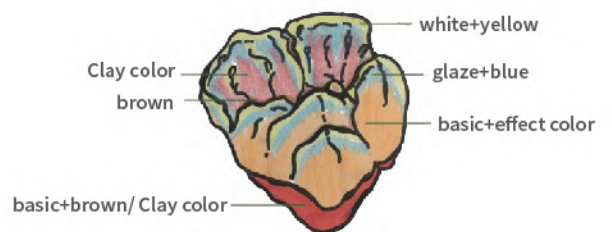
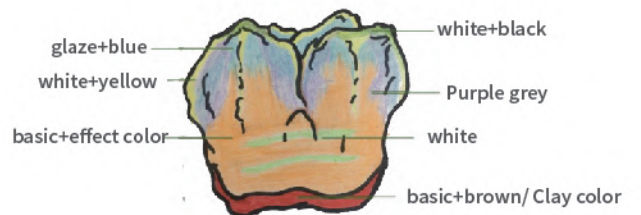
Simple staining of posterior teeth:



Personalized staining of anterior teeth:



Personalized staining of posterior teeth:



Sintering program of Aidite staining and glazing kit:  
Sintering program of single crown, bridge of three-unit or less

Start temp	Drying time	Heating ration	Highest temp	Time kept	Final temp
500°C	4min	50°C/min	820°C	2min	300°C

Sintering program of bridge above three-unit

Start temp	Drying time	Heating ration	Highest temp	Time kept	Final temp
500°C	4min	30°C/min	820°C	2min	300°C

**Notes:**

- ✓The highest temperature of Aidite stain & glaze kit is between 740°C to 900°C, temperature should be adjusted according to customers' requirement for texture and glaze.
- ✓Firing a full arch bridge, the second program has to be used for glaze-firing, otherwise problems such as cracks may easily occur.
- ✗The lowered platform temperature for zirconia is 300 °C. Do not open the furnace when the temperature is very high, otherwise it will cause potential fracture and cracking due to the temperature difference between furnace temperature and the environment.



爱迪特(秦皇岛)科技股份有限公司  
Aidite (Qinhuangdao) Technology Co.,Ltd.  
Tel : 0086-335-8587898  
Fax: 0086-335-8587198  
Web: [www.aidite.com](http://www.aidite.com)  
Email: [info@aidite.com](mailto:info@aidite.com)  
NMPA ISO13485 CE0197 FDAK111291