



# GUIDANCE

## Zirconia



*Follow us on*

UPCERA

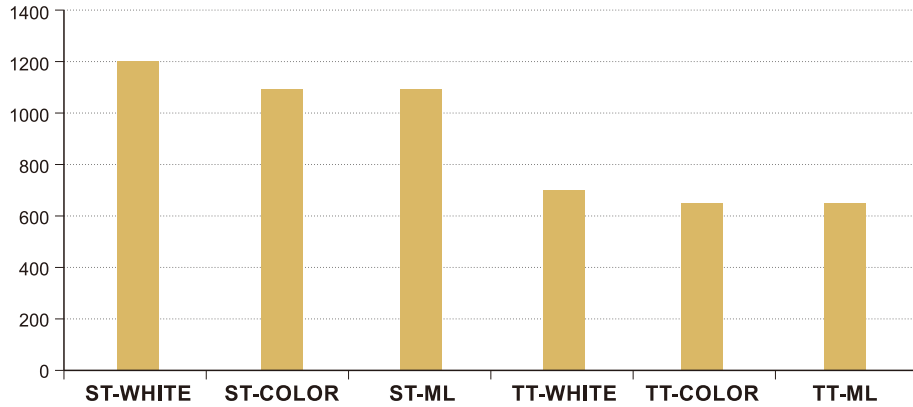
 

Shenzhen Upcera Dental Technology CO.,Ltd  
Add: 2nd Floor, Tsinghua IT Port R&D Bldg. B,  
No.1 Xindong Rd., High-tech Park,Nanshan  
District, Shenzhen, Guangdong, China  
Tel: +86-755-8882 0818  
E-mail: sales@upcera.com





Strength(Mpa)



49%

44%

Transmittance

ST-WHITE

TT-WHITE

## Indications

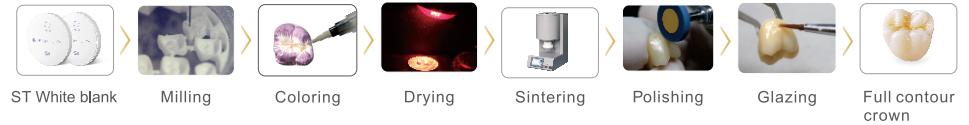
Indication	ST White	ST-Color	ST-ML	TT White	TT-Color	TT-ML
Single crown	✓	✓	✓	✓	✓	✓
2-3 unit bridges	✓	✓	✓	✓	✓	✓
3-4 unit bridges (with one pontic)	✓	✓	✓			
Bridges over 5 units (Less than 3 sequential pontics for the anterior, Less than 2 sequential pontics for the posterior)	✓*	✓*	✓*			
Cantilever bridges (Except the patient with bruxism)	✓	✓	✓			
Inlay bridges (Except the patient with bruxism)	✓	✓	✓			
Maryland bridges (Except the patient with bruxism)	✓	✓	✓			
Telescopic crowns	✓	✓	✓	✓	✓	✓
Veneers				✓	✓	✓

✓ recommended to make bridge

✓\* can be made bridge but not recommended

## ST White

## Procedures



## Upcera visible coloring liquid table

Application	Dentin area	Gingival area	Fossa area	Incisal area
Liquid	16 VITA shades	P1/P2/P3	O1/O2	G1/G2
Colorant	Blue	Pink	Brown	Purple

**PS:** the diluting liquid can reduce the density of the coloring liquid to provide lighter shades



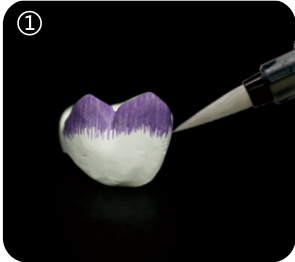
## Attention

- If you are using wet milling, make sure the restoration is completely dry before coloring.
- Use the palette or graduated flask supplied in your kit
- Use the plastic tweezers in your kit, do not use metal tweezers, as this can affect the final shade.
- Gloves are recommended when coloring esp for sensitive skin
- Do not put used liquid back into the bottle, this avoids any contamination
- Keep the bottles sealed after use. Cool storage (0~4 degree) is recommended
- Use the Upcera diluting liquid rather than water to dilute the coloring liquid
- Use a tissue to gently dab the crown before drying, the crown has to be at room temperature and dry if more color stain is needed



## Step 1 Coloring ( 2 Methods )

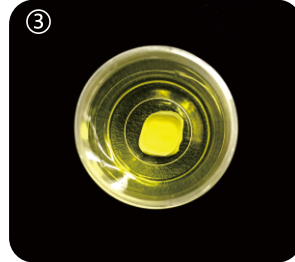
### A. Brushing + Dipping



① Brush the incisal area with G1/G2 liquid 1-2 times .

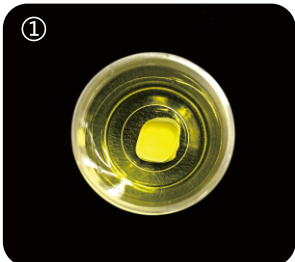


② Paint the occlusal surface with O1/O2 liquid 1-2 times.



③ Dip the restoration into the coloring liquid for 2-5 minutes

### B. Dipping + Brushing



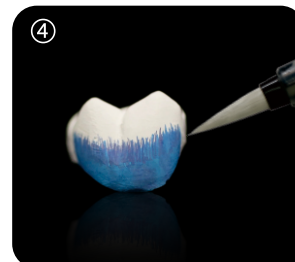
① Dip the restoration into the A2 coloring liquid for 2-5 minutes



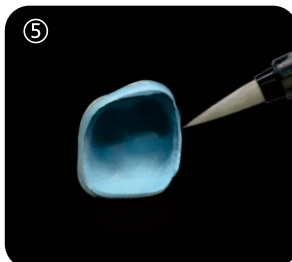
② Dry the restoration under an infrared lamp for 20-30 minutes



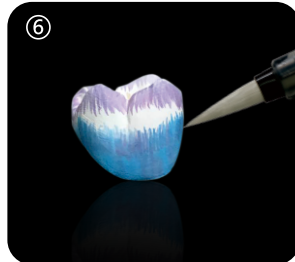
③ Paint the occlusal surface with O1/O2 liquid 1-2 times.



④ Brush the cervical and body areas with A3 liquid once, and then brush the cervical area once more.



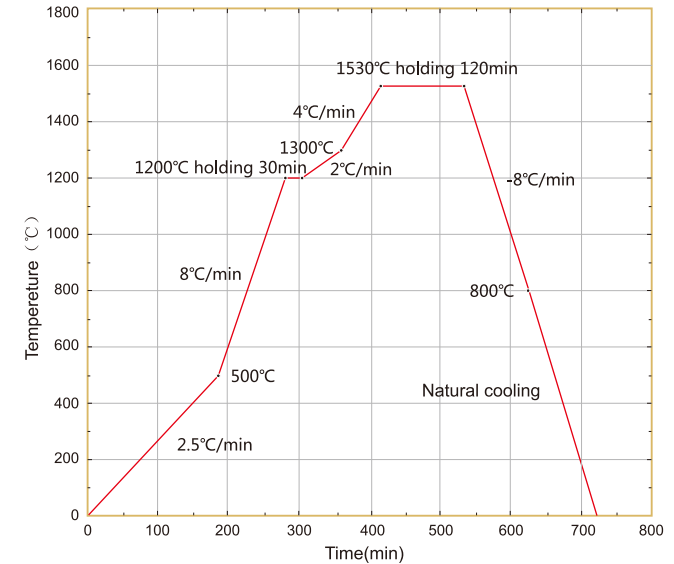
⑤ Brush the whole fit surface with A3 liquid once and then give the cervical area one more coat.



⑥ Brush the occlusal area with G1/G2 liquid 1-2 times.

## Step 2 Sintering

The ideal sintering temperature for ST White is 1530°C, holding for 2 hours.

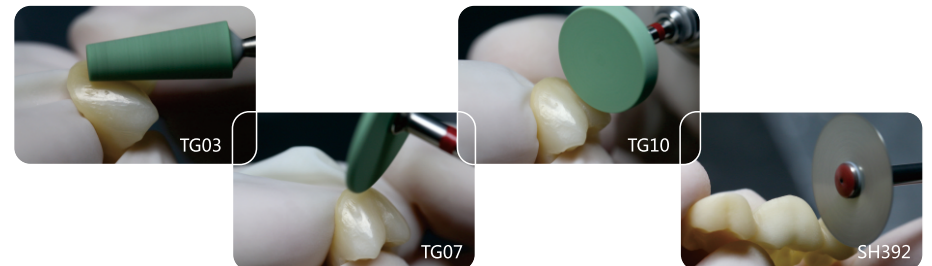


### Attention

The Path of Insertion, the accuracy of the impression or digital scan file, the design, the parameters set in your CAD software, the coarseness of the burs, staining choices and accuracy, and the surgery skills at try-in, all go to influence the final fit and aesthetics of zirconia restorations.

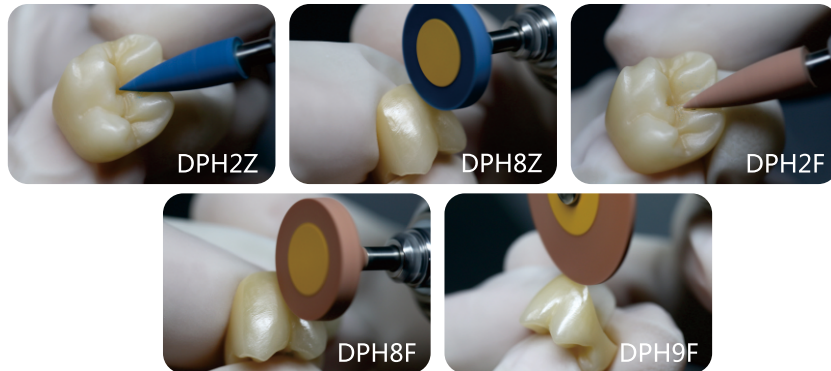
## Step 3 Grinding

Grind the restoration with Upcera stones series TG03 / TG07 / TG10(8000-12000 rev/M) or water-cooled diamond burs. SH392 can be used to polish the interdental areas if necessary. (When finishing a sintered zirconia restoration, be careful with the grinding speed and the pressure, otherwise local hotspots created can lead to cracking)

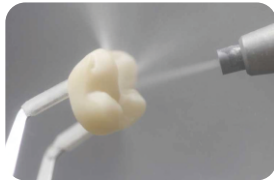


## Step 4 Polishing

Use special zirconia polishers (e.g Upcera polishing kit DPH2Z / DPH8Z / DPH2F / DPH8F / DPH9F at rotation speeds of 8000-12000 rev/M) to polish the occlusal surface, and polish the buccal and distal surfaces as required.



## Step 5 Sandblasting



Sandblast under 2-2.5Bar with 50µm AL<sub>2</sub>O<sub>3</sub> grit. Polish the crown if applicable.

## Step 6 Glazing

Available for two stains kits:

<b>UPCERA Base stains kit</b>	Base A / Base B / Base C / yellow / olive yellow / pink / brown / reddish brown / grey / blue / purple / black / white / olive green / glaze / universal glaze liquid.
<b>UPCERA 16 shades stains kit</b>	A3.5 / A4 / B2 / B4 / C1 / C3 / C4 / D2 / D3 / D4 / glaze / universal glaze liquid.

### Glazing process

Glazing cycle							
Starting temp: (°C)	Drying time: (mins)	Pre-heat time: (mins)	Heating rate: (°C/min)	Highest temp: (°C)	Holding time: (mins)	Final temp: (°C)	Cooling time: (mins)
400	3	2	50	830	2-4	400	4

Note: For bridges, reduce the heating rate to 35 °C/min

## How to use the Upcera 16 shades Stain Kit:

The UPCERA 16 shades stains kit is formulated to work with Upcera ST pre-shaded zirconia discs. This table shows you how to combine the stains with Upcera pre-shaded ST zirconia to achieve the correct end result:

Classical 16 shades A-D combination table

The shade you want	Use this ST color zirconia	Stain needed	incisal and fossae stain
A1	A1	None needed	Purple/Blue as necessary Brown or red-brown for the fissures
A2	A2	None needed	
A3	A3	None needed	
A3.5	A3	Use A3.5	
A4	A3	Use A4	<b>Note:</b> ST 6 shades zirconia (A1/A2/A3/B1/B3/C2) + upcera 16 shades stains kit = VITA 16 shades restorations
B1	B1	None needed	
B2	B1	Use B2	
B3	B3	None needed	
B4	B3	Use B4	
C1	A1	Use C1	
C2	C2	None needed	
C3	C2	Use C3	
C4	C2	Use C4	
D2	A1	Use D2	
D3	A2	Use D3	
D4	C2	Use D4	

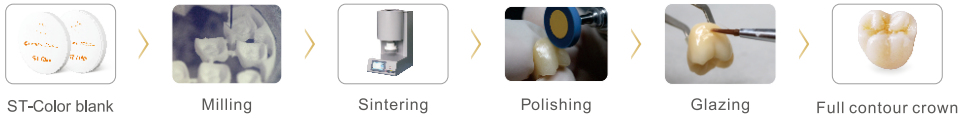
## Things to note when using Upcera glazing kits:

- If the shade is too light with the first staining, you can deepen the color effect with a second application (more chroma)
- With irregular use, the stains and glaze paste may separate a little. Before each use, the glaze and stains should be mixed thoroughly with a mixing knife or glaze pen.
- It is important to keep the glaze pens clean by dipping in the universal liquid and drying before use.
- You can adjust the consistency of the glaze paste by mixing with extra universal liquid. For any given firing temperature, a thicker glaze paste will increase the value slightly.
- You can increase the value (brightness) slightly by raising the firing temperature and extending the hold time, but still keeping the temperature to no more than 840 deg C
- To lower the value (brightness) slightly, glaze a second time.



# ST-COLOR

## Procedures



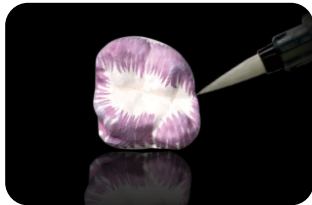
### Step 1 Coloring ( Recommended )

Using this method, having chosen a pre-colored zirconia disc that is closest to the required color for your case, stain the incisal and fossa areas as required.

#### Incisal Coloring ( T0 liquid )



Brush 6 - 8 times from half way to the incisal surface with T0 coloring liquid



Brush 1 – 2 times onto the incisal surface and marginal ridges with T0 coloring liquid

**Tip**

Magic Liquid T0 is used to make incisal area more translucent

#### Fossa coloring ( O1/O2 liquid )



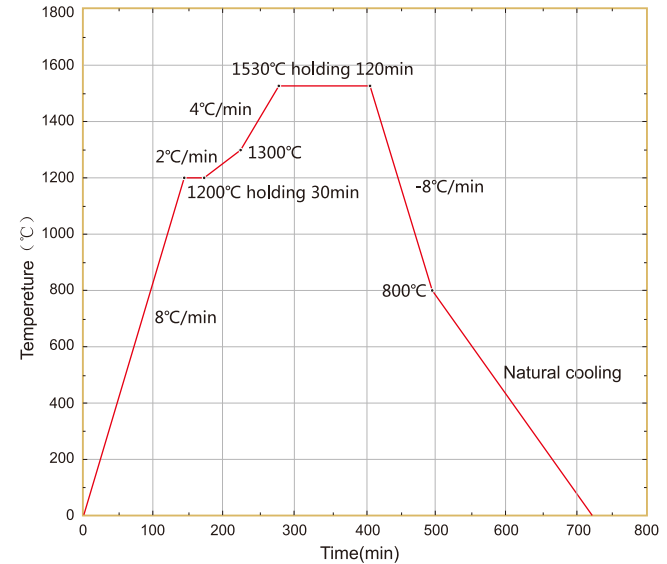
Paint the occlusal surface with O1/O2 liquid 1-2 times.

**Attention**

- Clean all remaining zirconia powder from the restoration either with a dry brush or carefully using a dry and oil free airline, before coloring.
- T0 coloring liquid cannot be used on the bridge connector area; keep to incisal areas only.
- To avoid too deep a color after sintering, use the minimum O1 and O2 stains in the fossa areas.
- Make sure the restoration is fully dried before sintering.

### Step 2 Sintering

The ideal sintering temperature for ST color is 1530°C, holding for 2 hours



### Step 3 Grinding (refer to P4)

### Step 4 Polishing (refer to P5)

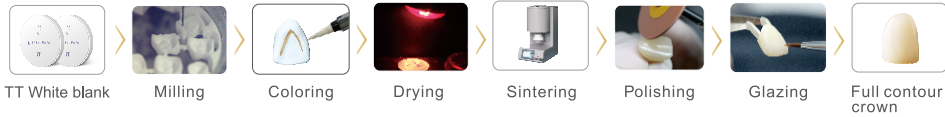
### Step 5 Sandblasting (refer to P5)

### Step 6 Glazing (refer to P5)



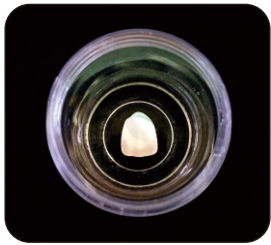
TT white

Procedures



Step 1 Coloring ( 3 Methods )

A. Dipping



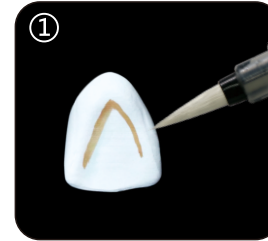
- ① Dip the restoration into the A2 coloring liquid for 2 minutes.
- ② Remove from the coloring liquid and dry carefully with a tissue.

Attention

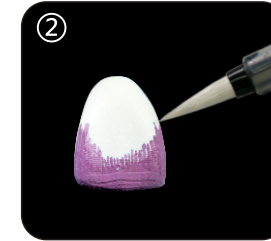
Place the restoration into coloring liquid slowly to avoid any bubbles which may appear around the restoration, they may influence the color conformity of the restoration; Vibrating the restoration while immersing also helps to clear any bubbles that appear on the surface.



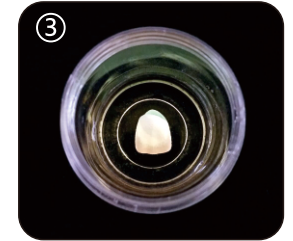
B. Brushing+ Dipping



Paint O1 or O2 on the lingual side and occlusal fossa 1-2 times

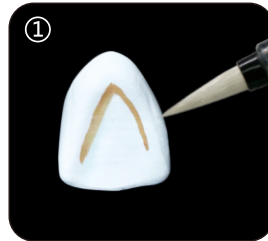


Brush G1 or G2 onto the incisal area 1-2 times

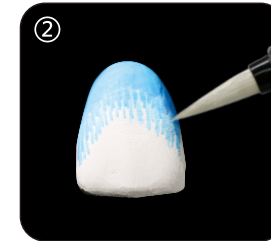


Fully immerse the crown into A2 coloring liquid for a minimum of 2mins

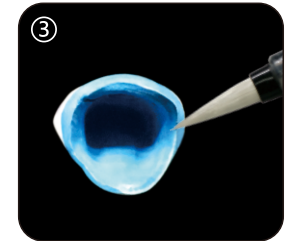
C. Brushing



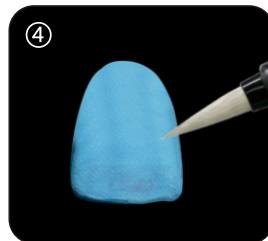
Paint O1 or O2 on the lingual side and occlusal fossa 1-2 times



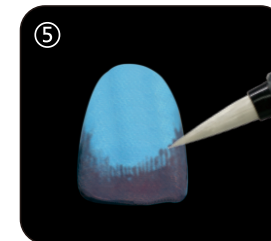
Brush A2 onto the body area and the cervical third twice



Brush A2 inside the whole crown twice



Brush A1 onto the body area and cervical third twice



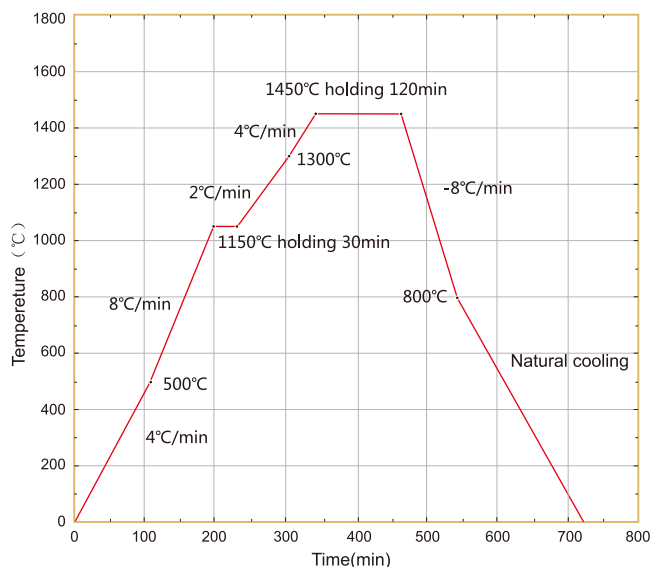
Brush G1 or G2 onto the incisal area 1-2 times

Attention

Do not load the brush too much when staining the incisal and occlusal areas, to avoid too deep a color.

## Step 2 Sintering

The ideal sintering temperature for TT white is 1450°C, holding for 2 hours



### Attention

The real temperature inside the furnace should be 1450°C to get a perfect result.

## Step 3 Grinding (refer to P4)

## Step 4 Polishing (refer to P5)

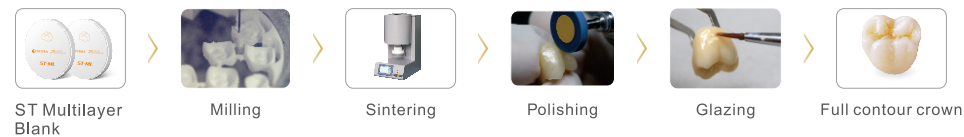
## Step 5 Sandblasting (refer to P5)

## Step 6 Glazing (refer to P5)

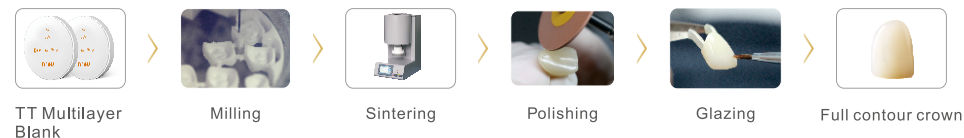
# ST-ML/TT-ML

## Procedures

### ST-ML

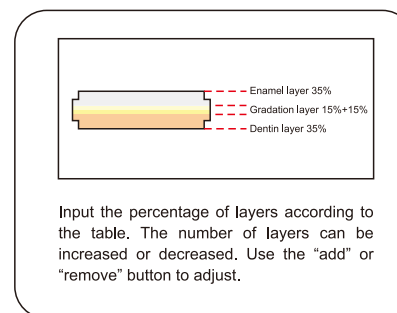


### TT-ML

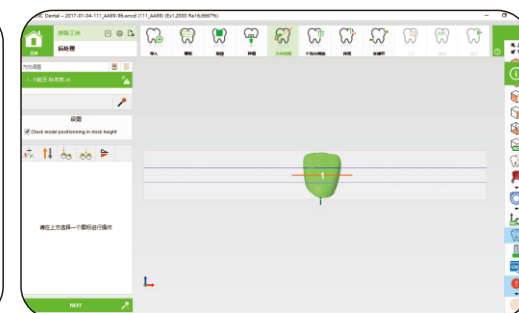


## Step 1 Designing

When creating the CAM file, you can see the natural layering shade on the crown after adding the layer information. This makes sure the incisal, cervical, and body areas are correctly balanced after sintering. For example: worknc software



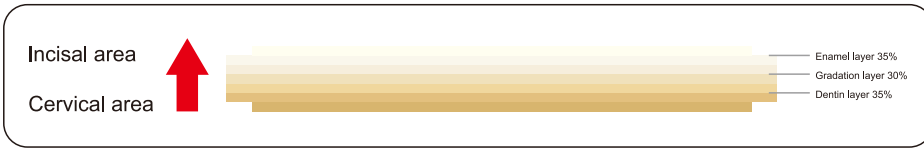
Input the block information.



Check if the incisal and cervical areas are placed correctly, and make adjustments as necessary.

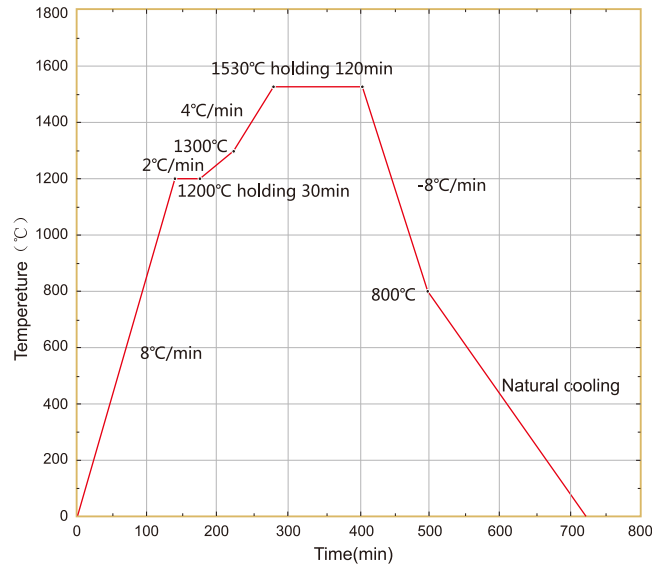
**Step 2 Milling**

When milling Multilayer discs, first check that the incisal surface is upper side.



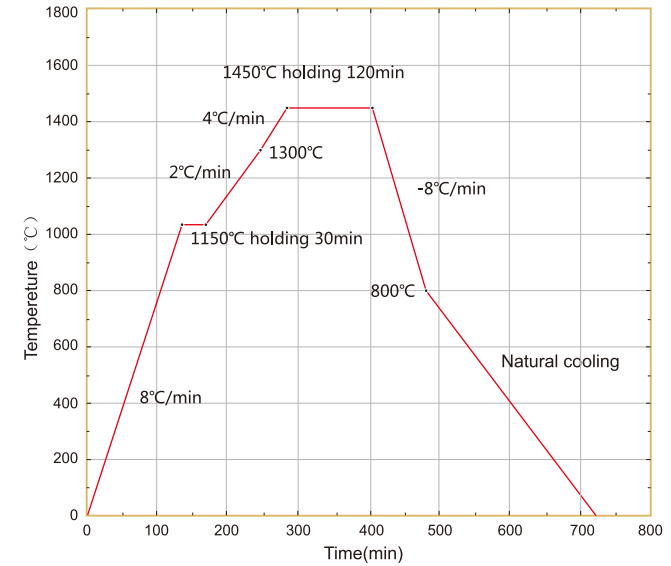
**Step 3 Sintering**

The ideal sintering temperature for ST-ML is 1530°C, holding for 2 hours

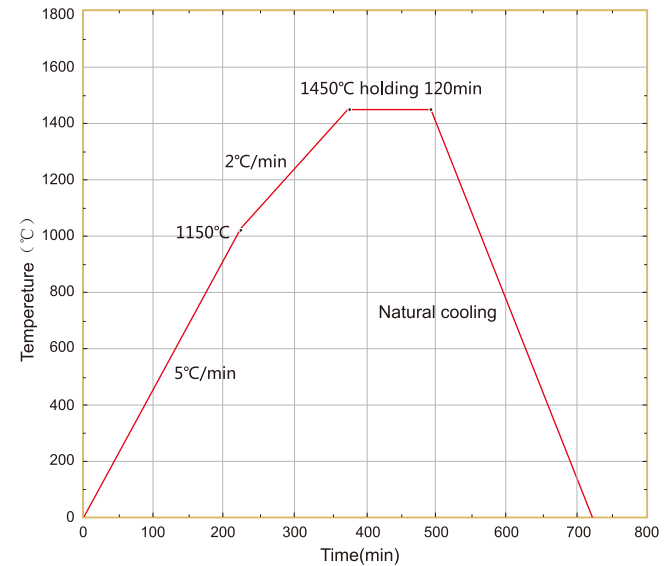


The ideal sintering temperature for TT-ML is 1450°C, holding for 2 hours

Sintering schedule 1



Sintering schedule 2



- Step 4 Grinding (refer to P4)
- Step 5 Polishing (refer to P5)
- Step 6 Sandblasting (refer to P5)
- Step 7 Glazing (refer to P5)