Amber® Mill – **QUICK USER GUIDE**

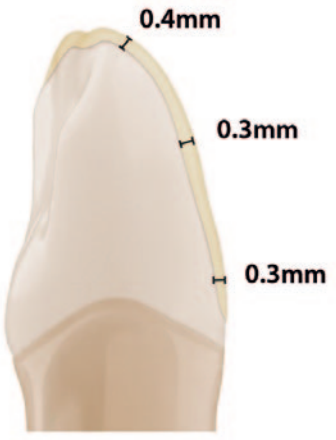
INDICATIONS

- Inlays
- Onlays
- Veneers
- Anterior Crowns
- Posterior Crowns
- 3-Unit Bridge (up to the second premolar)

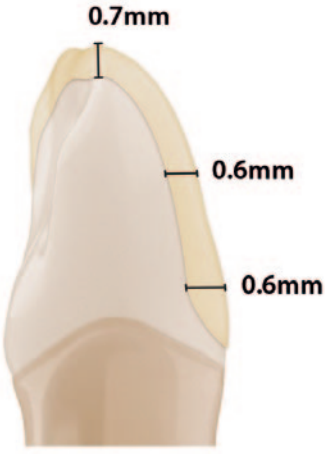
CONTRAINDICATIONS

- Very deep subgingival preparations
- Maryland bridges
- Patients with severely reduced residual dentition
- Bruxism
- Cantilever bridges

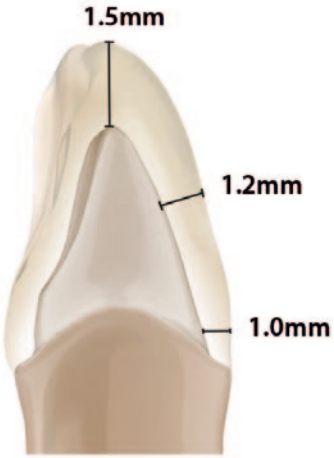
PREPARATION GUIDE



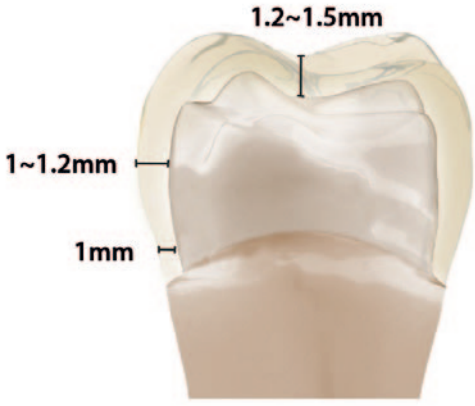
Thin Veneer



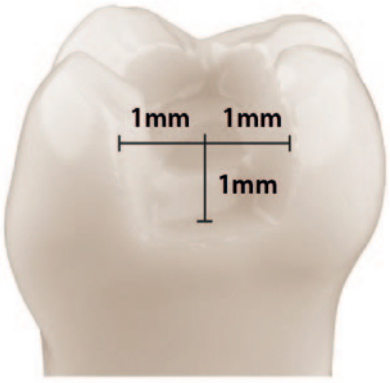
Veneer



Anterior Crown



Posterior Crown



Inlay/Onlay

CEMENTATION



After try-in, etch the inner surface with 5% hydroflouric for 20 sec. (4% for 30 sec. is also available)



Rinse out with water and blow air to dry.



Apply silane to the surface and refer to manufacturer instructions.



Use self-adhesive resin cement to bond.

TIP!

- Keep to the recommended etching times; exceeding the time can cause fragility.
- Refer to the manufacturer's recommendations on the use of silane.

BLOCK SELECTION

Processing Technique & Indications



Staining technique
HT+ / HT / MT / LT



Cut-back technique
HT+ / HT / MT / LT / MO



Layering technique
HT / MT / LT / MO



Indications								
Table Tops	Thin Veneers	Veneers	Inlays	Onlays	Partial Crowns	Anterior Crowns	Posterior Crowns	3-Unit Bridges
High Translucency+								
High Translucency								
Medium Translucency								
Low Translucency								
						Medium Opacity		

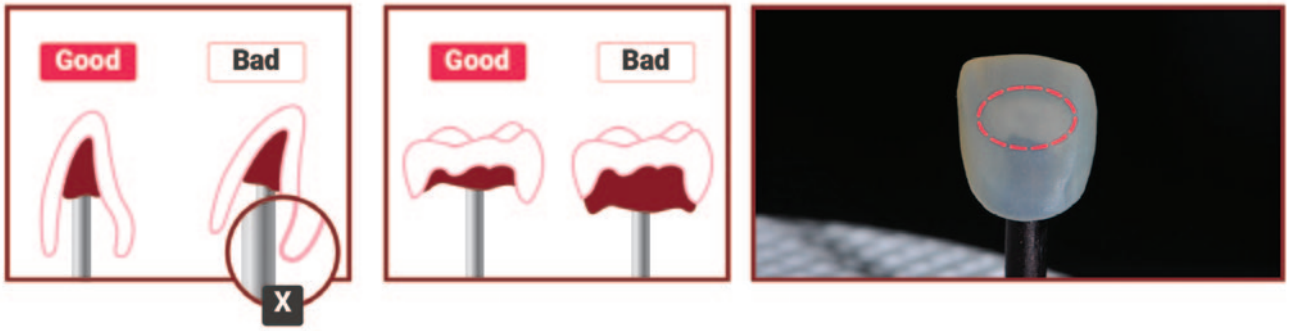
TIP!

- For use in anterior and premolar bridge restorations can be expected.

CAD/CAM PROCESS



BEFORE CRYSTALLIZATION



Please Make Sure to Check the Furnace Before Using the Amber® Mill

The firing parameters provided in this document are reference example used to evaluate the performance of Amber® Mill. Actual results may vary depending on your clinical environment and the condition of your furnace. We strongly recommend verifying and optimizing the settings for each individual furnace prior to use.

1. When using the furnace for the first time or applying a new furnace:
Each furnace has different heat distribution characteristics.
Pre-verification procedures are mandatory before applying the given firing parameters directly.
Please use a temperature verification tool such as a *Amber Mill Calibration Kit to confirm temperature accuracy inside the furnace.

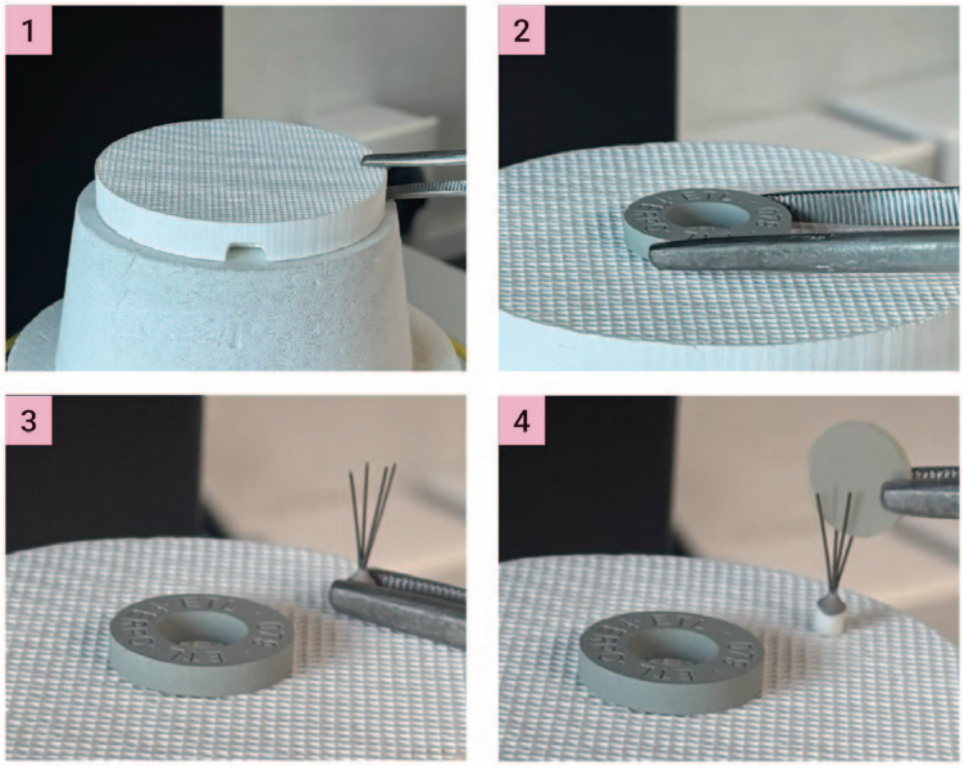
2. When using multiple furnaces at the same location:
Even within the same location, temperature variations may occur between different furnaces.
Please ensure separate verification and setup for each unit.

3. Periodic calibration is recommended:
To maintain consistent condition, perform periodic calibration and verification using tools such as *Amber Mill Calibration Kit.(heat emission characteristics of furnaces may change over time)
Recommended frequency: At least once every 6 months.

The firing schedule provided here is not an absolute standard applicable for any equipment or environment. Users should check and adjust the conditions to suit their own operating environment.

FURNACE CALIBRATION USING THE AMBER MILL CALIBRATION KIT

① Place the MCK (Measurable Calibration Kit) and Test Strip on the honeycomb tray as shown in the reference image.



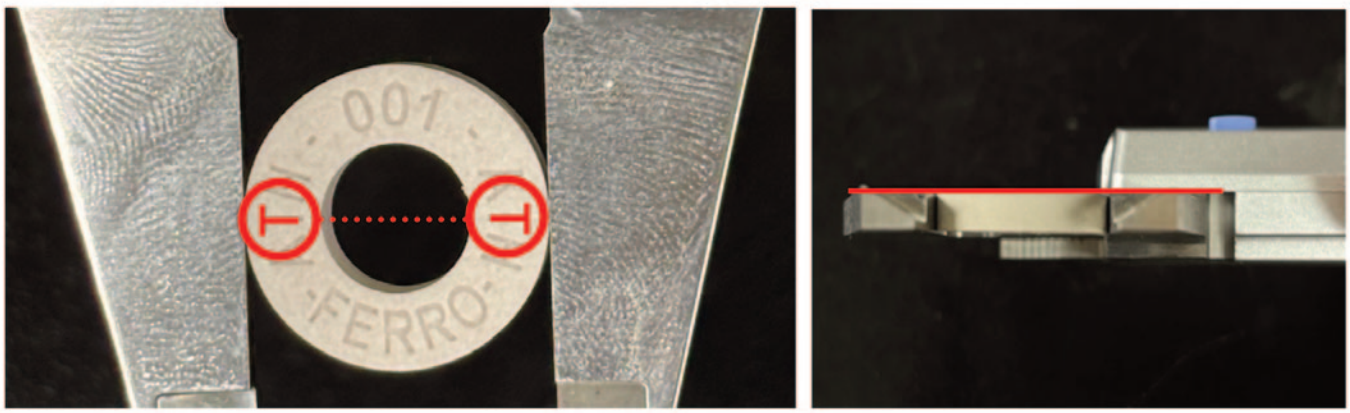
② Select the LT program (860 °C) and start the firing cycle.

* Since the MCK provides the most stable results at 860 °C, it is recommended to begin calibration at this temperature.

	LT		
Dry			--:--
Close			06:00
Preheat	430 °C		00:00
Temperature 1	860 °C	60 °C/min	15:00
Temperature 2	690 °C	60 °C/min	--:--
Temperature 3	___	___ °C/min	--:--
VAC (off/level/hold)	860 °C	100%	15:00

③ After the firing cycle is complete, measure the diameter of the MCK ring using a vernier caliper.

※ When measuring the ring diameter, ensure the measurement is taken between the "T" marks at the top of the ring.



④ Compare the measured diameter with the conversion chart to determine the temperature deviation between the programmed temperature and the actual furnace temperature.

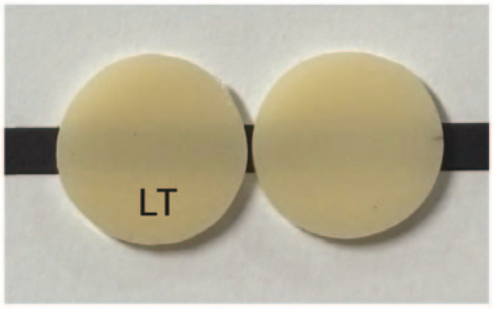
※ Temperature setting method (when fired at 860 °C)

No.	MCK Diameter	Conversion value (℃)	Temperature Difference	Furnace set-ting value(℃)
1	19.97	857	- 3℃	863
2	19.95	861	+ 1℃	859
3	19.93	866	+ 6℃	854

※ MCK Conversion Table.

No.	Measurable Calibration ring	
	MCK Diameter	Temperature (℃)
1	20.00	849
2	19.99	852
3	19.98	855
4	19.97	857
5	19.96	860
6	19.95	861
7	19.94	863
8	19.93	866
9	19.92	868
10	19.91	870

⑤ Compare the fired Test Strip with the LT Calibration Strip to cross-verify the translucency result.

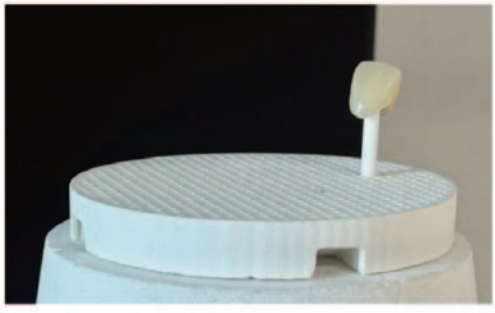


⑥ If the translucency of the Calibration Strip differs from the Test Strip, adjust the final firing temperature and repeat the firing using new MCK and Test Strips. (Refer to page 9 for details.)

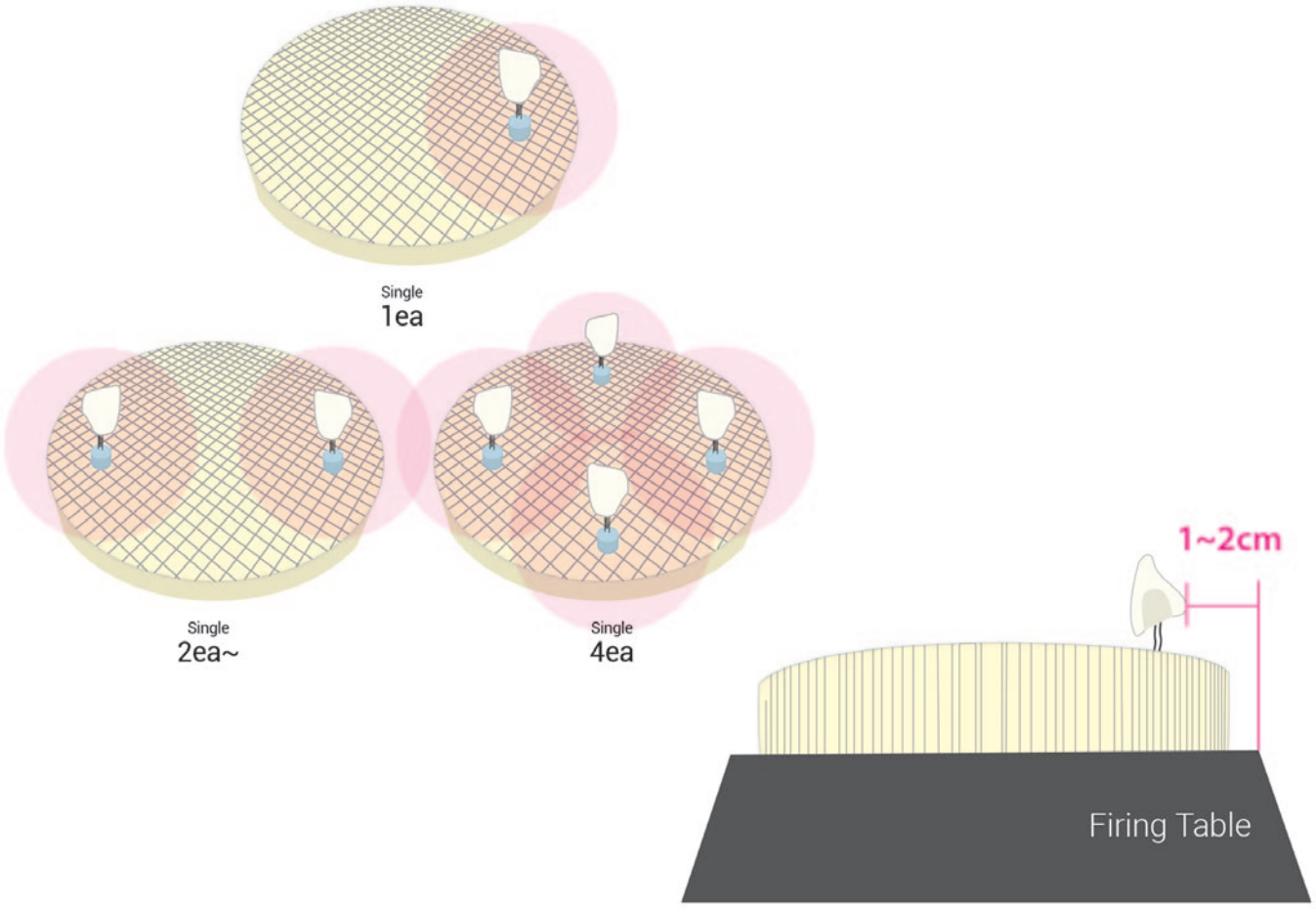
* If further confirmation is required after temperature adjustment, fire a Test Strip using the HT schedule and verify it with the HT Calibration Strip.



⑦ Once the desired translucency is achieved, refer to the manufacturer's recommended translucency firing schedules (HT+, HT, MT, LT, MO).
These can then be fine-tuned according to your furnace's characteristics.
Enter the optimized schedule and proceed with the final firing of your restorations.



FURNACE PLACEMENT TIPS



TIP!

The position of the transmitters may vary slightly depending on their placement within the furnace.
When placing the prostheses, make sure they are evenly spaced to ensure consistent firing results.
If you're firing a single prosthesis, place it near the edge of the firing table as shown in the image above.
For four prostheses, arrange them in a cross pattern (north-south and east-west).
Always keep a distance of 1–2 cm between the prostheses and the outer edge of the firing table.

RECOMMENDED HEAT-TREATMENT

Please make sure your furnace is calibrated to reflect the right temperature.
Calibration every 6 months is recommended. Amber Mill calibration kit is recommended.

DEKEMA Austromat 624i [1)]

	HT+			HT			MT			LT			MO		
Dry			–:–			–:–			–:–			–:–			–:–
Close			06:00			06:00			06:00			06:00			06:00
Preheat/°C	430		00:00	430		00:00	430		00:00	430		00:00	430		00:00
Tem.1/°C	840	60/min	15:00	850	60/min	15:00	855	60/min	15:00	860	60/min	15:00	870	60/min	15:00
Tem.2/°C	690	60/min	–:–	690	60/min	–:–	690	60/min	–:–	690	60/min	–:–	690	60/min	–:–
Tem.3/°C	—	—/min	–:–	—	—/min	–:–	—	—/min	–:–	—	—/min	–:–	—	—/min	–:–
VAC (off/level/hold)	840	100%	15:00	850°C	100%	15:00	855	100%	15:00	860	100%	15:00	870	100%	15:00

* The firing chamber must not be opened during long term cooling.

1) Austromat 654 / 624i is a registered trademark of DEKEMA.

IVOCLAR VIVADENT PROGRAMAT CS [2)]

B °C	S min.	t↗ °C / min.	T °C		H min.	VAC. 1 / VAC. 2 °C		L °C	tL*
430	6:00	60	HT+	840	15:00	HT+	550/840	690	0
			HT	850		HT	550/850		
			MT	855		MT	550/855		
			LT	860		LT	550/860		
			MO	870		MO	550/870		

* The firing chamber must not be opened during long term cooling.

2) PROGRAMAT CS is a registered trademark of IVOCLAR VIVADENT.

VITA VACUMAT [3)]

Predry °C	→ min.	↗ min.		↗ °C / min.	T °C		→ min.	VAC min.		↘ °C *
430	6:00	HT+	6:50	60	HT+	840	15:00	HT+	21:50	690
		HT	7:00		HT	850		HT	22:00	
		MT	7:05		MT	855		MT	22:05	
		LT	7:10		LT	860		LT	22:10	
		MO	7:20		MO	870		MO	22:20	

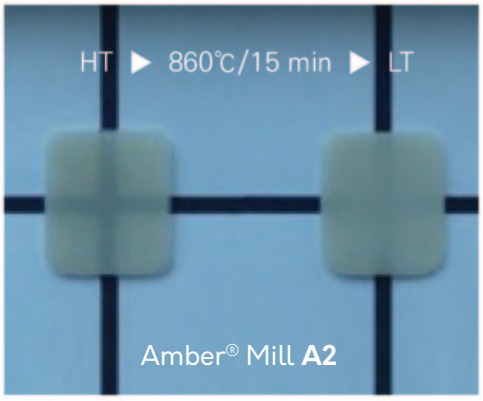
* The firing chamber must not be opened during long term cooling.

3) VACUMAT is a registered trademark of VITA.

RE-FIRING

Change of Opacity(translucency) by Re-Firing





- Do not exceed 885°C as the maximum temperature for any heat treatment, including re-firing.
- The refiring schedule uses the same temperature as the initial firing schedule.
  (HT+: 840°C / HT: 850°C / MT: 855°C / LT: 860°C / MO: 870°C)
- Use Amber Mill VCK* to measure the actual furnace temperature during the crystallization process. Based on the measurement results, adjust the maximum temperature of the crystallization schedule accordingly. * VCK (Visual Calibration Kit)

CHARACTERIZING & GLAZING (Can be done in the same time of crystallization)



Ensure the surface is clean by removing bubbles. At this time, it is also necessary to work while applying water.

