EN

Lithium Disilicate-Based Press on Zirconia

Amber® LiSi-POZ

User's Manual

www.hassbio.com

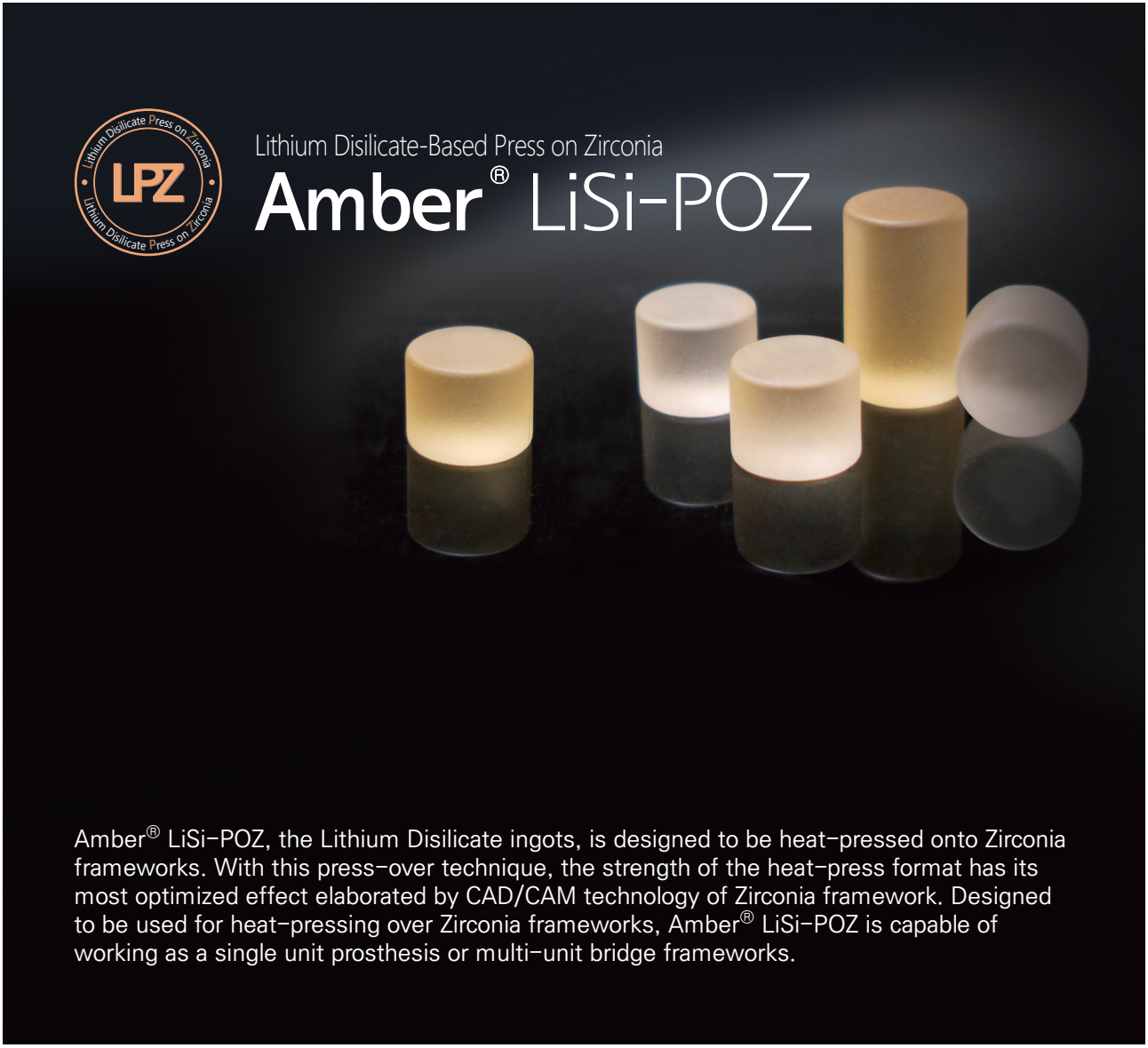
CE 2195 FDA RX Only

HASS Human-Aid System Supplier

Amber® LiSi-POZ User's Manual

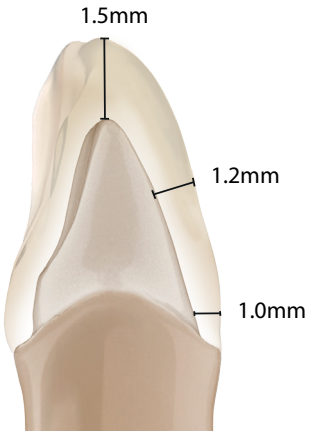
Table of Contents

1	Introduction	3
2	Preparation guide	4
3	Zirconia framework	5
4	Wax-up	9
5	Sprueing	10
6	Ingot Selection	11
7	Investing	12
8	Burn-Out	13
9	Heat-Pressing	14
10	Divesting	15
11	Characterizing	16
12	Staining & Glazing	17
13	Completion	18
14	Indications / Contra-Indications	19
15	Product Line-up	20

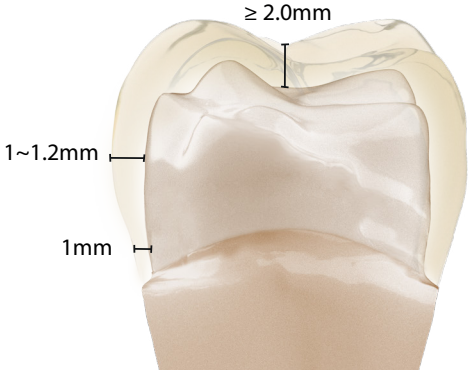


Amber® LiSi-POZ, the Lithium Disilicate ingots, is designed to be heat-pressed onto Zirconia frameworks. With this press-over technique, the strength of the heat-press format has its most optimized effect elaborated by CAD/CAM technology of Zirconia framework. Designed to be used for heat-pressing over Zirconia frameworks, Amber® LiSi-POZ is capable of working as a single unit prosthesis or multi-unit bridge frameworks.

2. Preparation Guide



Anterior Crown



Posterior Crown

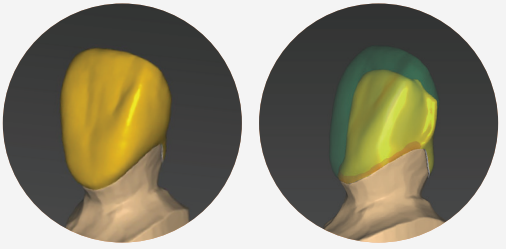
The minimum thickness of zirconia framework should be more than 0.6mm

TIP!

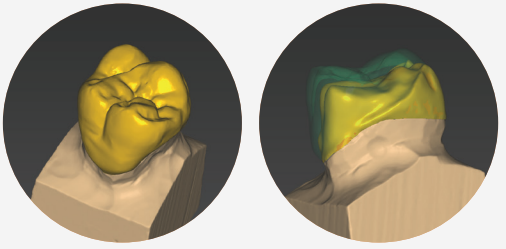
- Make the prep tooth surface in the most rounded shape possible.(Deep chamfer margin, rounded shoulder margin).
- Maintain the most even margin thickness possible.

3. Zirconia framework

- Once the restoration shape is finished in CAD software, complete zirconia framework design with the cut-back technique.
- In selecting the shade for zirconia framework, please select one step brighter one than the shade you planned for the final restoration.



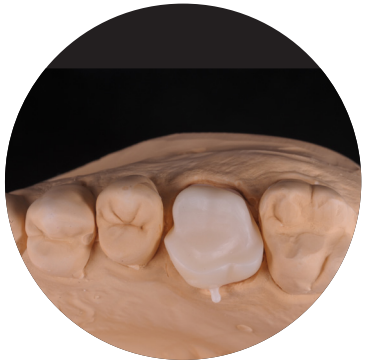
Anterior Crown



Posterior Crown

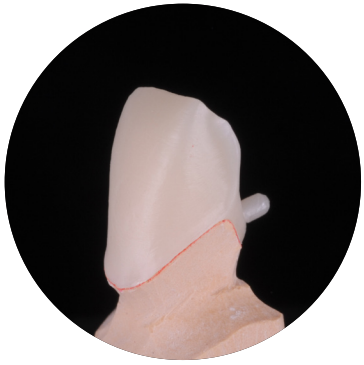
TIP!

Please keep the minimum thickness of cut-back to 0.6mm



- Trim the surface of zirconia framework so that edge areas would be a rounded shape instead of sharply angled.

- Keep the margins clean, not leaving the surface rough and get the space for inserting Amber LiSi-POZ.



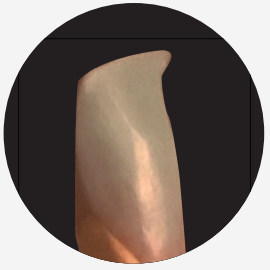
- Zirconia framework should be treated by sandblasting, which entailed spraying 50~80μm of alumina(Al_2O_3) powder at a pressure of 2 bar and sintered at 1050℃ for 15 minutes to stabilize zirconia framework.

TIP!

Thermal stabilizing ※ The schedule table below is for HASS Zirtooth. Please refer to the firing schedule for each brand.

Starting Temp.	Up / Dry	Heating Rate	Max Temp.	Holding Time	Vacuum
500℃	1 min	65℃/min	1,050℃	15 min	NO

Under cut design of framework creates mechanical adhesion which enhances the bond strength.



Incisial edge

Occlusal edge

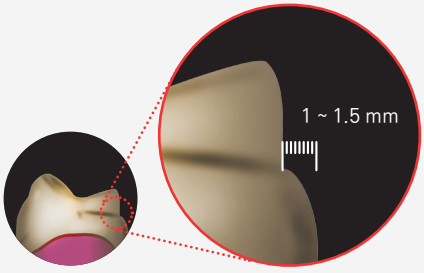
Grooved surface

TIP!

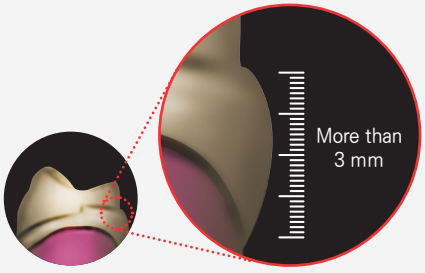
In the anterior, pay attention to the occlusal surface during design.

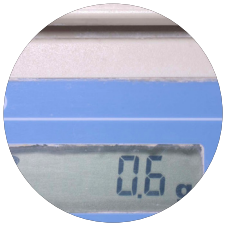
Good | Acceptable | Not recommended

For the stability of press restorations, consider 1~1.5mm width in designing.



For decreasing tensile strength, make sure the ledge height on the lingual side is more than 3mm.

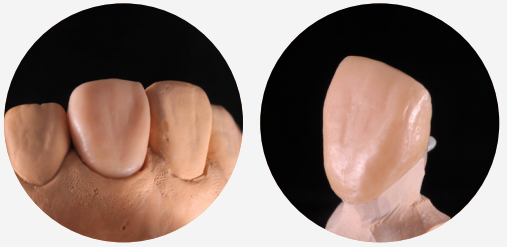




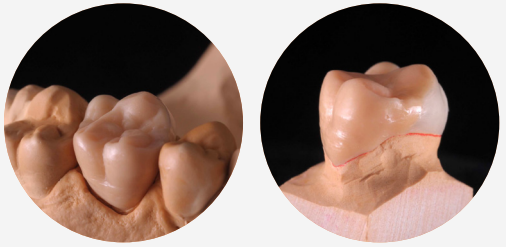
After firing, measure the overall weight of zirconia framework. (It is important to decide the size of ingots)

4. Wax-up

Complete the final shape of restorations. Remember to use combustible wax when doing a burn-out process.



Anterior Crown



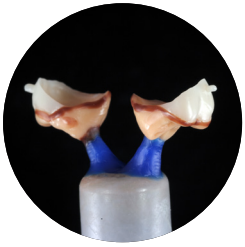
Posterior Crown

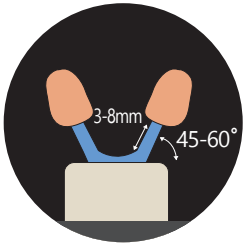
TIP!

Form shapes while ensuring the wax thickness is not less than 0.6mm

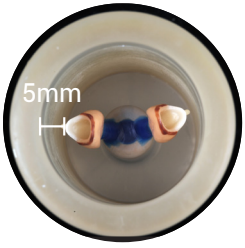
5. Sprueing

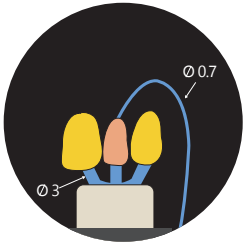
Attach the sprues in the direction of flow for ceramic so that ingot can flow smoother during pressing.





Connect the object and investment ring base at an ∠45~60° angle, at a length of 3~8mm, using □3~3.5 mm of spruing wax.





Keep a distance of at least 5 mm between the wax-up objects and silicone ring.

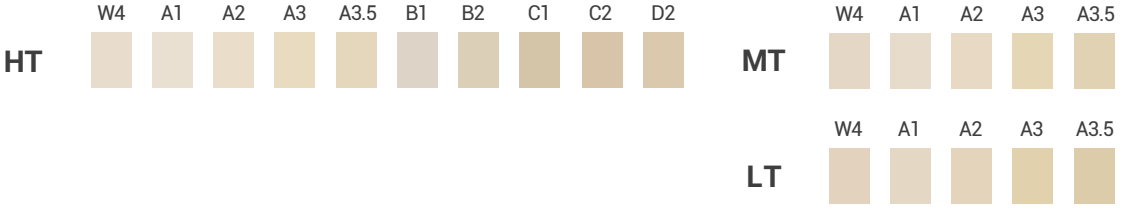
It is recommended to attach sprueing wax to each crown and it aids gas ventilation if air vent is attached in the thick part.

When finishing sprueing work, measure the total weight and subtract the weight of zirconia framework to decide the proper ingot size.

Ingot	Wax Weight	Invest. Ring
R10 1 ea(3 g)	~ 0.7 g	100 g
R15 1 ea(4.5 g)	0.7 ~ 1.2 g	200 g
R20 1 ea(6 g)	1.2 ~ 1.4 g	200 g

6. Ingot Selection

Color Chart



Conversion Chart

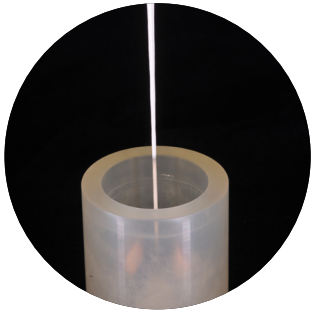
		Amber® LiSi-POZ				
		LT 0 / HT 0 (W4)	LT 1 / HT 1 (A1)	LT 2 / HT 2 (A2)	LT 3 / HT 3 (A3)	LT 4 / HT 4 (A3.5)
Vita Classic Shade	BL	BL1 / BL2				
	A	A1	A1 / A2	A2 / A3	A3.5	A4
	B	B1	B2	B2 / B3	B4	B4
	C		C1	C2 / C3	C3	C4
	D			D2 / D3	D3	D3

TIP!

- Please choose one step brighter shade than the one you actually plan for the final restoration. (This prevents restoration from turning greyish during staining.)
- Please choose the ingot which is most closely matched with the adjacent teeth.

7. Investing

After mixing powder and liquid by hand for 20 seconds, mix it again with vacuum mixer. If it has hardened in the pressurizer after investing, strength and surface roughness are enhanced during pressing.



TIP!

For details, please refer to the IFU from the investment material manufacturer.

Phosphate-based investment material for ceramic press

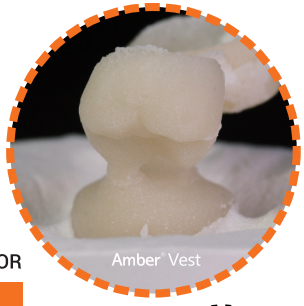
Amber® Vest

Packaging: KIT POWDER + EXPANSOR

Amber® Vest POWDER
5kg (50X100g)

+

Amber® Vest EXPANSOR-B
LIQUID (1,000ml)



Comparison of Reaction Layer Generation on Surface

8. Burn-Out

- Remove the silicone ring only after the investment is completely set.
- Trim the upper side flat and place the investment ring in the preheating furnace.
- The lower side of the investment should face down. Pay attention to ensure good drainage of the melted wax.

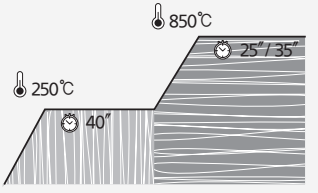
TIP!

Burn-out temperature and time should be according to the manufacturer`s guidelines.

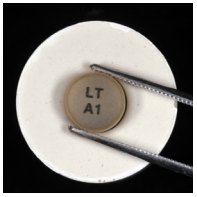
ex) Phosphate-based investment material for ceramic press

Amber® Vest

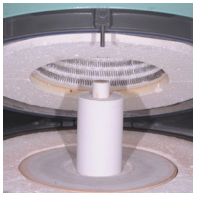
The highest temperature : 850℃



9. Heat-Pressing



Make sure to put the ingot and plunger into the ring only at room temperature. At this time, printed side of the ingot should face up. Check if the ring bottom is placed flat.



Proceed to pressing the ingot at the appropriate temperature.

Pressing Schedules

	Translucency	Size	Shade	Investment Ring	Starting Temp.	Heating Rate	Max Temp.	Holding Time	Vacuum On	Vacuum Off
*Horizon	HT	R10(3 g) / R15(4.5 g)	W4, A1, A2, A3, A4	Small (100 g)	700□	45℃/min	915℃	15 min	700℃	915℃
	LT									
	HT	R20 (6 g)		Large (200 g)				30 min		
	LT									

*Horizon is a registered trademark of Shenpaz.

	Translucency	Size	Shade	Investment Ring	Starting Temp.	Heating Rate	Max Temp.	Holding Time	Press duration	Press level
*Austromat Press-i-dent	HT	R10(3 g) / R15(4.5 g)	W4, A1, A2, A3, A3.5	Small (100 g)	700℃	45℃/min	930℃	20 min	Auto1	6
	LT									
	HT	R20 (6 g)		Large (200 g)				30 min		
	LT									

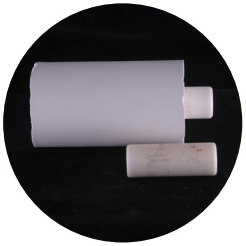
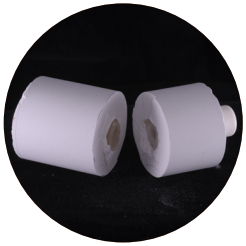
*Austromat Press-i-dent is a registered trademark of DEKEMA.

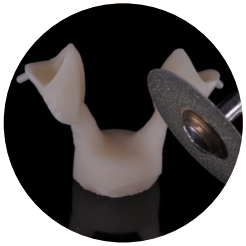
TIP!

There may be a difference between the temperature indicated on the furnace and the actual temperature.
If problems occur after pressing, find out the optimal pressing temperature with the following process.
- Bubbles or discoloration on restoration surface : Decrease the max temperature by 5~10˚C degrees and try again.
- If pressing is not completed : Increase the max temperature by 5~10˚C degrees and try additional 5 minutes of holding time.

Please do not use two of R 10 ingots so that air trap problem would not happen. R20 ingot required.

10. Divesting



First check the length of the plunger and cut the investment with a disk.

Use Al_2O_3 (50 μm) for sandblasting.
4 bar of pressure for general blasting and 2 bar for precise blasting is recommended.
Be cautious and only work after the ring has fully cool down.

TIP!

When cutting sprues, keep getting disk wet with plenty of water so that you can be cautious about micro fracturing.
Refer to the instructions for use of the corresponding investment materials. Just few amount of reaction layer remains on the result at the recommended temperature.

11. Characterizing

Trim sprue and additionally layered areas. Ensure the surface is clean by removing bubbles. At this time, it is also necessary to work while applying water.

After contouring, sandblasting the spot with Al_2O_3 where staining procedures would be done, using 1 bar or less pressure. Apply the stain in accordance with the target shade.

13. Completion

Anterior



Courtesy of CDT. Won Pil Jang and Dr. Hee Kyong Lee, Seoul, Korea

Posterior



Courtesy of CDT. Won Pil Jang and Dr. Hee Kyong Lee, Seoul, Korea

Indication

Single crown
Press over zirconia framework

Multi unit bridge(3-unit / 4-unit)
Press over zirconia framework

Press over implant abutment made of zirconia

Contraindication

- Subgingival abutment
- Press over unsintered zirconia framework
- Bruxism

15. Product Line-up

Amber® LiSi-POZ		Dimensions (mm)	pcs / Pack
	R10	Ø12.7 × 10T	5 Ingots
	R15	Ø12.7 × 15T	3 Ingots
	R20	Ø12.7 × 20T	3 Ingots

* R10 can be used in either a 100 g or 200 g investment ring.

HASS Corporation

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