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Gradient Lithium Disilicate
GLD
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Functionally Gradient Lithium Disilicate CAD/CAM Blocks

Amber® Mill DIRECT

User's Manual

HASS | Human-Aid System Supplier

Amber® Mill DIRECT User Manual

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Functionally Gradient Lithium Disilicate CAD/CAM Blocks

Amber® Mill DIRECT

Amber Mill Direct is a CAD/CAM-based millable Lithium Disilicate Block. Reinforced aesthetically by its gradated translucency, Amber Mill Direct can fabricate restorations that only require to be polished after milling. The translucency of the block may be adjusted by simply baking the glazed restoration.

Speed · Durability · Aesthetics

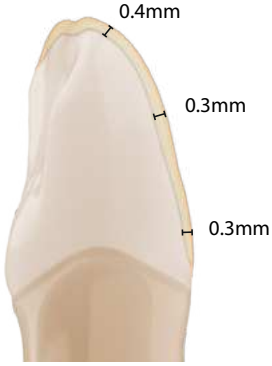
Yao-Lin Tang, DDS, *Pacific Dental Center/ USA*

"Amber Mill Direct has all the advantages of lithium disilicate ceramics. Its power, however, are the beautiful smooth margins without the need for firing – an invaluable CAD block every dentist should have in their office"

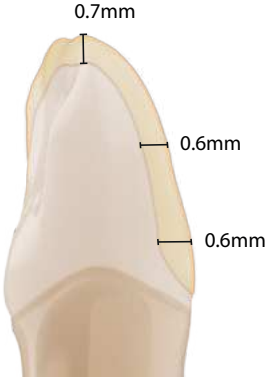
Cristian Petri *Oral Design Clinic / Romania*

"No glaze, no stain, just MILL & POLISH, and the final restoration is ready. Anybody can do it, so don't wait, go for it."

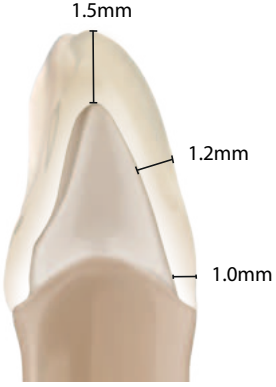
2. Preparation Guide



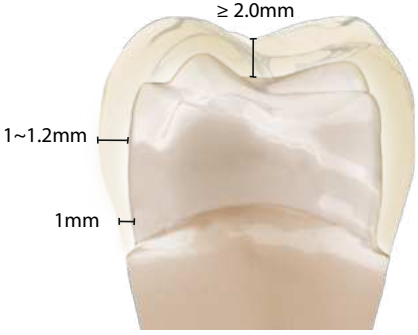
Thin Veneer



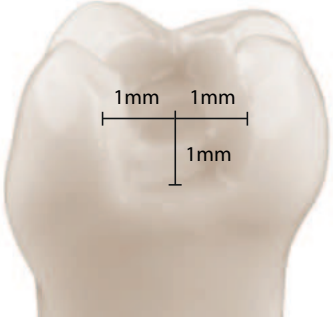
Veneer



Anterior Crown



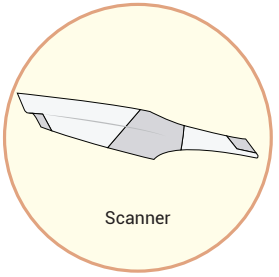
Posterior Crown



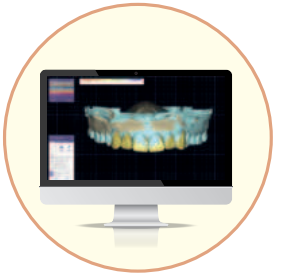
Inlay/Onlay

3. Workflow

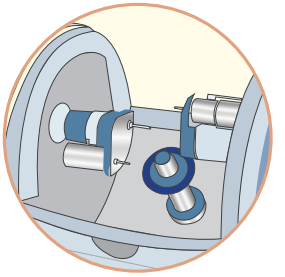
AMD Workflow



Acquire Image

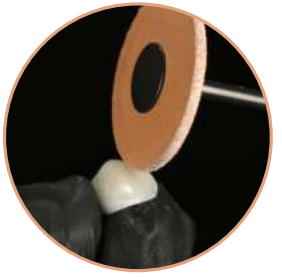


CAD/CAM design



Wet Grind

Sprue Removal



Polish

Complete

TIP!

Amber Glow is a polish optimized for Amber Mill Direct.

For best results, rubber-wheel the area to be polished and apply Amber Glow with reasonably firm pressure at c.10,000 rpm.

AMD Polishing x Amber Glow

4-1. Stain / Glaze

If your restoration requires more characterization, simply stain/glaze to achieve better aesthetic results.

4-2. Controllable transmission (from HT to LT)

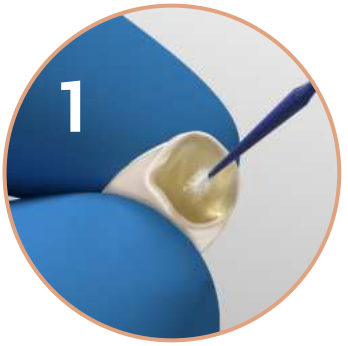
If you want to modify the value and opacity of the restorations, you can change from HT to LT by simply baking over 840°C (max. 860°C).

Stand-by temperature B	Closing time S	Heating rate t_1	Firing temperature T_1	Holding Time H_1	Vacuum 1 V_{11} /V_{12}	Vacuum 2 V_{21} /V_{22}	Long-term cooling L	Cooling time t_l
400℃	3:00 min.	45℃	840℃ (max. 860℃)	1:00 min.	450℃	840℃ (max. 860℃)	690℃	-

*840℃ is the minimum recommended temperature for LT co-firing.

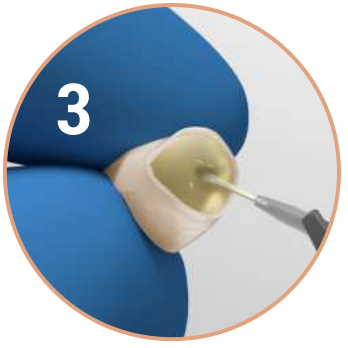
*Programat CS

5. Cementation



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

Rinse out with water and blow air to dry.



Apply silane to the surface and blow air for 20 seconds to dry.

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.

6. Indications / ContraIndications

Indications


Inlays


Onlays


Veneers


Anterior Crowns


Posterior Crowns

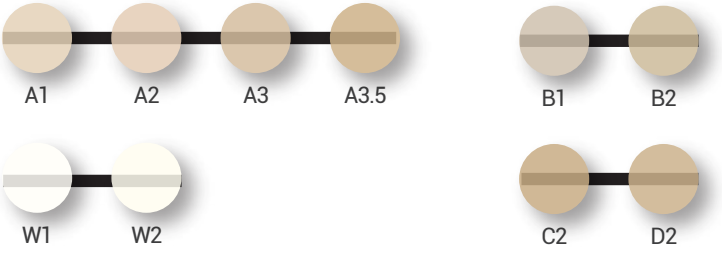
* Occlusal wall thickness ≥ 2.0 mm

Contraindications

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

7. Product Line-up

Available shades

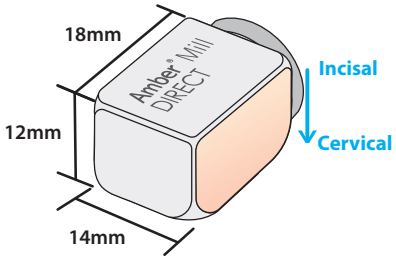


Size	Dimensions (mm)	pcs / Pack
C14 / HT	14 × 12 × 18	5 blocks

8. FAQs

Q How many sizes are available?

A Amber® Mill Direct is available only in size 14.
Dimensions of the block are: 12mm x 14mm x 18mm.



Q As a functional gradient block, Amber Mill Direct has different transparency and strength for each area; how can we distinguish the incisal/cervical area?

A The section where our product logo is marked on the block is the incisal area, which is more transparent, and the opposite side is the cervical area, which is more opaque.
Also, the cervical area has the highest strength as this is where the most stress fractures occur from occlusal forces and the incisal has the lowest strength. (avg.355MPa)
Consider this information when you design your case.

Q How is the gradated effect of your block different from other existing lithium disilicate-based glass ceramics?

A Amber® Mill Direct is uniquely designed to achieve the most natural gradation to resemble how a natural tooth gradates. We coined this unique feature as our GLD technology - Gradient lithium-disilicate technology.

Q Why does the Amber Mill Direct have a curved shape in the notch part of the holder?

A The curved shape allows the targeted area to be reached faster allowing for low bur consumption and faster milling.

Q Is the prep guide the same as the Amber Mill?

A In the case of posterior crowns, we recommend the occlusal wall thickness over 2.0mm if it is not glaze fired.

Q What is the etching condition?

A 5% HF, 20sec recommended (4% for 30sec is also available.)

Q What type of cement do you recommend?

A Conventional self-adhesive resin cement don't need this.

Q What polishing paste do you recommend?

A Amber Glow Polishing pasteis optimized for Amber Mill Direct
for use can be found on page 5.

Q Is the posterior region possible only by polishing?

A We recommend to finish the restoration by polishing up to the recommended indication: single posterior crown.

Q Are there any glazing tip protocols?

A You may bake up to 820 degrees without causing any changes to the transparency while staining/glazing. Refer to the Recommended Heating Schedule for proper glazing techniques.
Note that transparency can change from HT->LT over 840 degrees (max 860°C).
(min. requested temperature for LT co-firing is 840°C)
You can fire 5-10 degrees up if it turns out desired LT. or extend the holding time 2-3min.

Q Is milling in Fast Mode recommended?

A No, Standard Mode is the recommended milling strategy.

Q what about the shade? Do you have any shade guide for Amber Mill Direct?

A our aim is to match the VITA shade guide(classic) either under LED lamp or fluorescent lamps.

* Depending on the user's environment, the feeling of color may vary.

HASS Corporation

77-14, Gwahakdanji-ro, Gangneung-si, Gangwon-do,
KOREA 25452
Tel: +82-70-7712-1300 / Fax: +82-33-644-1231
Customer Support : +82-2-2083-1367
E-mail : hasscorp@hassbio.com
Website : www.hassbio.com

HASS BIO America, Inc.

10400 Eaton place, Suite 220 I Fairfax, VA I 22030
Tel : 703-537-0333
E-mail : info@hassbioamrica.com
Website : www.hassbioamerica.com

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