

Celtra® Duo

Zirconia-reinforced Lithium Silicate (ZLS) Block

Processing Guide

Celtra Duo Blocks' fully crystallized microstructure provides the unique option of dual modes of fabrication, faster processing, exceptional marginal integrity, and increased strength with no shrinkage when fired. *This advanced material has different processing and handling steps than other materials.* Please take a moment to familiarize yourself, and your CEREC® team, with the following tips for successfully processing Celtra Duo Blocks.

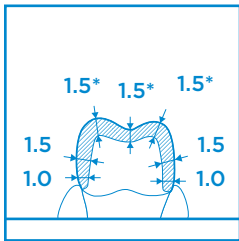
Indications: Single-unit anterior and posterior crowns, inlays, onlays, and veneers.



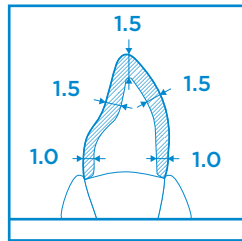
Fabrication Options

Method A	Three-point Bending Strength	Biaxial Strength
Mill ▶ Polish ▶ Seat	210 MPa	413 MPa
Method B		
Mill ▶ Polish ▶ Fire Mill ▶ Glaze (Stain) ▶ Fire <i>Firing times dependent on oven used</i>	370 MPa	560 MPa

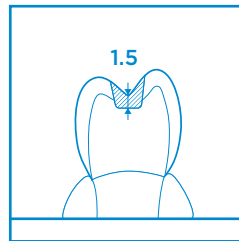
Minimum Wall Thickness *1.5 - 2 mm for restorations that have been polished only



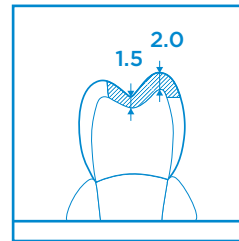
Posterior crowns



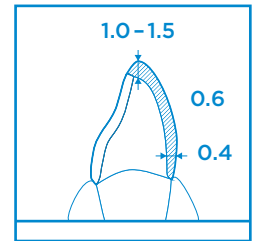
Anterior crowns



Inlays



Onlays



Veneers

Prep Guidelines

Full Crowns

- SHOULDER/CHAMFER (no bevel)
- 1.5 mm occlusal/axial reduction
- Wall angles, 5-6 degrees w/long axis of tooth

Inlays/Onlays

- 1.5-2 mm occlusal/incisal reduction
- Cavity wall angles 5-6 degrees w/long axis
- No undercuts or sharp angles

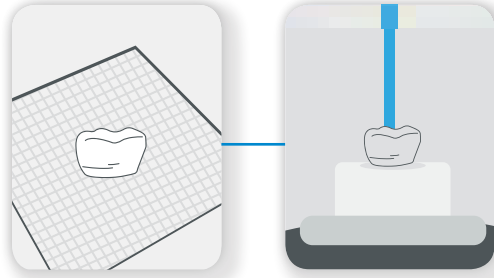
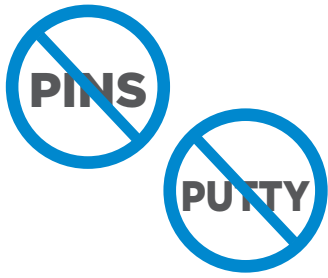
Veneers

- CHAMFER or ROUNDED SHOULDER
- 0.6 mm-labial / 0.4 mm gingival reduction
- 1.0-1.5 mm labiolingual incisal angle reduction (Prep margins should be in enamel)
- Conceal proximal margins and avoid proximal/gingival undercuts

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Important Points about Firing Celtra Duo



Avoid

- No pins, paste, and putty
- No high fusing glazes (HF)
- Do not use items specific to e.max®:
 - 1) e.max oven settings/firing times
 - 2) e.max Metal Firing Tray and Pins
 - 3) Object Fix® Putty (or any other refractory paste)
 - 4) e.max Paint or Spray Glaze

Firing and Glazing (Note: Glaze is optional)

Recommended

- Paint overglaze on crown
- Apply stains as needed
- Position the firing pad on top of the honeycomb tray and place restoration on the pad
- In Speedfire, place crown directly on trimmed firing pad on platform
- Select correct oven settings
- Cool restorations on tray for four minutes post-firing
- Do Not Rush Cool Down!

Okay to use

- Dentsply Sirona Universal Stain & Glaze Kit

Polishing and Adjusting

Important: Because Celtra Duo Blocks quickly become shiny, there is a risk to under polish the material and not achieve its optimal high strength. It is the effect of proper smoothing and polishing that strengthens the material. All steps should be followed. Do Not Overheat.

Sprue Removal

- Use a heatless stone with short strokes at low rpms (no sustained contact)

Polishing

- To remove bur marks and create uniform surface, begin with a coarse grit rubber wheel with light to medium pressure. As with sprue removal, use short strokes at low rpms

- Next, use medium, fine, and extra fine grit rubber wheels in succession with light to medium pressure at between 8-12,000 rpm
- Polish occlusal surfaces with diamond bodies (<60 µm) using light to medium pressure
- Optional: For a higher luster, polish with a fine diamond paste using a stiff Robinson brush at 4-8,000 rpm

Final Step

- Clean crown with soap and water, steam cleaner, or ultrasonic bath
- Dry crown in an air stream

Adjustments

- At try in, adjust proximal contacts using a water-cooled instrument with fine diamond burs or polishers
- Adjust occlusion after cementation

Cementation

Apply Prime&Bond elect™ adhesive for 20 seconds, then evaporate solvent.* (Phosphoric Etching is optional)

Carefully etch the internal surfaces of the restoration for 30 seconds with 5% hydrofluoric acid, then rinse thoroughly and apply Calibra® Silane Coupling Agent.

Apply Calibra® Ceram Adhesive Resin Cement.

Seat restoration. Briefly light cure the cement at the margins by constantly moving the curing tip around the margins for no more than 5 seconds per surface (buccal/lingual) to initiate gel phase. Clean up excess cement.

Light cure all areas for 20 seconds from each direction - buccal, lingual, occlusal. Finish and Polish.

* For restorations thicker than 2.5 mm, cure adhesive prior to seating the restoration. IPS e.max and Object Fix are not registered trademarks of Dentsply Sirona.