



Celtra®

Developed to make a difference

Clinical Guide

THE DENTAL
SOLUTIONS
COMPANY™

 Dentsply
Sirona

Celtra®

Content

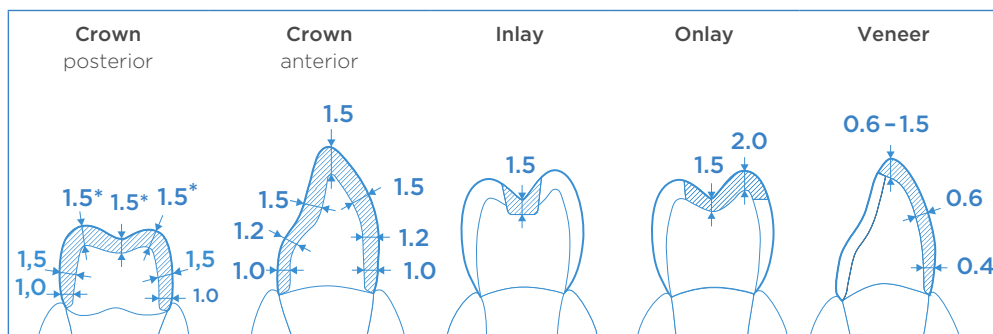
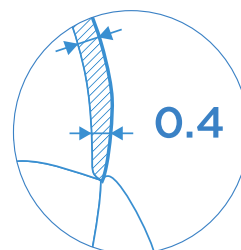
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Preparation Guidelines

Proper reduction of the hard tissue of the tooth during preparation is essential for maximizing the strength, shade and retention of the finished restoration. When preparing anterior or posterior teeth, the anatomical form has to be reduced as shown below. Minimum wall thickness: The following diagram shows the specified minimum wall thickness for each indication. The minimum wall thickness must be retained after all manual adjustments have been made.

! Important application precautions

All internal line angles of a preparation should be rounded. Sharp internally prepared angles have to be softened. Sharp line angles have to be rounded to prevent stress in the restoration. Celtra Press substructure cusp tips and incisal edges must be designed to support the porcelain when veneered.



3 unit bridges including 2nd premolar:

Maximum pontic width:

anterior 11 mm

premolar 9 mm

Connectors for 3 unit bridges need a diameter of 16 mm².

> Principle **Height ≥ Width**

Indications

Inlays and Onlays

A conventional inlay/onlay design is recommended. Do not prepare undercuts. Ensure that the cavity walls form an angle of 5 to 6 degrees with the long axis of the tooth. Ensure that all sharp edges and angles are rounded. In centric and dynamic occlusion, reduce incisally/occlusally by 1.5 to 2 mm. Celtra Press inlays and onlays are ideally delivered by fully adhesive cementing. Alternatively, highly retentive inlay or onlay restorations may be cemented with self-adhesive resin cements.

Crowns and bridges

Ensure that there is an axial reduction of 1.0 to 1.5 mm with the walls forming an angle of 5 - 6 degrees with the long axis of the tooth. In centric and dynamic occlusion, reduce incisally/occlusally by 1.5 mm. The lingual shoulders must be extended at least 1.0 mm into the proximal contacts surfaces. It is recommended to use a shoulder preparation without a bevel: All angles must be rounded, and the preparation surfaces must be smooth. Given the different masticatory forces, the maximum acceptable pontic width is different in the anterior and posterior region. The pontic width is determined on the unprepared tooth.

- › In the anterior region (up to the canine), the pontic width should not exceed 11 mm.
- › In the premolar region (canine up to the second premolar), the pontic width should not exceed 9 mm.

Always observe the relation between width and height as well as the suitable dimensions (**min. 16 mm²**) when designing the connectors. Basically, the following applies: **Height ≥ Width**. Celtra Press crowns and bridges can be delivered by either fully adhesive or self-adhesive cementing.

Veneers

The standard reduction is 0.6 mm for the labial surface and 0.4 mm in the gingival area (since enamel is thinner in this region). Reduce the labio-lingual incisal angle by 0.6 to 1.5 mm. The preparation margins should be located in enamel. A chamfer or rounded-shoulder preparation is recommended for all veneer margins. Proximal extensions must be located far enough proximally to conceal preparation margins from site and to avoid proximal gingival undercuts. Celtra Press veneers are delivered by fully adhesive cementing. Self-adhesive cementing is not recommended for veneer restorations.

Intra-oral procedure after luting

Pictures by Dr. Moritz Zimmermann, University of Munich, Germany

Try-in of finally contoured restoration (Try-in, paste, vaseline, silicone)



1

Occlusal adjustment (60 µm diamond bur)



2

Intra-oral polishing, using a three-step ceramic polishing system (Diapol, EVE)

COARSE GRIT



MEDIUM GRIT



FINE GRIT



3

Final intra-oral result



Initial situation



After preparation



Final result after treatment



Final result one week after treatment

Cementation

Preparation of the Celtra® restoration

- › Clean the restoration with a steam cleaner, in ultrasonic bath or with alcohol.
- › Apply 5% - 9% hydrofluoric acid etching gel (Available separately, see manufacturer's complete Directions for Use) to the interior of the restoration only and allow to soak for 30 seconds.
- › CAUTION: Follow manufacturer's precautions. Do not allow tissue or eyes to come into contact with the acid!
- › Remove the hydrofluoric acid as per the manufacturer's instructions.
- › Dry the restoration in an air stream. It is recommended to silanize the etched surfaces immediately.
- › At chairside, apply silane only to those surfaces required for adhesive cementing.
- › Allow to soak for 60 seconds. If the silane layer is no longer liquid, add more silane. Blow-dry in a powerful air stream. (Recommended material: Calibra® Silane Coupling Agent, available separately, see complete Directions for Use).

Cementing

Depending on the indication for Celtra Press restorations a self-adhesive or full-adhesive cementation can be chosen. Crowns can be cemented with glass-ionomer cement. Compatible time-proven adhesive cementing materials are available as part of the Dentsply Sirona range of products. Cements are available separately.

| | Self-adhesive | Fully adhesive | Glass-ionomer |
|----------------|---------------|----------------|---------------|
| Inlays | R | HR | - |
| Onlays | R | HR | - |
| Veneers | - | HR | - |
| Crowns | HR | HR | R |
| Bridges | R | HR | R |

R = recommended

HR = highly recommended

Technical guide Calibra Ceram

for ceramic, composite and metal-based restorations



CLEAN AND DRY*

Follow dental lab instructions for pre-treatment of the intaglio surface of the restoration.



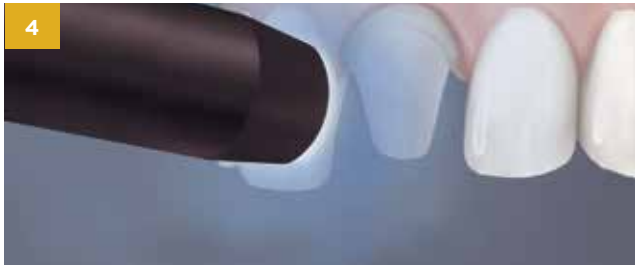
APPLY ADHESIVE TO TOOTH

Apply Prime&Bond active™ adhesive to all cavity surfaces. Avoid pooling. No need for Self Cure Activator when Prime&Bond active adhesive is used with Calibra Ceram Cement. Slightly agitate adhesive for 20 seconds.



DRY WITH CLEAN AIR

Thoroughly dry with moderate air flow for at least 5 seconds.



LIGHT CURE - 10 SECONDS

Special Instruction for use with light transmissible crowns only: Light curing of applied Prime&Bond active adhesive may be accomplished right after seating restoration with cement. See Step 9.



APPLY CALIBRA CERAM CEMENT

Dispense and discard a small amount of material from the dual-barreled syringe. Attach mixing tip. Apply a thin uniform layer of cement to the entire intaglio surface of the restoration.



SEAT RESTORATION

Protect restoration from contamination and movement until the final set of the cement (5 minutes from start of mix or completion of light curing).



CLEAN UP MARGINAL EXCESS - OPTIONAL DUAL CURE

Briefly light cure cement at the margins by constantly moving the curing tip around the margins for no more than 5 seconds. Excess cement will reach a "gelled" state after this brief (<5 second) cure. Excess cement will remain in the "gelled" state for approximately 45 seconds following light exposure. (**Note:** For excess cement cleanup, monowave output LED lights with a single peak output around 470nm are recommended.)

7b

Or see 7b



CLEAN UP MARGINAL EXCESS - SELF CURE

Excess cement will reach the “gelled” state after approximately 1-2 minutes in the mouth, allowing easy removal.

Note: Cement within the crown has not yet set. Do not move, torque, or disturb the crown during cleanup.

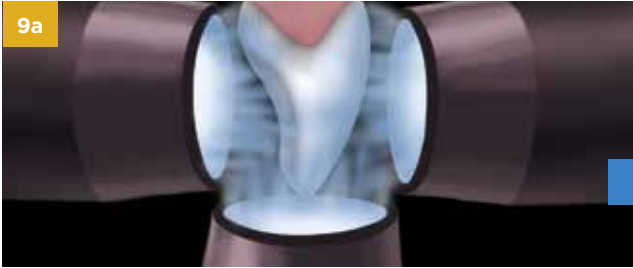
8



REMOVE EXCESS CEMENT

Protect restoration from movement during the gel phase cleanup through the final set.

9a



LIGHT CURE FOR LIGHT TRANSMISSIBLE RESTORATIONS WITH < 2.5MM WALL THICKNESS

Once cleanup is complete, light cure all areas of the restoration for 20 seconds from each direction - buccal, lingual, and occlusal.

OR

9b



SELF CURE AND DUAL CURE FOR NON-LIGHT TRANSMISSIBLE RESTORATIONS

For zirconia-based, metallic, thick or heavily opaqued ceramic or composite, once cleanup is completed and restoration is stabilized, allow Calibra® Ceram Cement to self cure without disturbing for 5 minutes from start of mix. Following all excess removal, exposed margins may be light cured 20-40 seconds to assist restoration stabilization.

10



FINISH

Removal of resin cement flash and finishing of the margins is best accomplished with the Enhance® Finishing System (or Celtra TwisTec Set). See complete Directions for Use.

***CLINICAL TIPS:**

For Feldspathic Porcelain, Leucite-reinforced Ceramic, Lithium Disilicate Ceramic, Zirconia-reinforced Lithium Silicate:

Etch the bonding surfaces with hydrofluoric acid and use Calibra® Silane Coupling Agent on intaglio. If the internal surface of the restoration designed to be silanated has been disturbed during try-in, apply Calibra Silane Coupling Agent following manufacturer’s directions for use. Application of Prime&Bond Elect adhesive on the intaglio is not required after silanation.

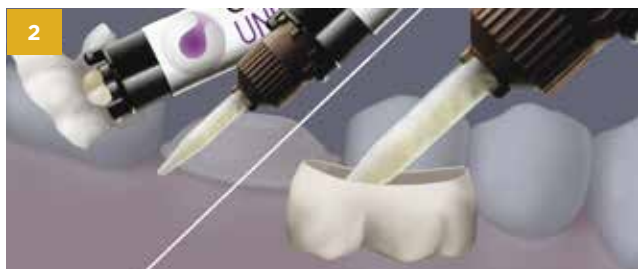
For Zirconia-based Ceramic:

Sandblast, use zirconia primer, if directed. Follow the dental laboratory or restoration manufacturer’s instructions for pre-treatment.



CLEAN AND DRY

Follow dental lab or restoration manufacturer’s instructions for pre-treatment of the intaglio surface of the restoration, if required.



APPLY CALIBRA UNIVERSAL CEMENT

Dispense and discard a small amount of material from the dual-barreled syringe. Attach mixing tip. Apply a thin, uniform layer of Calibra Universal Cement to the entire internal surface of the restoration.



SEAT RESTORATION

Protect restoration from contamination and movement until the final set of the cement (6 minutes from start of mix or completion of light curing).



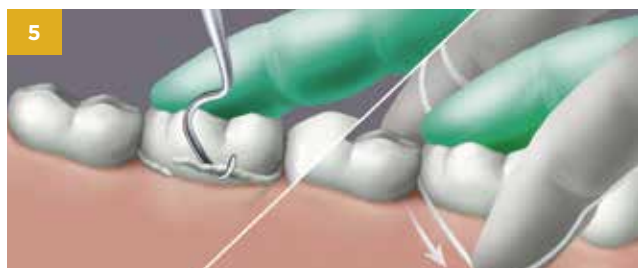
CLEAN UP MARGINAL EXCESS: SELF CURE

The excess cement will reach the “gelled” state after approximately 1-2 minutes in the mouth. Excess cement will remain in the gelled state for approximately 1 minute. (**Note:** Cement within the crown has not yet set. Do not move, torque, or disturb the crown during cleanup.)



CLEAN UP MARGINAL EXCESS: DUAL CURE

Light curing to facilitate cleanup must be accomplished within the first minute following intraoral insertion. Light cure excess cement at the margins by constantly moving the curing light tip around the margins for no more than 5 seconds per surface (buccal and lingual). Excess cement will reach a “gelled” state after this brief cure. The excess cement will remain in the “gelled” state for approximately 45 seconds following light exposure. (**Note:** Monowave output LED lights with a single peak output around 470nm are recommended.)



REMOVE EXCESS CEMENT

Protect restoration from movement during the gel phase cleanup through the final set.



SELF CURE AND DUAL CURE FOR NON-LIGHT TRANSMISSIBLE RESTORATIONS

Light cure margins for 20–40 seconds (in dual cure mode). Allow Calibra Universal Cement to self cure without disturbing for 6 minutes from start of mix.

6b



OR

7



LIGHT CURE LIGHT TRANSMISSIBLE RESTORATIONS

Light cure all areas for 10 seconds from each direction - buccal, lingual and occlusal.

FINISH

Removal of the resin cement flash and finishing of the margins is best accomplished with the Enhance® Finishing System (or Celtra TwisTec Set). See complete Directions for Use.

| PROCEDURE CHART | Self Cure | Dual Cure – Non-Light Transmissible Restorations | Light Cure – Light Transmissible Restorations |
|---|----------------------------|--|--|
| Type of Restoration | All | PFM, Zirconia, Alumina, opaque ceramics & composites | Translucent ceramics & composites |
| 1. Fill and seat crown | up to 2 min | up to 2 min | up to 2 min |
| Protect restoration from movement during gel phase cleanup through final set | | | |
| 2. Remove excess: | | | |
| Gel stage from seating | 1-2 min | up to 5 sec per surface ¹ light cure | up to 5 sec per surface ¹ light cure |
| Gel Duration | 1 min | 45 sec | 45 sec |
| 3. Stabilize | Constant occlusal pressure | Light cure margins 20-40 sec | Light cure margins 20-40 sec |
| 4. Final set | 6 min from start of mix | 6 min from start of mix | Upon completion of light curing each surface ² 10 sec |

¹ Buccal and Lingual

² Buccal, Lingual and Occlusal

TECHNIQUE TIPS:

- Tooth preparation should leave the tooth surface moist, evenly glistening with moisture. Dry preparations (air-dried or alcohol-dried), and wet preparations (with pooled surface water), can reduce adhesion. The adjacent teeth and/or the external surfaces of the restoration may be lubricated with a water soluble medium to ease cleanup of excess cement.
- Stabilize restorations (e.g. with a finger) during gel phase cleanup and throughout the final set.
- For excess cement cleanup, monowave output LED lights with a single peak output around 470nm are recommended. High power, dual or broad spectrum lights may cause premature hardening of excess cement. Check curing light effect on mixed cement in the laboratory prior to clinical use.
- Remove floss horizontally through interproximals during cleanup so as not to dislodge the restoration before the cement has completely set.
- Cement at the margins may appear set before cement within the restoration is set. Do not move, torque or disturb restoration until final set of the cement (6 min. from the start of mix or in the case of light-transmissible restorations upon completion of light curing).
- Stabilize restorations with occlusal pressure while the patient waits the full 6 minutes from start of mix in self cure and dual cure mode or upon completion of light curing each surface (buccal, lingual, occlusal).

CLINICAL TIPS:

For Feldspathic Porcelain, Leucite-reinforced Ceramic, Lithium Disilicate Ceramic, Zirconia-reinforced Lithium Silicate:

Etch the bonding surfaces with hydrofluoric acid and use Calibra® Silane Coupling Agent on intaglio. If the internal surface of the restoration designed to be silanated has been disturbed during try-in, apply Calibra Silane Coupling Agent following manufacturer's directions for use.

For Zirconia-based Ceramic:

Sandblast, use zirconia primer, if directed. Follow the dental laboratory or restoration manufacturer's instructions for pre-treatment.



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The logo for Dentsply Sirona, featuring a stylized 'S' icon to the left of the company name.

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