

OVCTM₄

One Visit Crown

INSTRUCTIONS FOR USE



RHODIUMTM
Dental Laboratories

OVC₄ PROCEDURE

1. Impression

During the initial patient assessment, take a dual arch PVS impression using fast set bite impression material. Ensure the patient is in centric occlusion. Send this impression with the prescription to Rhondium Labs. The lab will use this impression/model to custom make the OVC₄.

CAUTION: Curing lights must be greater than 1,000 mW/cm².

OVC₄ PLACEMENT

2. Tooth Preparation

Check opposing and adjacent dentition and perform corrections if needed (e.g. over erupted cusps, poorly contoured adjacent restorations).

Prep the tooth, allow at least 1 mm of clearance in the central fossa and 1.5 mm at the cusps and marginal ridges.

Bevel the margins for better bonding, shade blending and easier McDonald Matrix Band™ placement (Figure A).

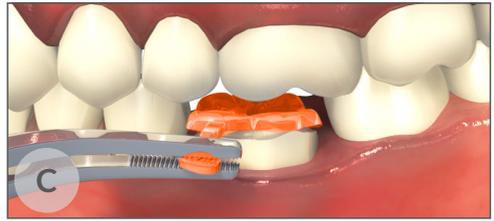


Open the OVC₄ case (Figure B).



Check occlusal clearance: Hold the Occlusal Reduction Guide handle using tweezers and place on the prep. Ask the patient to gently bite down with Occlusal Reduction Guide in place. Ensure there is sufficient occlusal clearance – the guide should have sufficient space to move when the handle is gently tugged.

Also check the guide has not been tilted due to an opposing cusp – adjust opposing dentition if required (Figure C).

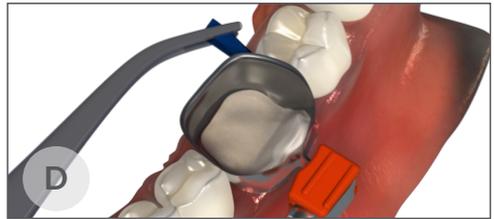


Deep margin elevation may be necessary in some cases. The green OVC wedges are excellent for this.

3. Place McDonald Matrix Band™

Carefully place the McDonald Matrix Band™.

Step 1: Place the distal side of the matrix band into the gingival crevice first and secure it with a wedge (Figure D).



Step 2: If the band is still unstable you now repeat Step 1 for the mesial. Ensure that the bevel on the top edge of the band is slightly above the marginal ridge of the neighbouring tooth.

Step 3: The matrix band is now held in place. You are now able to use both hands to tighten the matrix band with a Hex Stick (supplied separately). There are a few ways to do this.

1. Using a finger to press the orange toggle against the tooth while tightening (Figure E).
2. Hold the orange toggle in place with tweezers or forceps while tightening.



Ensure that the matrix band is tight.

The McDonald Matrix Band™ can be unscrewed and re-tightened if adjustments are necessary.

Push hard on the wooden wedges to create

separation. The use of a Garrison Composi-Tight® original sectional matrix ring works well. Use standard direct composite bonding techniques (etch and bond) to cover the tooth preparation.

Use regular composite bonds such as Optibond FL (Kerr Dental) or Clearfil SE Bond (Kuraray Dental).

Burnish proximal zones of the matrix band as required to form a good emergence profile and ensure the band is touching the neighbouring teeth.

To gain a tight contact, place a separator ring resting it behind the wedge (Figure F).



Place a small amount of composite under the contact point and use a ball burnisher or flat instrument to hold the matrix band against the adjacent mesial tooth while curing (Figure G).



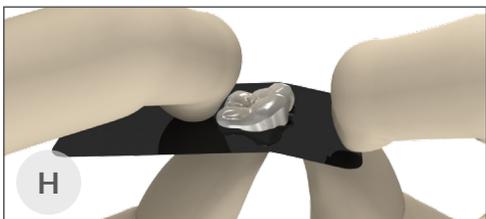
Repeat for the other contact, moving the separating ring to this side.

Seal the bevelled margins with a small amount of flowable and then cure.

4. OVC₄ Placement

Apply a small amount of flowable composite on the tooth to prevent bubble formation (do not cure).

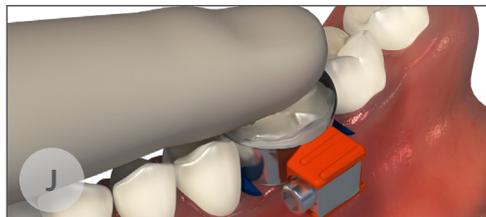
Remove the OVC₄ from the packaging by fully inverting the black film (Figure H).



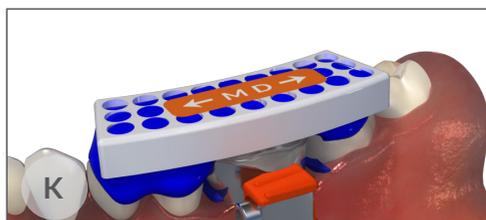
Shape the uncured sub-layer of the OVC₄ into a rounded cone-shape (Figure I).



Place the OVC₄ inside the matrix band and gently depress with finger (Figure J).



Slowly press Seating Guide into position. Note the label indicates Mesial and Distal orientation (Figure K).

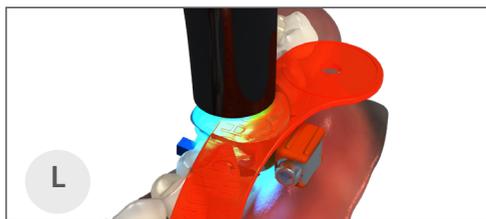


Remove Seating Guide and carefully remove the excess composite.

Make sure the marginal ridge area has been cleared of any uncured material overflow.

Double-check OVC₄ position by re-seating with Seating Guide.

Either fully cure or cure the lingual side by masking the buccal with the Spot Curing Tool allowing you to loosen the band and shape the buccal before fully light curing (Figure L).



Now the OVC₄ is bonded into place, loosen the McDonald Matrix Band screw and use a flat plastic instrument to smooth the buccal side and form natural contours (Figure M).



Fully cure the OVC₄.

5. Remove the McDonald Matrix Band™

Remove any wedges.

Loosen the McDonald Matrix Band™ by turning the screw counter-clockwise with a Hex Stick.

Remove the matrix band by levering the buccal side with a strong flat-plastic instrument.

The lingual side of the band can also be cut with scissors or a fine diamond bur then the matrix can be pulled buccally holding the toggle to remove.

6. Finish the OVC₄

Fully cure each surface for 20 seconds*.

Cool with air syringe while curing to prevent tooth/pulp overheating.

Polish and adjust the restoration as required.

High speed diamond burs can be used for large reductions, then use polishing burs or discs for a final polish.

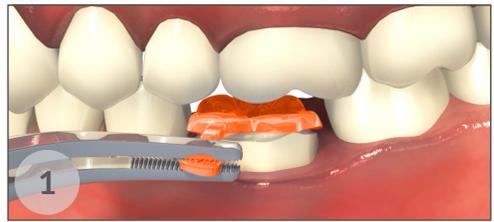
Check the bite and adjust if necessary to complete the restoration.

CLINICAL TIPS

Check the bite with occlusal paper while the local anesthetic is taking effect. Then reduce any obvious opposing cusps that might cause occlusal interference.

Use Dentsply® Wedge Guards, or something similar, when preparing the tooth to protect the adjacent dentition.

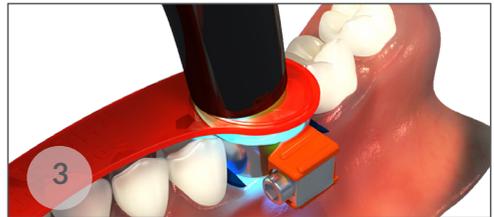
When using the Occlusal Reduction Guide you can leave a mark where the prep is high. Spray the underside of the guide with an occlusal spray to identify where further reduction of the prep is needed after the patient bites down (Bausch Arti-Spray® Occlusion-Spray) (Figure 1).



When placing the McDonald Matrix Band™, occasionally, the band does not reach the neighbouring tooth's contact point. Cutting a "dress-maker's dart" in the band with scissors or a high-speed hand-piece (Figure 2) or cutting the top strips of metal near the toggle can assist with flaring the band.



For easier tidy up after seating the OVC₄ use the spot curing tool, spot cure for 3-5 seconds* through the hole to secure the OVC₄ allowing you to tidy the soft edges without moving the OVC₄ (Figure 3).



After seating the OVC₄, if excess flowable resin is present, air blow away.

For more clinical tips and helpful videos visit our dentist area at www.rhodium.com

DESCRIPTION OF COMPONENTS

OVC₄



The OVC₄ is a custom-made hybrid ceramic crown made of two parts. A cured anatomical occlusal layer and an uncured sub-layer that allows adaption of the OVC₄ to the tooth preparation. Both layers are made of the same material.

Occlusal Reduction Guide



The Occlusal Reduction Guide is used to confirm that the occlusal clearance obtained during tooth preparation is sufficient.

OVC Wedges



These are single-use plastic wedges used for deep gingival procedures. They come in two sizes, green are small and blue are large. Each pair come as a right and left wedge. The wedges may be placed from the buccal or lingual aspect with the concave, smooth area facing the preparation. Green or blue OVC Wedges can be selected when ordering the OVC₄.

McDonald Matrix Band™



The McDonald Matrix Band™ is a single-use circumferential matrix band pre-contoured for each tooth shape and size. It is placed around the preparation, tightened with a Hex Stick (supplied separately), to shape the uncured ceramic sub-layer of the OVC₄.

Spot Curing Tool

This tool helps to secure the vertical position of the OVC₄ when cleaning up the excess uncured material. Cure through the small hole on the spot cure tool to cure only the centre of the OVC₄ leaving the uncured material on the margins for easy clean up.



GETTING STARTED WITH THE OVC₄

Ideal clinical uses:

- + As a superior full coverage alternative to large MODBL fillings and weakened tooth structures
- + As an affordable alternative to a traditional dental crown for private patients
- + For patients who have previously deferred needed dental crown treatment
- + Ideal after root canal treatment to prevent the risk of re-infection
- + Teeth with a hopeless prognosis where a traditional crown is not worth the investment

To identify your first case, look for:

1. Teeth that have good access and visibility
2. Teeth that have a reasonable amount of tooth structure supra-gingivally
3. Free standing teeth - as there are no contacts which make it easier.

Ideal case selection:

Root canal treated teeth



Cracked tooth syndrome



Weakened teeth



How to build-up subgingival margins

See how to use the OVC wedges to build up deep subgingival margins prior to placement of the McDonald Matrix Band.

Case One



A. Prep tooth.



B. Insert OVC Wedges.



C. Etch and bond.



D. Build up the subgingival margins.



E. Remove OVC Wedges.



F. Place McDonald Matrix Band and complete OVC procedure as normal.

Case Two



A. Radiograph prior to treatment.



B. Tooth prepped and large OVC wedge inserted.



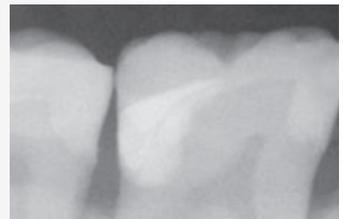
C. Deep box built up with composite.



D. Ready for McDonald Matrix Band placement.



E. OVC after finishing, polishing and staining.



F. Final radiograph.

CLINICAL CASE EXAMPLES

Case 1: Before



Prep



After



Case 2: Before



Prep



After



Case 3: Before



Prep



After



Case 4: Before



Prep



After



Case 5: Before



Prep



After



Chairside Guide

Please ensure you have read the full instructions for use prior to using this guide.
At consultation take a dual arch PVS impression using fast set bite impression material and send this to the lab.



1 Prep

Prep the tooth, allow at least 1 mm of clearance in the central fossa.



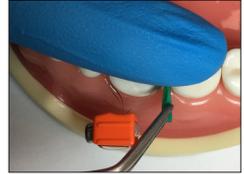
2 Open case

The OVC₄ is in the lid.



3 Occlusal check

Check Occlusal clearance with Occlusal Reduction Guide.



4 Place matrix band

Secure matrix band in place with a wedge on distal side.



5 Secure

Place wedge on mesial side to secure matrix band completely.



6 Tighten band

Hold orange toggle with thumb or forceps while tightening with Hex Stick.



7 Burnish

Burnish contact points, make sure matrix band touches adjacent teeth.



8 Etch and bond

Etch and bond as you would any composite restoration.



9 Separate

Push wedges hard and place a separator ring.



10 Seal margins

Use flowable to hold matrix band against adjacent teeth and cure.



11 Place OVC₄

Apply flowable to prep and don't cure. Place and squash down OVC₄ onto prep.



12 Align OVC₄

Align with OVC₄ Seating Guide.



13 Clean excess

Remove any excess material and use Seating Guide once more to re-align.



14 Final cure

20s each surface while air cooling then remove wedges and matrix band.



15 Trim

Trim and shape OVC₄ into desired shape.



16 Polish

Check bite and polish OVC₄.