OVC PROCEDURE

1. OVC Selection
Determine the mesial-distal (M-D) distance of the affected tooth using the appropriate Selector Key to confirm the OVC size needed for that restoration (Figure A).

Clinical Tip: It is more accurate to measure the mesial-distal distance once the tooth is reduced and the contacts are removed. Another option is to take a bite registration impression at initial consult.

and use a Selector Key to measure the impression.

2. Tooth Preparation
Prep the tooth, allow at least 1 mm of clearance in the central fossa and 1.5 mm at the cusps and marginal ridges (Figure B).†

Clinical Tip: Bevel the margins for better bonding, shade blending and easier matrix application.
Check opposing and adjacent dentition and perform corrections if needed (e.g. over erupted cusps, ill contoured adjacent restorations).

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

Open the appropriate OVC case (Figure C).

Grip the Replica handle using tweezers and place on the prep to confirm its M-D fit over the prep.
Ask the patient to gently bite down with Replica in place. Ensure there is adequate occlusal clearance – the Replica should have sufficient space to move when the handle is gently tugged (Figure D).

Also check the Replica has not been tilted due to an opposing cusp – Adjust opposing dentition if required.

**Clinical Tip:** Spray the underside of the Replica with an occlusal spray to identify where further reduction of the prep is needed after the patient bites down

Deep defects should be built up, prior to using the band, to within 2-3 mm of the occlusal plane using the blue OVC wedges. This will help with the retention of the OVC₃ Matrix Band and the Stretch Wedge.

**3. Place OVC₃ Matrix Band**

Place the matrix band from the buccal side at the angle shown (Figure E).

The matrix band is then tightened by pinching the crimp section from the outer end toward the tooth. The flattened crimp section can be folded flat along the adjacent teeth.

Slowly pull the Stretch Wedges a few times prior to use. This strengthens the wedges and allows for increased interproximal separation (Figure F).

Pull the Stretch Wedges sufficiently to make them thin enough to floss through the contacts.
Optibond FL (Kerr Dental) or Clearfil SE Bond (Kuraray Dental) are recommended.

To obtain a good proximal emergence profile apply a small amount of flowable resin below the mesial contact area. Use a ball burnisher to hold matrix band against adjacent tooth then cure. Repeat for distal (Figure H).

Clinical Tip: Avoid placing too much flowable resin as this may prevent proper seating of the OVC.

Pull Stretch Wedges hard to create more separation and burnish contact points to ensure the matrix band is touching the neighboring contacts (Figure I).

Clinical Tip: Pulling too hard initially can rotate the matrix band so it is best to put one Stretch Wedge in place and then the second one to prevent the rotation of the band.

Use standard direct composite bonding techniques (etch and bonding) to cover the tooth preparation.  

Floss the Stretch Wedges down at an angle to avoid damaging the band and pull gently at this stage (Figure G).

4. OVC Placement

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

Remove the OVC from the packaging by fully inverting the black film (Figure J).
Clinical Tip: If excess flowable resin is present, air blow away. Using a sharp carving instrument remove the excess material and adapt the remainder to form natural contours (Figure N).

Clinical Tip: If possible depress slightly lower than the occlusal plane to minimize occlusal adjustments. If the crown is out of occlusion it will erupt back into occlusion over the next couple of weeks.

Use a flat-plastic instrument to horizontally align the OVC fissures with neighboring teeth (Figure L).

Check buccal/lingual alignment with remaining tooth structure, make corrections if necessary. Using the Selector Key spot cure for 15 seconds* to secure vertical dimension (Figure M).

*Based on a 1,000 mW/cm² curing light

Clinical Tip: If possible depress slightly lower than the occlusal plane to

Place the OVC inside the matrix band and gently depress until the marginal ridges are aligned with the marginal ridges of the neighboring teeth (Figure K).†4
5. Removing the OVC$_3$ Matrix Band

Remove the Stretch Wedges by flossing out or cutting with scissors. Bonding agents can bond to the matrix band. To separate, slide a flat instrument under the proximal contact points between the matrix band and the restoration. Remove the matrix band by levering the buccal side with a flat-plastic instrument. The lingual side of the band can also be cut with scissors or a handpiece.

6. Finishing the OVC

Fully cure each surface for 20 seconds$^*$. Polish and adjust the restoration as required (Figure P).

Fully Cure the OVC (Figure O).

High speed diamond burs can be used for large reductions if required, then polishing burs or discs for a final polish. Check the bite and adjust if necessary to complete the restoration.

For more clinical tips, free online training and FAQ’s visit www.rhondium.com.

$^*$Based on a 1,000 mW/cm$^2$ curing light

† Notes:
1 - With the direct procedure - do not paint the prepared tooth surface with a separating agent.
2 - Do not apply bonding agent to the OVC.
3 - Do not trim the hard OVC occlusal layer prior to seating on the prepared tooth.
4 - There should be sufficient uncured composite available on the OVC, do not add uncured composite.
CLEANING

• OVC Selector Keys, Wedges, Matrix Band and Replicas are single use only.
• The carving instrument can be steam sterilized before use.
  DO NOT ultrasonically clean as this will damage the instrument.

POST-OPERATIVE
As with standard dental treatment, advise patient to return if there is any discomfort experienced or if a problem with the restoration is experienced.

For more information please contact:
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NZ       :  0800 746 634
www.rhondium.com

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Katikati 3129
New Zealand

Pat Pending, US9629693

STORAGE

Store the OVC at 1°C to 25°C (34°F to 77°F).
When not in use, keep containers closed to prevent contamination from moisture and contaminants.
Accessory items to be stored according to manufacturers’ label instructions.

Instructions:

See Instructions for Use

Use By
Single Use Only
Dentist Use Only

† Notes:
1 - With the direct procedure - do not paint the prepared tooth surface with a separating agent.
2 - Do not apply bonding agent to the OVC.
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High speed diamond burs can be used for large reductions if required, then polishing burs or discs for a final polish.

Check the bite and adjust if necessary to complete the restoration.
good visual of the overall 3D position of the OVC on the prep and the relationship with adjacent and opposing dentition.

OVC Wedges
These are single-use plastic wedges used for deep gingival procedures. Each pair comes 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.

Selector Keys
These are single-use gauges made of transparent orange plastic, available in four types:

- Upper Premolar (UPM) (light orange)
- Lower Molar (LM) (dark orange)
- Upper Molar (UM) (light orange)
- Lower Premolar (LPm) (light orange)

Selector Keys have a dual function. One is to determine the mesial-distal (M-D) distance of the damaged tooth so that the correct OVC Hybrid size is selected. The second function is to facilitate the spot curing of the center of the OVC Hybrid using the hole in the handle to lock the vertical dimension.

OVC Matrix Band
The OVC3 Matrix Band is a single-use, circumferential matrix band pre-contoured for each tooth shape and size. It is placed around the preparation to shape the uncurled hybrid ceramic sub-layer of the OVC Hybrid.

Stretch Wedges are flossed between the mesial and distal surfaces of the teeth and pulled tight to create separation. The stretch wedges are gentle on the gingiva and have adjustable separating force (the harder you pull, the more separation you get). They are gentle on the papillae and hold the matrix band in place.

Stretch Wedges
The anatomy of each OVC type is common to two teeth, the first and second of each tooth group. For example, OVC 4/5 (US) 15/14 (FDI) can be used to restore a first or second upper right premolar.

<table>
<thead>
<tr>
<th>Tooth Group</th>
<th>OVC Hybrid Type</th>
<th>Tooth Type</th>
<th>(Tooth Number)</th>
<th>Shade A2 HT</th>
<th>Shade A3 HT</th>
<th>Size</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Premolar</td>
<td>US</td>
<td>UPM</td>
<td>4/5</td>
<td>12/13</td>
<td>14/15</td>
<td>XS M L XL</td>
<td>2</td>
</tr>
<tr>
<td>Upper Premolar</td>
<td>BM</td>
<td>UPM</td>
<td>2/3</td>
<td>16/17</td>
<td>24/25</td>
<td>XS M L XL</td>
<td>2</td>
</tr>
<tr>
<td>Lower Molar</td>
<td>BM</td>
<td>LM</td>
<td>28/29</td>
<td>44/45</td>
<td>34/35</td>
<td>XS M L XL</td>
<td>2</td>
</tr>
<tr>
<td>Lower Molar</td>
<td>BM</td>
<td>LM</td>
<td>18/19</td>
<td>36/37</td>
<td>46/47</td>
<td>XS M L XL</td>
<td>2</td>
</tr>
</tbody>
</table>

Each tooth type is available in:

- Shades A2 HT and A3 HT
- Five different sizes - XS S M L XL
- High Translucency

The Replica also provides a confirmation of the size selection and combination of the shade selection and preparation is sufficient. It serves as an occlusal clearance device during tooth preparation. The Replica is used to confirm that the occlusal clearance obtained during tooth preparation is sufficient. Each pair hand fits the selected tooth type and size portion of the OVC Hybrid, with a handle matching the selected tooth type.

A disposable plastic replica of the cured OVC on the prep and the relationship of the OVC to the adjacent and opposing dentition. The Replica is used to confirm that the occlusal clearance obtained during tooth preparation is sufficient. It serves as a confirmation of the size selection and suitability. The Replica also provides a good visual of the overall 3D position of the OVC on the prep and the relationship of the OVC to the adjacent and opposing dentition. The Replica is used to confirm that the occlusal clearance obtained during tooth preparation is sufficient. It serves as a confirmation of the size selection and suitability. The Replica also provides a good visual of the overall 3D position of the OVC on the prep and the relationship of the OVC to the adjacent and opposing dentition. The Replica is used to confirm that the occlusal clearance obtained during tooth preparation is sufficient. It serves as a confirmation of the size selection and suitability.
professional assessment of oral health, chewing habits, and patient concerns should be factored into the decision.

7. Proper adaptation of the margin is needed for optimal marginal integrity. Adaptation and smooth finishing of the crown margin (buccal, lingual, interproximal) are needed for optimal marginal integrity.

8. Finish and polish steps help to maintain shine and stain resistance.

9. If a crown margin is not properly adapted to the tooth preparation, the integrity of the margin may not be comparable to margins produced using well-executed traditional fabrication methods.

10. Continue to monitor crown margins during routine check-ups.

PRODUCT PRESENTATION

The OVC Hybrid is provided in an OVC3 Hybrid Refill Pack.

An OVC3 Hybrid Refill Pack consists of:

- 1 x OVC Hybrid in the selected size
- 1 x Replica in corresponding size
- 2 x OVC Wedges
- 2 x Stretch Wedges
- 1 x OVC Matrix Band
- 1 x Selector Key
- 2 x OVC Hybrid in the selected size

An OVC3 Hybrid Refill Pack is available individually or as part of a Kit, where a Kit consists of:

- 1 x Selector Key
- 2 x OVC Wedges
- 1 x Replica in corresponding size
- 2 x Stretch Wedges
- 1 x OVC Matrix Band
- 1 x OVC Hybrid in the selected size
- 2 x OVC Hybrid in the selected size

An OVC Hybrid is available in an OVC Hybrid Refill Pack.

DESCRIPTION OF COMPONENTS

OVC

Cured occlusal layer

Uncured hybrid ceramic sub-layer

The OVC is a hybrid ceramic crown made of two parts. A cured anatomical occlusal layer and an uncured sub-layer that allows customization of the OVC to the tooth preparation.

The OVC Hybrid is provided in an OVC Hybrid Refill Pack.

During routine check-ups, continue to monitor crown margins using well-executed traditional fabrication techniques. If a crown margin is not properly adapted to the tooth preparation, the integrity of the margin may not be comparable to margins produced using well-executed traditional fabrication methods.

Finish and polish steps help to maintain shine and stain resistance.

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- 1 x Replica in corresponding size
- 2 x Stretch Wedges
- 1 x OVC Matrix Band
- 1 x Selector Key
- 2 x OVC Hybrid in the selected size

An OVC3 Hybrid Refill Pack is available individually or as part of a Kit, where a Kit consists of:

- 1 x Selector Key
- 2 x OVC Wedges
- 1 x Replica in corresponding size
- 2 x Stretch Wedges
- 1 x OVC Matrix Band
- 1 x OVC Hybrid in the selected size
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DESCRIPTION OF COMPONENTS

OVC

Cured occlusal layer

Uncured hybrid ceramic sub-layer

The OVC is a hybrid ceramic crown made of two parts. A cured anatomical occlusal layer and an uncured sub-layer that allows customization of the OVC to the tooth preparation.
Federal (USA) law restricts this device to sale by or on order of a licensed dentist.

**INTRODUCTION**

To gain maximum satisfaction and benefit from these products, carefully read the OVC Procedure for detailed step-by-step instructions. The OVC Instructions for Use/Procedure Manual is available from the Rhondium Ltd at the address shown at the end of this document and on the Rhondium website.

**INDICATIONS FOR USE**

The Rhondium OVC is intended for restoration of permanent teeth with a single unit crown.

The OVC Hybrid restoration procedure is used during the procedure. Use of blue light protective eyewear by clinicians and patients throughout the procedure is recommended. Instructions for all materials used during the procedure can be found in the OVC Instructions for Use/Procedure Manual.

**CONTRAINDICATIONS**

- It is contraindicated to place the OVC Hybrid on an old composite margin.
- The OVC Hybrid procedure requires the OVC 3 Matrix Band can be held in a stable position and if this is not possible the matrix band can help with the procedure. Requirements for the OVC 3 Matrix Band is shown in section 2.
- The OVC Hybrid direct clinical restoration is recommended.
- The OVC Hybrid direct clinical restoration is recommended.
- The OVC Hybrid direct clinical restoration procedure is intended for use on permanent teeth only.
- Instructions before use.
- Carefully read and understand all Instructions before use.

**WARNINGS AND PRECAUTIONS**

1. Carefully read and understand all Instructions before use.
2. For use on permanent teeth only.
3. Use of blue light protective eyewear by clinicians and patients throughout the procedure is recommended.
4. Follow manufacturers’ instructions.
5. Patients with bruxism must follow preventative treatment such as the use of night splints.
6. The OVC Hybrid direct clinical restoration procedure is intended for use on permanent teeth only.

**The OVC Hybrid restoration procedure is used during the procedure.**