

EVOLVE MATRIX



X BIOCLEAR

TECHNIQUE GUIDE

THE NEXT EVOLUTION IN SECTIONAL MATRICES

As its name suggests, the Bioclear Evolve Matrix is an evolution in posterior matrices—an improvement on what was already the most advanced and user-friendly mylar matrix in modern posterior restorations, the Bioclear Biofit HD.

Evolve matrices come in four shapes and multiple heights. Matrices are color-coded to show the amount of curvature in the gingival emergence profile that each matrix has. The height is also printed on the matrix to ease identification. All colors of Evolve matrices offer superior buccal, lingual, and occlusal wrap around the tooth. This allows the matrix to do the work for you to create superior outcomes without all of the fussy finishing.

All matrices are 75 microns thick and anatomically preshaped. This makes them stiffer than other mylar matrices, easier to place, and easier to adapt.

Their extension can be seated deeper into the sulcus—even down to the bone level—helping to create infinity margins with minimal overhangs and broad contacts. The Evolve extension also seats nicely even when a rubber dam clamp is used, whereas the rubber dam clamp sometimes prevents full seating when using other matrices.

The matrices' translucence allows for three point curing of the heated composite on the buccal, lingual, and occlusal of the tooth, essential to thoroughly light cure bulk-fill composites.



BLACK PREMOLAR

Tab is color-coded with the size printed on the matrix for easy identification

Rounded, broad contact

Quick release flange for easy removal

Extension allows the matrix to seat more deeply in the premolar interproximal, even down to the bone level



5 matrix heights

The Black Evolve Matrix is shaped specifically for premolar teeth, these matrices can be used anywhere you would typically use a Biofit premolars matrix.

Use For:

- Premolars
- Undersized teeth

Because the Black Evolve's shape is curvaceous and requires a unique insertion method. To place the matrix, rotate it into place from top to bottom. Doing this expands the base of the matrix so it snaps over the tooth and into place.

Back Evolve is similar to Blue Evolve with a slightly narrower width. They are also, the only matrix to come in 10mm height.

BLUE MOLAR

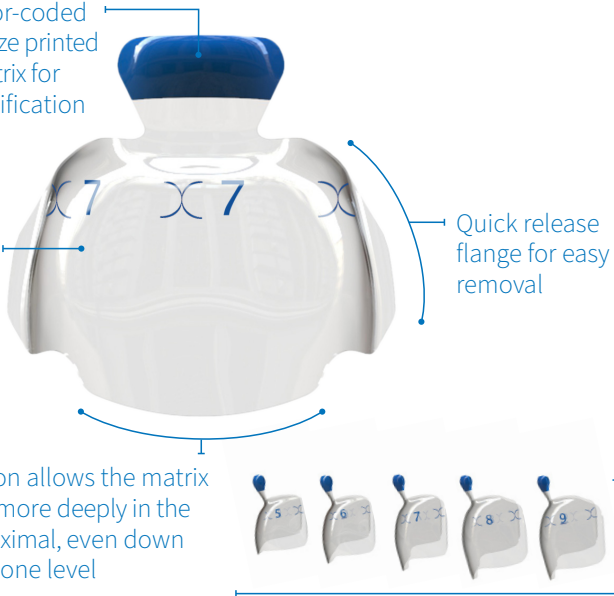
Tab is color-coded with the size printed on the matrix for easy identification

Rounded, broad contact

Quick release flange for easy removal

Extension allows the matrix to seat more deeply in the interproximal, even down to the bone level

5 matrix heights



The Blue Evolve Matrix is color-coded to be easily seen, features an aggressively rounded emergence profile, and comes in five heights to provide an ideal fit.

The occlusal curvature of the matrix creates a rounded marginal ridge with ease. The size and shape is appropriate for most posterior molar cases.

Because the Blue Evolve's shape is curvaceous and requires a unique insertion method. To place the matrix, rotate it into place from top to bottom. Doing this expands the base of the matrix so it snaps over the tooth and into place.

ORANGE MOLAR

Tab is color-coded with the size printed on the matrix for easy identification

Flat, broad contact

Quick release flange for easy removal

Extension allows the matrix to seat more deeply in the interproximal, even down to the bone level



3 matrix heights

The Orange Evolve Matrix is color-coded to be easily seen, features a flatter emergence profile curvature, and comes in three heights to provide an ideal fit.

Orange Evolve was created for instances where the Blue Evolve Matrix or Biofit HD Matrix would invert. This commonly occurs between maxillary 1st and 2nd molars.

Use For:

- Teeth with root proximity
- Flat teeth

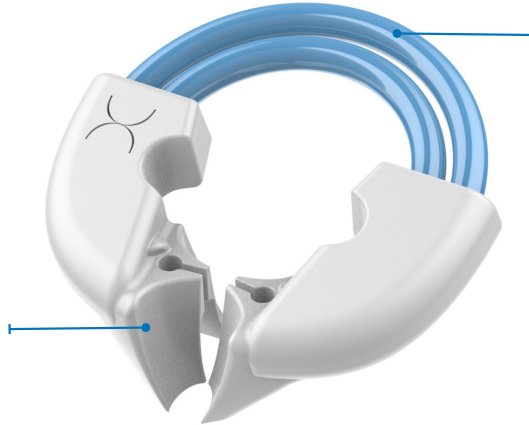
The root proximity often causes a normal sectional matrix to invert occluso-gingivally and buccal-lingually.

TWINRING UNIVERSAL

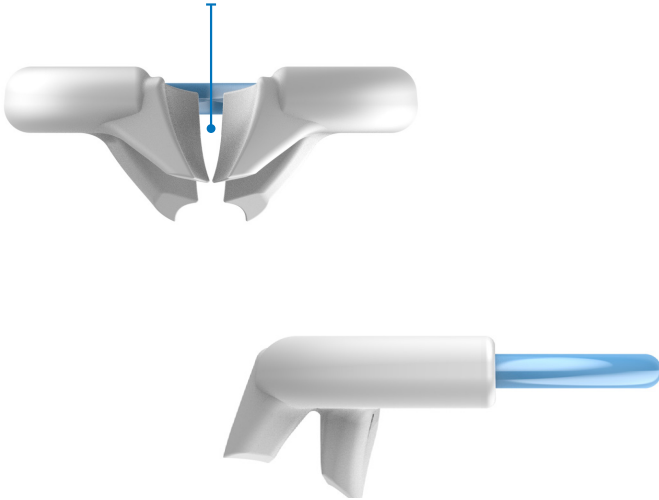
The TwinRing Universal is a major advancement in design and function that will be a welcome upgrade to your Class II composite procedure.

Separation power has been shown to surpass other traditional separators out of the package, but more importantly the twin Nitinol springs do not stretch out over time

Anti-slip technology makes the TwinRing Universal stay put on teeth that would never retain a separator in the past



Adapts to a variety of tooth types and shapes: short molars, short premolars, primary molars, and on top of rubber dam clamps



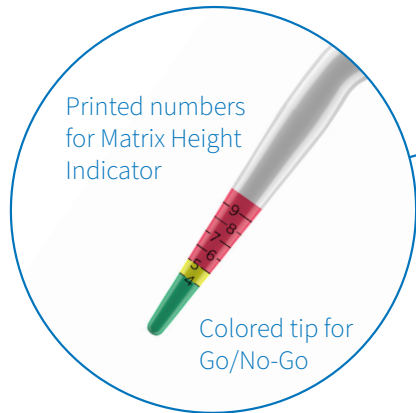
The TwinRing Universal adapts to a variety of tooth types and shapes: short molars, short premolars, primary molars, and on top of rubber dam clamps. It should be the only separator you will need for nearly every Class II.

The geometry of the ring causes it to apply a strong, even tension that assists in the separation of the teeth; creates a strong seal with the matrix without collapsing the matrix into the cavity; and allows for a superior infinity edge margin when used with the Bioclear matrix and Diamond Wedge.

The anti-slip technology makes this ring stay put on teeth that wouldn't retain a separator in the past.

The separation power has been shown to surpass other traditional separators out of the package, but more importantly the twin Nitinol springs do not stretch out over time.

EVOLVE MATRIX HEIGHT INDICATOR



Textured
grip for easy
handling



The Bioclear Evolve Matrix Height Indicator is designed for posterior restorations and has two uses:

Matrix Height Indicator: Numbers are printed on the indicator so the correct Evolve matrix for a restoration is chosen the first time. This helps reduce waste when incorrect matrices are chosen.

Go/No-Go Indicator: The colored tip indicates if a cavity prep can be cured in one layer or if more must be used.

MATRIX HEIGHT INDICATOR

INSERTION

Insert the indicator straight into the oral cavity (incisor area) as seen here. Keep the lines in the height indicator parallel to the tooth.

When measuring the cavity prep, the best reference point for height is the marginal ridge of the neighboring tooth.

Tip for back-to-back restorations: When doing back-to-back restorations, neither marginal ridge will be available. Instead use multiple landmarks like occlusal margins, the central groove, and cusp tips to estimate where the marginal ridge will be when done.

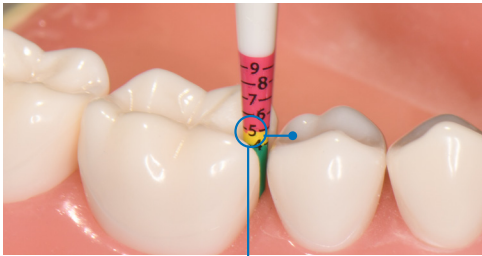
MEASUREMENT CALCULATION

Once you have measured the depth of the cavity in relation to the marginal ridge of the neighboring tooth, you will generally need to add 1-2mm from that reading.

- **Teeth with no bone loss: add 1 mm**
- **Teeth with bone loss: add 2 mm**

Make sure the matrix you choose is tall enough to seat all the way down to the periodontal ligament in order to seal the matrix to the tooth and create a good margin without overhangs.

Tip: For advanced perio, very deep caries, or cuspal overlay cases, you may need to add 3mm or 4mm.



MEASUREMENT = 5

Depth of the cavity in relation to the marginal ridge of the neighboring tooth.

IS THERE BONE LOSS?

→ YES

Add 2mm
to the reading.
 $5 + 2 = 7$
Use the 7mm Matrix.



→ NO

Add 1mm
to the reading.
 $5 + 1 = 6$
Use the 6mm Matrix.



GO/NO-GO INDICATOR

After the cavity preparation is complete, insert the Evolve Matrix Height Indicator into the preparation. Find on which color the marginal ridge will fall after composite has been injected. The color will indicate if the restoration is a “Go” or “No-Go.”

USE THIS KEY TO DECIDE HOW TO PROCEED:



GREEN = GO

The composite will be less than 4mm and, if necessary, can be cured from the occlusal only (bulk fills generally have a 4mm max depth of cure on the occlusal).



YELLOW = GO WITH CONDITIONS

The composite will be between 4mm and 5mm and can be fully cured **ONLY** if you have access at the interproximal and can 3-point cure (curing from the buccal, lingual, AND occlusal) with a clear matrix.

Tip: The best reference point is the marginal ridge of the neighboring tooth. If you are doing a back-to-back restoration and no marginal ridge is available, then use the gauge to estimate the height the composite should be when you are finished injection molding but before curing.



RED = NO-GO

The composite will be deeper than 5mm. To solve this problem, put down 1mm or 2mm of flowable composite at the bottom of the prep, cure it, and then injection mold with bulk fill—effectively taking the restoration less deep by putting one layer down.

GETTING STARTED

Keys to Success: Use a rubber dam. Choose the correct matrix. Use Bioclear Evolve Matrices for three point curing—their translucence is key to curing bulk-fills. Use Bioclear Forceps—designed specifically for the TwinRing. Ensure proper matrix orientation—the tab should be opposite of the gingival. Seat the matrix deep into the sulcus. **Always pre-wedge to facilitate a great outcome.**

MATRIX SELECTION

There are three lines of Bioclear Evolve Matrices: Black, Blue, and Orange. Matrix selection is primarily based on doctor preference but, in general: Black Evolve is for premolar teeth; Blue Evolve is suitable for most all posterior cases. Orange Evolve features a flatter, less rounded, emergence profile and is slightly wider than Blue.

THE BIOCLEAR PUSH-PULL INSTRUMENT

The Bioclear Push-Pull Instrument was created to ensure tight contacts, particularly when there is not interproximal tooth structure to hold the matrix tightly to the adjacent tooth. To learn about this instrument and the Spot-Weld / Push-Pull Technique, we recommend you view this video:



<https://www.bioclearmatrix.com/videos/class-2-restorations/>

TWINRING TIPS

The Bioclear Forceps are specifically designed for safely and securely opening and placing the TwinRing. Ensure that the tines of the forceps are completely engaged with the plastic handles of the ring. If they are not fully engaged or if the tines are seated on the metal, they can cause the ring to break. **DO NOT use alcohol wipes or other cold sterilization methods—this will void the warranty.**

DEEP MARGIN ACQUISITION (DMA)

Pre-wedging creates good margin access, but some cases require deeper access. DMA is a combination of technique and cutting-edge product that allows the creation of a much deeper, high-quality margin than has previously been possible.

Technique: Pack a #3 cord moistened with astringent in the interproximal aggressively to temporarily release the periodontal ligament. Remove the cord, and then blast. In summary, the cord is packed aggressively, and then removed immediately. No cord is present when the matrix is "placed".

Product: The taller, extensioned Bioclear Evolve Matrices (7, 8, 9, & 10) facilitate the DMA.

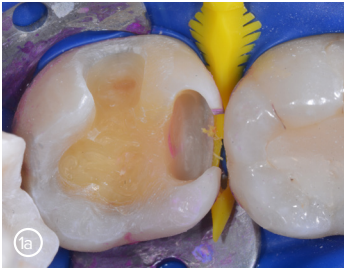
The DMA protocol allows the extension of the matrix to seat deeply enough to use the periodontal ligament as a seal, eliminating problems such as overhangs. Anytime you desire that the matrix seat deeper, the DMA protocol can be utilized regardless of matrix height; however the best results will be obtained by using a taller matrix with an extension.



EVOLVE MATRIX SERIES: THE NEXT EVOLUTION IN CONTACTS

1) PRE-WEDGE AND PREPARE THE TOOTH

Evaluate the pre-operative bite-wing x-ray and select the appropriate Diamond Wedge. Insert the Bioclear Diamond Wedge before cavity preparations. This will stretch the periodontal ligaments, providing more working space and separation for a tight contact once the restoration is complete. Prepare the tooth. Make sure to break the contact using a fine bur or the TruContact Sander.



2) SELECT YOUR MATRIX

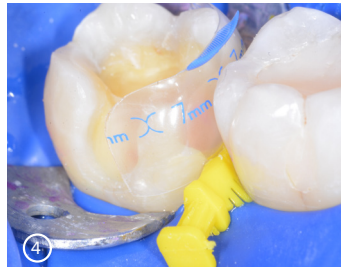
After the tooth has been prepped, use the Evolve Matrix Height Indicator to measure the cavity and determine the Go/No-Go of a single-layer composite cure as well as the appropriate height matrix. Remember, both of these determinations should be based on the marginal ridge of the neighboring tooth. Next, select the colored matrix that is the ideal shape and width for your procedure.

Tip for the Go/No-Go: Remember: Green is go, Yellow is go with conditions, Red is no-go.

Tip for the Matrix Height Selection: Remember you typically need to add 1-2mm to the reading you get from the height indicator to select the appropriate matrix. Review pages 14-15 for more information.

3) REMOVE WEDGE AND PLACE BIOCLEAR EVOLVE MATRIX INTO THE EMBRASURE

Remove the pre-wedge. Then, using cotton pliers, grip the small tab on the selected Evolve Matrix. Slide the matrix into the embrasure space, making sure the matrix is centered on the tooth and the tab is towards the occlusal. Make sure to seat the matrix fully by pressing on the occlusal tab firmly with your thumb.



4) WEDGE THE MATRIX

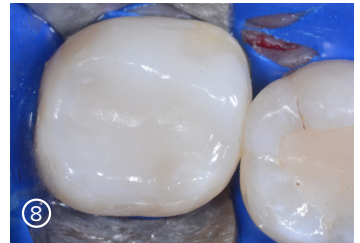
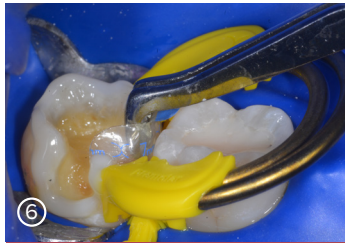
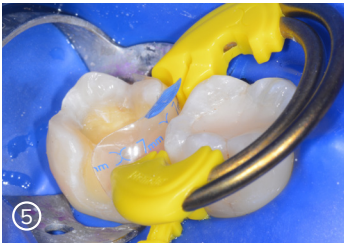
You can either re-use the pre-wedge or use a larger wedge against the matrix. While holding the matrix in place with your finger, insert the selected wedge against the matrix. Check that the wedge has not inverted the curve of the Bioclear Matrix. In deep caries cases, the wedge selection is advanced. Contact your Bioclear rep to learn more.

5) PLACE THE TWINRING

Open the TwinRing using the Bioclear TwinRing Forceps just enough to get past the matrix, down to the gingival margin. Release the forceps to clamp the ring over the top of the wedge and down against the matrix and teeth. Ensure that the matrix is between the ring tines and the tooth, is not folded inside the hands of the ring, and is properly positioned. Use your fingers to lightly press on the ring to seat it more fully. Gently adapt the matrix against the neighboring tooth.

6) SPOT-WELD PUSH-PULL TECHNIQUE

After you have placed your matrix, wedge, and ring, then it is time to etch, rinse, and dry. Then massage the adhesive into the dentin tubules for a full 20 seconds. Dab the adhesive up near the occlusal corners of the matrix. Air thin the adhesive until it stops moving. Before you light-cure the adhesive, use the Spot-Weld Push-Pull Technique. Create spot welds by dispensing flowable composite at the occlusal corners of the matrix on the buccal and lingual. Use enough flowable to make sure it covers outside, over the top, and inside the matrix corner. Insert the Push-Pull instrument into the prep and pull (if mesial) or push (if distal) the matrix against the neighboring tooth. While holding the matrix in place with the Push-Pull instrument, cure the spot-welds of flowable from the occlusal for only 5 seconds each. Remove the Push-Pull then cure the adhesive in the prep for 10 seconds.



7) INJECTION MOLD THE COMPOSITE USING THE BIOCLEAR METHOD, THEN LIGHT CURE

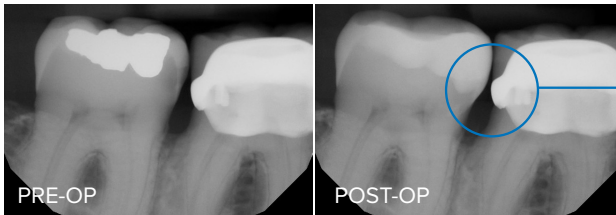
After etching the tooth and curing adhesive on the dentin, the patented injection molding process steps are as follows: apply a second round of adhesive as a surfactant; air thin—do NOT cure; inject heated bulk fill flowable—do NOT cure; inject heated bulk fill paste and then light cure all three together using the three-point curing method.

Using Bioclear's translucent matrices allows for three-point curing, which is imperative for fully curing bulk-fills. Begin curing at the occlusal for 10 seconds. Then remove the TwinRing Separator and cure from the buccal and lingual to complete three-point curing before removing the Diamond Wedge and the Evolve Matrix.

To learn more about injection molding with heated composite and the Heat Sync Composite Warmer, visit www.bioclearmatrix.com/products/equipment-heatsync-kit/

8) THE FINAL STEPS

Sculpt and use the two-step Rockstar Polish Kit to finish.



RADIOGRAPH

Radiograph shows the smooth margin with no overhangs resulting from using the Bioclear Method and Deep Margin Acquisition.

CLEANING AND STERILIZATION

The TwinRings, TwinRing Forceps, Push-Pull, and Evolve Matrix Height Indicator are reusable and autoclavable. See the Instructions for Use for care, cleaning, and sterilization instructions. Please note that the matrices and wedges are single use only and can not be reused.



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