DIRECTIONS FOR USE

The Palodent® Sectional Matrix System

Caution: U.S. Federal law restricts this device to sale by or on the order of a dentist.

The Palodent® System employs a spring steel BiTine® ring and sectional matrices for placement of restorations in the posterior region. Sectional matrices are available in three sizes suitable for use with all posterior restorative materials. BiTine rings are available in round and oval or elongated shapes suitable for use in the posterior region either singly or in tandem. The advantages of the sectional matrices and rings include natural contours for better control of contact areas and embrasures, ease of placement, better visualization of the operative field, and more comfort for the practitioner and patient. Eliminating the leverage of a conventional matrix retainer allows the practitioner to use less tension, avoiding excessive compression of tooth and easier formation of anatomical proximal contact areas.

INDICATION:
The Palodent® System is indicated whenever a restoration will involve interproximal surfaces to facilitate the contouring of a direct placement of restorative materials.

CONTRAINDICATIONS:
The sectional matrices are intended for single use only. Do not attempt to sterilize and/or re-use.

WARNINGS:
As with all intraoral instruments, care must be exercised to ensure stable handling and placement. Placement of rubber dam or other suitable isolation is advised prior to operative procedures. If rubber dam isolation is not possible, tying dental floss to the BiTine ring is mandatory for easy retrieval. If aspiration occurs seek immediate medical attention. The rings are intended for multiple use and proper sterilization techniques are required. See “Sterilization and Maintenance” section at the end of these directions.

Used matrices are contaminated. When handling, use precautions as when handling other contaminated sharps.

PRECAUTIONS:
Care must be taken when placing the BiTine ring, due to the spring nature of the ring.

ADVERSE REACTIONS:
Excessive pressure in an apical direction may result in injury to periodontal tissues.

STEP-BY-STEP INSTRUCTIONS FOR USE:

Ring Placement
To effectively use a contoured sectional matrix, there must be enough interproximal space to position the matrix without force or distortion. The BiTine ring, when placed prior to and left on during, cavity preparation, provides the necessary separation with no additional chair time. To place the round BiTine ring, grasp it at its widest diameter with a rubber dam forceps, spread the forceps. Place the ring with one tine in each interproximal space from buccal to lingual adjacent to the surface to be restored. The direction the ring points, mesial or distal, does not matter, though placing it so that the ring points mesially is usually more easily achieved due to easier access. To place the elongated BiTine II ring, grasp it so that the rubber dam forceps engages the ring in the “u-shaped” depressions above the prongs. Place as described for the round ring. Either ring may be used to provide the necessary separation when applied before the preparation is initiated.

Cavity Preparation
Complete cavity preparation as usual utilizing rubber dam or other suitable isolation technique. Once the preparation is complete, remove the ring.

Matrix Selection
The standard Palodent contoured sectional matrix is recommended for most applications. The Mini-matrix is designed for use with adolescents and patients with poorly erupted posterior teeth. It is also ideal for the direct-indirect technique. The Plus matrix is designed for larger cavities occlusogingivally. It augments a contoured matrix with a patented adjustable apron gingivally and an adjustable continuation of the contour at the marginal ridge.

Application of Matrix
1. Once the tooth is prepared and the ring removed, finger roll the matrix to the approximate tooth circumference.

2. Grasp the matrix with the notch toward the occlusal for the standard matrix, with the dot toward the occlusal for the Mini-matrix and with the longer flap toward the apex for the Plus matrix, with a forceps or cotton pliers. If the ring was placed properly before tooth preparation, then the band should slide easily into place adjacent to the space to be restored from the occlusal approach.
3. Close the gingival margin by placing an anatomic wooden wedge.

4. Replace the BiTine ring in the proximal plane, engaging either the matrix or the wedge, thus stabilizing it against tooth structure. The tines may be sitting on the wedge, in front of the wedge, or behind the wedge.

5. Lightly burnish the matrix against the adjacent tooth and both buccally and lingually to further adapt it to form proper contours. **NOTE:** Over burnishing may distort matrix and compromise contours.

**Technique tip:** When restoring an MOD preparation, two round rings may be placed facing opposite directions, one mesially and one distally or both pointing in the same direction, usually mesially, one over the other placing the mesial band and ring first. If placed pointing in the same direction, it is often easier to use one round BiTine® ring and one elongated BiTine II ring. In this scenario, the round ring and band should be placed first mesially, then the elongated ring and band placed distally. Placing one ring with the tines pointing occlusally and one with the tines pointing gingivally also facilitates restoration of an MOD preparation.

**Placement of Restorative**
Place restorative material and establish proximal contact as per usual technique. Light cure and/or allow material to reach initial set. Gross contouring may be accomplished with matrix in place.

**Matrix Removal**
Remove ring(s), remove wedge(s) and remove sectional matrices. Finish contouring and verify appropriate proximal contact.

**Technique Tips:** It is advisable to "post-cure" light cured restorative materials following matrix removal from all surfaces, including proximo-facial and lingual line angles.

**STERILIZATION AND MAINTENANCE**
Do not attempt to sterilize and/or reuse sectional matrices. Properly dispose used matrices with other contaminated sharps.

Sterilization of the matrices pre-use (if desired) and the rings may be accomplished by any of the following means:

- Steam Autoclaving
- Dry heat
- Chemiclaving

**Note:** Cold sterilization with agents such as glutaraldehyde is not recommended as they significantly tarnish and discolor the metal rings.

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DENTSPLY Caulk
DENTSPLY International Inc.
Milford, DE 19963-0359

Authorized EU Representative
DENTSPLY DeTrey GmbH
D-78467 Konstanz
Germany

Swiss Representative
DENTSPLY DeTrey GmbH, Konstanz
Zweigniederlassung Baar
CH 6342 Baar

Printed in U.S.A. 559105 (R-11/7/01)