A Paradigm Shift in Orthodontic Treatment

Treatment can begin immediately after patient consult.

- A Motion Appliance takes less than 15 minutes to measure and place
- No separating appointments, bands, crowns, or lab time

Unlike other Class II and Class III correction devices, Motion Appliances are:

- Simple, direct bonded appliances without push rods, springs, or unreliable attachments
- Minimally invasive, discreet, and patient friendly

With Motion Appliances patients experience less pain and greater comfort as compared to other Class II appliances.
Motion Appliances are used at the beginning of treatment, when patient compliance is at its highest and there are no competing forces to slow tooth movement.

Motion Appliance placed at the beginning of treatment

Class I platform achieved in 3-4 months
Once a Class I platform is achieved, patient time in braces can be reduced to 7-10 months, or less, when using Carriere SLX™ Brackets.
The **Motion Class II** Appliance

An elegant and minimally invasive solution for:

- Treating Class II dental relationship to a Class I platform in patients of all ages
- Correcting Class II malocclusions faster than any other appliance on the market today*
- Treating bilateral, unilateral, and mixed dentition cases
- Reducing overall treatment time
- Enhancing office efficiency and productivity

*“Treatment effects of the Carriere Distalizer (Motion) using lingual arch and full fixed appliances”, Journal of the World Federation of Orthodontists- May 2014

"Shifting to the Motion Appliance has been one of the most significant treatment advances I have implemented over the past five years in my practice."

- Ron Maddox, D.D.S., San Dimas, CA
Biometrics of the *Motion Class II* Appliance

**Pre-Tx**
1. Excessive overbite
2. Anterior crowding
3. Mesially rotated molars

**After Treatment**
1. Molars are rotated and uprighted
2. Space is gained to resolve crowding without extractions
3. Molars and cuspids move into Class I relationship
Key Features for the **Motion Class II** Appliance

No springs, push rods, bands, or crowns to complicate matters for you, your staff, or your patients.

- **Molar pad ball** articulates in the socket to rotate and upright molars into their ideal positions.
- **Sleek, comfortable design** delivers greater comfort.
- **Hooks** enable easy attachment of elastics.
- **Stiff arm** runs posteriorly over the two upper premolars in a slight curve. Maintains exact space between pre-molars during translation.
- **Cuspid pad** is bonded to the mesial third of the upper cuspid and enables movement of the cuspid along the alveolar ridge without tipping.

No springs, push rods, bands, or crowns to complicate matters for you, your staff, or your patients.
Preparing the Mandibular Arch for the *Motion Class II* Appliance

1. The *Motion* Appliance will be placed on the maxillary arch. A solid and consistent source of anchorage on the mandible must be selected to avoid protrusion of the lower incisors.

2. Possible sources of anchorage can be selected based on an orthodontists’ preference. The recommended source of anchorage is the lower Essix® Appliance with direct bonded tubes on lower molars.

3. The recommended Essix material is A+ with .040” (1 mm) thickness. If the 2nd lower molars (L7) are fully erupted, it is preferred to use them to place the buccal tubes, instead of the 1st molars that will be used to stretch the elastics from the molars to the cuspids or bicuspsids.

You may also watch how easy it is to place the *Motion Class II* Appliance at: [https://youtu.be/FcVHU64qnlq](https://youtu.be/FcVHU64qnlq)
Appliance Measurement & Selection for the *Motion Class II* Appliance

1. **Measuring the Maxillary Segment**

   Using a *Motion* Ruler (included with the appliance), measure from the midpoint on the facial surface of the maxillary 1st molar buccal groove (U6) to the mesial 3rd of the facial surface of the maxillary cuspid (U3).

   ![25 mm measurement](image)

   Measure both sides. Individual sizes are available to accommodate uneven length requirements.

**Appliance Selection**

Select the correct length *Motion* Appliance for treatment by using the measurement described above. When the measurement is between 2 sizes (i.e. in between 24 mm and 25 mm) select the correct appliance based on the amount of rotation desired:

- More molar rotation: select the smaller size
- Less molar rotation: select the larger size
Preparing to Bond the *Motion Class II* Appliance

1. **Prep the teeth for light-cure bonding:**
   
   a. **Clean**: Clean upper 1st molar and upper cuspid (or upper 1st bicuspid) using prophy paste.
   
   b. **Rinse and dry**: Rinse teeth thoroughly with water and air dry.
   
   c. **Etch**: Etch the surface of the molar and upper cuspid (or upper 1st bicuspid) as appropriate for the adhesive selected.
   
   d. **Rinse**: Rinse teeth thoroughly with water.
   
   e. **Dry**: Apply brief air burst to surface of etched cuspid and molar. Ensure that the entire isolated area is dry.
   
   f. **Prime**: Apply a uniform coating of primer onto the surface of the upper 1st molar and upper cuspid (or upper 1st bicuspid), for maximum tensile bond strength.

2. **Generously apply the light-cure adhesive to both pads.**
Preparing and Aligning the *Motion* Class II Appliance

1. **Placement:**
   
   a. Using a locking hemostat, forceps or tweezers, grab the arm of the *Motion* Appliance, and position the appliance onto the teeth.
   
   b. Position the molar pad first on the molar, then position the cuspid pad onto the mesial 3rd of the cuspid (or 1st bicuspid). The vertical groove on the posterior pad of the *Motion* Appliance should be positioned in the center of the buccal surface of the molar.

2. **Alignment**

   Position the *Motion* Appliance onto its optimal position by aligning both pads onto the tooth surface.
Bonding the *Motion Class II* Appliance

1. Remove excess adhesive using your hemostat, forceps, or tweezers, from tooth surface while maintaining alignment of the Motion Appliance.

2. Fully cure the molar pad first.

3. Fully cure the cuspid (or bicuspid) pad.
Activation of the \textit{Motion Class II} Appliance

1. With the lower Essix placed, attach an elastic at the lower 1\textsuperscript{st} (or 2\textsuperscript{nd}) molar tubes and then stretch and attach it to the hook of the maxillary cuspid pad of the \textit{Motion} Appliance.

2. Refer to the Elastics Protocol on the following slide for full details on elastics sizing and strengths.

3. Schedule the next appointment 4 to 6 weeks after placement, and then following at 6 week intervals until the desired treatment outcome is reached. Appointment checks should only take a few minutes-observe treatment progress, explain the progress to the patient, and praise and/or encourage compliance.
Elastics Protocols for the *Motion Class II* Appliance

**Standard Protocol**
- 1st Month: Force 1 elastics (6 oz, 1/4”)
- After 1st Month: Force 2 elastics (8 oz, 3/16”) thereafter

**Blocked-Out Canine Standard Protocol**
Due to blocked-out, high, or buccally-displaced cuspids.

- **Motion 3 to 6 with Tube on Lower 7**
  - Patient Right
  - Patient Left

- **Motion 4 to 6 with Tube on Lower 7**
  - 1st Month: Force 1 elastics (6 oz, 1/4”)
  - After 1st Month: Force 2 elastics (8 oz, 3/16”) thereafter

- **Motion 3 to 6 with Tube on Lower 6**
  - Patient Right
  - Patient Left

- **Motion 4 to 6 with Tube on Lower 6**
  - 1st Month and thereafter: Force 2 elastics (8 oz, 3/16”)
**Elastics Protocols for the Motion Class II Appliance**

**Mixed Dentition Protocol With Deciduous Canine**

3/4 of deciduous canine’s root must be available.
- 1st and 2nd Months: 2 oz, 1/4”
- 3rd and 4th Months: 4 oz, 1/4”
- 5th and 6th Months: 4 oz, 1/4” OR 6 oz, 1/4” at doctor’s discretion

**Adult Patients With High-Bone Density**

If there is no movement after three months following the standard protocol in Class II, Division II, high-bone density patients, boost the case by doing the following:

- **Motion 3 to 6 with Tube on Lower 7**
  - 1st Month-Night: double up Force 1 and Force 2 elastics (6 oz, ¼” & 8 oz, ¾”)
  - 1st Month-Day: single wear of Force 2 elastics (8 oz, ¾”)
  - 2nd Month and thereafter: revert to single wear of Force 2 elastics (8 oz, ¾”) to finish

- **Motion 3 to 6 with Tube on Lower 6**
  - 1st Month: double up Force 2 elastics (8 oz, ¾”) at night
  - 2nd Month and thereafter: revert to single wear of Force 2 elastics (8 oz, ¾”)

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*[Images of diagrams showing the elastics protocols]*
Selection of Elastics for the
Motion Class II Appliance

Choices of elastics:
- Force 1: 6 oz, 1/4” (424-9F1)
- Force 2: 8 oz, 3/16” (424-9F2)
1. **Remove any excess adhesive** around the cuspid, or 1st bicuspid molar pad, utilizing a tapered flame burr. A slight concave channel should now be formed around the parameter of the pad.

2. **Have the patient bite on a cotton roll** placed perpendicular to the cuspid or bi-cuspid to provide stability to either the cuspid or bi-cuspid tooth.

3. **Instrumentation for removal options:**
   a. Bracket Debonding Pliers (PN 204-219)
   b. Angulated Debonding Pliers (PN 204-220XL)
   c. Micro Mini Pin & Ligature Cutter (PN 204-107 or 107XL Long Handle)

4. **Take one of the recommended removal instruments and place the tip ends at the adhesive interface** (concave channel) between the Motion Appliance cuspid pad and the tooth surface. Orient the instrument toward the mesial aspect of the cuspid or bicuspid pad in an occlusal/gingival aspect. Gently squeeze, applying increased continuous pressure, without any twisting or pulling until the bond fails.

5. Once the cuspid pad is debonded, **have the patient bite on a cotton roll** placed in the molar region and then remove the molar pad.

6. **Take one of the debonding instruments** and place it toward the mesial aspect of the molar pad. Gently squeeze the instrument with increased continuous pressure until the molar bond disengages.

7. **Use a burr or adhesive removing pliers** (PN 204-206) to remove any excess adhesive from the molar and cuspid, or bicuspid, tooth surface.

8. **Polish the teeth** to a fine, smooth finish.
Removal of the *Motion Class II* Appliance

Remove cement from **distingival** portion of the pad, where the bar attaches.

Remove cement from **distoincisal** portion of the pad, where the bar attaches.

(Bur used is a 7901 flame shaped carbide)
Removal of the **Motion Class II** Appliance

Remove cuspid pad first. Have patient bite firmly on a cotton roll. Place pinchers of the debonding tool at the area where you removed the cement with a bur. Quickly squeeze the pliers to bring the pincher ends together. If the appliance does not remove, reposition and try again.

Remove molar pad. Place over the molar socket and quick rotation of the wrist down towards the occlusal surface. If it doesn’t come loose, reposition and try again.
## The *Motion* Class II Appliance

### Part Numbers

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<tr>
<th>DESCRIPTION/SIZE</th>
<th>COLOR-CODE</th>
<th>ITEM NUMBERS LEFT</th>
<th>ITEM NUMBERS RIGHT</th>
<th>CATALOG NUMBERS LEFT &amp; RIGHT (1 SET)</th>
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# The Motion Class II Appliance Part Numbers

## DESCRIPTION/SIZE | COLOR-CODE | CATALOG NUMBERS LEFT | CATALOG NUMBERS RIGHT | CATALOG NUMBERS LEFT & RIGHT (1 SET)
--- | --- | --- | --- | ---
Motion Class II 22 mm | Black | 424-922LN | 424-922RN | 424-922CN
Motion Class II 23 mm | Yellow | 424-923LN | 424-923RN | 424-923CN
Motion Class II 24 mm | White | 424-924LN | 424-924RN | 424-924CN
Motion Class II 25 mm | Red | 424-925LN | 424-925RN | 424-925CN
Motion Class II 26 mm | Blue | 424-926LN | 424-926RN | 424-926CN
Motion Class II 27 mm | Green | 424-927LN | 424-927RN | 424-927CN
Motion Class II 28 mm | Pink | 424-928LN | 424-928RN | 424-928CN
Motion Class II 29 mm | Purple | 424-929LN | 424-929RN | 424-929CN
Motion Class II 30 mm | Black | 424-930LN | 424-930RN | 424-930CN
Motion Class II 31 mm | Gray | 424-931LN | 424-931RN | 424-931CN
Motion Class II 32 mm | — | 424-932LN | 424-932RN | 424-932CN
Motion Class II 33 mm | — | 424-933LN | 424-933RN | 424-933CN
Motion Class II 34 mm | — | 424-934LN | 424-934RN | 424-934CN

## DESCRIPTION/SIZE | ITEM NUMBERS
--- | ---
ACCESSORIES
Typodont-Motion with Clear Aligner | 631-017DNE
Motion Storage Tray (1/pk) | CDA-TRAY
Essix, A+ .040 (100/pk) | 617-4402
Motion Class II Patient Education Brochure (15/pk) | 999-257
Motion Elastic Protocol & Instructions for Patients (50/pk) | 999-293
The *Motion* Class III Appliance

An elegant and minimally invasive solution for:

- Treating dental Class III cases to a balanced and optimal Class I occlusion.
- Treating a high percentage of skeletal Class III cases to a Class I occlusion (for patients whom do not want surgery).
- Treating lower anterior crowding at the beginning of treatment (without brackets).
Key Features and Benefits of the *Motion Class III* Appliance

- **Universal (L/R) appliance in six sizes, color-coded for easy identification and inventory.**
- **Simple, reliable, direct-bond attachment points.**
- **Multi-lateral flexion at the center and distal segments, allowing a custom anatomical fit and gentle repositioning of the molar.**
- **High flexibility and unique spring-back qualities to resist deformation.**
Preparing the Maxillary Arch for the *Motion Class III* Appliance

The choice of anchorage can help clinicians reach certain treatment goals associated with facial harmony and balance. The following are two preferred sources of anchorage:

**Option 1: Clear Aligner**

- Recommended when the desired outcome is to maintain the patient’s soft tissue characteristics (angle, fullness, etc...), as the clear aligner will prevent additional protrusion of the upper lips and surrounding soft tissues.
- A clear aligner (Essix 0.4, A+) is placed in the upper arch at the onset of treatment when the Motion Appliance is placed on the lower arch.
- A direct-bonded buccal tube is placed on the upper molars. Bonding to the upper 2nd molars is preferable (if available).

**Option 2: Carriere SLX Self-Ligating Brackets**

- Recommended when the desired outcome is to protrude the patient’s upper lip & soft tissue between the subnasal, labial superior, and stomion points.
- Prior to using the *Motion* Appliance, SLX Brackets are placed on the upper arch along with a round wire.
- Once the upper arch is level and aligned, transition to a .014 x .025 archwire and place the *Motion* Appliance on the lower arch.

You may also watch how easy it is to place the *Motion* Class III Appliance at: https://youtu.be/N8i-xBdRnrI
1. Measuring the Mandibular Segment:

Using a *Motion* Ruler (included with the appliance), measure from the **midpoint** on the facial surface of the mandibular 1\textsuperscript{st} molar buccal groove (L6) to the **mesial 3\textsuperscript{rd}** of the facial surface of the mandibular cuspid (L3). Be sure to measure both sides, as some patients may need a different appliance size on each side. Individual sizes are sold separately to accommodate unevenness.

2. Appliance Selections:

Select the correct length *Motion* Appliance for treatment by using the measurement found and described in the Class II section, page 9. When the measurement is between 2 sizes (i.e. in between 25 mm and 27 mm) select the correct appliance based on the amount of rotation desired.

- More molar rotation: select the smaller size
- Less molar rotation: select the larger size

*Note: This appliance is universal/interchangeable between right and left.*
Preparing to Bond the *Motion Class III* Appliance

1. **Prep the teeth for light-cure adhesion per the following:**
   
   a. **Clean**: Clean the lower 1st molar and lower cuspid or lower 1st bicuspid using prophy paste.
   
   b. **Rinse and dry**: Rinse teeth thoroughly with water and air dry
   
   c. **Etch**: Etch the surface of the 1st molar and lower cuspid (or lower 1st bicuspid) as appropriate for the adhesive selected
   
   d. **Rinse**: Rinse teeth thoroughly with water.
   
   e. **Dry**: Apply brief air burst to surface of etched cuspid and molar. Ensure that the entire isolated area is dry.
   
   f. **Prime**: Apply a uniform coating of primer onto the surface of the upper 1st molar and upper cuspid (or upper 1st bicuspid), for maximum tensile bond strength.

2. **Holding the Motion Appliance by the arm, dispense a generous amount of light-cure bonding material, completely covering each pad.**
Placing and Aligning the *Motion Class III* Appliance

1. **Placement:**
   
   a. Using a locking hemostat, forceps, or tweezers, grab the arm of the *Motion* Appliance, and position onto the teeth.
   
   b. Position the molar pad first on the molar, then position the cuspid pad onto the **mesial 3** of the cuspid (or 1**st** bicuspid). The vertical groove engraved in the posterior pad of the *Motion* Appliance should be positioned in the center of the buccal surface of the molar, however it can fall before or after (+/-1 mm) if necessary.

2. **Alignment:**
   
   Position the *Motion* Appliance onto its optimal position by aligning both pads onto the tooth surface.
Bonding the *Motion Class III* Appliance

1. **Place light pressure with a finger** near the cuspid pad.

2. **Remove excess adhesive** around the cuspid pad.

3. **Light cure the cuspid pad** for only 3 seconds. Make sure to block the cuspid pad with 2 fingers to prevent curing the posterior segment.

4. **Place the tips of the tweezers on the Motion Appliance’s molar pad** Instrument Channel to position the molar pad. Press gently until it becomes in full contact with the vestibular surface of the molar crown. Remove any excess of adhesive around the molar pad. While keeping pressure, proceed to light cure without releasing the pressure.

5. **Now that the Motion Appliance is well aligned, fully cure the cuspid pad.**
1. With the upper Essix placed, attach an elastic at the upper 1st (or 2nd) molar buccal tube and then stretch and attach it to the hook of the mandibular cuspid pad on the Motion Appliance.

2. Refer to the Elastics Protocol on the following slide for full details on elastics sizing and strengths.

3. Schedule the next appointment 4 to 6 weeks after placement, and then following at 6 week intervals until the desired treatment outcome is reached. Appointment checks should only take a few minutes—observe treatment progress, explain the progress to the patient, and praise and/or encourage compliance.
Elastics Protocols for the **Motion Class III** Appliance

**Standard Protocol**
- An elastic will run from the lower cusp to upper molar
- Use 6 oz, ¼” (Force 1) elastic throughout the treatment

**“Shorty” Cases Protocol**
Elastic will run from 1st Lower Bicuspid to upper 1st or 2nd molar.

- **Motion Lower 3 to 6 with Tube on Upper 6**
  - Use 6 oz, ¼” (Force 1) elastic throughout the treatment

- **Motion Lower 3 to 6 with Tube on Upper 7**
  - Use 8 oz, ⅛” (Force 2) elastic throughout the treatment

*Note: For both protocols, elastics are worn 24-hours per day, except while eating.*
Selection of Elastics for the *Motion Class III* Appliance

Choices of elastics:

- Force 1: 6 oz, 1/4” (424-9F1)
- Force 2: 8 oz, 3/16” (424-9F2)
Removal of the *Motion Class III* Appliance

1. **Remove cuspid pad first.**

   To provide stability, have the patient bite on a cotton roll. At your discretion, remove any excess adhesive around the cuspid pad with a tapered flame burr (see Removal of *Motion Class II* Appliance section for more details).

   Place the tip ends of the debonding tool at the adhesive interface between the cuspid pad and the tooth surface. Gently squeeze, applying increased continuous pressure until the bond fails.

2. **Remove the molar pad.**

   With the patient biting firmly on a cotton roll, place pinchers of the debonding tool as shown.

   Gently squeeze the instrument with increased continuous pressure and slightly twist towards the occlusal surface until the bond fails.
## Removal of the **Motion Class III** Appliance

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<td><strong>Motion Class III Trial Kit (1 set of each 23, 25, 27 mm)</strong></td>
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<tr>
<td>Motion Storage Stray (1/pk)</td>
<td>CDA-TRAY</td>
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<tr>
<td>Motion Elastic Protocol &amp; Instructions for Patients (50/pk)</td>
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