

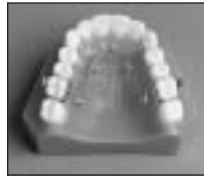
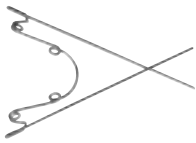
## Unitek™ MIA Mobile Intraoral Arch System

### Instructions For Use



#### Warning:

Stainless steel contains nickel and chromium. A small percentage of the population is known to be allergic to these metals. If an allergic reaction occurs, direct patient to consult a physician.



The MIA Mobile Intraoral Arch is a palatal and lingual appliance.

#### MIA Mobile Intraoral Arch System

##### Quad Helix Lingual Arches

A quad helix consists of the force producing transverse body, the force generating arms, and the retention loops between them. The transverse body starts occlusal at the sheath and crosses over the arm lingually to allow proper gingival clearance around the neck of the molars. In addition, the body of the arch maintains its flexibility without significantly restricting the tongue.

- Adapted to maxillary and mandibular anatomy with proper gingival clearance.
- Can be used with MIA Curved Rotation Sheaths as well as straight lingual sheaths.
- Secured with wire tie or AlastiK™ S1 force module. No soldering needed.
- Ideally suited for direct and indirect fitting.



Maxillary Occlusal View



Mandibular Occlusal View

#### Arch Insertion MIA Lingual Sheaths

Straight Lingual Sheath

Curved Sheath



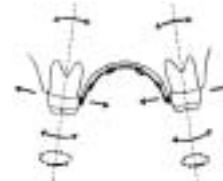
1. Place tip in sheath.



2. Slide to stop with alternating pressure.



3. Secure with ligature or AlastiK™ Force Module.



Possible molar movement and control by Quad Helix arches: buccal and lingual rotation, expansion and contraction.

#### Maxillary or Mandibular (Maxillary Shown)

1. Bilateral expansion of posterior teeth and cuspids.
2. Bilateral expansion of molars.



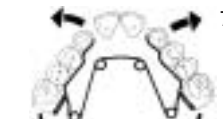
3. Asymmetrical expansion of posterior teeth.
4. Asymmetrical expansion of one molar, reinforced anchorage by contralateral segment.



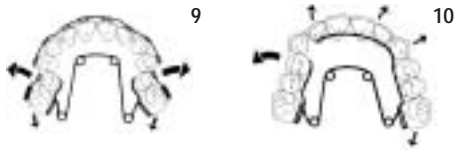
5. Asymmetrical expansion of unilateral posterior segment; reinforced by lingual arm and fixed labial appliance.
6. Asymmetrical, unilateral expansion of single molar; combined with fixed labial appliance.



7. Fan-like expansion, symmetrical of posterior teeth and cuspids (cleft palate).
8. Fan-like expansion, symmetrical of posterior teeth.



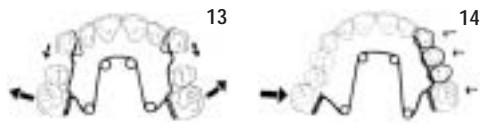
- 9. Fan-like expansion, symmetrical of posterior segments; combined with labial fixed appliance.
- 10. Fan-like expansion, asymmetrical of posterior segments; reinforced anchorage by anterior segment.



- 11. Fan-like expansion, asymmetrical of unilateral segment; reinforced anchorage with fixed labial appliance.
- 12. Fan-like expansion, asymmetrical of unilateral posterior segment; simultaneous protrusion of anterior segment with an auxiliary spring (unilateral cleft palate).



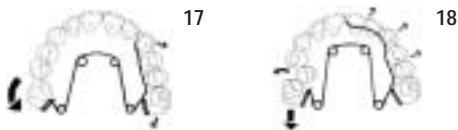
- 13. Fan-like expansion of molars, symmetrical with distal movement of cuspids.
- 14. Unilateral contraction of molar anchorage by ligated cuspid and premolars.



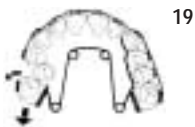
- 15. Unilateral contraction identical to diagram.
- 16. Symmetrical bilateral rotation of molars.



- 17. Unilateral rotation of molar; anchorage on contralateral side.
- 18. Unilateral distal movement and rotation of molar; anchorage by contralateral posterior and anterior segment.

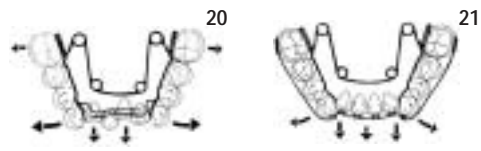


- 19. Unilateral distal movement identical to diagram 18; reinforced anchorage by fixed labial appliance.



**Mandibular Only**

- 20. Temporary fan-like expansion in the canine region; protrusion of the anterior segment by an uprighting spring.
- 21. Temporary fan-like expansion in the canine region; intrusion and protrusion by a utility arch.



**MIA Arch Adaptation**

Adapt arch in the mouth or on patient model. Use inactivated for initial treatment phase. To avoid molar torque, place a compensatory bend in the double end of the quad helix prior to sheath insertion.

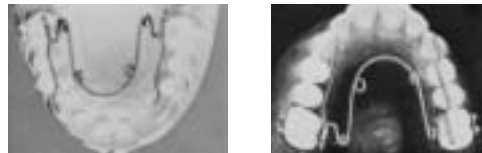
Anterior helices: Position at first bicuspid.

Posterior helices: Position at the middle of the sheaths.

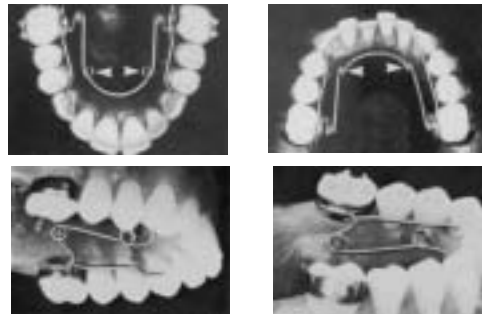
MIA transverse body: Should miss the tissue by 1 mm in the maxilla and 2mm in the mandible. Consider future active tooth movements.

Arch arms: Should contact the teeth as needed. Arms should contact the teeth needing to be moved (bicuspid and molars) gingivally at the area of the greatest circumference.

**Adapted Arch Model**



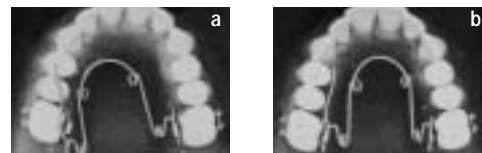
**Activated Arch**



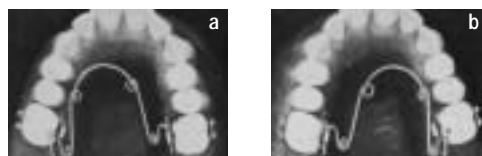
**MIA Arch Activation**

Procedure:

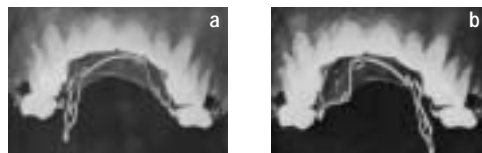
1. Activate with a flat nose plier and finger-pressure.
2. Verify activation amount by inserting one retention loop and observing the relationship of the other retention loop to its sheath. (Figure a)
3. Repeat on opposite side to confirm. (Figure b)  
Unilateral Molar Rotation



**Bilateral Molar Rotation**



**Bilateral Molar Torque**



The treatment goal always determines the amount of activation for expansion, contraction, torque, and rotation. Heavy permanent forces require activation in only small steps:

- Maximum 8 week activation parameters:
- expansion and contraction is 3mm
- rotation is 20 degrees
- torque is 10 degrees

**Caution:** Maximum 8 week activation parameters should not be exceeded. Over-activation of MIA arches to the final treatment goal can cause possible root resorption and loss of force-control.

**The MIA (Mobile Intraoral Arch) Quad Helix System is removable and easily activated**

- The lingual arches are inserted into sheaths already cemented on bands for easy removal and reinsertion.
- Routine use of molar bands with lingual sheaths means later lingual arch placement is possible without de- and re-banding.
- Lingual arches can be activated outside the mouth and checked accurately inside mouth.
- Molar torque can be easily reactivated, changed, and checked.
- The arch can be easily modified without removing or re-cementing the bands.
- Pressure regions on the mucosal tissue resulting from contacting arches can be relieved and controlled.
- Temporary removal of arches during treatment intervals is simple.
- Easy removal of arches facilitates oral hygiene.

**MIA System – Product Information**

- 340-100** MIA Intro Kit-Curved  
20 Quad Helix Arches upper/lower curved  
40 Curved Sheaths (4 pk 080-810)
- 340-101** MIA Intro Kit-Curved/Straight  
10 Quad Helix Arches upper straight  
10 Quad Helix Arches lower curved  
20 Straight Lingual Sheaths (2 pk 080-211)  
20 MIA Curved Rotation Sheaths, lower  
(2 pk 080-810)
- 340-001** Quad Helix Arch **upper** Size 1 curved (5 ea)  
**340-002** Quad Helix Arch **upper** Size 2 curved (5 ea)  
**340-003** Quad Helix Arch **upper** Size 3 curved (5 ea)  
**340-004** Quad Helix Arch **upper** Size 4 curved (5 ea)  
**340-006** Quad Helix Arch **upper** Size 1 straight (5 ea)  
**340-007** Quad Helix Arch **upper** Size 2 straight (5 ea)  
**340-008** Quad Helix Arch **upper** Size 3 straight (5 ea)  
**340-009** Quad Helix Arch **upper** Size 4 straight (5 ea)  
**340-011** Quad Helix Arch **lower** Size 1 curved (5 ea)  
**340-012** Quad Helix Arch **lower** Size 2 curved (5 ea)  
**340-013** Quad Helix Arch **lower** Size 3 curved (5 ea)  
**080-810** MIA Curved Rotation-Lingual Sheath (10 ea)  
**080-211** Straight Lingual Sheaths (10 ea)

**Caution:** U.S. Federal Law restricts this device to sale by or on the order of an orthodontic professional.

**3M**

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