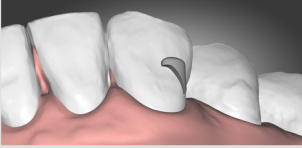
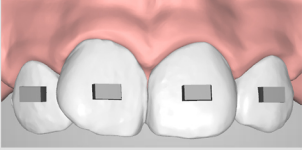
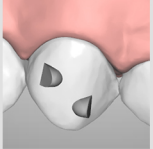
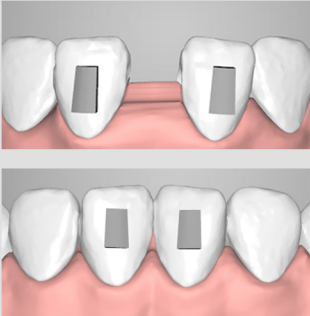
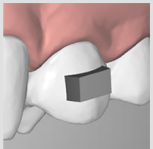
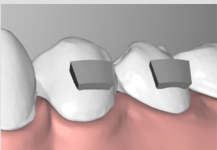



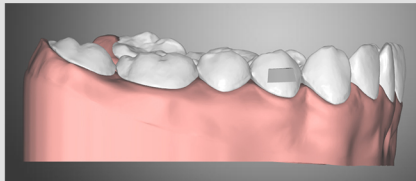
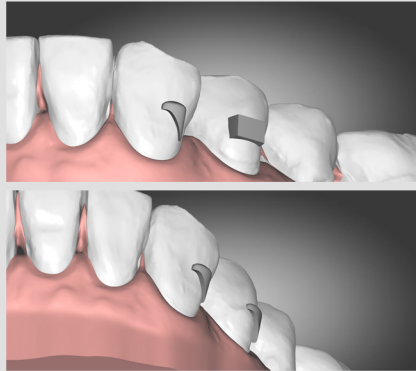
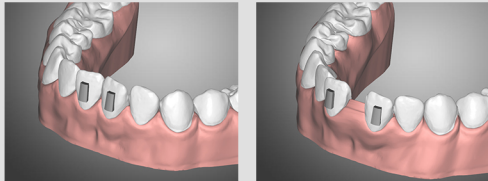
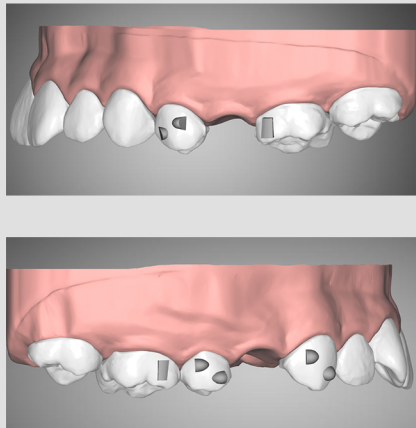
# Optimized Attachments

Type of Movement		Attachment Type	
		Visual	Comments
Rotation	Canines and premolars		Threshold: 5° of rotation Maximum Velocity: 3° per stage
Extrusion	Upper Incisors		Threshold: extrusion of 0.5mm Maximum Velocity: 0.25mm per stage
Root Control Tipping	Incisors, Canines and Premolars		Threshold: Tipping of 0.75mm Maximum Velocity: 0.25mm per stage
Space Closure	Incisors and Premolars		Threshold: Extraction of 2.0mm Maximum Velocity: 0.25mm per stage
Intrusion	Anchorage		Threshold: Extraction of 0.5mm Maximum Velocity: 0.25mm per stage
	Anchorage if premolar is also in rotation		
Retention	Molars		No attachment will be placed Without the clinical diagnosis.

# Attachment Appliance Examples

For certain treatments conventional attachments will be placed and some of these attachments combine optimized attachments.

Table below shows adaptation of conventional attachments and optimized attachments.

Type of Movement	Visual	Comments
Anterior Intrusion without premolar rotation or Root Controls		Place horizontal beveled attachment occlusally on first premolars
Anterior Intrusion with premolar rotation or Root Controls		Place 1mm horizontal beveled attachment. Rotational attachments are placed on premolars in needs of rotation; if both are rotating, do not place horizontal beveled attachment.
Lower Incisor Extraction		Place 1mm thick Vertical Rectangular on two teeth adjacent to the extracted tooth.
Premolar Extraction		On 1st premolar extraction: Root Control Attachment on canine and second premolar  On 2nd premolar extraction: Root control attachment on first molar and place Vertical Rectangular attachment 1mm thick on two distal teeth.

# Autolign Attachment Guides

There are 2 Categories of various attachments, Which are Passive attachments and Active Attachments.

**Passive attachments are used on primarily on molars for:**

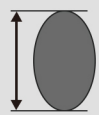
- Intrusion Anchorage
- Aligner Retentiveness

**Active attachments are used on active tooth such as incisors for:**

- Rotation of tee th
- Root Control
- Extrusion

## Types of conventional attachments

### ELLIPSOID ATTACHMENT



3.0mm



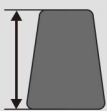
2.0mm



0.75 or 1.0mm

Default size for Ellipsoid horizontal & vertical:  
Height: 3mm  
Width: 2mm  
Length: 1mm

### RECTANGULAR (CRT) ATTACHMENT



3.0mm or  
5.0mm



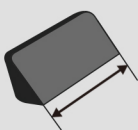
2.0mm



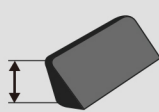
0.75 or 1.0mm

Default size for Rectangular horizontal & vertical:  
Height: 3, 4, 5mm  
Width: 2mm  
Length: 1mm

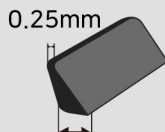
### BEVELLED ATTACHMENT



3.0mm or  
5.0mm



2.0mm



1.25mm

Default size for Rectangular horizontal & vertical:  
Height: 3, 4, 5mm  
Width: 2mm  
Length: 0.5~1.25mm

- Ellipsoid attachments are commonly used for extrusion of anterior teeth
- Applicable on any tooth
- Rectangular attachments are commonly used for rotations of cuspids & bicuspid and also used for root control on extraction cases.
- Applicable on any tooth. Rectangular attachments are very retentive.
- Beveled attachments are commonly used for anchorage for anterior intrusion and normally placed on bicuspid.
- Applicable on any tooth.