



# Attachment design strategy

CLARITY™ ALIGNERS



# Attachment design strategy:

## Default placement guidelines and customization parameters

This guide provides an overview of the standardized approach to attachment design and placement in Clarity™ Aligners, including default configurations and the boundaries for customization.



Bar



Bevel

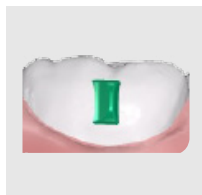
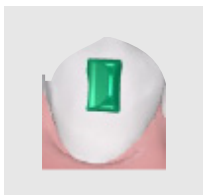
### Attachment options

Two shapes, bar and bevel. They differ in that the bevel has a sloped surface which is designed to be used as a “pushing surface”. Both bar and bevel have rounded ends to aid aligner seating when slight misfit occurs. Both are customizable with a wide range of lengths, widths, and depths.



### Default placement

By default, attachments are centered on the labial or buccal surface of the clinical crown and are oriented either horizontally or vertically, only one Clarity Precision Grip Attachment per tooth is allowed.

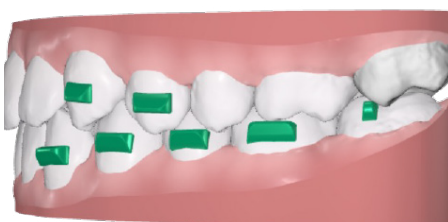


### By default

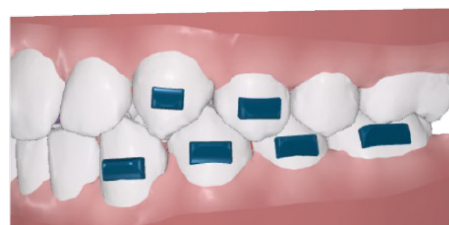
- By default both attachments are placed at stage 1
- Clarity Precision Grip Attachments cannot be changed mid-treatment

## Default color display

In Clarity™ Portal, Clarity™ Precision Grip Attachments appear in green, while conventional attachments appear in blue.



Clarity Precision Grip Attachments



Conventional Attachments

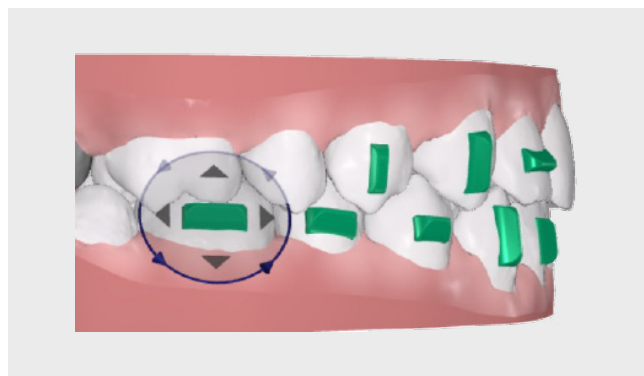
# Attachment dimensions

Attachments can be customized in length, width, depth, and position.

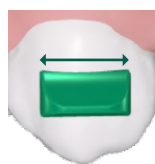
| Tooth                | Auto-adjust                            |
|----------------------|----------------------------------------|
| Attach               | On <input checked="" type="checkbox"/> |
| Conventional         |                                        |
| Precision Grip       |                                        |
| Length               | 6 +                                    |
| Width                | 2.5 +                                  |
| Depth                | 1 +                                    |
| Rotate and translate |                                        |
| Intrude and extrude  |                                        |
| Adjust bevel angle   |                                        |

Shape: bevel or bar

Dimensions

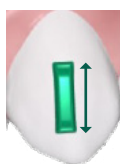


## Default dimensions



### Length (bevel)

Size is based on the length of the crown

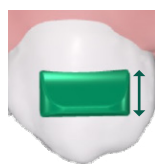


### Length (bar)

## Maximum dimensions

Max length up to 6.0 mm  
(bar and bevel)

(limited by tooth size)



Width (bevel)  
= 2.0 mm



Width (bar)  
= 1.5 mm

Max width (bevel) = 2.5 mm

Max width (bar) = 2.0 mm

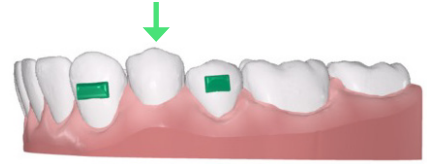
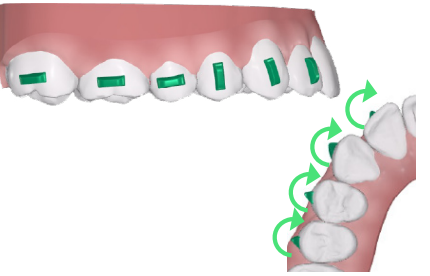
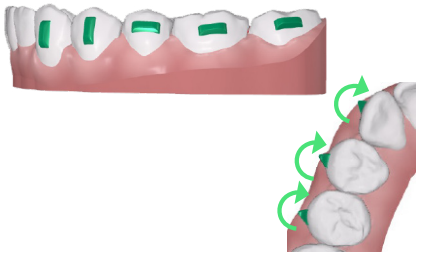
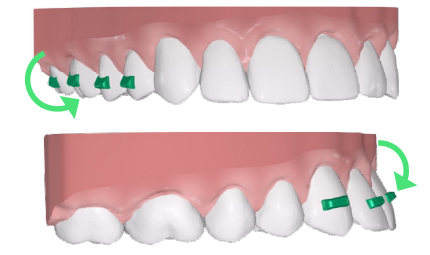
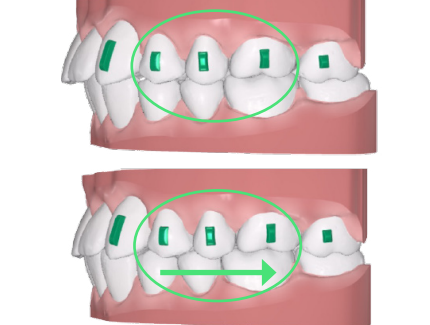


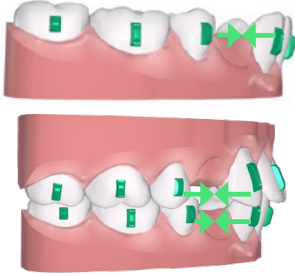
Depth (bevel)  
= 1.0 mm  
Rise from the tooth



Depth (bar)  
= 1.0 mm  
Rise from the tooth

Max depth (bar and bevel) = 1.0 mm  
(rise from the tooth)

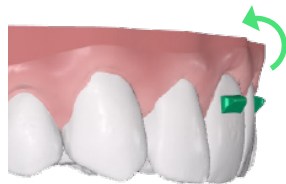
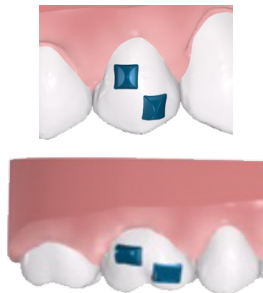
| Movement                           | Location                                                                                                               | Type                                                          | Threshold                                                          | Strategy                                                              | Design                                                                                |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Extrusion</b>                   | <ul style="list-style-type: none"> <li>Incisors</li> <li>Canines</li> <li>Premolars</li> <li>Molars</li> </ul>         | Horizontal bevel towards the gingiva                          | Extrusion greater than 0.5 mm                                      | Designed to provide a “pushing surface” for extrusion.                |    |
| <b>Intrusion</b>                   | Placed on the teeth adjacent to the intruding tooth or segment of teeth                                                | Horizontal bevel towards the gingiva                          | Intrusion greater than 0.5 mm                                      | Designed to provide retention on adjacent teeth to support intrusion. |    |
| <b>Rotation (upper arch)</b>       | <ul style="list-style-type: none"> <li>Lateral incisors</li> <li>Canines</li> <li>Premolars</li> <li>Molars</li> </ul> | Vertical bevel facing toward the rotational force (see image) | Rotation greater than 10°                                          | Designed to provide a “pushing surface” to de-rotate teeth.           |    |
| <b>Rotation (lower arch)</b>       | <ul style="list-style-type: none"> <li>Canines</li> <li>Premolars</li> <li>Molars</li> </ul>                           | Vertical bevel facing toward the rotational force (see image) | Rotation greater than 10°                                          | Designed to provide a “pushing surface” to de-rotate teeth.           |   |
| <b>Tipping (mesial-distal)</b>     | <ul style="list-style-type: none"> <li>Incisors</li> <li>Canines</li> <li>Premolars</li> <li>Molars</li> </ul>         | Vertical bar                                                  | Tipping movement greater than 7°                                   | Designed to provide tray anchorage for controlled tipping.            |  |
| <b>Root torque (buccal)</b>        | <ul style="list-style-type: none"> <li>Incisors</li> <li>Canines</li> <li>Premolars</li> <li>Molars</li> </ul>         | Horizontal bevel towards the gingiva                          | Root movements resulting in greater than 25° change in inclination | Designed to support root movement and provide tray retention.         |  |
| <b>Translation (mesial-distal)</b> | <ul style="list-style-type: none"> <li>Incisors</li> <li>Canines</li> <li>Premolars</li> <li>Molars</li> </ul>         | Vertical bar                                                  | Translation greater than 1.0 mm                                    | Designed to keep roots upright while translating crowns.              |  |

| Movement                             | Location                                                                                                       | Type                                 | Threshold                                           | Strategy                                         | Design                                                                              |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Space closure (mesial-distal)</b> | <ul style="list-style-type: none"> <li>Incisors</li> <li>Canines</li> <li>Premolars</li> <li>Molars</li> </ul> | Vertical bar                         | 1.0 mm                                              | Designed to resist tipping during space closure. |  |
| <b>Maxillary expansion</b>           | <ul style="list-style-type: none"> <li>Canines</li> <li>Premolars</li> <li>Molars</li> </ul>                   | Horizontal bevel towards the gingiva | Expansion requiring translation greater than 1.0 mm | Designed to reduce unwanted torque.              |  |

## Default attachment priority by tooth movement

| Priority order | Movement                    |
|----------------|-----------------------------|
| ①              | Extrusion                   |
| ②              | Tipping (mesial-distal)     |
| ③              | Intrusion (adjacent teeth)  |
| ④              | Translation (mesial-distal) |
| ⑤              | Expansion                   |
| ⑥              | Root torque                 |
| ⑦              | Rotation                    |

# Additional options

| Movement                     | Location                                                                    | Type                                                  | Threshold   | Strategy                                                                                                                         | Design                                                                                |
|------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Retention</b>             | Placed upon request                                                         | Horizontal bevel towards the gingiva                  | N/A         | Designed to provide tray retention especially for cases with short clinical crowns.                                              |    |
| <b>Extrusion/rotation</b>    | Lateral incisors                                                            | Bevel “sash” — diagonally-oriented beveled attachment | Per request | Designed for compound movements, such as simultaneous extrusion and rotation. This orientation is available upon doctor request. |    |
| <b>Root torque (lingual)</b> | <ul style="list-style-type: none"> <li>Incisors</li> <li>Canines</li> </ul> | Horizontal bevel towards incisal edge                 | Per request | Designed to support root movement and provide tray retention. Alternative option to torque points.                               |   |
| <b>Tipping</b>               | Placed upon request                                                         | Two bevels “yin-yang”                                 | Per request | Designed to aid in tipping movement by providing a coupling force. This orientation is available upon doctor request.            |  |