SmartClip™ SL3 Self-Ligating Appliance System

Lunch and Learn

Innovative Self-Ligation Technology

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Agenda

- SmartClip™ SL3 Bracket Overview
- Consultation Benefits
- Bracket Positioning Benefits
- Bonding Benefits
- Leveling & Aligning Benefits
- Working Phase Benefits
- Finishing Benefits
- Debonding Benefits
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SmartClip™ SL3 Brackets: Key Features

- **True Twin Design**
- **ID Dimple with Ink Dots**
- **Nitinol Self-ligating Clips**
- **Clip Retaining Rotation Arm**
- **Rounded, Dome-Shaped Tie-wing**
- **Metal Injection Molded Bracket**

**The Only Metal True Twin Self-ligating Bracket!**
SmartClip™ SL3 Bracket: True Twin Design

- Familiar Twin Wing design allows for treatment flexibility
- Only metal self-ligating bracket offered with APC™ Adhesive consistent adhesive application and improved bond reliability
- Twin bracket design allows selective bracket or tie-wing ligation, increasing inter-bracket width when needed
- Variable bracket widths and twin bracket design enhanced rotational and tip control
- Available in bondable molar brackets complete 6 to 6 system
SmartClip™ SL3 Self-Ligating Brackets

SmartClip™ SL3 Bracket: Ligating Mechanism

- No moving parts or doors to open and close  » saves time over ligated brackets or competitive SL brackets
- Clips snapped over protrusion prior to laser welding base to bracket  » creates clip stability
- One step archwire engagement  » reduces chair time for better chairside productivity
- Quicker archwire removal  » cut the archwire toward the anterior and pull out
- Low engagement force  » 2 to 3 lbs of force needed to engage archwire, similar to ligating a bracket
- Nickel-titanium clips are fatigue resistant with optimal shape memory
- Intelligent clip  » pre-programmed release of the archwire if force is excessive
SmartClip™ SL3 Self-Ligating Brackets

SmartClip™ SL3 Bracket – Clip Design Improvements

Original

SL3 Clip

- Clip Gap .004” → easier archwire engagement
- Angled 15º edge → easier archwire disengagement
- Fulcrum point provides more clip flexibility → easier archwire engagement and disengagement
Advantages of SmartClip™ SL3 Brackets

- Reduction in friction, which results in more efficient sliding mechanics than traditionally ligated brackets
- Improvement in oral hygiene with an open slot and elimination of ligature ties
- Reduced chair-time for archwire removal and insertion
- No plaque entrapment in sliding mechanism and bracket slot
- Ability to ligate on an as-needed basis
- Treatment flexibility of twin tie-wing design
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How do they work?

Self-ligating brackets contain special locking mechanisms to secure the archwire in the bracket slot, without the need for a ligature. Removing the need for ligatures eliminates the friction between ligatures and the archwires, providing enhanced sliding mechanics with less force application.
SmartClip™ SL3 Self-Ligating Brackets

SmartClip™ SL3 Bracket vs. Non-SL Brackets

Self-ligation with SmartClip™ SL3 Brackets

Traditional Ligation

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Consultation Benefits: Hygiene and Comfort

...self-ligating bracket systems display a lower level of frictional resistance, less chairtime for arch wire removal and insertion, and improved infection control, when compared with polyurethane elastomeric and stainless steel tie wire ligation. (AJO/DO 1994;106:472-80.)

SmartClip™ SL3 Brackets …

- Reduce the use of ligatures that contribute to poor oral hygiene as food traps
Improved Hygiene

- Ligatures can retain food particles around the bracket, which makes it more difficult for patients to keep teeth clean.
- Ligatures are made of elastomeric material that stain over time from food products.
- Self-ligating brackets remove the need to use ligatures.
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Bracket Positioning Benefits: Visual References

... Accuracy of bracket positioning is essential, so that the prescription of the bracket can be expressed. This helps treatment mechanics and improves the consistency of the results.

- Systemized Orthodontic Treatment Mechanics (Mosby, 0-7234-3171-X)

SmartClip™ SL3 Brackets Offer ...

- True twin design
- Open slot as horizontal indicator
- Clips serve as long axis indicators
- Proprietary color changing
  APC™ PLUS or APC™ II Adhesive
How do I sterilize this instrument?
Vacuum autoclave, minimum of 20 minutes at 121° C. Do not exceed 138° C (280° F). For further decontamination instructions, please refer to the Unitek™ Bracket Placement Instrument Instructions For Use Ref 011-633.
Bracket Positioning Benefits: Tactile

SmartClip™ SL3 Brackets Feature ...

- Tooth-specific design for better tooth adaptation / fit
- Compound contour base with 3-Point Contact
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Bonding Benefits: Bonding Surface

SmartClip™ SL3 Brackets Offer …

- 80 Gauge Micro etch pad compatible with 3M Unitek adhesives
- 3-point base conforms to tooth anatomy
- Smooth, molded features facilitate indirect bonding
- Compound contour base
SmartClip™ SL3 Self-Ligating Brackets

Bonding Benefits: APC™ Pre-coated Adhesives

- Available pre-coated with APC™ II and APC™ PLUS Adhesive to reduce steps during bonding
  - APC™ PLUS Color Change Adhesive assists with flash cleanup and is fluoride releasing

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SmartClip™ SL3 Self-Ligating Brackets

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### Leveling & Aligning Benefits: Passive Self-ligation

<table>
<thead>
<tr>
<th>SmartClip™ Bracket</th>
<th>In-Ovation™ C Bracket</th>
<th>Victory Series™ Bracket w/ Module</th>
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<td>0g Friction</td>
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In-Ovation is a trademark of GAC Intl., Inc.
Leveling & Aligning Benefits: Treatment Flexibility

- Allows selective tie-wing engagement
- Engaging one tie-wing increases inter-bracket distance
Leveling & Aligning Benefits: Treatment Flexibility

Thank You Dr. Charles Rodrigue, Quebec Canada!
(Example of using Clarity™ SL Bracket features to better manage forces)
Tandem Archwires: Filling the Slot
SmartClip™ SL3 Self-Ligating Brackets

Tandem Archwires: Dimension Details

SmartClip Lower Anterior with Cradle Clip

022 slot 014 + 014
018 slot 014 + 014

022 slot 014 + 016
018 slot 014 + 016

022 slot 012 + 014
018 slot 012 + 014

SCALE 20.000

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SmartClip™ SL3 Self-Ligating Brackets

Upper: .016
Lower: .014

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SmartClip™ SL3 Self-Ligating Brackets

Upper: .016 and .014

Lower: .016 and .014
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Working Phase Benefits: Control

Clips Assist with **Tip Control**

Torque Control
Inaccurate machining of bracket slot dimensions ... may directly and adversely affect three-dimensional tooth positioning. (Angle Orthod 2004;74:450–453.)

Clip Retaining Rotation Arms Assist with **Rotation Control**

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SmartClip™ SL3 Self-Ligating Brackets

**SmartClip™ Appliance Wire Insertion Hand Instrument**

- Single point end torquing key for tight spots
- Double point end torquing key for rectangular wires

3M Unitek

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Stabilizing the Anteriors – The Power of Cotton Rolls
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<th>.022 Slot</th>
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Archwire Insertion

Using the SmartClip™ Appliance Wire Insertion Instrument

- **Double or Torquing key end:**

  1. **Align** archwire over clip opening and bracket slot.
  2. **Position** instrument on archwire so the torquing key straddles the bracket.
  3. **Torque** rectangular wires by rolling the instrument until the wire torque matches the slot torque, which will allow the wire will naturally fall into place with little effort.
  4. **Push** instrument gently while providing lingual support to the teeth.

*Consider using fingers instead of instruments on round and smaller rectangular wires. It may be easier to feel the force levels and the proper seating of the wire.*
Archwire Disengagement
Using the SmartClip™ Appliance Wire Disengagement Instrument

1. **Approach** archwire with disengagement instrument from occlusal or gingival side.

2. **Place** instrument hooks under archwire keeping the bracket between the instrument hooks, avoiding the mesial and distal protrusions and tie-wings.

3. **Squeeze** handles (Note: It is not necessary to fully squeeze the instrument. Only squeeze until the wire releases from the clips.)
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Finishing Benefits: Familiar True Twin Design

At the core, it is a twin bracket!
Torque control is the same as conventional brackets for predictable finishing.
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Debonding Benefits: Debonding on an Archwire!

Unitek™ Self-Ligating Debonding Instrument now allows SmartClip™ SL3 and Clarity™ SL Brackets to be debonded on the archwire – this saves valuable time!
SmartClip™ SL3 Self-Ligating Brackets

SmartClip™ SL3 Bracket Summary

- Treatment Flexibility – true twin edgewise bracket design, active on demand
- Passive Self-ligation – enabled by self-ligating clips
- Edgewise Control – tooth specific bracket widths
- Pre-Adjusted System – systemized in/out relationship with Clarity™ SL Brackets
- Reduced Chair-time – simple and quick archwire changes
- Bracket Positioning Benefits – visual, tactile
- Bonding Benefits – tooth specific 3-Point contact base design, APC™ Adhesive
- Leveling and Aligning Benefits – zero classical friction, effective control
- Working Phase Benefits – torque, tip & rotational control
- Finishing Benefits – familiar true twin
- Debonding Benefits – consistent, debonding on the wire
SmartClip™ SL3 Self-Ligating Brackets

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