

SmartClip™ SL3 Self-Ligating Brackets

SmartClip™ SL3 Self-Ligating Appliance System

Lunch and Learn



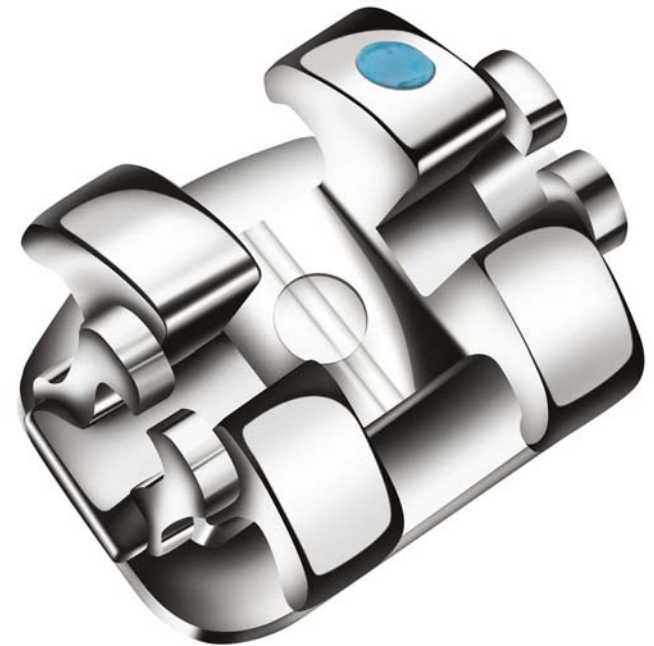
Innovative
Self-Ligation
Technology



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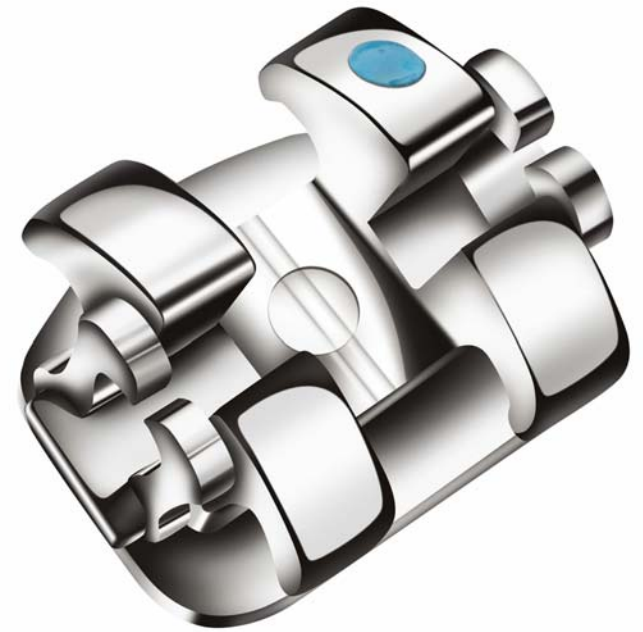
Agenda

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

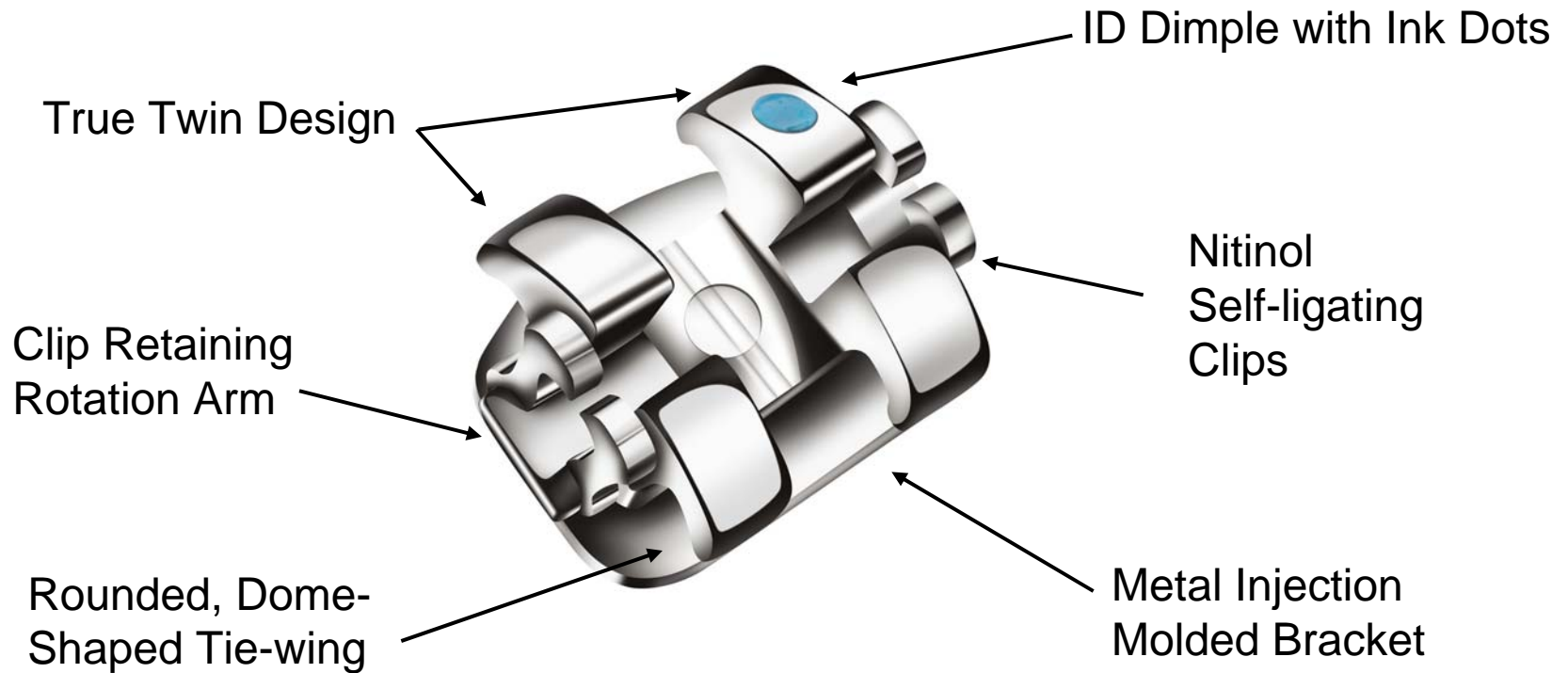


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SmartClip™ SL3 Brackets: Key Features



The Only Metal True Twin Self-ligating Bracket!

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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 Bracket: Ligating Mechanism

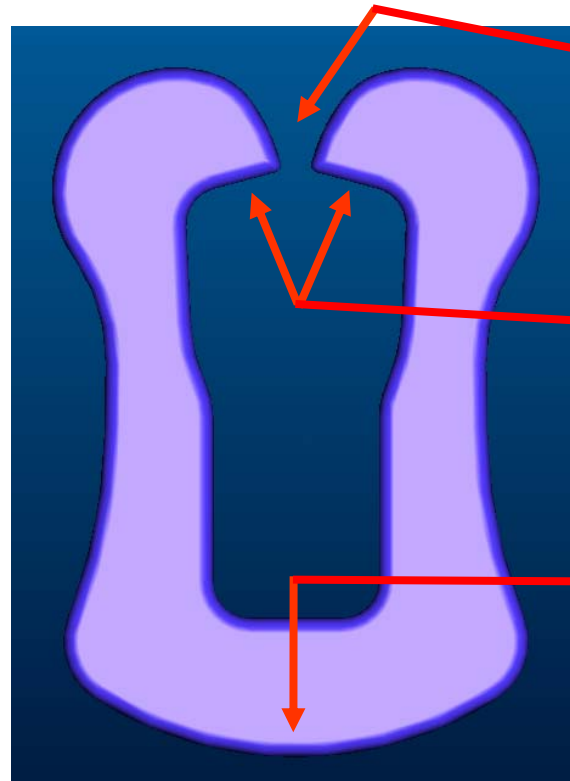
- No moving parts or doors to open and close ► saves time over ligated brackets or competitive SL brackets
- Clips snapped over protrusion prior to laser welding base to bracket ► creates clip stability
- One step archwire engagement ► reduces chair time for better chairside productivity
- Quicker archwire 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 Bracket -- Clip Design Improvements



Original



Clip Gap .004" ▶ easier archwire engagement

Angled 15° edge
▶ easier archwire disengagement

Fulcrum point provides
more clip flexibility ▶
easier archwire
engagement and
disengagement

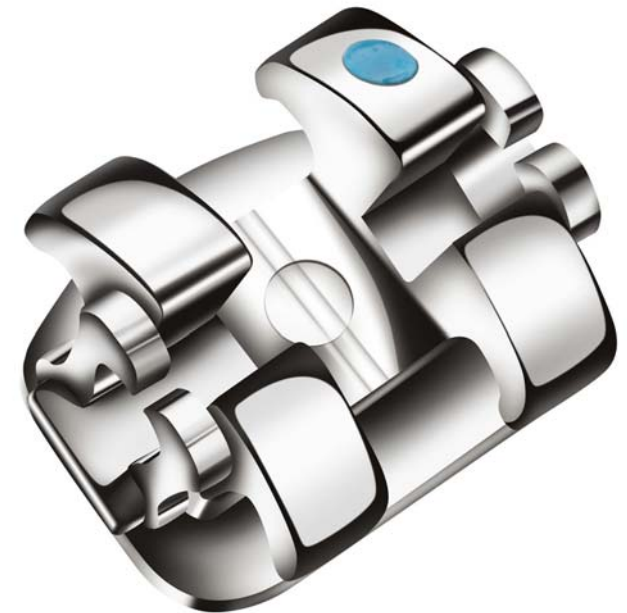
SL3 Clip

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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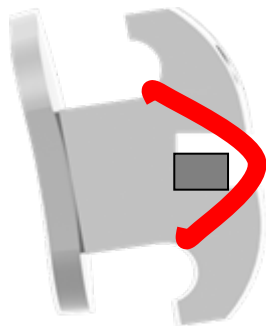
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How do they work?

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.

Traditional Ligated Bracket



Ligature
secures
archwire in
bracket slot

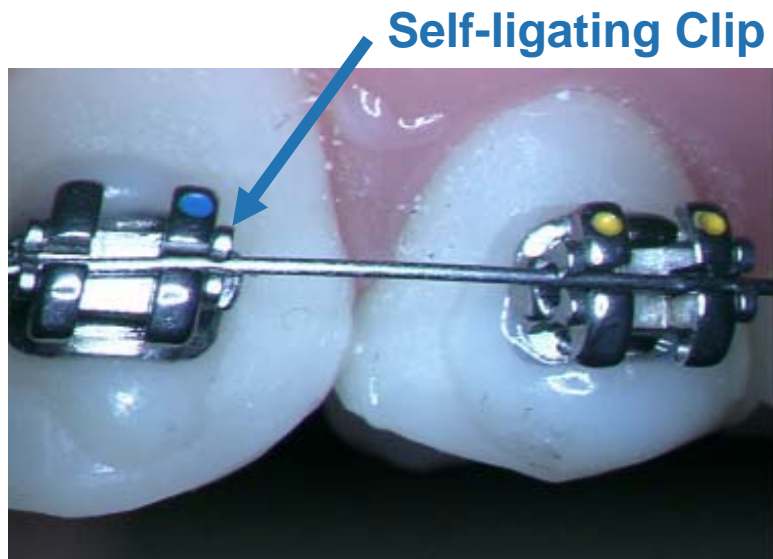
SmartClip™ SL3 Self-Ligating Bracket



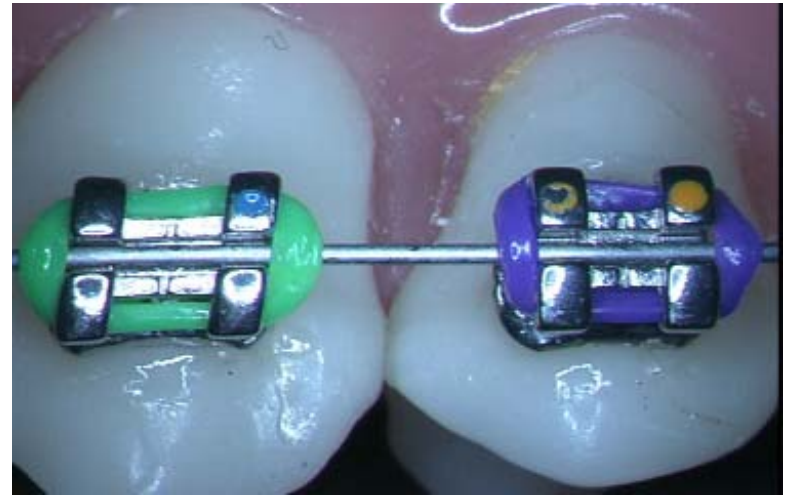
Clips secure
archwire in
bracket slot

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SmartClip™ SL3 Bracket vs. Non-SL Brackets



**Self-ligation with
SmartClip™ SL3 Brackets**



Traditional Ligation

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.)

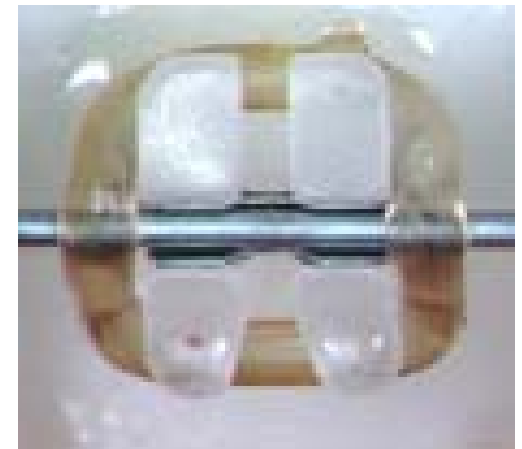


SmartClip™ SL3 Brackets ...

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

Improved Hygiene

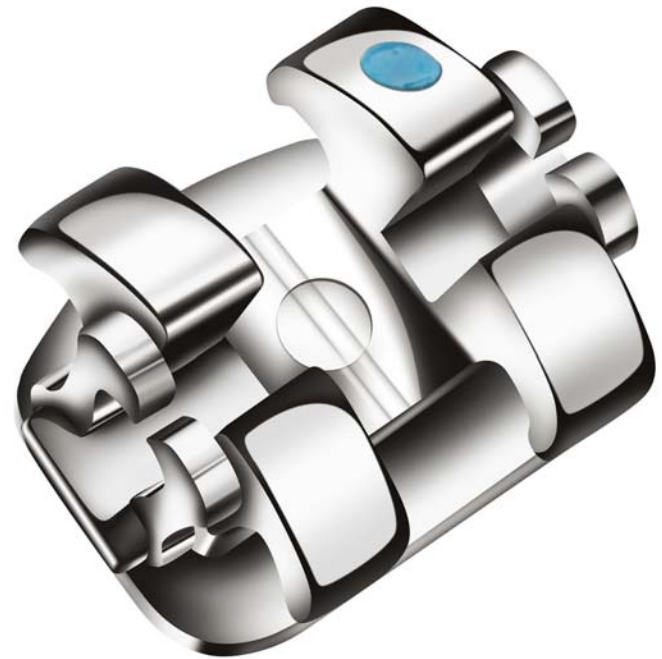
- Ligatures can retain food particles around the bracket, which makes it more difficult for patients to keep teeth clean
- Ligatures are made of elastomeric material that stain over time from food products
- Self-ligating brackets remove the need to use ligatures



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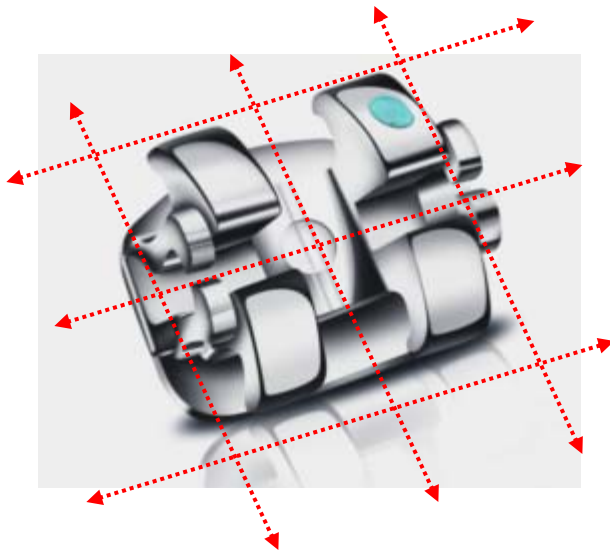
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Bracket Positioning Benefits: Visual References

...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

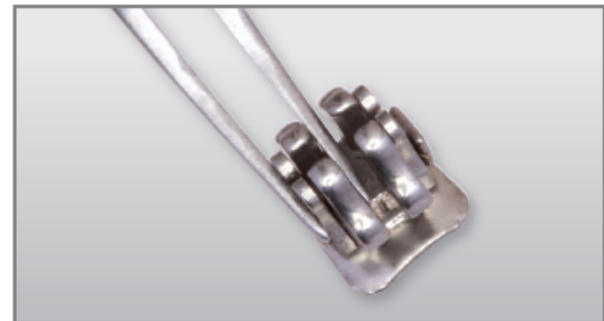
Unitek™ Bracket Placement Instrument (804-171)



SmartClip™ Self-Ligating Brackets



Alternative Gripping Option



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



Central

Lateral

Cuspid

Bicuspid

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

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Bonding Benefits: APC™ Pre-coated Adhesives



SmartClip™ SL3 Brackets Are ...

- 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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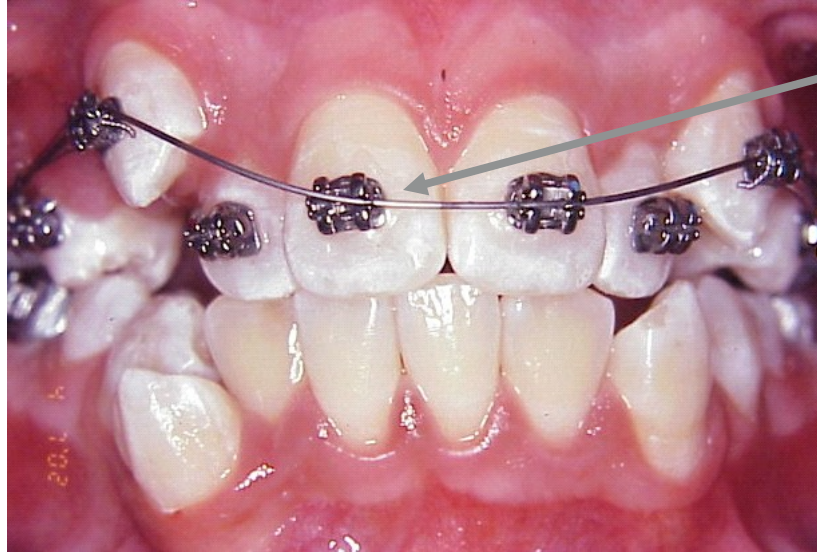
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Leveling & Aligning Benefits: Passive Self-ligation

SmartClip™ Bracket	In-Ovation™ C Bracket	Victory Series™ Bracket w/ Module
		
0g Friction	55g Friction	145g Friction

Leveling & Aligning Benefits: Treatment Flexibility

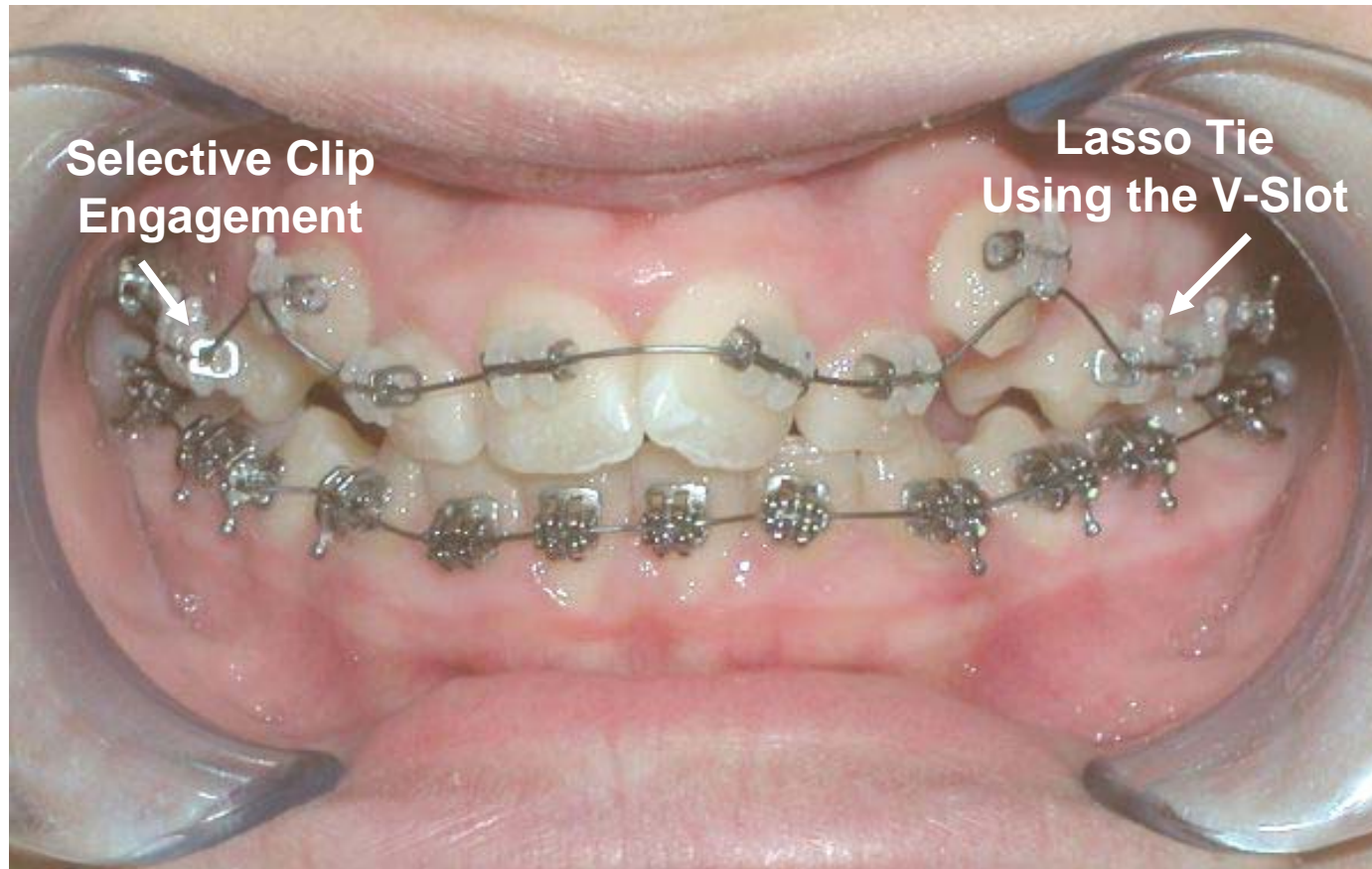


- Allows selective tie-wing engagement
- Engaging one tie-wing increases inter-bracket distance



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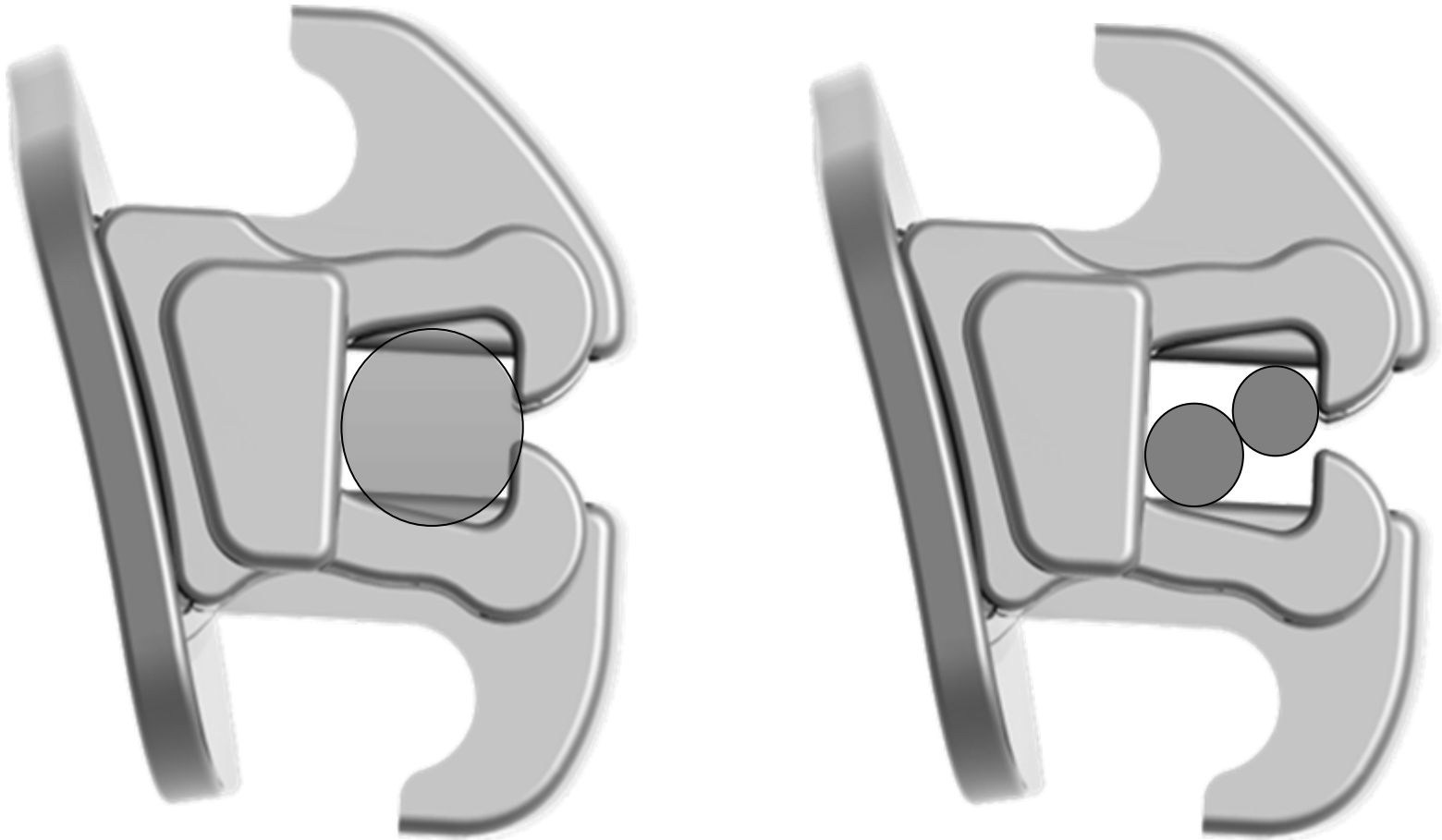
Leveling & Aligning Benefits: Treatment Flexibility



Thank You Dr. Charles Rodrigue, Quebec Canada!
(Example of using Clarity™ SL Bracket features to better manage forces)

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Tandem Archwires: Filling the Slot

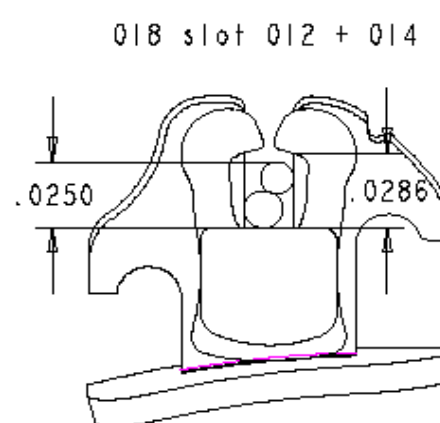
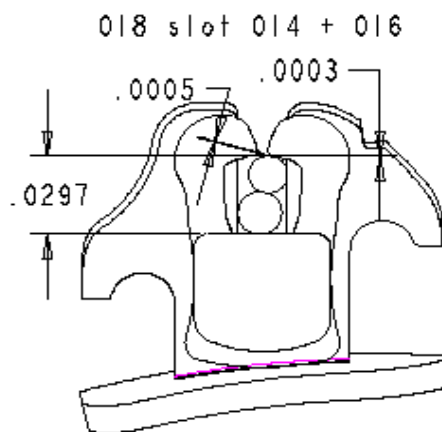
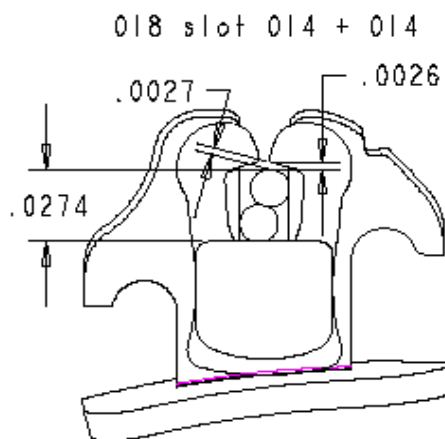
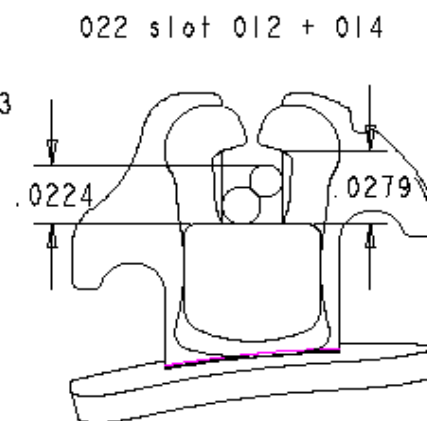
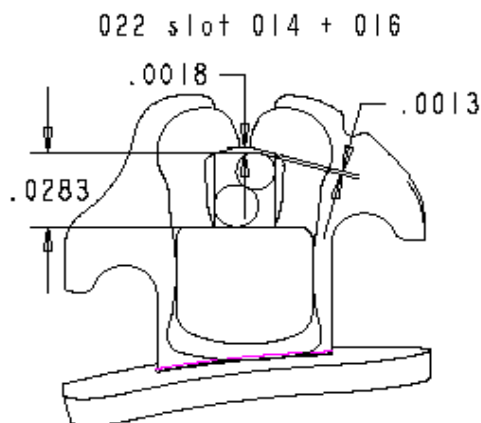
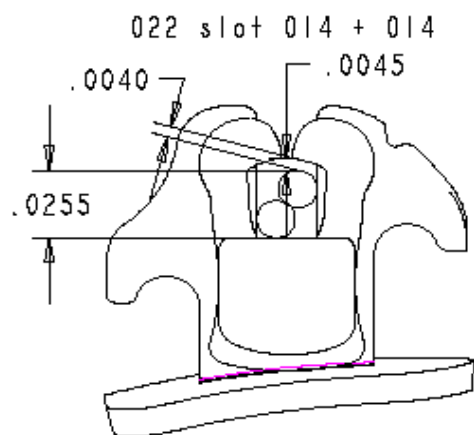


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Tandem Archwires: Dimension Details

SmartClip Lower Anterior
with Cradle Clip

SCALE 20.000



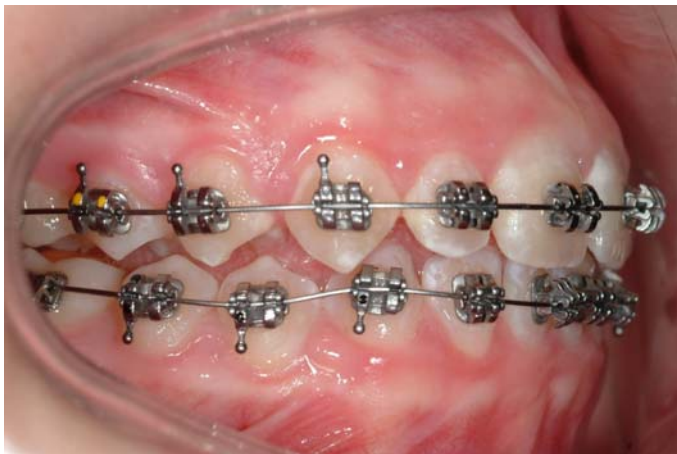
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SmartClip™ SL3 Self-Ligating Brackets



Upper: .016

Lower: .014



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SmartClip™ SL3 Self-Ligating Brackets



.014



Initial .014/.016 Tandem



Final .014/.016 Tandem

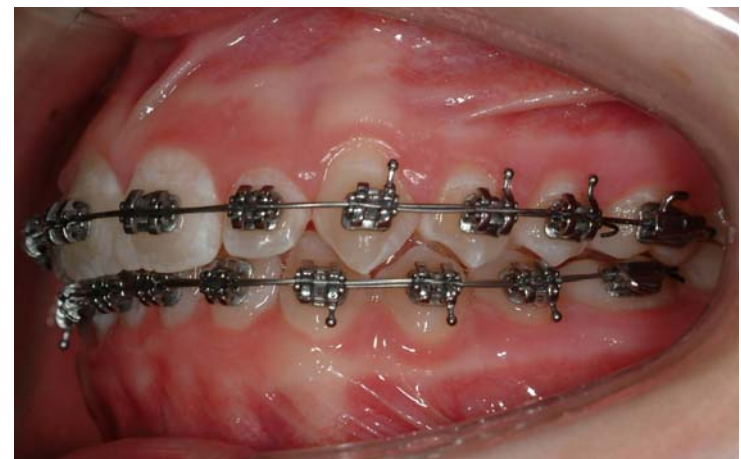
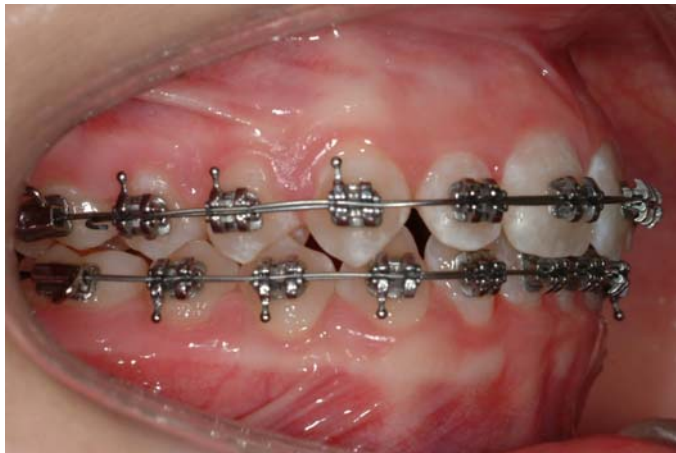
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SmartClip™ SL3 Self-Ligating Brackets



**Upper:
.016 and .014**

**Lower:
.016 and .014**



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Working Phase Benefits: Control

Clips Assist with
Tip Control



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

Torque Control

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



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SmartClip™ Appliance Wire Insertion Hand Instrument

Single point end torquing
key for tight spots

Double point end torquing key for
rectangular wires



Stabilizing the Anteriors – The Power of Cotton Rolls



Recommended Archwire Sequencing for 3M™ Self-Ligating Appliances

Treatment Phase	.018 Slot	.022 Slot
Initial Phase <i>Getting Organized</i> <ul style="list-style-type: none"> - leveling - aligning <i>Necessary Wire Criteria</i> <ul style="list-style-type: none"> - low forces - low modulus - low friction 	Nitinol Classic .012 Nitinol SE or HA .014	Nitinol Classic .012 Nitinol SE or HA .014
Intermediate Phase <i>Working the Big Picture</i> <ul style="list-style-type: none"> - arch form correction - occlusal plane leveling - rotating - tipping <i>Necessary Wire Criteria</i> <ul style="list-style-type: none"> - medium forces - medium working range - medium modulus - medium malleability - low friction 	Nitinol SE or HA .014 with Nitinol SE .014 tandem	Nitinol SE or HA .014 with Nitinol SE .014 or .016 tandem
Finishing Phase <i>Getting Down to Details</i> <ul style="list-style-type: none"> - vertical detailing - space closure - refine interdigitation - retention <i>Necessary Wire Criteria</i> <ul style="list-style-type: none"> - medium forces - short working range - high modulus - high malleability 	Beta III Titanium (non-extraction) .016x.025 .017x.025 Permachrome Resilient (extraction) .016x.025 .017x.025 Braided .017x.025	Beta III Titanium (non-extraction) .019x.025 Permachrome Resilient (extraction) .019x.025 Braided .019x.025

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Archwire Insertion

Using the SmartClip™ Appliance Wire Insertion Instrument

- Double or Torquing key end:

Single-handed technique



Dual-handed technique

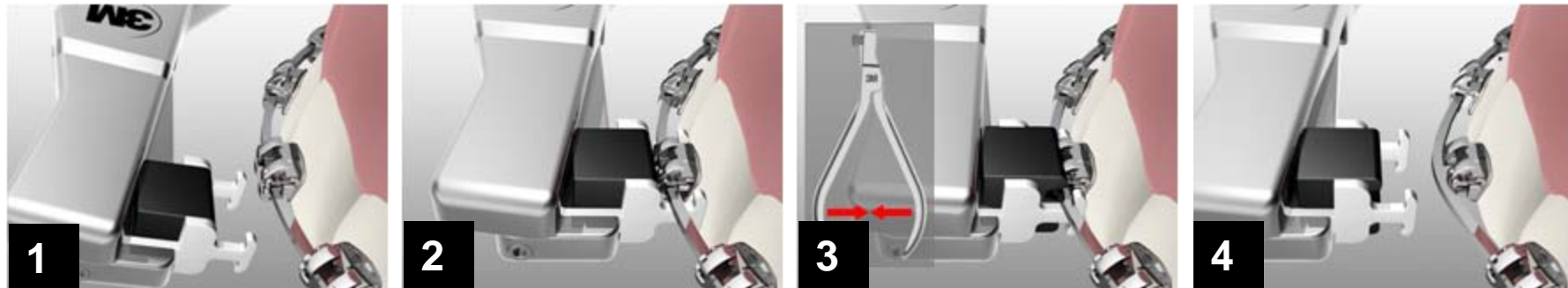


1. **Align** archwire over clip opening and bracket slot.
2. **Position** instrument on archwire so the torquing key straddles the bracket.
3. **Torque** rectangular wires by rolling the instrument until the wire torque matches the slot torque, which will allow the wire will naturally fall into place 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.)

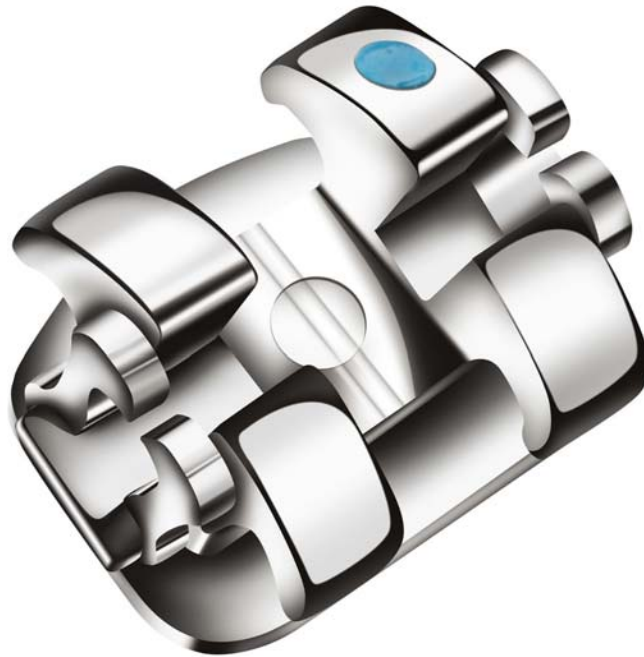
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Finishing Benefits: Familiar True Twin Design



*At the core, it is a twin bracket!
Torque control is the same as conventional brackets for
predictable finishing.*

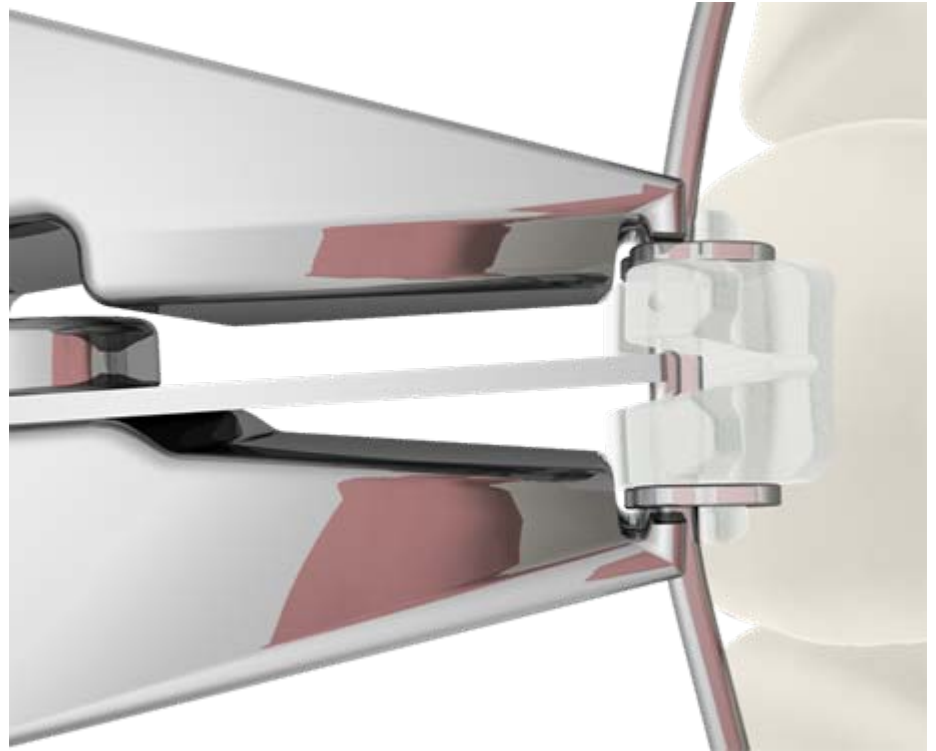
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Debonding Benefits: Debonding on an Archwire!

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



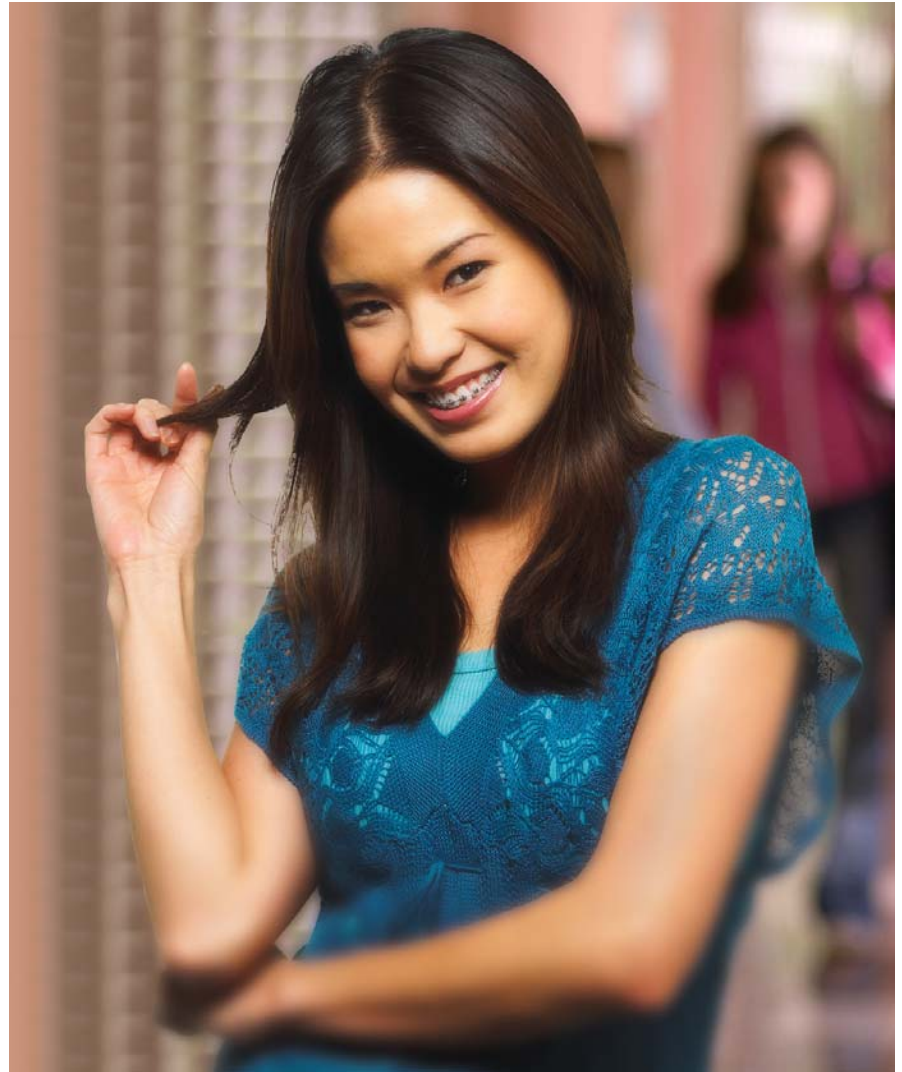
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SmartClip™ SL3 Bracket Summary

- 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



SL3



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