

## **Restorative Manual**

*OSSEOTITE® Certain® Implant System And  
OSSEOTITE External Hex Implant System*



**Certain Internal  
Connection System**



**External Hex  
Connection System**

### ***How To Use The Icon Key:***

The icons represent the connection types of the BIOMET **3i** Implant System and both internal and external connection types are represented in this manual. In the fully illustrated protocols, each icon is present by each step. When a dark burgundy icon and a light burgundy icon are present together, the dark burgundy indicates which system is illustrated. When both icons are dark burgundy, then both systems are illustrated together.

#### ***Icon Key:***

OSSEOTITE® Certain® Internal  
Connection Implant System:



OSSEOTITE External Hex  
Connection Implant System:



OSSEOTITE Certain Internal  
and OSSEOTITE External Hex  
Connection Implant System:



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## **Introduction**

*This manual is designed to serve as a reference guide for dental practitioners to utilize BIOMET 3i Restorative Components and instruments to their maximum potential. BIOMET 3i's Implant Systems have been developed to meet the diverse needs of patients and to offer practitioners a choice of restorative techniques customized to meet each individual's requirements.*

BIOMET 3i's unique implant and restorative component designs provide practitioners with a wide range of restorative options, including support for single tooth crowns, fixed and removable prostheses and attachments for securing overdentures. BIOMET 3i's Implant and Abutment Systems utilize proven restorative designs and provide clinicians and patients with predictable treatment options.

### **General Information**

This manual provides instruction for restorative practitioners in the use of BIOMET 3i's Restorative Systems. The success of any dental implant system depends upon proper use of the components and instrumentation. This manual is not intended for use as a substitute for professional training and experience.

## ***Treatment Planning***

### **Treatment Planning Patient Evaluation And Selection**

Several important factors must be considered when evaluating a patient prior to implant surgery. The presurgical evaluation must include a careful and detailed assessment of the patient's general health, medical history, oral hygiene, motivation and expectations. If the patient's medical history reveals an existing condition or signals a potential problem that may compromise treatment and/or the patient's well being, consultation with a physician is recommended. In addition, the clinician should determine if the patient presents with an acceptable anatomical foundation that is conducive to implant placement. An extensive intraoral examination should be performed to evaluate the oral cavity for any potential bone or soft-tissue pathology. The clinician should also determine the periodontal status of the remaining teeth, the health of the soft tissue, the presence of occlusal abnormalities or parafunctional habits, such as bruxism or crossbite and any other conditions that could adversely affect the restorative outcome.

### **Pre-Operative Planning**

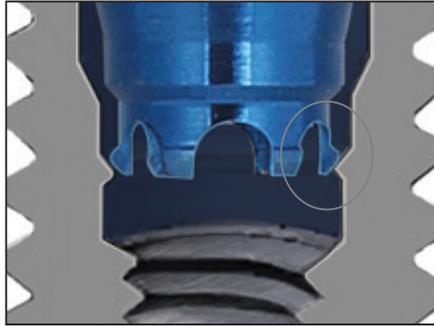
Proper treatment planning includes selection of appropriate implant lengths, diameters and locations. The number of implants is a fundamental consideration for the long-term success of an implant supported restoration. Before an implant is placed, the anatomical foundation of the treatment area must be carefully assessed.

During the presurgical restorative planning phase, it is important for the surgeon, restorative dentist and laboratory technician to participate in determining the type of prosthesis and restorative components that will be used. Such decision making is critical for determining the location of implants and should be finalized prior to implant surgery. A top-down treatment planning approach is recommended, whereby the final prosthesis is designed, implant locations determined and restorative components selected prior to initiating implant surgery.

Clinical information necessary for determining appropriate treatment options includes but is not limited to: determining vertical dimension, evaluating the space available between the alveolar crest and the opposing dentition to confirm that available space exists to accommodate the proposed abutment and final restoration, locating the position of important anatomic structures and determining bone dimensions where implants are to be placed. The height required by the restorative components varies with the type of abutment. Therefore, the surgeon and restorative dentist should carefully evaluate abutment dimensions. Diagnostic casts should be used pre-operatively to evaluate the residual ridge and to determine the position and angulation of all implants. These casts allow the clinician to evaluate the opposing dentition and its effect on implant position. A surgical guide is helpful in determining the precise intraoral position and angulation of the implants and should be included in the pre-operative treatment plan.

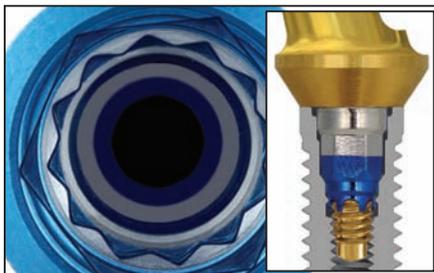
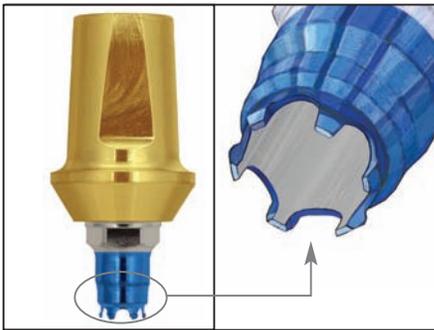
By visualizing the final design of the prosthesis prior to implant surgery, both restorative and surgical clinicians have the opportunity to identify potential restorative problems. They can then make the necessary modifications to implant selection, location and the overall treatment plan prior to actually placing the implants, thus improving treatment predictability and success.

## Implant System Distinctions

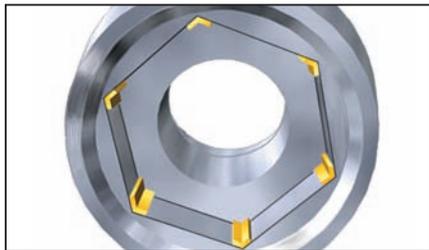


### OSSEOTITE® Certain® Implant System

The internal connection implant that is designed for ease of use and simplicity.



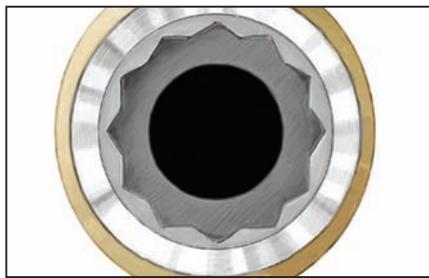
- QuickSeat® Connection: It Clicks! The OSSEOTITE Certain Implant System features the QuickSeat Connection, which has an audible and tactile “click” when placing impression copings and abutments. This click feedback provides confirmation and confidence to the clinician that the components are properly seated.
- Abutment Fingers cause the “click” and also provide retention for the prosthetic components in the implant before the screw is placed. A screw is needed to fully seat the components when restorations are being tried in or definitively placed.
- The 6/12 internal connection has both a hex and a 12-point double hex. The hex has two functions: engaging the driver tip for mountless delivery during implant placement and providing anti-rotation for all straight abutments. The 12-point double hex provides rotational positioning every 30° for the 15° Pre-Angled GingiHue® Post.
- Impression Copings: Pick-Up and Twist Lock™ Transfer Copings are available in the internal connection design, in three EP® (Emergence Profile) diameters and a straight diameter to match the healing abutments. The impression copings also “click” when properly seated. The copings have a different finger design that engages 2mm internally in the implant, as compared to the abutment’s design that engages 4mm deep in the implant. This shorter engagement in the implant is important because it allows off-axis draw for impressions of implants that are divergent.
- Color-Coding: Certain Implants and all interfacing components are color-coded by restorative platform diameter for easy identification and selection.



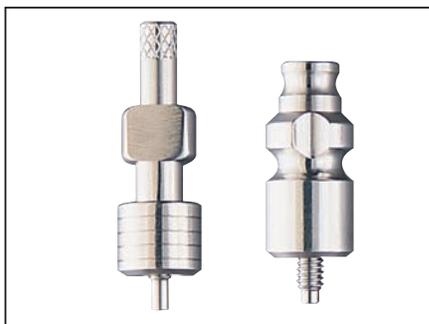
## OSSEOTITE® External Hex Implant System

The external hexed implant design has historically been the most widely used implant design in implant dentistry.

- Gold Standard ZR™ (Zero Rotation) is a patented design of machined microstops within the corners of the hex in the abutment. The design reduces horizontal rotation between the implant and abutment. Gold Standard ZR is available on UCLA, GingiHue® Post and Conical abutments.



- The 12-point double hex, which is machined in the 15° Pre-Angled GingiHue Post, provides rotational positioning in 30° increments on the implant hex.



- Impression Copings: Pick-Up and Twist Lock™ Transfer Copings are both available in the external hex design, in three EP® (Emergence Profile) diameters and a straight diameter to match the healing abutments. The patented Twist Lock design provides a more accurate transfer of the implant hex compared to other transfer (closed tray) techniques. The unique Twist Lock feature provides a series of undercuts to guide the coping into the impression for stability. As a result, the copings lock into orientation grooves upon clockwise rotation, thereby allowing a tactile sensation of resistance that ensures an accurate hex transfer.



- Precise Abutment Placement: The ASYST Abutment Placement Tool provides fingertip control for fast and easy abutment delivery. The patented packaging design makes abutment placement easier because the abutment is delivered sterile from the package directly to the implant site. The abutment and abutment screw are packaged inside the plastic ASYST seating device. The plastic seating device facilitates precise placement of the abutment on the implant, thus reducing chair time. The ASYST Tool is packaged with Standard and Conical abutments.

## Certain® QuickSeat® Activator Tool

The QuickSeat Activator Tool is used to verify that the fingers on the impression copings and abutments are in the proper position to ensure the click when placed into the implant (fig. 1). The QuickSeat Activator Tool is marked to indicate the areas to activate the impression copings on one end and the abutments on the opposite end.

To activate the QuickSeat Fingers, locate the proper end for the component.

- **Impression Copings:** Insert the impression coping onto the pin, fingers first and slide inward until the fingers meet the tool (fig. 2).
- **Abutments:** Insert the abutment onto the pin, fingers first and slide inward until the platform meets the tool (fig. 3).

Remove the component from the pin and insert it into the implant.

In addition, there is an area indicated on the tool for deactivating the fingers on a Hexed UCLA Abutment (fig. 4). This may be necessary when laboratory technicians prefer to insert and remove the abutment from the analog without the finger retention during waxing, finishing or porcelain application. After the custom abutment or crown is completed, the UCLA fingers must be reactivated (fig. 5).

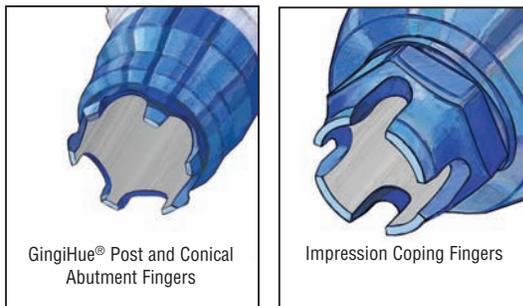


fig. 1

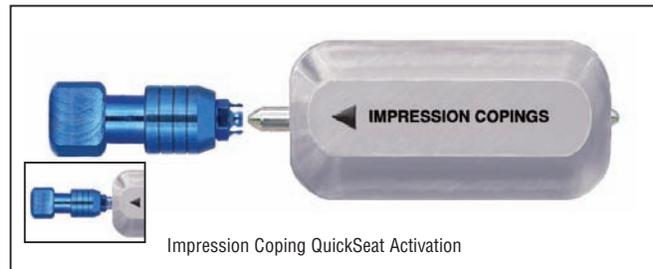


fig. 2

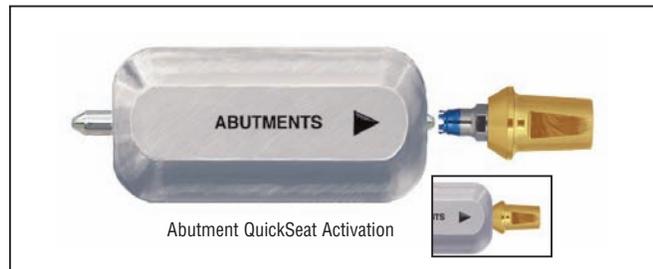


fig. 3



fig. 4



fig. 5

## **Certain® Hexed And Non-Hexed Pick-Up Impression Coping Draw Angles**

### **Maximum Draw Of Certain Hexed Pick-Up Impression Copings**

The Certain Hexed Pick-Up Impression Copings are designed with a shallow internal connection and a draft on the hex, which allows these to draw from implants placed at divergent angles to a maximum of 30° per implant. This maximum angulation is possible with individual or multiple copings that are not rigidly splinted together before the impression is made (fig. 6).

### **Maximum Draw Of Certain Hexed Pick-Up Impression Copings And Non-Hexed Pick-Up Impression Copings When Rigidly Splinted Together**

Clinicians may desire to rigidly splint the Pick-Up Impression Copings together prior to impressioning a multi-implant, implant level restoration. The Hexed Pick-Up Impression Copings will not draw from multiple divergent implants when rigidly splinted together. This impression technique may only be used on parallel implants (fig. 7).

The Non-Hexed Pick-Up Impression Copings have a maximum draw angle of 40° between implants and will draw when rigidly splinted together as impression copings. The Non-Hexed Pick-Up Impression Copings have a shallow non-hex engaging internal connection that allows up to 40° of draw (fig. 8)

When clinicians desire to splint the impression copings together before making an impression of multiple divergent implants for a splinted implant restoration, the Non-Hexed Pick-Up Impression Copings may be used in place of the Hexed Pick-Up Impression Copings (fig. 9).



fig. 6  
30° Per Implant

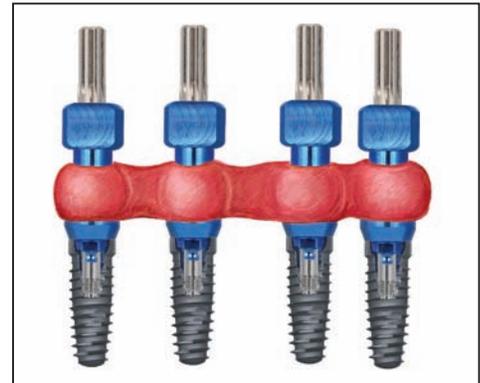


fig. 7  
Pick-Up Impression Copings Rigidly Splinted  
(Parallel Implants)



fig. 8  
40° Divergence Between Splinted Implants



fig. 9  
Non-Hexed Pick-Up Impression Copings Rigidly Splinted  
(Non-Parallel Implants)

## Certain® UCLA Abutment

The OSSEOTITE® Certain Line of restorative components includes a newly designed UCLA Abutment. This new design provides greater predictability and more flexibility for laboratory technicians when waxing and casting implant level restorations.

- Improved Cylinder Retention Design**

The new design incorporates machined vertical grooves that reduces the potential for miscasts due to the smoother alloy flow onto the gold alloy cylinder during casting. The vertical grooves provide mechanical retention and are designed to eliminate the problem on previous UCLA designs of the alloy stopping on the horizontal retention instead of flowing to the margin (fig. 10).

- Chamfer Margin**

The chamfer margin design provides a smooth transition from the gold alloy cylinder to the cast alloy at the junction. It also aids in the prevention of alloy flowing onto the interface area of the gold alloy cylinder during casting (fig. 10).

- Reduced Collar Height**

The collar height has been reduced from 1mm to 0.25mm to provide greater flexibility when fabricating restorations for implants with shallow tissue depths. This allows the restoration to emerge from the implant platform more quickly and to add porcelain closer to the implant platform on screw retained restorations (fig. 11).

- Collar Adjustment After Casting**

The reduced collar height may cause an undercut laterally around the implant platform. The undercut should be removed after casting by tapering the collar back (fig. 12).

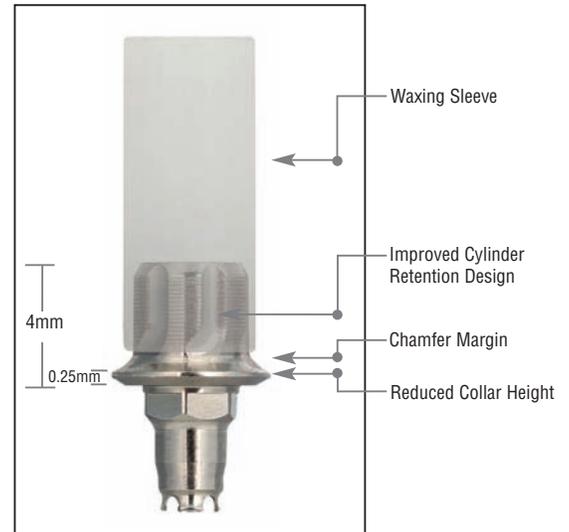


fig. 10

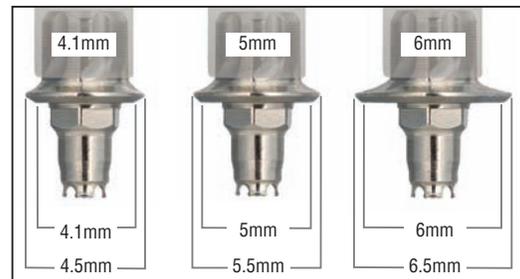


fig. 11



fig. 12

## Certain® Non-Hexed Abutments

The Certain Non-hexed Abutments are designed to provide flexibility for laboratory technicians when fabricating splinted multi-unit, screw-retained provisionals, bridge frameworks and bars for implant level restorations.

- Internal Engagement**

The non-hexed abutments have a 1mm internal engagement feature to allow a greater degree of draw from multiple divergent implants than other internal connection implant systems (fig. 13).

- Large Diameter Abutment Screw**

The non-hexed abutments are retained into the implant with a unique Large Diameter Gold-Tite® or Titanium Abutment Screw. The larger diameter screw provides lateral stability to the restoration. It goes into the full depth of the internal connection, replacing the 4mm length of the hexed abutment's connection (fig. 13). Each Certain Non-hexed Abutment is packaged with a Large Diameter Gold-Tite or Titanium Abutment Screw.

- Maximum Draw Of Non-Hexed Abutments**

The non-hexed abutments have a maximum draw angle of 40° between implants (fig. 14).

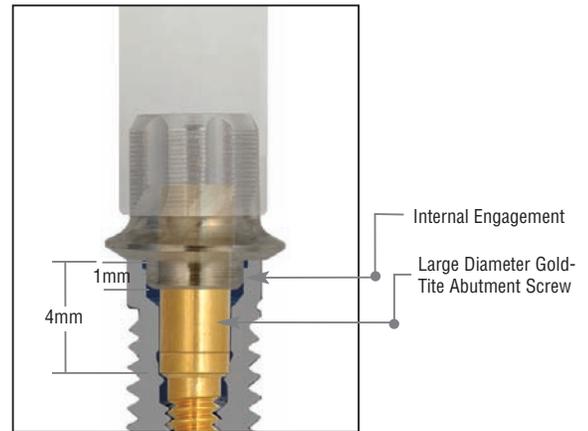


fig. 13  
Certain Non-Hexed UCLA Abutment



fig. 14  
40° Divergence Between Splinted Implants

- Gold Alloy Cylinder Formulation**

The formulation specifics for the gold alloy cylinder material used with the UCLA Abutments is indicated on the chart to the right. The formulation should be taken into consideration during burnout and casting procedures.

GOLD ALLOY CYLINDER FORMULATION	
Melting Range	1400-1490° C (2550-2710° F)
Solidus	1400° C
Liquidus	1490° C
CTE	13.5 x 10 <sup>-6</sup> °K at 500° C

An alloy with a CTE of 14.5 x 10<sup>-6</sup>°K at 500° C is recommended

## Implant Level Impressions

### Choices

#### Pick-Up Impression Coping

The Pick-Up Impression Coping transfers the position of an implant hex to a laboratory cast. The coping is picked up inside the impression when the impression is removed from the mouth. An open top impression tray is used with the Pick-Up Impression Coping.

#### Note

- Pick-Up Impression Copings may be difficult to use in limited, interarch distance spaces.
- Pick-Up Impression Copings are ideal for use when an impression is made of multiple divergent implants.

#### Twist Lock™ Transfer Coping

The Twist Lock Transfer Coping transfers the position of an implant hex to the laboratory cast. The coping is designed to stay on the implant in the mouth when the impression is removed. The coping is then removed from the implant and transferred into the impression. A closed top impression tray is used with the Twist Lock Transfer Coping.

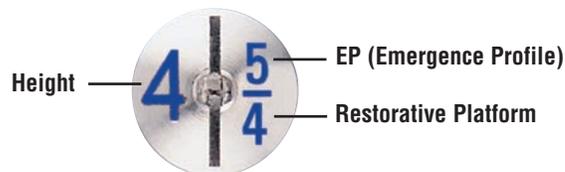
#### Note

- Twist Lock Impression Copings are ideal for use in limited, interarch distance spaces.
- Twist Lock Impression Copings are contraindicated for use when an impression is made of multiple divergent implants. There is a risk of not being able to remove the impression tray from the copings once the impression material has set.

### Selecting The Proper Impression Coping

Select the proper platform diameter Pick-Up or Twist Lock Transfer Impression Coping(s) by matching the color of the implant platform(s). Also, match the diameter of the coping to the EP® Diameter of the healing abutment. See healing abutment measurements:

#### Healing Abutment Measurements:



If using the Pick-Up Impression Coping, turn to page 11.

If using the Twist Lock Transfer Impression Coping, turn to page 14.

### Components Needed

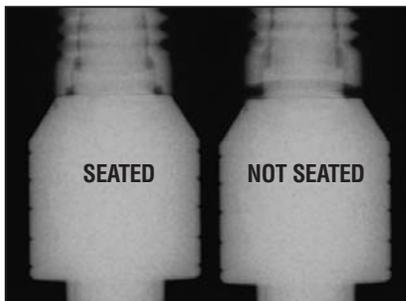
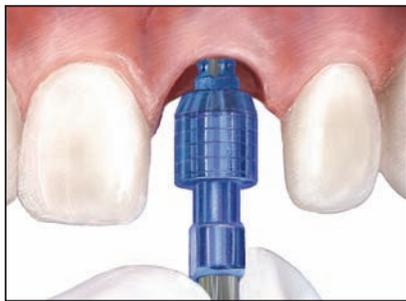
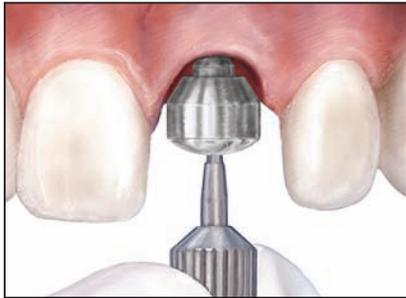
- Matching Platform and EP Diameter Pick-Up or Twist Lock Impression Coping(s).
- Matching implant laboratory analog(s).

### Instruments Needed

- PHD02N or PHD03N - .048in. Large Hex Driver
- ICD00 - Impression Coping Driver (For Twist Lock Only).

## Implant And Abutment Level Impressions Pick-Up Impression Copings

(Certain® Illustrated)



### 1. Restorative Dentist

 Select the proper Pick-Up Impression Coping by matching the EP® Diameter of the healing abutment and matching the color of the implant platform to determine platform diameter (see below). Remove the healing abutment from the implant using the Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

(purple)	(blue)	(yellow)	(green)
			
3.4mm	4.1mm	5mm	6mm

 Activate the fingers using the QuickSeat® Activator Tool. Place the Pick-Up Impression Coping into the implant, line up the hex and press firmly until feeling the tactile click.

or

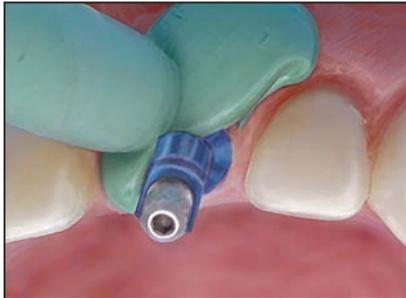
 Place the Pick-Up Impression Coping on the implant and engage the hex.

 Thread the Pick-Up Impression Coping Screw into the implant until finger tight. Tighten the screw using the Large Hex Driver.

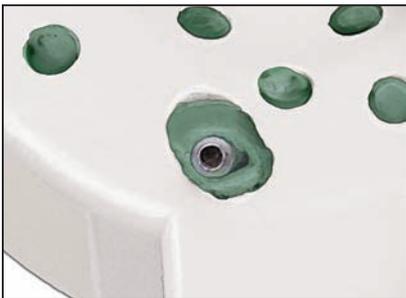
 Radiograph the interface to verify complete seating of the coping on the implant. Place the film perpendicular to the interface of the coping on the implant or abutment.

 A custom or stock **open top** impression tray is used for the Pick-Up Impression Technique. Cut a small hole in the tray through which the screw may protrude. Try in the tray to verify that the screw head is visible through the opening.

## Implant And Abutment Level Impressions Pick-Up Impression Copings



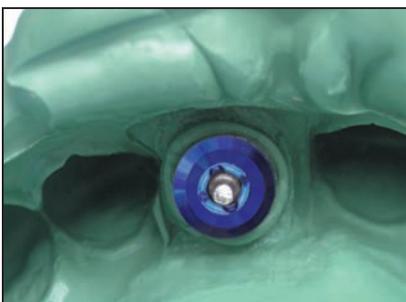
5.  A medium or heavy body impression material is recommended. Syringe impression material around the entire Pick-Up Impression Coping.



6.  Load the impression tray and seat in the mouth. Wipe impression material off the top of the screw before it sets. Allow the impression material to set per the manufacturer's instructions.



7.  After the impression material has set, remove the Pick-Up Impression Coping Screw using the Large Hex Driver. Remove the impression from the mouth.



8.  Verify that the impression material completely adapted around the coping.

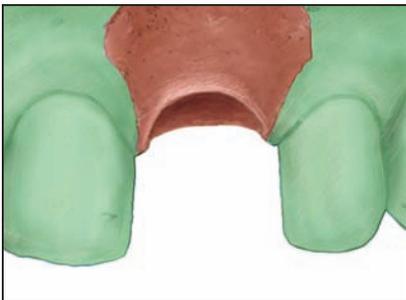
## Implant And Abutment Level Impressions Pick-Up Impression Copings



9.  Immediately replace the healing abutment on the implant using the Large Hex Driver.



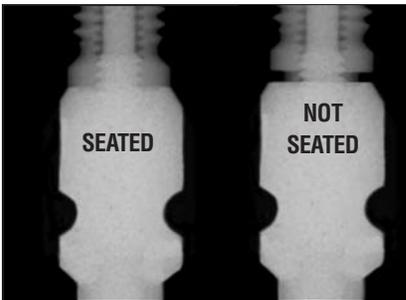
10. **Laboratory**  
 Place the proper diameter Implant Lab Analog onto the impression coping, engaging the hex. Hold the analog in place while tightening the screw with the Large Hex Driver. Verify that the impression coping is seated passively on the analog.



11.  Syringe a soft-tissue material around the coping and analog interface. Pour the cast in die stone. Articulate with opposing cast.

## Implant And Abutment Level Impressions Twist Lock™ Transfer Impression Copings

(External Hex Illustrated)



### 1. Restorative Dentist

 Select the proper Twist Lock Impression Coping by matching the EP® Diameter of the healing abutment and matching the color of the implant platform to determine platform diameter (see below). Remove the healing abutment from the implant using the Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

(purple)	(blue)	(yellow)	(green)
			
3.4mm	4.1mm	5mm	6mm

 Activate the fingers using the QuickSeat® Activator Tool. Place the Twist Lock Impression Coping into the implant, line up the hex and press firmly until feeling the tactile click.

or

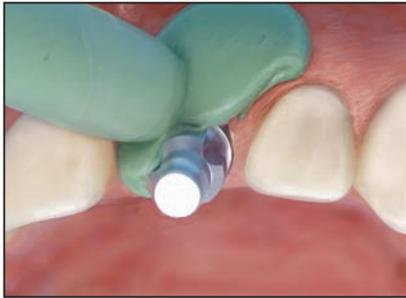
 Place the Twist Lock Impression Coping on the implant and engage the hex.

 Thread the Twist Lock Impression Coping Screw into the implant until finger tight. Tighten the screw using the Impression Coping Driver.

 Radiograph the interface to verify complete seating of the coping on the implant. Place the film perpendicular to the interface of the coping on the implant or abutment.

 A custom or stock **closed top** impression tray is used for the Twist Lock Transfer Impression technique. Try in the tray to verify that there is no contact with the coping.

## Implant And Abutment Level Impressions Twist Lock™ Transfer Impression Copings



5.  A medium or heavy body impression material is recommended. Syringe impression material around the entire Twist Lock Impression Coping.



6.  Load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.



7.  After the impression material has set, remove the impression from the mouth. The Twist Lock Impression Coping will remain on the implant. Verify that the impression material completely adapted around the coping.

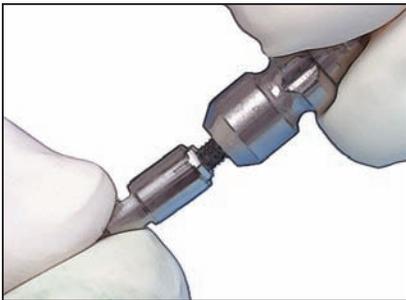


8.  Remove the Twist Lock Coping from the implant using the Impression Coping Driver.

## Implant And Abutment Level Impressions Twist Lock™ Transfer Impression Copings



9.  Immediately replace the healing abutment on the implant using the Large Hex Driver.



10. **Laboratory**  
 Place the proper diameter Implant Lab Analog into the impression coping engaging the hex. Hold the components together while finger tightening the screw. Verify that the impression coping is seated passively on the analog.

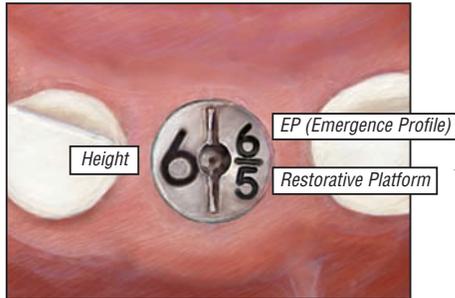


11.  Re-index the impression coping/analog assembly into the impression using firm pressure to its full depth. Slightly rotate the coping/analog clockwise until feeling antirotational resistance. This indicates that the orientation grooves are locked into place and the implant hex is accurately transferred.



12.  Syringe a soft-tissue material around the coping and analog interface. Pour the cast in die stone. Articulate with the opposing cast.

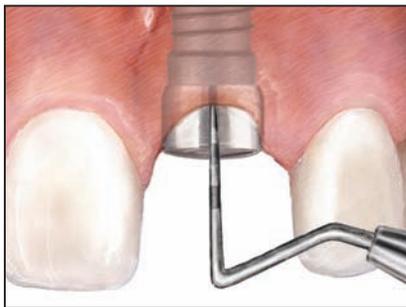
## Prosthetic Abutment Selection Guide



### 1. Restorative Dentist

 Note the size of the implant platform and the EP® Diameter from the healing abutment to select the proper size Prep-Tite® Abutment. The implant platform diameter is also identified by the color code anodized on the implants and components. See below.

(purple)	(blue)	(yellow)	(green)
			
3.4mm	4.1mm	5mm	6mm



 Select the proper abutment collar height by measuring the height of the healing abutment above tissue, **NOT** including the dome portion. Subtract the measurement from the total height of the healing abutment.



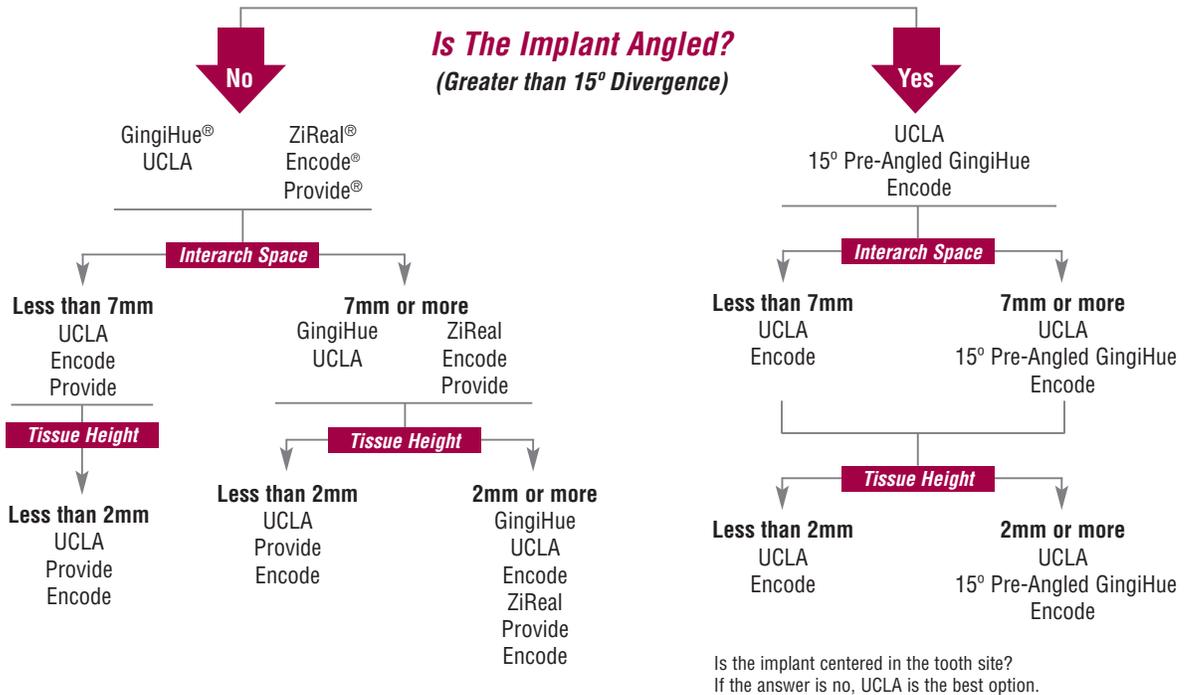
 Using a .048" Large Hex Driver, evaluate angulation by inserting the driver into the healing abutment hex. If the angle appears to be more than 10°, use the Prosthetic Angle Guide Kit to determine the approximate angulation of the implant. The Prosthetic Angle Guide Kit consists of 15, 25 and 35 degree pins in 2, 4 and 6mm collar heights.



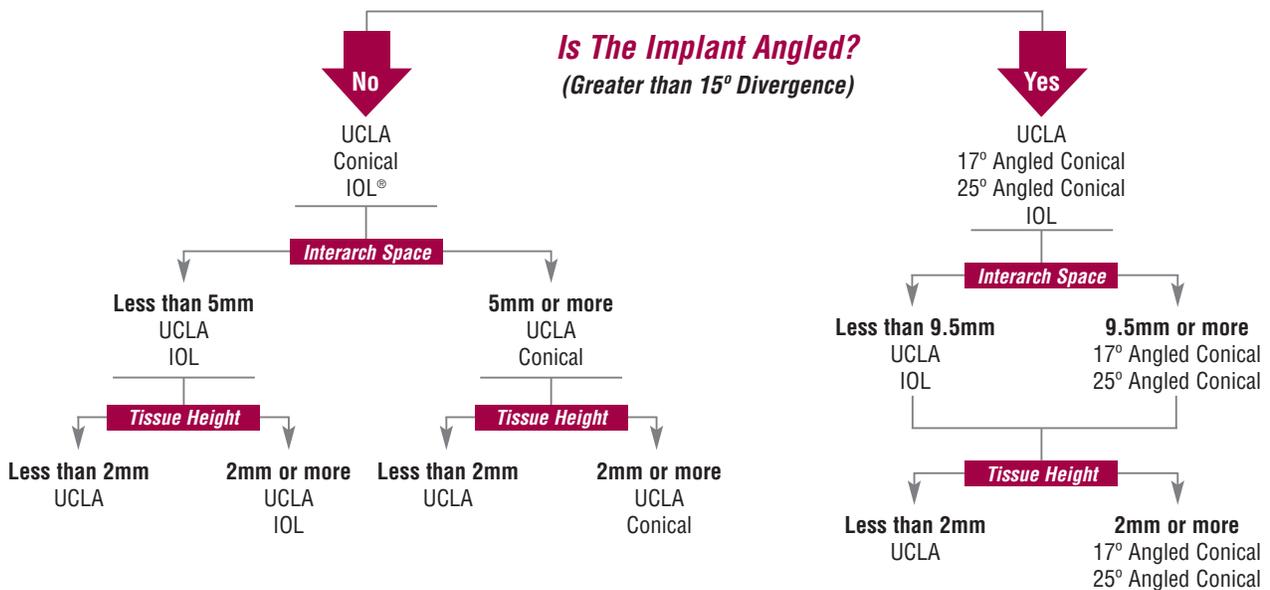
 Place the pins into the implant to select the proper angled abutment. The correct angle will have the guide pin in line with the central fossa of the adjacent posterior teeth or the incisal line angle of the adjacent anterior teeth.

## Restorative Products Flow Chart

### Cement-Retained Restoration Details



### Screw-Retained Restoration Details



## Provide® Abutment Selection guide

	Blue	Blue	Yellow	Green	Yellow	Green
	 a = 4.1mm c = 4mm d = 4.8mm	 a = 4.1mm c = 5.5mm d = 4.8mm	 a = 5mm c = 4mm d = 6.5mm	 a = 6mm c = 4mm d = 6.5mm	 a = 5mm c = 5.5mm d = 6.5mm	 a = 6mm c = 5.5mm d = 6.5mm
<b>Abutments</b>	IPA4140 IPA4240 IPA4340 IPA4440	IPA4155 IPA4255 IPA4355 IPA4455	IPA5140 IPA5240 IPA5340 IPA5440	IPA6140 IPA6240 IPA6340 IPA6440	IPA5155 IPA5255 IPA5355 IPA5455	IPA6155 IPA6255 IPA6355 IPA6455
<b>Screws</b>	IUNIHG	IUNIHG	IUNIHG	IUNIHG	IUNIHG	IUNIHG
<b>Protection Caps</b>	PPC484	PPC485	PPC654	PPC654	PPC655	PPC655
<b>Impression Copings</b>	PIC484 <i>Non-Prepared</i> PIC484H <i>Prepared</i>	PIC485 <i>Non-Prepared</i> PIC485H <i>Prepared</i>	PIC654 <i>Non-Prepared</i> PIC654H <i>Prepared</i>	PIC654 <i>Non-Prepared</i> PIC654H <i>Prepared</i>	PIC655 <i>Non-Prepared</i> PIC655H <i>Prepared</i>	PIC655 <i>Non-Prepared</i> PIC655H <i>Prepared</i>
<b>Laboratory Analogs</b>	PAA484 <i>Non-Prepared</i> PAAP484 <i>Prepared</i>	PAA485 <i>Non-Prepared</i> PAAP485 <i>Prepared</i>	PAA654 <i>Non-Prepared</i> PAAP654 <i>Prepared</i>	PAA654 <i>Non-Prepared</i> PAAP654 <i>Prepared</i>	PAA655 <i>Non-Prepared</i> PAAP655 <i>Prepared</i>	PAA655 <i>Non-Prepared</i> PAAP655 <i>Prepared</i>
<b>Waxing Sleeves</b>	PWS48S <i>Single Unit</i> PWS48M <i>Multi-Unit</i>	PWS48S <i>Single Unit</i> PWS48M <i>Multi-Unit</i>	PWS65S <i>Single Unit</i> PWS65M <i>Multi-Unit</i>	PWS65S <i>Single Unit</i> PWS65M <i>Multi-Unit</i>	PWS65S <i>Single Unit</i> PWS65M <i>Multi-Unit</i>	PWS65S <i>Single Unit</i> PWS65M <i>Multi-Unit</i>
<b>Temporary Cylinders</b>	PUA48S <i>Single Unit</i> PUA48M <i>Multi-Unit</i>	PUA48S <i>Single Unit</i> PUA48M <i>Multi-Unit</i>	PUA65S <i>Single Unit</i> PUA65M <i>Multi-Unit</i>	PUA65S <i>Single Unit</i> PUA65M <i>Multi-Unit</i>	PUA65S <i>Single Unit</i> PUA65M <i>Multi-Unit</i>	PUA65S <i>Single Unit</i> PUA65M <i>Multi-Unit</i>

\* b: collar height selection depends on tissue depth

## Provide® Abutment Selection

**Material:**  
Titanium Alloy

**Indications:**

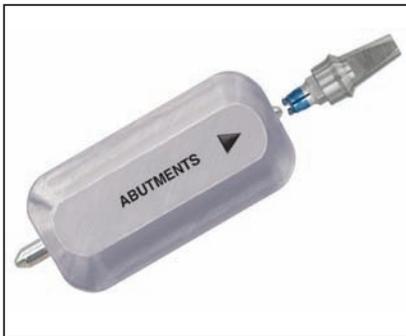
- Single- and Multi-Unit Porcelain Fused to Metal Restorations
- Maximum Angulation Correction of 10°
- Minimum Interarch Space of 6mm



1. Select the proper abutment collar height by measuring the height of the healing abutment above the tissue on the buccal, not including the dome portion. Subtract this measurement from the total height of the healing abutment, then subtract an additional 1mm. The resulting abutment collar height will place the crown margin 1mm subgingival on the buccal. Next, select the proper post height that will allow approximately 2mm of interarch distance space between the top of the post and the opposing occlusion. Finally, match the color of the implant platform to determine the platform diameter.

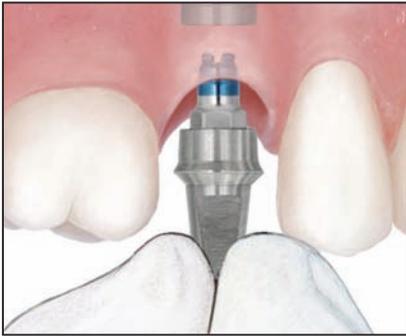


2. Remove the healing abutment using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

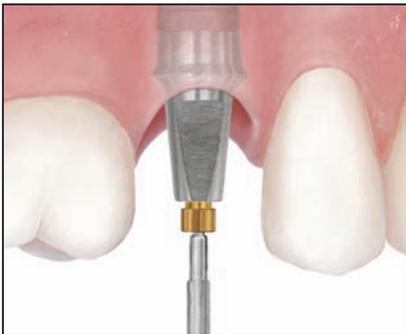


3. Activate the fingers on the Provide Abutment using the QuickSeat® Activator Tool.

## ***Provide® Abutment Placement***

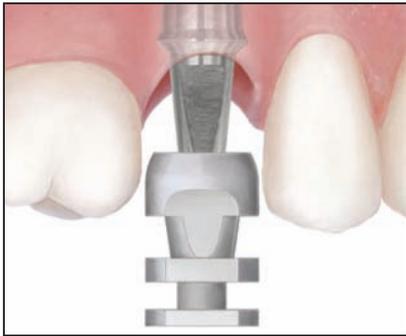


- 4.** Place the Provide Abutment into the implant. Line up the hexes and place the flat side of the post to the buccal. Press firmly until hearing and feeling the audible and tactile click.



- 5.** Thread the Certain® Gold-Tite® Abutment Screw into the implant until finger tight using a .048" Large Hex Driver. Radiograph the interface to verify an accurate fit. Torque the abutment screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device. Seal the top of the access hole with temporary filling material.

**Cement Retained  
Provide® Abutment  
Indirect Technique  
Non-Prepared Post**



*In many cases, with proper abutment selection and ideal angulation, preparation of the abutment post will not be necessary. The following is the restorative procedure for a non-prepared Provide Abutment.*

**Impression Procedure**

**6.** Place the appropriate Provide Impression Coping over the Provide Abutment making sure that the flat side of the impression coping mates with the flat side of the abutment. Snap the impression coping over the abutment margin area.



**7.** Syringe a medium-to-heavy body impression material around the Provide Impression Coping, load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions. Remove the impression from the mouth. The impression coping will be picked-up in the impression.



**8.** Send the impression to the laboratory with an opposing cast or impression and a bite registration.

**Please Note: Provide Impression and Restorative Components are not compatible with the Straumann-ITI® Implant System.**

**Cement Retained  
Provide® Abutment  
Indirect Technique  
Non-Prepared Post**



**Provisionalization Procedure**

**9a.** Place the appropriate Provide Protection Cap over the abutment and press firmly to snap it over the abutment margin area.

**or**

**9b.** Fabricate a provisional crown utilizing a Provide Temporary Cylinder. Place a small amount of temporary cement inside the Provide Temporary Cylinder to ensure that the fit remains passive on the Provide Abutment margin during fabrication of the provisional crown.

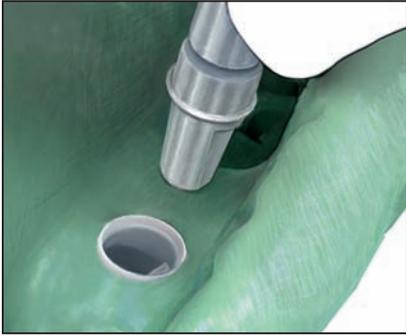
*For a single-unit provisional crown, line up the anti-rotational flat side of the Provide Temporary Cylinder with the anti-rotational flat side of the Provide Abutment. For multiple unit provisionals, there is no anti-rotational flat to align.*

*Masticatory forces and lengths of the multiple-unit spans should be evaluated and the addition of a reinforcement material may be required.*

Once the Provide Temporary Cylinder is secure on the Provide Abutment, try in and adjust the fit of a prefabricated crown shell over the cylinder. Reduce the height of the cylinder as needed. Add acrylic resin or composite material inside the prefabricated crown shell and into the retention facets of the Provide Temporary Cylinder and allow it to set per the manufacturer's instructions. Check contacts and adjust the occlusion.

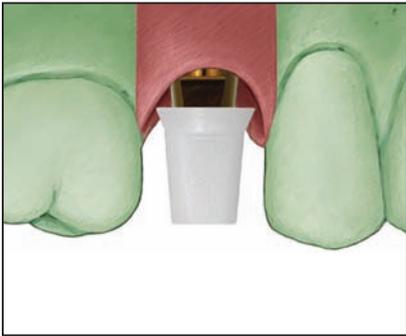
Remove the provisional crown with the Provide Temporary Cylinder joined to it from the abutment. Remove any temporary tacking cement from the inside of the provisional crown and Provide Abutment. Fill in any voids, finish the crown to the desired contour and polish. Attach the crown to the Provide Abutment with temporary cement and allow it to set per the manufacturer's instructions.

## **Cement Retained Provide® Abutment Indirect Technique Non-Prepared Post**

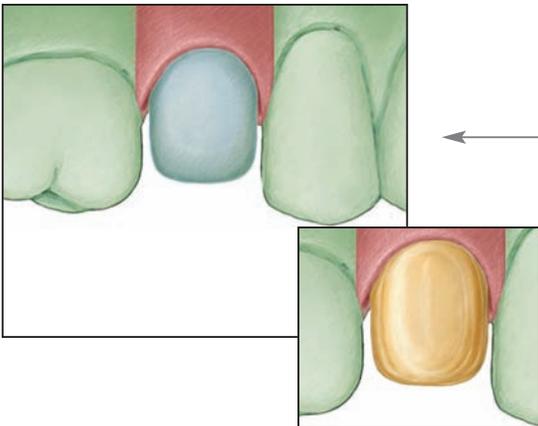


### **Laboratory Procedure**

- 10.** Use the appropriate, color-coded Provide Analog that matches the impression coping. Line up the flat side of the analog post with the flat in the impression coping. Then, insert the Provide Analog into the Provide Impression Coping until it snaps over the margin. Pour the cast in stone using a soft tissue material around the analog. Articulate with the opposing cast.



- 11.** Block out the dimple on the top of the Provide Abutment Analog with wax prior to waxing the crown coping on the Provide Waxing Sleeve. Use the corresponding sized waxing sleeve to fabricate the final PFM crown coping. Place the waxing sleeve over the post, line up the flat sides and verify it is seated to the margin. Tack the sleeve in position with wax.



- 12.** Wax the single unit PFM crown coping to the waxing sleeve. Invest, burnout and cast the coping in a semi-precious or high noble alloy.

**Cement Retained  
Provide® Abutment  
Indirect Technique  
Non-Prepared Post**



**13.** Opaque, build porcelain, stain and glaze the crown.



**Delivery Of Restoration**

**14.** Remove the Provide Protection Cap or provisional crown from the abutment using cotton pliers. Try the crown on the Provide Abutment and check occlusion, marginal fit and interproximal contacts. Cement the crown onto the abutment.

## Cement Retained Provide® Abutment Indirect Technique Prepared Post



*Some circumstances will require the clinician to prepare the Provide Abutment Post. The following is the restorative procedure for preparing a Provide Abutment Post and the associated impression making and laboratory procedures.*

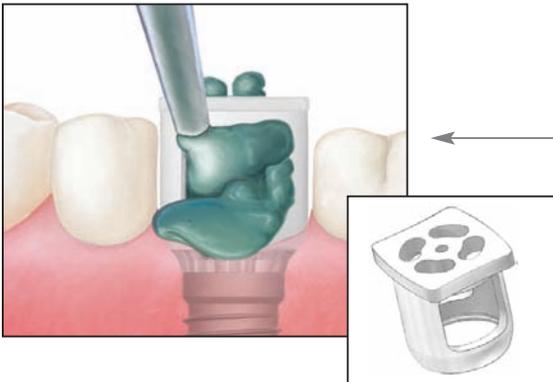
*See Steps 1-5 on pages 19 and 20 for Provide Abutment selection and placement.*

### Post Preparation

6. When reducing a Provide Abutment Post, a carbide bur with copious irrigation is recommended. Prepare the abutment post, leaving 2mm of interarch space for the alloy and porcelain of the final crown. **Do not prepare the margin area of the abutment as this will impact the fit of interfacing components. Adjustments should be limited to post height.**



7. Seal the top of the access hole with temporary filling material. Snap the appropriate Provide Impression Coping With Holes over the abutment margin area.



### Impression Procedure

8. Inject a medium body impression material around the Provide Abutment and into both of the large openings at the sides of the Impression Coping With Holes, causing the flow of impression material to the margin area, without any voids or bubbles. Impression material should be injected until it can be observed extruding from the four small holes at the top surface of the Impression Coping With Holes. Load a full arch impression tray with impression material and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.

**Please Note: Provide Impression and Restorative Components are not compatible with the Straumann-ITI® Implant System.**

## Cement Retained Provide® Abutment Indirect Technique Prepared Post



- 9. Remove the impression from the mouth. The Impression Coping With Holes will be picked up in the impression. Verify the marginal integrity of the impression.

### Provisionalization Procedure

- 10a. Place the appropriate Provide Protection Cap over the abutment and press firmly to snap it over the abutment margin area.

or

- 10b. Fabricate a provisional crown utilizing a Provide Temporary Cylinder. Place a small amount of temporary cement inside the Provide Temporary Cylinder to ensure that the fit remains passive on the Provide Abutment margin during fabrication of the provisional crown.

*For a single-unit provisional crown, line up the anti-rotational flat side of the Provide Temporary Cylinder with the anti-rotational flat side of the Provide Abutment. For multiple-unit provisionals, there is no anti-rotational flat to align.*

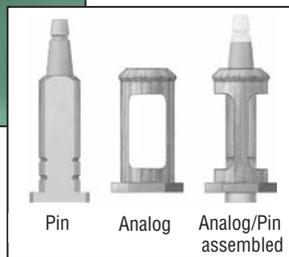
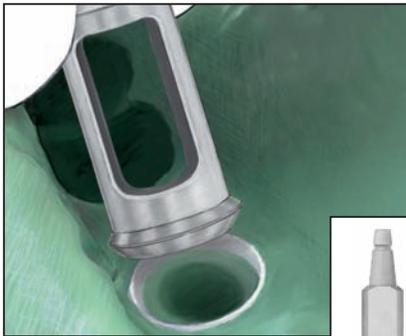
*Masticatory forces and lengths of the multiple-unit spans should be evaluated and the addition of a reinforcement material may be required.*

Once the Provide Temporary Cylinder is secure on the Provide Abutment, try in and adjust the fit of a prefabricated crown shell over the cylinder. Reduce the height of the cylinder as needed. Add acrylic resin or composite material inside the prefabricated crown shell and into the retention facets of the Provide Temporary Cylinder and allow it to set per the manufacturer's instructions. Check contacts and adjust the occlusion.

Remove the provisional crown with the Provide Temporary Cylinder joined to it from the abutment. Remove any temporary tacking cement from the inside of the provisional crown and Provide Abutment. Fill in any voids, finish the crown to desired contour and polish. Attach the crown to the Provide Abutment with temporary cement and allow it to set per the manufacturer's instructions.

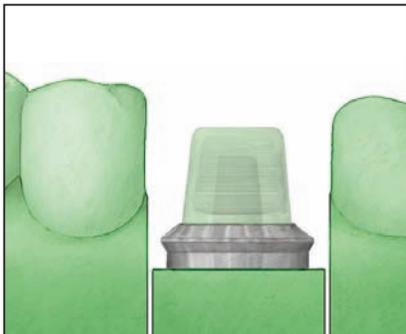


## Cement Retained Provide® Abutment Indirect Technique Prepared Post

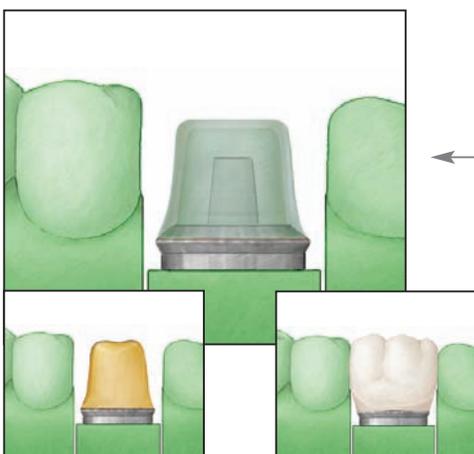


### Laboratory Procedure

11. Insert the appropriate Provide Laboratory Analog with pin (PAAP48 or PAAP65) collar into the Provide Impression Coping With Holes and snap over the margin area. Cut the Provide Die Reinforcing Pin to the proper height and try in for height verification. The pin should have a minimum of 1mm clearance between the top of the pin and the impression. Pour the cast in stone, inserting the Reinforcing Pin into the Provide Analog before the stone sets.



12. Pin, section and articulate with the opposing cast.



13. Apply die spacer and wax the single unit PFM crown coping on the stone die. Invest, burnout and cast the coping in a semi-precious or high noble alloy. Opaque, build porcelain, stain and glaze the crown.

**Cement Retained  
Provide® Abutment  
Indirect Technique**  
*Prepared Post*



**Delivery Of Restoration**

- 14.** Remove the Provide Protection Cap or provisional crown from the abutment using cotton pliers. Try the final crown on the Provide Abutment and check occlusion, marginal fit and interproximal contacts. Cement the final crown on the abutment.

## Cement Retained Provisional PreFormance® Post Indirect Technique



### Material:

PEEK; Titanium Alloy Connection

### PreFormance Post Indications:

- Single- and Multiple-Unit Cement Retained Provisional Restorations
- Minimum Interarch Space of 6mm
- Maximum Angulation of 15 Degrees
- Intraoral Use Limited to 180 Days
- Immediate Non-Occlusal Loading of Single-Unit Provisional Restorations
- Multiple-Unit Restorations Will Require an Evaluation of Occlusal Forces in Lateral and Protrusive Excursions and Masticatory Forces to Minimize the Load on the Provisional Restorations.
- Guided Soft Tissue Healing of Single- and Multiple-Unit Restoration of Integrated Implants

#### 1. Restorative Dentist

Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

#### 2. Laboratory

Select the PreFormance Post with the desired EP® Emergence Profile diameter and collar height. Measure the interproximal tissue heights and select a collar height that can be prepared to follow the gingival contour. Match the color of the implant platform.

Place the PreFormance Post into the implant analog, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

Place the proper PreFormance Post onto the implant analog, engaging the hex.

**3.** Thread the Hexed Titanium Screw into the analog until finger tight using a .048" Large Hex Driver. Mark the PreFormance Post with a pencil in areas requiring preparation.

**4.** Prepare the PreFormance Post in areas marked to the desired depth using a carbide bur. Refine with a coarse diamond bur. Prepare margins to 1mm subgingival, following the gingival contours. The post can be prepared on the cast or may be removed and placed on a laboratory abutment holder for preparation. Maintain three walls of the abutment and .5mm of wall thickness during preparation.

## Cement Retained Provisional PreFormance® Post Indirect Technique



5. Fabricate the provisional crown on the prepared PreFormance Post using the provisional material of choice.

6. **Restorative Dentist**  
 Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

Activate the fingers using the QuickSeat® Activator Tool. Place the prepared PreFormance Post into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

Place the prepared PreFormance Post onto the implant, engaging the hex.

Thread the Hexed Titanium Screw into the implant until finger tight using a .048 Large Hex Driver.

7. Try the provisional crown on the PreFormance Post and check the marginal fit, interproximal contacts and occlusion.

Remove the provisional crown. Torque the Hexed Titanium Screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

Place a protective material over the screw head. Seal the access hole with a temporary filling material. Cement the crown on the post using a temporary cement. Remove excess cement.

When using PreFormance Posts in immediate nonocclusal loading protocols for multiple units, please follow these instructions:

- Do not splint to natural dentition
- If splinting to other integrated implants, centric, lateral and protrusive forces should be out of occlusion. Masticatory forces should be minimized allowing the integrated implant to absorb the forces.
- If splinting to other immediately placed implants, no occlusion and a soft diet should be recommended to the patient for six to eight weeks.

## Cement Retained Provisional PreFormance® Post Direct Technique



### 1. Clinician

 Select the PreFormance Post with the desired EP® Emergence Profile diameter and collar height. Measure the interproximal tissue heights and select a collar height that can be prepared to follow the gingival contour. Match the color of the implant platform.

 Activate the fingers using the QuickSeat® Activator Tool. Place the PreFormance Post into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

 Place the PreFormance Post onto the implant engaging the hex.



 Thread the Hexed Titanium Screw into the implant until finger tight using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver. Mark the PreFormance Post with a pencil in areas requiring preparation.

### 2.

 Prepare the PreFormance Post in areas marked using a high-speed handpiece, carbide bur and irrigation. Refine with a coarse diamond bur. Prepare margins to 1mm subgingival, following the gingival contours. The post can be prepared intraorally or removed and placed on a laboratory abutment holder for preparation. Maintain 3 walls of the abutment and .5mm of wall thickness during preparation.



### 3.

 Once abutment preparation is complete, secure the abutment to the implant using the Hexed Titanium Screw torqued to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

## Cement Retained Provisional PreFormance® Post Direct Technique



4.  Place a protective material over the screw head. Seal the access hole with temporary filling material. Fabricate a provisional crown on the PreFormance Post and cement it to place using temporary cement. Remove excess cement. Adjust occlusion as necessary.

When using PreFormance Posts in immediate nonocclusal loading protocols for multiple-units, please follow these instructions:

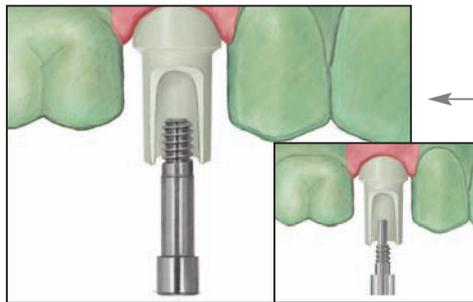
- Do not splint to natural dentition
- If splinting to other integrated implants, centric, lateral and protrusive forces should be out of occlusion. Masticatory forces should be minimized allowing the integrated implant to absorb the forces.
- If splinting to other immediately placed implants, no occlusion and a soft diet should be recommended to the patient for six to eight weeks.

## Cement Retained Provisional 15° Pre-Angled PreFormance® Post Indirect Technique



### 1. Restorative Dentist

  Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.



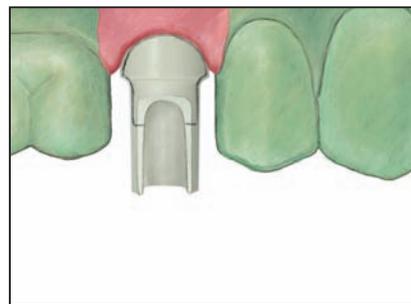
### 2. Laboratory

  Select the PreFormance Post with the desired EP® Emergence Profile diameter and collar height. Measure the interproximal tissue heights and select a collar height that can be prepared to follow the gingival contour. Match the color of the implant platform. The post may be rotated in 30° increments to ideally position it to correct the implant angulation.

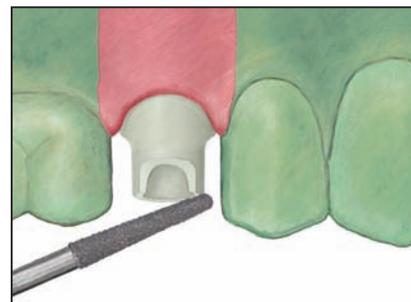
  Place the Pre-Angled PreFormance Post onto the implant analog, line up the hex in the 12-point double hex and press firmly until hearing and feeling the audible and tactile click.

**or**

  Place the proper Pre-Angled PreFormance Post onto the implant analog, engaging the hex.

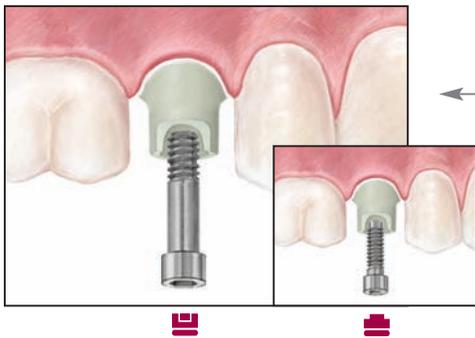


**3.**   Thread the Hexed Titanium Screw into the analog until finger tight using a .048" Large Hex Driver. Mark the PreFormance Post with a pencil in areas requiring preparation.



**4.**   Prepare the Pre-Angled PreFormance Post using a carbide bur. Refine with a coarse diamond bur. Prepare margins to 1mm subgingival. The post can be prepared on the cast or may be removed and placed on a laboratory abutment holder for preparation. Maintain three walls of the abutment and .5mm of wall thickness during preparation.

## Cement Retained Provisional 15° Pre-Angled PreFormance® Post Indirect Technique



5. Fabricate the provisional crown on the prepared PreFormance Post using the provisional material of choice.

6. **Restorative Dentist**

Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

Activate the fingers using the QuickSeat® Activator Tool. Place the prepared Pre-Angled PreFormance Post into the implant, line up the hex in the 12 point double hex and press firmly until hearing and feeling the audible and tactile click.

**or**

Place the prepared Pre-Angled PreFormance Post onto the implant engaging the hex.

Thread the Hexed Titanium Abutment Screw into the implant until finger tight using a .048" Large Hex Driver.

7. Try the provisional crown on the Pre-Angled PreFormance Post and check the marginal fit, interproximal contacts and occlusion. Remove the provisional crown.

Torque the Hexed Titanium Screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device. Place a protective material over the screw head. Seal the access hole with a temporary filling material. Cement the crown on the post using a temporary cement. Remove excess cement.

When using PreFormance Posts in immediate nonocclusal loading protocols for multiple-units, please follow these instructions:

- Do not splint to natural dentition
- If splinting to other integrated implants, centric, lateral and protrusive forces should be out of occlusion. Masticatory forces should be minimized allowing the integrated implant to absorb the forces.
- If splinting to other immediately placed implants, no occlusion and a soft diet should be recommended to the patient for six to eight weeks.

## Cement Retained Provisional 15° Pre-Angled PreFormance® Post Direct Technique



1. **Clinician**  
 Select the PreFormance Post with the desired EP® Emergence Profile diameter and collar height. Measure the interproximal tissue heights and select a collar height that can be prepared to follow the gingival contour. Match the color of the implant platform.

 Activate the fingers using the QuickSeat® Activator Tool. Place the Pre-Angled PreFormance Post into the implant. Line up the hex in the 12-point double hex and press firmly until hearing and feeling the audible and tactile click. The post may be rotated in 30° increments to ideally position it to correct the implant angulation.

or

 Place the proper PreFormance Post onto the implant, engaging the hex.

 Thread the Hexed Titanium Screw into the implant until finger tight using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver. Mark the post with a pencil in areas requiring preparation



2.  Prepare the Pre-Angled PreFormance Post in areas marked using a high speed handpiece, carbide bur and irrigation. Refine with a coarse diamond bur. Prepare margins to 1mm subgingival. The post can be prepared intraorally or removed and placed on a laboratory abutment holder for preparation. Maintain three walls of the abutment and .5mm of wall thickness during preparation.



3.  Once abutment preparation is complete, secure the post to the implant using the Hexed Titanium Screw torqued to 20Ncm using a .048" Large Hex Driver Tip and a torque device.



4.  Place a protective material over the screw head. Seal the access hole with temporary filling material. Fabricate a provisional crown on the 15° Pre-Angled PreFormance Post and cement it to place using temporary cement. Remove excess cement. Adjust occlusion as necessary.

When using PreFormance Posts in immediate nonocclusal loading protocols for multiple-units, please follow these instructions:

- Do not splint to natural dentition
- If splinting to other integrated implants, centric, lateral and protrusive forces should be out of occlusion. Masticatory forces should be minimized allowing the integrated implant to absorb the forces.
- If splinting to other immediately placed implants, no occlusion and a soft diet should be recommended to the patient for six to eight weeks.

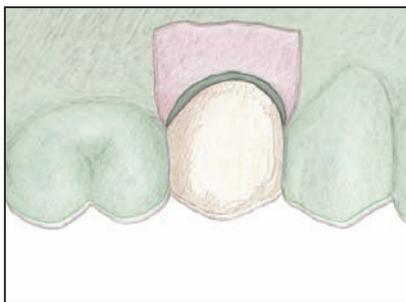
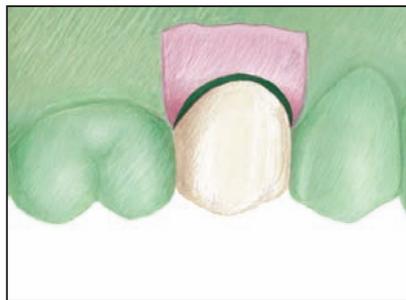
## Screw Retained Single-Unit Provisional PreFormance® Temporary Cylinder Indirect Technique

**Material:**

  PEEK; titanium alloy connection

**Indications:**

- Screw Retained Single-Unit Provisional Restorations
- Minimum Interarch Space of 4mm
- Minimum Tissue Height of 2mm



**1. Restorative Dentist**

  Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

**2. Laboratory**

  Set a denture tooth in wax on the cast where the single tooth is missing.

**3.**

  Make a vacuum formed template over the denture tooth and adjacent teeth on the cast. Remove the template, denture tooth and wax from the cast.

**4.**

  Select the proper diameter **Hexed** PreFormance Temporary Cylinder by matching the color of the implant platform. Place it into the implant analog, line up the hex and press firmly until hearing and feeling the audible and tactile click. (See page 6 for finger deactivation instructions.)

**or**

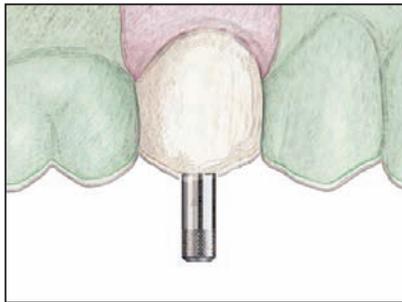
  Place the proper diameter **Hexed** PreFormance Temporary Cylinder onto the implant analog and engage the hex.

  Thread a waxing screw into the analog until finger tight using a .048" Large Hex Driver.

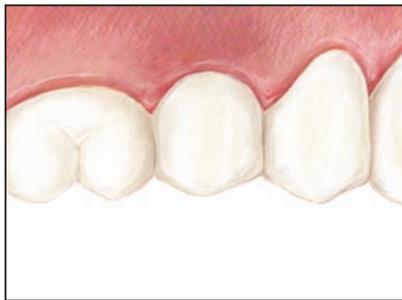
## Screw Retained Single-Unit Provisional PreFormance® Temporary Cylinder Indirect Technique



5.  Reduce or adjust the cylinder as necessary. Block out any undercuts apical to the contact points of the adjacent teeth.



6.  Cut a hole in the template to accommodate the waxing screw. Add acrylic resin to the cylinder and template and place the template on the cast to form the single-unit provisional crown. Allow the acrylic resin to set per the manufacturer's instructions. Remove the waxing screw and template from the cast. Remove the provisional crown from the template. Fill in any voids around the subgingival area. Contour and polish the crown. Place the crown back onto the cast and thread a Hexed Titanium Screw into the analog until finger tight. Adjust the occlusion as necessary.



7. **Restorative Dentist**  
 Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.  
 Activate the fingers using the QuickSeat® Activator Tool. Place the single-unit provisional crown into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

 Place the single unit provisional crown on the implant, engaging the hex.

 Thread a Hexed Titanium Screw into the implant until finger tight using a .048" Large Hex Driver. Check the interproximal contacts. Torque the screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device. Place a protective material over the screw head. Seal the access hole with a temporary filling material and composite resin. Make any occlusal adjustments necessary.

## Screw Retained Multi-Unit Provisional PreFormance® Temporary Cylinder Indirect Technique

**Material:**

  PEEK; titanium alloy connection

**Indications:**

- Screw Retained Multi-Unit Provisional Restorations
- Minimum Interarch Space of 4mm
- Minimum Tissue Height of 2mm
- Maximum Divergence of 40° Between Implants



**1. Restorative Dentist**

  Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.



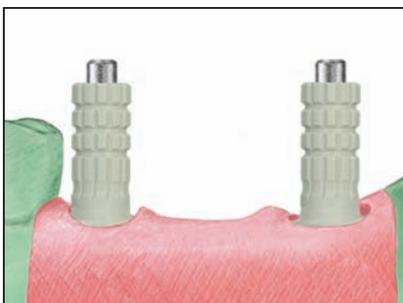
**2. Laboratory**

  Set denture teeth on the cast where the multi-unit bridge will be fabricated.



**3.**

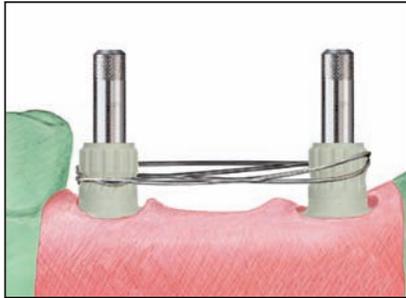
  Make a vacuum formed template over the denture teeth and adjacent teeth. Remove the template, denture teeth and wax from the cast.



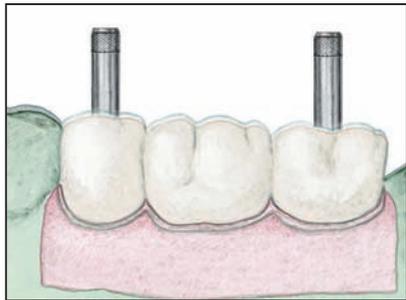
**4.**

  Select and place the proper diameter **Non-Hexed** PreFormance Temporary Cylinders onto the implant analogs. Thread waxing screws into the analogs until finger tight using a .048" Large Hex Driver

## Screw Retained Multi-Unit Provisional PreFormance® Temporary Cylinder Indirect Technique



5.  Reduce or adjust the cylinders as necessary. The cylinders may be connected with ortho wire or a strengthening frame may be waxed and cast to support a pontic. Block out any undercuts apical to the contact points of the adjacent teeth.



6.  Cut holes in the template for the waxing screws to come through. Add acrylic resin to the cylinders and inside the template to form the provisional bridge. Place the template on the cast. Allow the acrylic to set per the manufacturer's instructions. Remove the waxing screws and the template from the cast. Remove the provisional bridge from the template. Fill in any voids around the subgingival areas. Contour and polish the bridge. Place the bridge back on the cast and thread Hexed Titanium Screws into the analogs until finger tight. Adjust the occlusion as necessary.



7. **Restorative Dentist**  
 Remove the healing abutments from the implants using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the multi-unit provisional bridge onto the implants. Thread Hexed Titanium Screws into the implants until finger tight using a .048" Large Hex Driver.

Check the interproximal and occlusal contacts. Torque the screws to 20Ncm using a .048" Large Hex Driver Tip and a torque device. Place a protective material over the screw heads. Seal the access holes with temporary filling material and composite resin. Make any occlusal adjustments necessary.

## Screw Retained Single-Unit Provisional Titanium Temporary Cylinder Indirect Technique

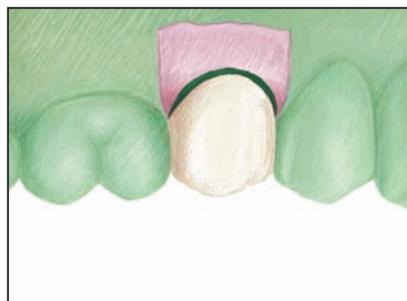
**Material:**  
 Titanium Alloy

- Indications:**
- Screw Retained Single-Unit Provisional Restorations
  - Minimum Interarch Space of 4mm
  - Minimum Tissue Height of 2mm



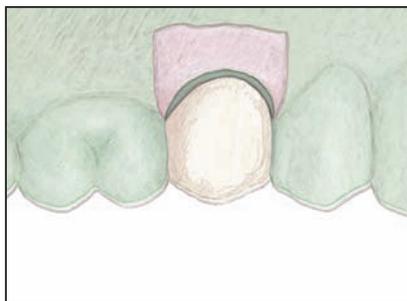
### 1. Restorative Dentist

  Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.



### 2. Laboratory

  Set a denture tooth in wax on the cast where the single tooth is missing.



3.   Make a vacuum formed template over the denture tooth and adjacent teeth on the cast. Remove the template, denture tooth and wax from the cast.



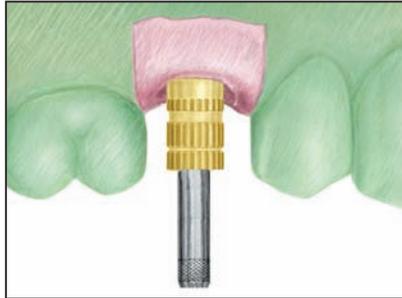
4.   Select the proper diameter **Hexed** Titanium Temporary Cylinder by matching the color of the implant platform. Place it into the implant analog, line up the hex and press firmly until hearing and feeling the audible and tactile click. (See page 6 for finger deactivation instructions.)

**or**

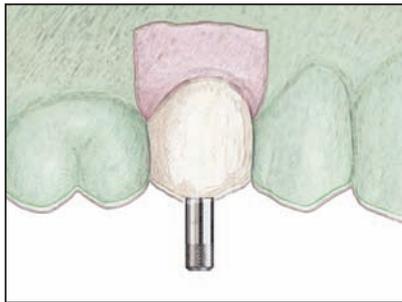
  Place the proper diameter **Hexed** Titanium Temporary Cylinder onto the analog and engage the hex.

  Thread a waxing screw into the analog until finger tight using a .048" Large Hex Driver.

## Screw Retained Single-Unit Provisional Titanium Temporary Cylinder Indirect Technique



5.  Reduce or adjust the cylinder as necessary. Block out any undercuts apical to the contact points of the adjacent teeth.



6.  Cut a hole in the template to accommodate the waxing screw. Add acrylic resin to the cylinder and template and place the template on the cast to form the single-unit provisional crown. Allow the acrylic resin to set per the manufacturer's instructions. Remove the waxing screw and template from the cast. Remove the provisional crown from the template. Fill any voids around the subgingival area. Contour and polish the crown. Place the crown back onto the cast and thread a Hexed Titanium Screw into the analog until finger tight. Adjust occlusion as necessary.



### 7. Restorative Dentist

 Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool. Place the single-unit provisional crown into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

 Place the single unit provisional crown on the implant, engaging the hex.

 Thread a Hexed Titanium Screw into the implant until finger tight using a .048" Large Hex Driver. Radiograph the interface to verify an accurate fit. Check the interproximal and occlusal contacts. Torque the screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device. Place a protective material over the screw head. Seal the access hole with a temporary filling material and composite resin. Make any occlusal adjustments necessary.

## Screw Retained Multi-Unit Provisional Titanium Temporary Cylinder Indirect Technique

**Material:**  
 Titanium Alloy

- Indications:**
- Screw Retained Multi-Unit Provisional Restorations
  - Minimum Interarch Space of 4mm
  - Minimum Tissue Height of 2mm
  - Maximum Divergence of 40° Between Implants



**1. Restorative Dentist**

 Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

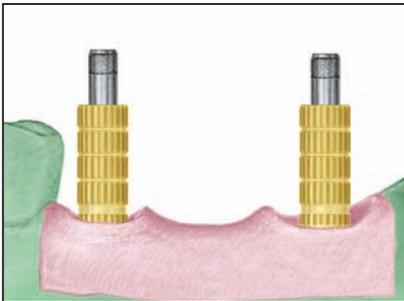


**2. Laboratory**

 Set denture teeth on the cast where the multi-unit bridge will be fabricated.

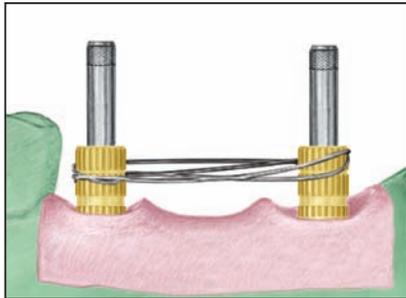


**3.**  Make a vacuum formed template over the denture teeth and adjacent teeth. Remove the template, denture teeth and wax from the cast.

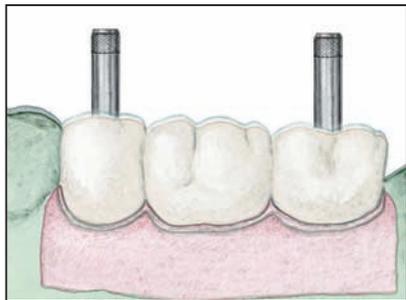


**4.**  Select and place the proper diameter **Non-Hexed** Titanium Temporary Cylinders onto the implant analogs. Thread waxing screws into the analogs until finger tight using a .048" Large Hex Driver.

## Screw Retained Multi-Unit Provisional Titanium Temporary Cylinder Indirect Technique



5.  Reduce or adjust the cylinders as necessary. The cylinders may be connected with ortho wire or a strengthening frame may be waxed and cast to support a pontic. Block out any undercuts apical to the contact points of the adjacent teeth.



6.  Cut holes in the template for the waxing screws to come through. Add acrylic resin to the cylinders and inside the template to form the provisional bridge. Place the template on the cast. Allow the acrylic to set per the manufacturer's instructions. Remove the waxing screws and the template from the cast. Remove the provisional bridge from the template. Fill in any voids around the sub-gingival areas. Contour and polish the bridge. Place the bridge back on the cast and thread Hexed Titanium Screws into the analogs until finger tight. Adjust the occlusion as necessary.



7. **Restorative Dentist**  
 Remove the healing abutments from the implants using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the multi-unit provisional bridge onto the implants. Thread the Hexed Titanium Screws into the implants until finger tight using a .048" Large Hex Driver.

Radiograph the interfaces to verify a passive fit. Check the interproximal and occlusal contacts. Torque the screws to 20Ncm using a .048" Large Hex Driver Tip and a torque device. Place a protective material over the screw heads. Seal the access holes with temporary filling material and composite resin. Make any occlusal adjustments necessary.

## Cement Retained GingiHue® Post Indirect Technique



### Material:

-  Titanium Alloy (Certain® Straight Posts and All 15° Pre-Angled Posts)
-  Commercially Pure Titanium (External Hex Straight Posts)

### Indications:

- Single- and Multi-Unit Porcelain-Fused-to-Metal Restorations
- Areas of Thin Labial Tissue Where Gingival Discoloration is Possible
- Maximum Angulation Correction of 15°
- Minimum Interarch Space of 6mm

### 1. Restorative Dentist

  Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

### 2. Laboratory

  Select the proper GingiHue Post by matching the EP® Diameter of the healing abutment and matching the color of the implant platform.

  Place the GingiHue Post into the implant analog, line up the hex and press firmly until hearing and feeling the audible and tactile click.

OR

  Place the proper GingiHue Post onto the implant analog, engaging the hex.

  Thread a try-in screw into the analog until finger tight using a .048" Large Hex Driver. Mark the GingiHue Post with a pencil in areas requiring preparation.

**3.**   Prepare the GingiHue Post in areas marked using a high-speed handpiece and an aggressive carbide bur. Prepare margins 1mm subgingival following the gingival contours. The post can be prepared on the cast or may be removed and placed on a laboratory abutment holder for preparation.

**4.**   Wax the single unit PFM crown coping on the prepared abutment. Invest, burnout and cast the coping in a semi-precious or high noble alloy. Opaque, build porcelain stain and glaze the crown.

## Cement Retained GingiHue® Post Indirect Technique



### 5. Restorative Dentist

 Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool. Place the prepared GingiHue Post into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click. Thread a Certain® Gold-Tite® Hexed Screw into the implant until finger tight using a .048" Large Hex Driver.

**or**

 Place the prepared GingiHue Post onto the implant, engaging the hex. Thread a Square Gold-Tite Screw into the implant until finger tight.

 Radiograph the interface to verify an accurate fit.

6.  Try the single unit PFM crown on the GingiHue Post and check the marginal fit, interproximal contacts and the occlusion.

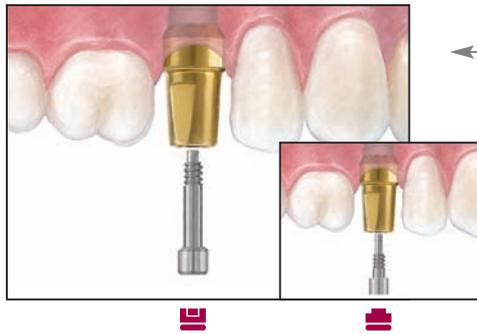
 Torque the Certain Gold-Tite Hexed Screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

**or**

 Torque the Square Gold-Tite Screw to 32-35Ncm using the Square Driver Tip and a torque device.

 Place a protective material over the screw head. Seal the access hole with temporary filling material. Cement the crown on the post using a temporary or permanent cement.

## Cement Retained GingiHue® Post Direct Technique



### 1. Restorative Dentist

 Select the proper GingiHue Post by matching the EP® Diameter of the healing abutment and matching the color of the implant platform. Remove the healing abutment using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool. Place the GingiHue Post into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

 Place the GingiHue Post onto the implant, engaging the hex.

 Thread a try-in screw into the implant until finger tight using a .048" Large Hex Driver. Radiograph the interface to verify an accurate fit. Mark the GingiHue Post with a pencil in areas requiring preparation.



2.  Prepare the GingiHue Post in areas marked using a high-speed handpiece, aggressive carbide bur and irrigation. Prepare margins 1mm subgingival following the gingival contours. The post can be prepared intraorally or removed and placed on a laboratory abutment holder for preparation.



3.  Once abutment preparation is complete, replace the try-in screw with:

 the Certain® Gold-Tite® Hexed Screw torqued to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

or

 the Square Gold-Tite Screw torqued to 32-35Ncm using the Square Driver Tip and a torque device.



4.  Place a protective material over the screw head. Seal the access hole with temporary filling material. Place retraction cord subgingivally to retract the gingiva from the margin prepared on the GingiHue Post. Syringe impression material around the entire GingiHue Post. Load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.

## Cement Retained GingiHue® Post Direct Technique



5.  Remove the impression. Verify the marginal integrity of the impression.



6.  Fabricate a provisional crown on the GingiHue Post and cement it to place using temporary cement.



7. **Laboratory**  
 Pour the cast in die stone, pin, section and articulate with opposing cast.



8.  Wax the single-unit PFM crown coping on the die. Invest, burnout and cast the coping in a semi-precious or high noble alloy. Opaque, build porcelain, stain and glaze the crown.

**Cement Retained  
GingiHue® Post  
Direct Technique**



**9. Restorative Dentist**

 Remove the provisional crown from the GingiHue Post and remove all cement. Try the single-unit crown on the post and check the marginal fit, interproximal contacts and the occlusion. Cement the crown on the post using a temporary or permanent cement. Remove excess cement.

## Cement Retained 15° Pre-Angled GingiHue® Post Indirect Technique



### 1. Restorative Dentist

  Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

### 2. Laboratory

  Select the proper Pre-Angled GingiHue Post by matching the EP® Diameter of the healing abutment and matching the color of the implant platform. The post may be rotated in 30° increments to ideally position it to correct the implant angulation.



  Place the Pre-Angled GingiHue Post into the implant analog, line up the hex in the 12-point double hex and press firmly until hearing and feeling the audible and tactile click.

**or**

  Place the proper Pre-Angled GingiHue Post onto the implant analog, engaging the hex.

  Thread a try-in screw into the analog until finger tight using a .048" Large Hex Driver. Mark the Pre-Angled GingiHue Post with a pencil in areas requiring preparation.



### 3.

  Prepare the Pre-Angled GingiHue Post in areas marked using a high-speed handpiece and an aggressive carbide bur. Prepare margins 1mm subgingival following the gingival contours. The post can be prepared on the cast or may be removed and placed on a laboratory abutment holder for preparation.



### 4.

  Wax the single-unit PFM crown coping on the prepared abutment. Invest, burnout and cast the coping in a semi-precious or high noble alloy. Opaque, build porcelain, stain and glaze the crown.

## Cement Retained 15° Pre-Angled GingiHue® Post Indirect Technique



### 5. Restorative Dentist

Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

Activate the fingers using the QuickSeat® Activator Tool. Place the prepared Pre-Angled GingiHue Post into the implant, line up the hex in the double hex and press firmly until hearing and feeling the audible and tactile click. Thread a Certain® Gold-Tite® Hexed Screw into the implant until finger tight using a .048" Large Hex Driver.

**or**

Place the prepared Pre-Angled GingiHue Post onto the implant, engaging the hex. Thread a Square Gold-Tite Screw into the implant until finger tight using a Square Driver.

6. Radiograph the interface to verify an accurate fit. Try the single-unit crown on the Pre-Angled GingiHue Post and check the marginal fit, interproximal contacts and the occlusion.

Torque the Certain Gold-Tite Hexed Screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

**or**

Torque the Square Gold-Tite Screw to 32- 35Ncm using the Square Driver Tip and a torque device.

Place a protective material over the screw head. Seal the access hole with temporary filling material. Cement the crown on the post using a temporary or permanent cement. Remove excess cement.

## Cement Retained 15° Pre-Angled GingiHue® Post Direct Technique



### 1. Restorative Dentist

 Select the proper Pre-Angled GingiHue Post by matching the EP® Diameter of the healing abutment and matching the color of the implant platform. The post may be rotated in 30° increments to ideally position it to correct the implant angulation. Remove the healing abutment using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool. Place the Pre-Angled GingiHue Post into the implant. Line up the hex in the 12-point double hex and press firmly until feeling the tactile click.

**or**

 Place the Pre-Angled GingiHue Post onto the implant, engaging the hex.

 Thread a try-in screw into the implant until finger tight using a .048" Large Hex Driver. Radiograph the interface to verify an accurate fit. Mark the post with a pencil in areas requiring preparation.



### 2.

 Prepare the Pre-Angled GingiHue Post in areas marked using a high speed handpiece, aggressive carbide bur and irrigation. Prepare margins 1mm subgingival following the gingival contours. The post can be prepared intraorally or removed and placed on a laboratory abutment holder for preparation.



### 3.

 Once abutment preparation is complete, replace the try-in screw with:

 the Certain® Gold-Tite® Hexed Screw torqued to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

**or**

 the Square Gold-Tite Screw torqued to 32-35Ncm using the Square Driver Tip and a torque device.



### 4.

 Place a protective material over the screw head. Seal the access hole with temporary filling material. Place retraction cord subgingivally to retract the gingiva from the margin prepared on the Pre-Angled GingiHue Post. Syringe impression material around the entire Pre-Angled GingiHue Post. Load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.

**Cement Retained  
15° Pre-Angled GingiHue® Post  
Direct Technique**



5.  Remove the impression. Verify the marginal integrity of the impression.



6.  Fabricate a provisional crown on the Pre-Angled GingiHue Post and cement it to place using temporary cement.



7. **Laboratory**  
 Pour the cast in die stone, pin, section and articulate with opposing cast.



8.  Wax the single-unit PFM crown coping on the die. Invest, burnout and cast the coping in a semi-precious or high noble alloy. Opaque, build porcelain, stain and glaze the crown.

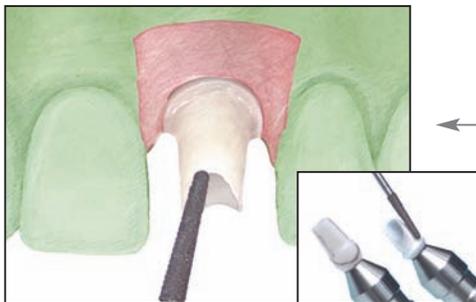
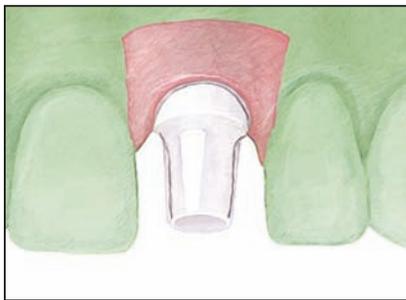
***Cement Retained  
15° Pre-Angled GingiHue® Post  
Direct Technique***



**9. Restorative Dentist**

 Remove the provisional crown from the Pre-Angled GingiHue Post and remove all cement. Try the single-unit PFM crown on the post and check the marginal fit, interproximal contacts and the occlusion. Cement the crown on the post using a temporary or permanent cement. Remove excess cement.

## Cement Retained All Ceramic ZiReal® Post Indirect Technique



### Material:

  Zirconium Oxide With A Fused Titanium Alloy Interface

### Indications:

- Single- and Multi-Unit All Ceramic Restorations
- Restorations in the Aesthetic Zone
- Aesthetic Restorations When Tissue is Limited
- Maximum Angulation of 10°
- Minimum Interarch Space of 6mm

### 1. Restorative Dentist

  Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

### 2. Laboratory

  Select the proper ZiReal Post by matching the EP® Diameter of the healing abutment and matching the color of the implant platform.

  Place the ZiReal Post into the implant analog, line up the hex and press firmly until hearing and feeling the audible and tactile click. Thread a **Certain® ZiReal Try-In Screw** into the analog until finger tight using a .048" Large Hex Driver.

or

  Place the proper ZiReal Post onto the implant analog, engaging the hex. Thread a try-in screw into the analog until finger tight using a .048" Large Hex Driver.

### 3. Mark the ZiReal Post with a pencil in areas requiring preparation.

### 4. Prepare the ZiReal Post in areas marked using a high-speed handpiece and a coarse diamond bur or green heatless stone. Prepare margins 1mm subgingival, following the gingival contours. The post can be prepared on the cast or may be removed and placed on a laboratory abutment holder for preparation. Maintain 3 walls of the abutment and .5mm of wall thickness during preparation.

## Cement Retained All Ceramic ZiReal® Post Indirect Technique



5.  Fabricate the all ceramic crown coping on the prepared post using the all ceramic system of choice. Build porcelain on the coping, stain and glaze the single-unit crown.

6. **Restorative Dentist**

 Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool. Place the prepared ZiReal Post into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click. Thread a **Certain® ZiReal Gold-Tite® Hexed Screw** into the implant until finger tight using a .048" Large Hex Driver.

or

 Place the prepared ZiReal Post onto the implant, engaging the hex. Thread a Square Gold-Tite Screw into the implant until finger tight using the Square Driver.

 Radiograph the interface to verify an accurate fit.

7.  Try the single-unit all ceramic crown on the ZiReal Post and check the marginal fit, interproximal contacts and the occlusion.

 Torque the Certain ZiReal Gold-Tite Hexed Screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

or

 Torque the Square Gold-Tite Screw to 32-35Ncm using the Square Driver Tip and a torque device.

**Be sure the driver tip is parallel with the access hole to avoid fracture during torque application.**

 Place a protective material over the screw head. Seal the access hole with composite resin. Cement the crown on the post using a temporary or permanent cement. Remove excess cement. The ZiReal Post may be etched and the crown bonded, if preferred.

## Cement Retained All Ceramic ZiReal® Post Direct Technique



### 1. Restorative Dentist

Select the proper ZiReal Post by matching the EP® Diameter of the healing abutment and matching the color of the implant platform. Remove the healing abutment using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

Activate the fingers using the QuickSeat® Activator Tool. Place the ZiReal Post into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click. Thread a **Certain® ZiReal Try-In Screw** into the implant until finger tight using a .048" Large Hex Driver.

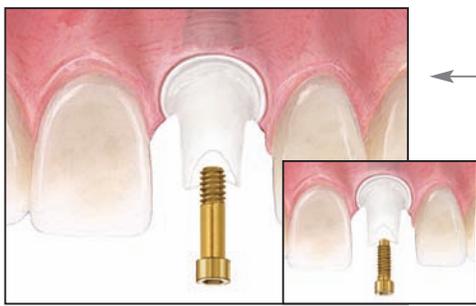
or

Place the ZiReal Post onto the implant, engaging the hex. Thread a try-in screw into the implant until finger tight using a .048" Large Hex Driver.



### 2.

Prepare the ZiReal Post in areas marked using a high-speed handpiece, a coarse diamond bur from the ZiReal Post Preparation Kit and irrigation. Prepare margins 1mm subgingival following the gingival contours. The post can be prepared intraorally or removed and placed on a laboratory abutment holder for preparation. Maintain 3 walls of the abutment and .5mm of wall thickness during preparation.



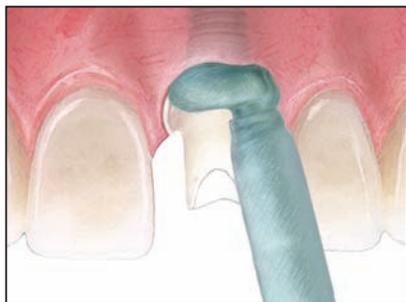
### 3.

Once abutment preparation is complete, replace the try-in screw with:

the Certain ZiReal Gold-Tite® Hexed Screw torqued to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

or

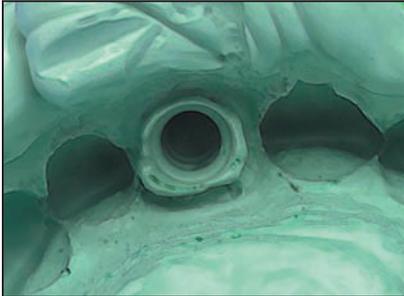
the Square Gold-Tite Screw torqued to 32-35Ncm using the Square Driver Tip and a torque device.



### 4.

Place a protective material over the screw head. Seal the access hole with composite resin. Place a retraction cord subgingivally to retract the gingiva from the margin prepared on the ZiReal Post. Syringe impression material around the entire ZiReal Post. Load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.

## Cement Retained All Ceramic ZiReal® Post Direct Technique



5.  Remove the impression. Verify the marginal integrity of the impression.



6.  Fabricate a provisional crown on the ZiReal Post and cement it to place using temporary cement.



7. **Laboratory**  
 Pour the cast in die stone, pin, section and articulate with the opposing cast. Fabricate the all ceramic crown coping using the all ceramic system of choice. Build porcelain on the coping, stain and glaze the single unit crown.



8. **Restorative Dentist**  
 Remove the provisional crown from the ZiReal Post and remove all cement. Try the single-unit all ceramic crown on the ZiReal Post and check the marginal fit, interproximal contacts and the occlusion. Cement the crown on the post using a temporary or permanent cement. Remove excess cement. The ZiReal Post may be etched and the crown bonded, if preferred.

## Cement Retained Single-Unit UCLA Custom Abutment Indirect Technique

**Material:**

 Machined Gold Alloy Cylinder With Plastic Unitube

**Indications:**

- Laboratory Fabricated Custom Abutments
- Single- and Multi-Unit Porcelain-Fused-to-Metal or All Ceramic Restorations
- Minimum Interarch Space of 6mm
- Aesthetic Restorations When Tissue Height is Limited
- Maximum Angulation Correction of 30°



**1. Restorative Dentist**

 Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.



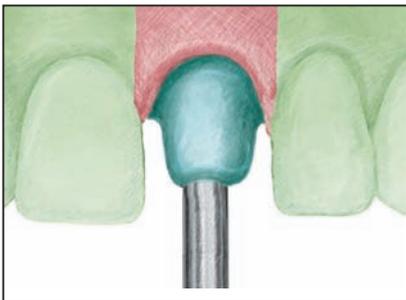
**2. Laboratory**

 Place the proper **Hexed** Gold UCLA Abutment into the implant analog, line up the hex and press firmly until hearing and feeling the audible and tactile click. (See page 6 for finger deactivation instructions.)

or

 Place the proper diameter **Hexed** Gold UCLA Abutment onto the implant analog, engaging the hex.

 Thread a try-in or waxing screw into the analog until finger tight using a .048" Large Hex Driver. Reduce or adjust the plastic sleeve as necessary. Add wax to the waxing sleeve to form the custom abutment with ideal emergence, angulation and crown margins.



**3.**  Carefully remove the waxed custom abutment from the implant analog. Invest, burnout and cast the custom abutment to the UCLA Gold Cylinder using a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Chemically divest and finish the custom abutment. Polish the gold abutment collar and entire subgingival portion of the abutment with a polishing protector in place.



**4.**  Place the finished custom abutment back onto the implant analog in the cast and thread a try-in screw into the analog until finger tight. Cover the access hole with wax. Wax the single-unit PFM crown coping on the custom abutment. Invest, burnout and cast the coping in a semi-precious or high noble alloy. Opaque, build porcelain, stain and glaze the single-unit crown.

## Cement Retained Single-Unit UCLA Custom Abutment Indirect Technique



### 5. Restorative Dentist

 Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool. Place the custom abutment into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click. Thread a Certain® Gold-Tite® Hexed Screw into the implant until finger tight using a .048" Large Hex Driver.

**or**

 Place the custom abutment on the implant, engaging the hex. Thread a Square Gold-Tite Screw into the implant until finger tight using a Square Driver.

 Radiograph the interface to verify an accurate fit.

### 6. Try the single-unit crown on the custom abutment and check the marginal fit, interproximal contacts and the occlusion. Remove the crown.

 Torque the Certain Gold-Tite Hexed Screw to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

**or**

 Torque the Square Gold-Tite Screw to 32-35Ncm using the Square Driver Tip and a torque device.

 Place a protective material over the screw head. Seal the access hole with temporary filling material. Cement the crown on the custom abutment using a temporary or permanent cement. Remove excess cement.

## Cement Retained Multi-Unit UCLA Custom Abutment Indirect Technique



### 1. Restorative Dentist

  Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

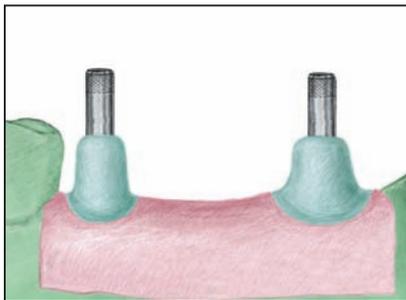


### 2. Laboratory

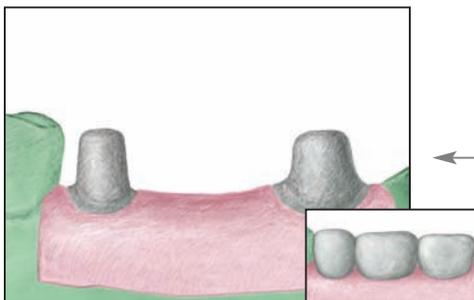
  Deactivate the fingers on the Certain® Hexed Gold UCLA Abutment using the QuickSeat® Activator Tool (see page 6). Place the proper diameter **Hexed Gold** UCLA Abutments into each implant analog.

**or**

  Place the proper diameter **Hexed Gold** or Castable UCLA Abutments on the implant analogs, engaging the hex.

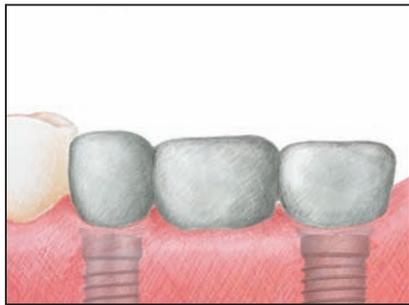


**3.**   Carefully remove the wax custom abutments from the analogs. Invest, burnout and cast the custom abutments to the UCLA Gold Cylinders using a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Chemically divest and finish the custom abutments. Polish the gold abutment collars and entire subgingival portions with polishing protectors in place.



**4.**   Place the finished custom abutments back onto the implant analogs in the cast and thread try-in screws into the analogs until finger tight using a .048" Large Hex Driver. Cover the access holes with wax. Wax the multi-unit framework on the custom abutments. Invest, burnout and cast the multi-unit framework in a semi-precious or high noble alloy. Return to the restorative dentist for metal framework try-in.

## Cement Retained Multi-Unit UCLA Custom Abutment Indirect Technique



### 5. Restorative Dentist

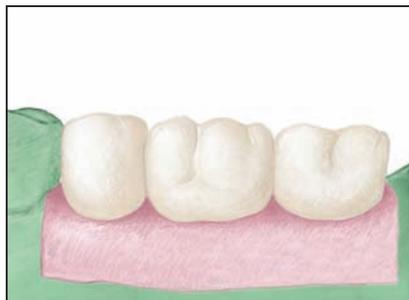
 Remove the healing abutments from the implants using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool. Place the custom abutments into each implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

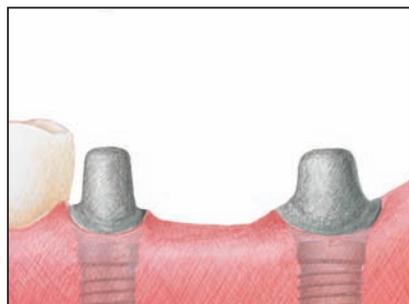
 Place the custom abutments onto the implants, engaging the hex.

 Thread a try-in screw into each abutment until finger tight using a .048" Large Hex Driver. Radiograph the interface of the implants to verify an accurate fit. Place the multi-unit framework on the custom abutments and verify a passive fit. Cut and index the framework intraorally if a fit discrepancy is found. Immediately replace the healing abutments on the implants.



### 6. Laboratory

 Place the custom abutments back onto the implant analogs in the cast and attach using try-in screws. Opaque and build porcelain on the multi-unit framework. Stain and glaze the porcelain.



### 7. Restorative Dentist

 Remove the healing abutments from the implants.

 Activate the fingers using the QuickSeat Activator Tool. Place the custom abutments into each implant, line up the hex and press firmly until hearing and feeling the audible and tactile click. Thread a Certain® Gold-Tite® Hexed Large Diameter Screw into each implant until finger tight using a .048" Large Hex Driver.

or

 Place the custom abutments onto the implants engaging the hex. Thread the Square Gold-Tite Screws into the implant until finger tight using a Square Driver.

 Radiograph the interface of the implants to verify an accurate fit.

**Cement Retained Multi-Unit  
UCLA Custom Abutment  
Indirect Technique**



8.  Try the multi-unit PFM bridge onto the custom abutments. Verify marginal fit, interproximal contacts and the occlusion.

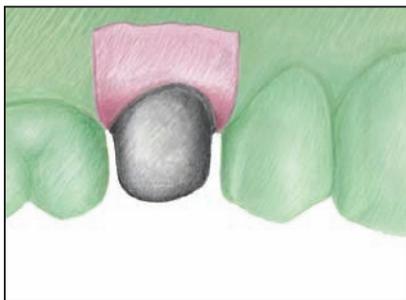
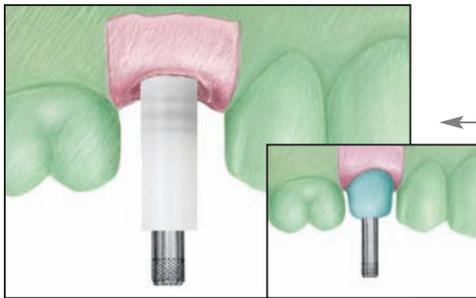
 Torque the Certain Gold-Tite® Hexed Large Diameter Screws to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

**or**

 Torque the Square Gold-Tite Screws to 32-35Ncm using the Square Driver Tip and a torque device.

9.  Place a protective material over the screw heads. Seal the access holes with temporary filling material. Cement the bridge on the abutments using a temporary or permanent cement. Remove excess cement. Make any occlusal adjustments necessary.

## Screw Retained Single-Unit UCLA Abutment Indirect Technique



### Material:

Machined Gold Alloy Cylinder With Plastic Unitube

### Indications:

- Screw Retained Single- and Multi-Unit Porcelain-Fused-to-Metal Restorations
- Minimum Interarch Space 4mm

#### 1. Restorative Dentist

Follow the steps for Implant Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

#### 2. Laboratory

Deactivate the fingers on the Certain® Hexed Gold UCLA Abutment before placement using the QuickSeat® Activator Tool (see page 6). Place the proper diameter Hexed Gold UCLA Abutment into the implant analog and line up the hex. Thread a try-in or waxing screw into the analog until finger tight using a .048" Large Hex Driver.

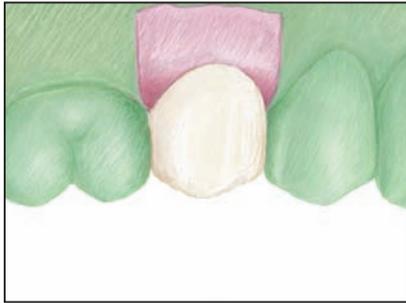
or

Place the proper diameter Hexed Gold or Castable UCLA Abutment onto the implant analog and engage the hex. Thread a try-in or waxing screw into the analog until finger tight using a .048" Large Hex Driver.

Reduce or adjust the plastic sleeve as necessary. Wax the single-unit PFM coping to the waxing sleeve.

3. Remove the try-in or waxing screw and carefully remove the wax coping from the analog. Invest, burnout and cast the single-unit PFM coping to the UCLA Gold Cylinder using a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Chemically divest and finish the coping.

## Screw Retained Single-Unit UCLA Abutment Indirect Technique



4. Place the cast coping back onto the implant analog in the cast and thread a try-in or waxing screw into the analog until finger tight. Opaque and build porcelain on the single-unit coping. Stain and glaze the porcelain. Polish the abutment gold collar with a polishing protector in place.

5. **Restorative Dentist**

Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

Activate the fingers using the QuickSeat® Activator Tool. Place the single crown into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click. Thread the Certain® Gold-Tite® Hexed Screw into the implant until finger tight using a .048" Large Hex Driver.

or

Place the single-unit crown onto the implant, engaging the hex. Thread the Square Gold-Tite Screw into the implant until finger tight using the Square Driver.

Radiograph the interface of the implant to verify an accurate fit. Verify the interproximal contacts and the occlusion.

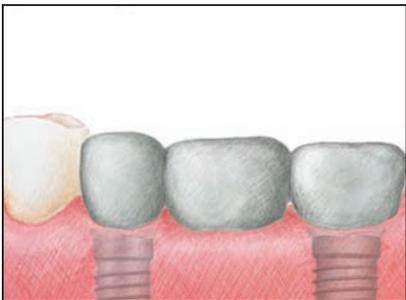
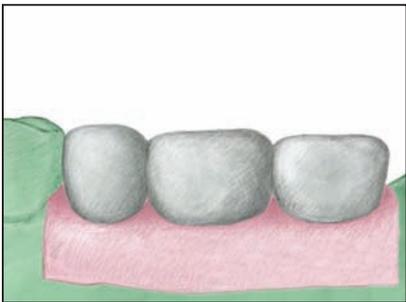
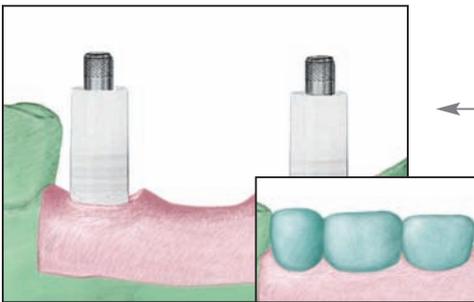
6. Torque the Certain Gold-Tite Hexed Screws to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

or

Torque the Square Gold-Tite Screw to 32-35Ncm using the Square Driver Tip and a torque device.

7. Place a protective material over the screw head. Seal the access hole with a temporary filling material and composite resin. Make any occlusal adjustments necessary.

## Screw Retained Multi-Unit UCLA Abutment Indirect Technique



### 1. Restorative Dentist

Follow the steps for Implant Level Impressions on page 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

### 2. Laboratory

Place the proper diameter **Non-Hexed** Gold or Castable UCLA Abutments onto the implant analogs and thread try-in or waxing screws into the analogs until finger tight using a .048" Large Hex Driver. Reduce or adjust the plastic sleeves as necessary. Wax the multi-unit framework to the waxing sleeves.

### 3.

Remove the try-in or waxing screws and carefully remove the wax framework from the analogs. Invest, burnout and cast the multi-unit PFM framework to the UCLA Gold Cylinders using a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Chemically divest and finish the framework. Return to the restorative dentist for metal framework try in.

### 4. Restorative Dentist

Remove the healing abutments from the implants using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the multi-unit PFM framework onto the implants. Thread a try-in screw into the anterior most implant using a Large Hex Driver. Radiograph the interface of all implants to verify a passive fit. Repeat after removing the screw and placing it into the posterior most implant. Cut and index the framework intraorally if fit discrepancy is found. Immediately replace the healing abutments on the implants.

## Screw Retained Multi-Unit UCLA Abutment Indirect Technique



### 5. Laboratory

Place the verified framework back onto the implant analogs in the cast and thread try-in or waxing screws into the analogs until finger tight. Opaque and build porcelain on the multi-unit framework. Stain and glaze the porcelain. Polish the abutment gold collars with polishing protectors in place.

### 6. Restorative Dentist

Remove the healing abutments from the implants. Place the multi-unit PFM bridge onto the implants.

Thread the Certain® Gold-Tite® Hexed Large Diameter Screws into each implant until finger tight using a .048" Large Hex Driver.

or

Thread the Square Gold-Tite Screws into each implant until finger tight using a Square Driver.

Radiograph the interface of the bridge on the implants to verify a passive fit. Verify the interproximal contacts and the occlusion.

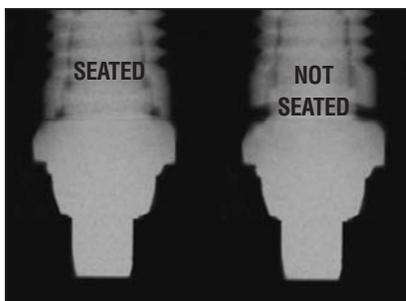
7. Torque the Certain Gold-Tite Hexed Large Diameter Screws to 20Ncm using a .048" Large Hex Driver Tip and a torque device.

or

Torque the Square Gold-Tite Screw to 32-35Ncm using the Square Driver Tip and a torque device.

8. Place a protective material over the screw heads. Seal the access holes with composite resin. Make any occlusal adjustments necessary.

## Screw Retained Single-Unit Conical Abutment Indirect Technique



### Material:

- Titanium Alloy
- Commercially Pure Titanium

### Indications:

- Single- and Multi-Unit Porcelain-Fused-to-Metal Restorations
- Minimum Interarch Space of 7mm
- Minimum Tissue Height of 2mm
- Angle correction up to 25°

#### 1. Surgeon or Restorative Dentist

Select the proper Conical Abutment collar height and angle (0°, 17° or 25°) for the implant by measuring the height of the healing abutment above tissue, not including the dome portion. Subtract the measurement from the total height of the healing abutment and subtract 2mm. Match the color of the implant platform. See page 17 for Prosthetic Abutment Selection Guide.

2. Remove the healing abutment from the implant using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

3. Activate the fingers using the QuickSeat® Activator Tool. Place the proper height Conical Abutment into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

Place the proper height Conical Abutment onto the implant, engaging the hex.

Thread the Conical Abutment Screw into the implant by turning the spindle on the ASYST Tool until finger tight. Remove the ASYST Tool or waxing screw.

If correcting an angle using the 17 or 25 degree Angled Conical Abutment, place the abutment in or on the implant hex to correct angulation while holding onto the delivery tool. Place the abutment screw onto the implant driver and thread into implant.

4. Radiograph the interface to verify complete seating of the abutment on the implant. Place the film perpendicular to the interface of the abutment on the implant.

## Screw Retained Single-Unit Conical Abutment Indirect Technique



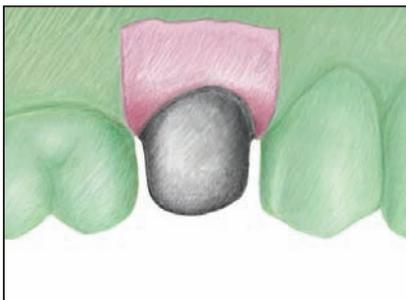
5.  Torque the Conical Abutment Screw into the implant at 20Ncm using the Abutment Driver Tip and a torque device. (If the surgeon places the abutment, a Conical Abutment Healing Cap is threaded onto the abutment using a .048" Large Hex Driver.)



6. **Restorative Dentist**  
 Follow the steps for Abutment Level Impressions on page 11-13 for the Pick-Up Impression Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

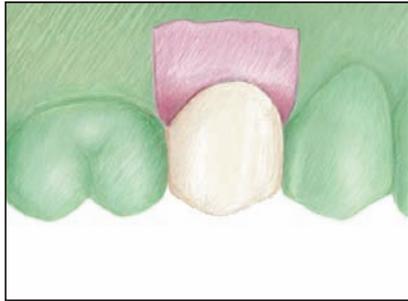


7. **Laboratory**  
 Place a **Hexed Conical Gold or Castable Cylinder** onto the conical analog. Thread with a waxing screw or retaining screw into the analog until finger tight using a .048" Large Hex Driver. Reduce or adjust the plastic sleeve as necessary. Wax the single-unit PFM coping to the waxing sleeve.

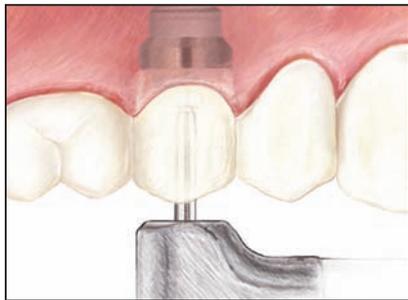


8.  Remove the retaining or waxing screw and carefully remove the wax coping from the implant analog. Invest, burnout and cast the single-unit PFM coping to the Conical Gold Cylinder using a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Divest and finish the coping.

## Screw Retained Single-Unit Conical Abutment Indirect Technique



9.  Place the finished coping back onto the Conical analog in the cast and thread a waxing or retaining screw into the analog until finger tight. Opaque and build porcelain on the single-unit coping. Stain and glaze the porcelain. Polish the gold collar with a polishing protector in place.



10. **Restorative Dentist**  
 Remove the healing cap from the abutment using a .048" Large Hex Driver. Place the single-unit PFM crown on the abutment, engaging the hex. Thread a Gold-Tite® Retaining Screw into the abutment until finger tight using a .048" Large Hex Driver. Radiograph the interface to verify an accurate fit. Verify the interproximal contacts and the occlusion. Torque the screw to 10Ncm using a .048" Large Hex Driver Tip and a torque device.



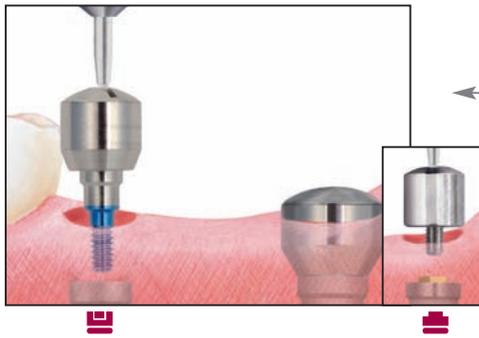
11.  Place a protective material over the screw head. Seal the access hole with a temporary filling material and composite resin. Make any occlusal adjustments necessary.

## Screw Retained Multi-Unit Conical Abutment Indirect Technique

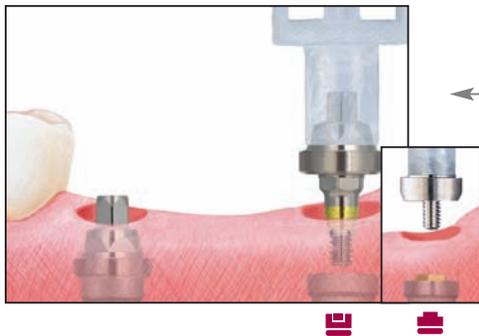


### 1. Surgeon Or Restorative Dentist

Select the proper Conical Abutment collar height and angle (0°, 17° or 25°) for each implant by measuring the height of the healing abutment above tissue, not including the dome portion. Subtract the measurement from the total height of the healing abutment and then subtract 2mm. Match the color of implant platforms.



2. Remove the healing abutments from the implants, one at a time, using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.



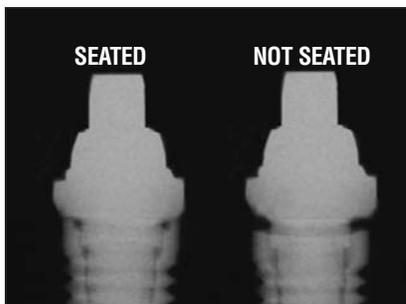
3. Activate the fingers using the QuickSeat® Activator Tool. Place the proper height Conical Abutment into the implants, line up the hex and press firmly until hearing and feeling the audible and tactile click.

or

Place the proper height Conical Abutment onto the implants, engaging the hex.

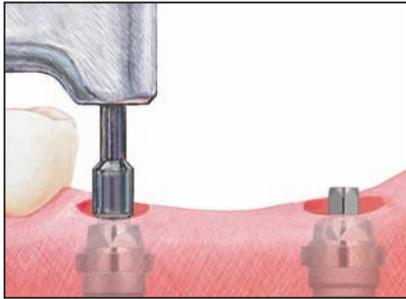
Thread the Conical Abutment Screw into the implant by turning the spindle on the ASYST Tool until finger tight. Remove the ASYST Tool.

If correcting an angle using the 17 or 25 degree Angled Conical Abutment, place the abutment in or on the implant hex to correct angulation while holding onto the delivery tool. Place the abutment screw onto the implant driver and thread into implant.



4. Radiograph the interfaces to verify complete seating of the abutments on the implants. Place the film perpendicular to the interface of the abutments on the implants.

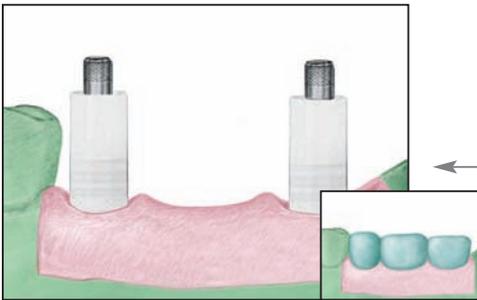
## Screw Retained Multi-Unit Conical Abutment Indirect Technique



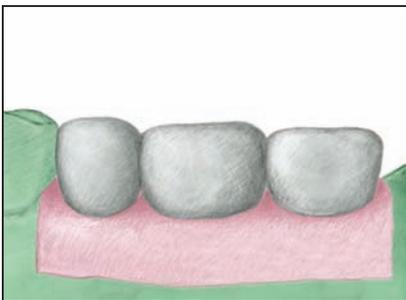
5.  Torque the Conical Abutment Screws into the implants at 20Ncm using the Abutment Driver Tip and a torque device. (If the surgeon places the abutments, Conical Abutment Healing Caps are threaded onto the abutments using a .048" Large Hex Driver.)



6. **Restorative Dentist**  
 Follow the steps for Abutment Level Impressions on pages 11-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.

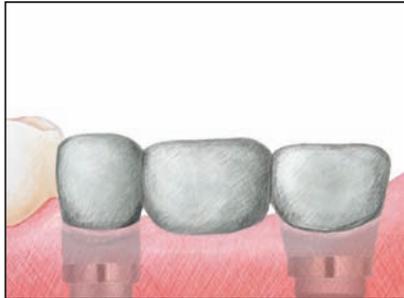


7. **Laboratory**  
 Place the **Non-Hexed** Conical Gold or Castable Cylinders onto the Conical Analogs and thread waxing or retaining screws into the analogs until finger tight using a .048" Large Hex Driver. Reduce or adjust the plastic sleeves as necessary. Wax the multi-unit PFM framework to the waxing sleeves.



8.  Remove the retaining or waxing screws and carefully remove the wax framework from the analogs. Invest, burnout and cast the multi-unit PFM framework to the Conical Gold Cylinders using a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Divest and finish the framework. Return to the restorative dentist for metal framework try in.

## Screw Retained Multi-Unit Conical Abutment Indirect Technique



### 9. Restorative Dentist

Remove the healing caps from the abutments. Place the multi-unit PFM framework onto the abutments. Thread a Gold-Tite® Retaining Screw into the posterior most abutment using a .048" Large Hex Driver. Radiograph the interface on the abutments to verify a passive fit. Repeat after removing the screw and placing it into the anterior most abutment. Cut and index the framework intraorally if a fit discrepancy is found. Immediately replace the healing caps on the abutments.



### 10. Laboratory

Place the verified framework back onto the Conical Analogs in the cast and thread retaining or waxing screws into the analogs until finger tight. Opaque and build porcelain on the multi-unit framework. Stain and glaze the porcelain. Polish the gold collars with polishing protectors in place.



### 11. Restorative Dentist

Remove the healing caps from the abutments. Place the multi-unit PFM bridge onto the abutments. Thread Gold-Tite Retaining Screws into the abutments until finger tight using a Large Hex Driver. Radiograph the interface on the abutments to verify a passive fit. Verify the interproximal contacts and the occlusion. Torque the screws to 10Ncm using a .048" Large Hex Driver Tip and a torque device. Place a protective material over the screw heads. Seal the access holes with temporary filling material and composite resin. Make any occlusal adjustments necessary.

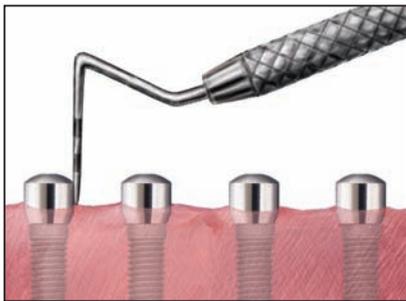
## Bar Supported Overdenture Standard Abutment Hader Bar

### Material:

-  Titanium Alloy
-  Commercially Pure Titanium

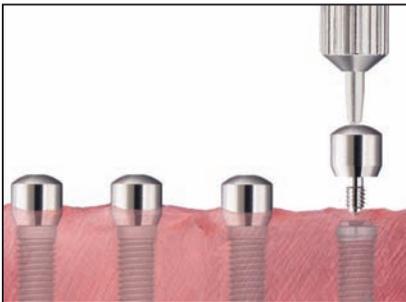
### Indications:

- Multiple Implant, Bar Retained and Fixed Removable Overdentures
- Minimum Space For Bar Construction is 7mm
- Maximum Divergence of 30°



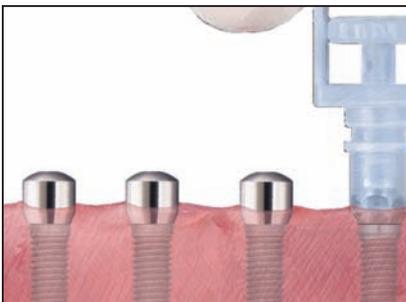
#### 1. Surgeon Or Restorative Dentist

  Select the proper Standard Abutment collar height for each implant by measuring the height of the healing abutment above tissue, not including the dome portion. Subtract the measurement from the total height of the healing abutment and add 1mm. Match the color of the implant platform.



#### 2. Remove the healing abutments from the implants,

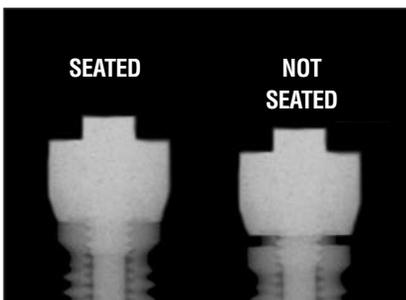
one at a time, using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.



#### 3. Place the proper height Standard Abutment into the implant and thread into place until finger tight.

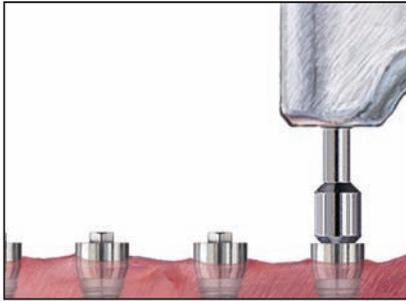
**or**

 Place the proper height Standard Abutment collar onto the implant, engaging the hex and thread the Standard Abutment Screw into the implant by turning the spindle on the ASYST Tool until finger tight. Remove the ASYST Tool.

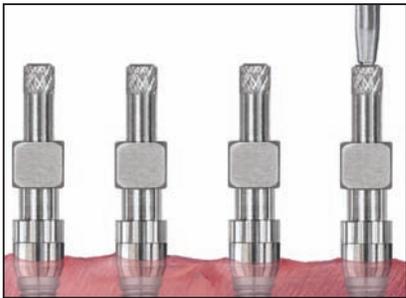


#### 4. Radiograph the interfaces to verify complete seating of the abutments on the implants. Place the film perpendicular to the interface of the abutment on the implant.

## Bar Supported Overdenture Standard Abutment Hader Bar



5.  Torque the Standard Abutment Screws into the implants at 20Ncm using the Abutment Driver Tip and a torque device. (If the surgeon places the abutments, Standard Abutment Healing Caps are then threaded onto the abutments using a .048" Large Hex Driver.) The patient's existing denture is then relieved to the height of the abutments and/or healing caps.



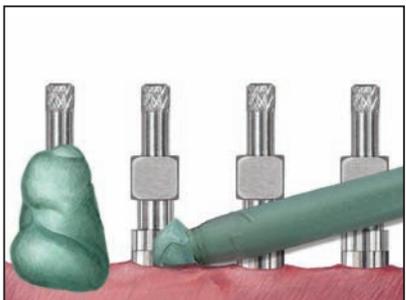
### Pick-Up Technique

#### 6a. Restorative Dentist-Pick-Up Technique

-  Place the Standard Abutment Pick-Up Impression Copings onto the abutments. Thread the coping screws into the abutments using fingers then tighten using a .048" Large Hex Driver. Visually verify all copings are seated passively on the abutments. Impression copings may be splinted prior to impressioning.



- 7a.  A custom or stock **open top** impression tray is used for the Pick-Up Impression Technique. Cut small holes in the tray for the screws to protrude through. Try in the tray to verify that the screw heads are visible through the openings.



- 8a.  A medium or heavy body impression material is recommended for the definitive impression. Syringe impression material around each of the entire Pick-Up Impression Copings.

## Bar Supported Overdenture Standard Abutment Hader Bar



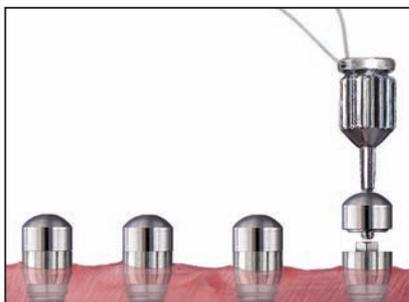
**9a.**  Load the impression tray and seat in the mouth. Wipe impression material off the top of the screws before it sets. Allow the impression material to set per the manufacturer's instructions.



**10a.**  After the impression material has set, unscrew and remove the Pick-Up Impression Coping Screws using a .048" Large Hex Driver. Remove the impression from the mouth.

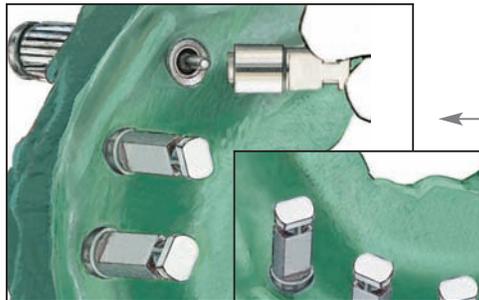


**11a.**  Verify that the impression material has completely adapted around each of the copings.



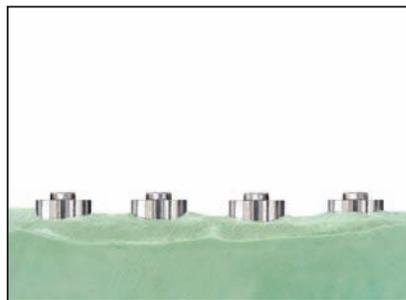
**12a.**  Replace the Standard Abutment Healing Caps onto the abutments using a .048" Large Hex Driver. Reline the patient's existing denture with a chair side, soft reline material over the abutments and healing caps.

## Bar Supported Overdenture Standard Abutment Hader Bar



### 13a. Laboratory

 Place the Standard Abutment Lab Analogs into the impression copings and hold them in position while tightening the screws. Verify that the analogs are seated passively.



14a.  Pour the cast in die stone. After the stone has set, loosen the screws using a large Hex Driver until these disengage from the analogs. Remove the impression from the stone cast. **Go to Step 15.**



### Transfer Technique

#### 6b. Restorative Dentist-Transfer Technique

 Thread the Standard Abutment Transfer Copings into the abutments using fingers; then tighten using the Transfer Impression Coping Driver. Visually verify that all copings are seated passively on the abutments.

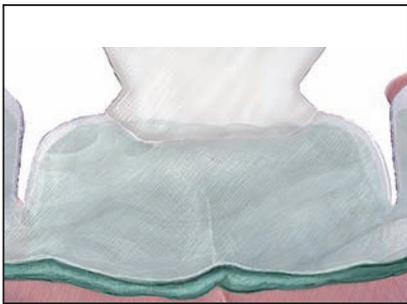


7b.  A custom or stock **closed top** impression tray is used for the transfer impression technique. Allow for approximately 2mm of space between the tray and top of the copings. The copings are 9mm in height.

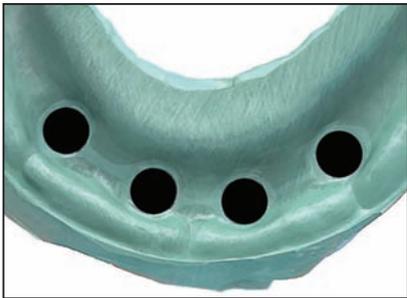
## Bar Supported Overdenture Standard Abutment Hader Bar



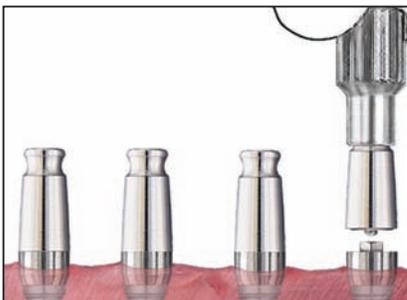
**8b.**  A medium or heavy body impression material is recommended for the definitive impression. Syringe impression material around each of the entire transfer impression copings.



**9b.**  Load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.

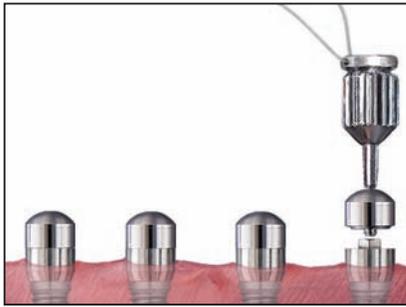


**10b.**  After the impression material has set, remove the impression from the mouth. The transfer impression copings will stay on the abutments in the mouth. Verify that the material completely adapted around each of the copings.

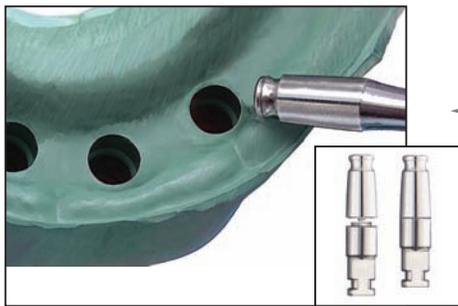


**11b.**  Remove the transfer impression copings from the abutments.

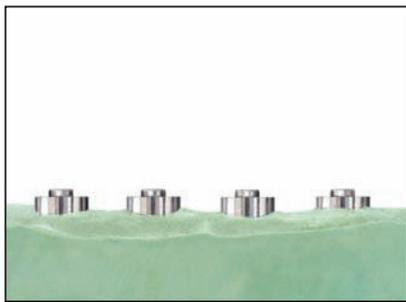
## Bar Supported Overdenture Standard Abutment Hader Bar



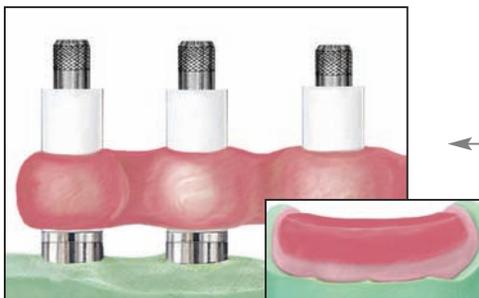
**12b.**  Replace the Standard Abutment Healing Caps onto the abutments using a Large Hex Driver. Reline the patient's existing denture with a chair side, soft reline material over the abutments and healing caps.



**13b. Laboratory**  
 Screw the transfer copings onto the Standard Abutment analogs and verify that these are passively seated. Holding onto the analog, press each transfer coping into the impression firmly. The coping is fully seated when the retentive groove engages.

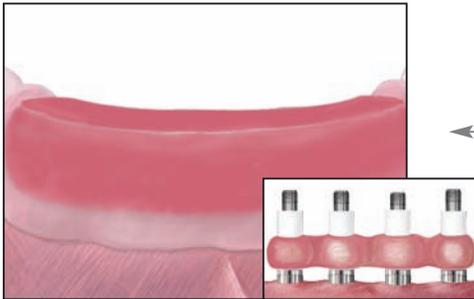


**14b.**  Pour the cast in die stone. After the stone has set, remove the impression from the cast. Unscrew the transfer copings from the analogs. **Go to Step 15.**



**15.**  Place the Standard Abutment Gold or Castable Cylinders onto the Standard Abutment Analog and thread waxing or retaining screws into the analogs until finger tight using a .048" Large Hex Driver. Fabricate a verification index by luting the plastic sleeves together using a low expansion light cure composite resin or autopolymerizing acrylic resin. Also, fabricate a baseplate and wax occlusal rim.

## Bar Supported Overdenture Standard Abutment Hader Bar



### 16. Restorative Dentist

 Remove the healing caps using a .048" Large Hex Driver. Place the occlusal rim into the mouth. Make the interocclusal records. Place the verification index onto the abutments. Place a Hexed Gold-Tite® Retaining Screw into one posterior-most cylinder and finger tighten. Visually verify that all cylinders are seated passively on the abutments. Remove the screw and place it into the opposite posterior-most cylinder and repeat. If a fit discrepancy is found, section the index and reassemble intraorally. Remove the index. Replace the healing caps.



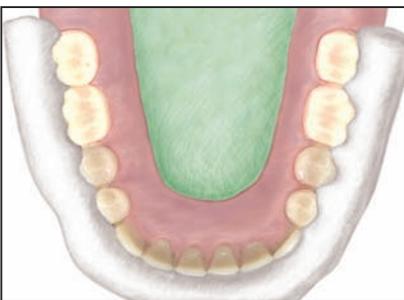
### 17. Laboratory

 Verify that the analog positions on the cast are accurate using the verification index. If a fit discrepancy is found, remove the analog and replace it in the cast using the verification index. Articulate casts using the interocclusal record. Set denture teeth on the baseplate and wax for try-in.



### 18. Restorative Dentist

 Place the wax try-in into the mouth. Verify the occlusion, aesthetics and phonetics. Make any adjustments necessary. If major adjustments are necessary, make a new interocclusal record and return to the laboratory for a new set up and try-in.



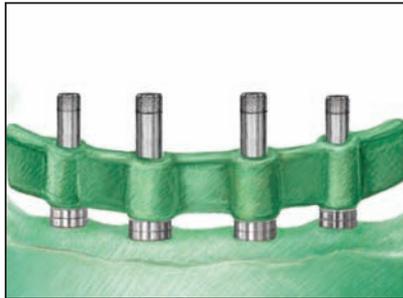
### 19. Laboratory

 Make a plaster or silicone matrix of the verified wax try-in and remove the denture teeth inside it.

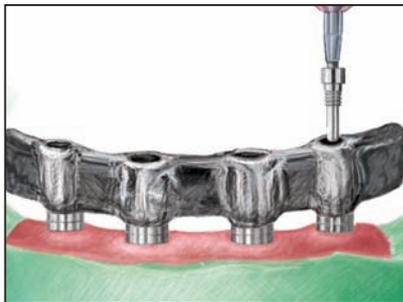
or

Request a CAM StructSURE® Precision Milled Bar.  
See CAM StructSURE Manual (ART861)

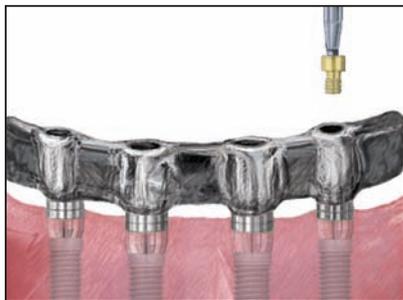
## Bar Supported Overdenture Standard Abutment Hader Bar



**20.**  Carefully remove the Standard Abutment Gold or Castable Cylinders from the verification index. Place the cylinders onto the analogs and thread waxing screws into the analogs until finger tight. Adjust the height of the sleeves as necessary. Wax the bar patterns (and attachments, if used) to the waxing sleeves. Use the matrix on the cast to position the bar within the confines of the wax try-in.



**21.**  Remove the Hader Bar wax-up from the cast. Invest, burnout and cast the bar in a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Divest, finish and polish the bar with polishing protectors in place. Return the bar to the restorative dentist for try in and fit verification.



**22. Restorative Dentist**  
 Remove the healing caps from the abutments. Place the bar onto the abutments. Thread a Hexed Gold-Tite® Retaining Screw into one posterior-most abutment and finger tighten. Visually verify that the bar is seated passively on all abutments. Repeat after removing the screw and placing it into the opposite posterior-most abutment. If fit discrepancy is found, cut and index the bar intraorally for soldering. Replace the healing caps.



**23. Laboratory**  
 Transfer the denture teeth back onto the cast using the matrix and wax the denture for processing. Flask the waxed denture and boil out. Separate the flask and attach the Hader Bar onto the analogs in the cast using retaining screws. Block out all undercuts and access openings with wax. Place the Hader clips and/or other attachments onto the bar. Process and finish the denture following conventional procedures.

## ***Bar Supported Overdenture Standard Abutment Hader Bar***



### **24. Restorative Dentist**

 Remove the healing caps. Place the Hader Bar onto the abutments. Thread the Hexed Gold-Tite® Retaining Screws into the abutments and torque these to 10Ncm using a .048" Large Hex Driver Tip and a torque device.



**25.**  Place the overdenture onto the Hader Bar in the mouth and engage the retentive attachments. Make occlusal or tissue adjustments as necessary. Instruct the patient on insertion and removal of the prosthesis and oral hygiene maintenance.

## Implant Retained Fixed Prosthesis Standard Abutment Fixed Hybrid



### 1. Restorative Dentist

 Follow the steps for Standard Abutment Impressions on pages 74-79 for the Pick-Up or Transfer Technique.

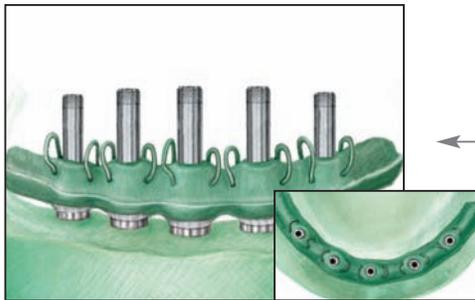


### 2. Laboratory

 Follow the steps on page 81 and 82 for fabrication of the verification index, baseplate and wax occlusal rim, wax try-in and plaster or silicone matrix.

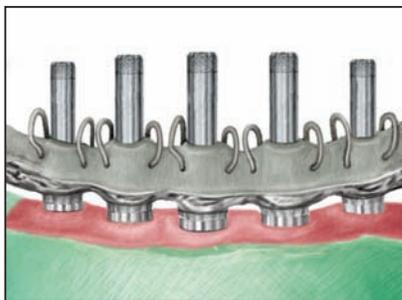
or

Request a CAM StructSURE® Precision Milled Bar.  
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### 3.

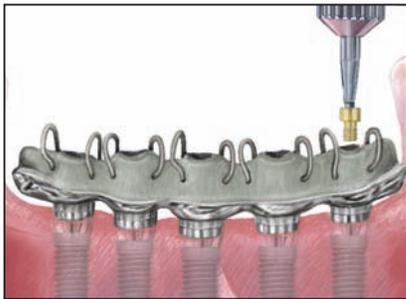
 Carefully remove the Standard Abutment Gold or Castable Cylinders from the verification index. Place the cylinders onto the analogs and attach with waxing screws using a .048" Large Hex Driver. Adjust the height of the sleeves as necessary. Wax the hybrid bar patterns to the waxing sleeves and add acrylic resin retention to the top of the bar. Use the matrix on the cast to position the bar within the confines of the wax try-in.



### 4.

 Remove the hybrid bar wax up from the cast. Invest, burnout and cast the bar in a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Divest, finish and polish the under surface of the bar with polishing protectors in place. Return the bar to the restorative dentist for try in and fit verification.

## Implant Retained Fixed Prosthesis Standard Abutment Fixed Hybrid



### 5. Restorative Dentist

 Remove the healing caps from the abutments using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the bar onto the abutments. Thread a Hexed Gold-Tite® Retaining Screw into one posterior-most cylinder and finger tighten. Visually verify the bar is seated passively on all implants. Repeat after removing the screw and placing it into the opposite posterior-most cylinder. If a fit discrepancy is found, cut and index the bar intraorally for soldering. Replace the healing caps.



### 6. Laboratory

 Attach the bar onto the analogs with waxing screws using a Large Hex Driver. Transfer the denture teeth from the matrix onto the bar on the cast and wax the hybrid prosthesis for processing. Flask the waxed prosthesis and boil out. Separate the flask. Opague the bar in areas where the acrylic will be processed to it. Block out all undercuts with wax. Process and finish the hybrid prosthesis in a conventional fashion. Polishing protectors should be in place during all finishing and polishing procedures.



### 7. Restorative Dentist

 Remove the healing caps. Place the fixed hybrid prosthesis onto the abutments. Screw the Hexed Gold-Tite Retaining Screws into the abutments. Adjust occlusion, remove and polish. Replace prosthesis and torque the screws 10Ncm using a .048" Large Hex Driver Tip and a torque device. Place a protective material over the screw heads. Seal the access holes with acrylic resin. Make any occlusal adjustments necessary. Instruct the patient on oral hygiene maintenance of the prosthesis.

## Bar Supported Overdenture UCLA Abutment Hader Bar

**Material:**

 Machined Gold Alloy Cylinder With Plastic Unitube

**Indications:**

- Multiple Implant Bar Retained and Fixed Removable Overdentures
- Minimum Space For Bar Construction is 5mm
- Maximum Angulation Correction of 30°



**1. Restorative Dentist**

 Follow the steps for Implant Level Impressions on pages 12-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.



**2. Laboratory**

 Place the **Non-Hexed** Gold or Castable UCLA Abutments onto the implant analogs and thread waxing screws or try-in screws into the analogs until finger tight using a .048" Large Hex Driver. Fabricate a verification index by luting the plastic sleeves together using a low expansion light cure composite resin or autopolymerizing acrylic resin. Also, fabricate a baseplate and wax occlusal rim.



**3. Restorative Dentist**

 Remove the healing abutments using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the occlusal rim into the mouth. Make the interocclusal records. Place the verification index onto the implants. Place a try-in screw into one posterior-most UCLA Abutment and finger tighten. Radiograph the interfaces to verify that all cylinders are seated passively on the implants. Remove the screw and place it into the opposite posterior-most UCLA Abutment and repeat. If a fit discrepancy is found, section the index and reassemble intraorally. Remove the index. Immediately replace the healing abutments.



**4. Laboratory**

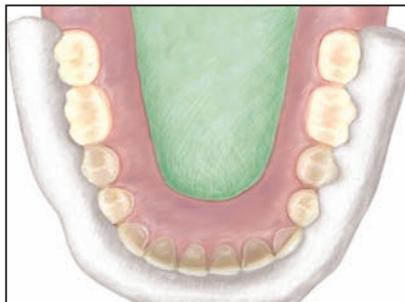
 Verify that analog positions on the cast are accurate using the verification index. If a fit discrepancy is found, remove the analog and replace it in the cast using the verification index. Articulate casts using the interocclusal record. Set the denture teeth on the baseplate and wax for try in.

## Bar Supported Overdenture UCLA Abutment Hader Bar



### 5. Restorative Dentist

 Place the wax try-in into the mouth. Verify the occlusion, aesthetics and phonetics. Make any adjustments necessary. If major adjustments are necessary, make a new interocclusal record and return to the laboratory for a new set up and try-in.

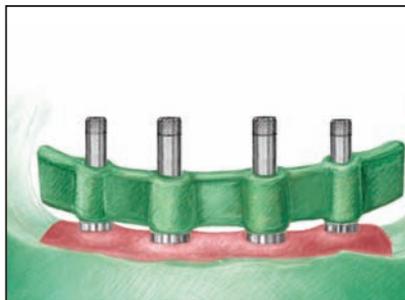


### 6. Laboratory

 Make a plaster or silicone matrix of the verified wax try-in and remove the denture teeth inside it.

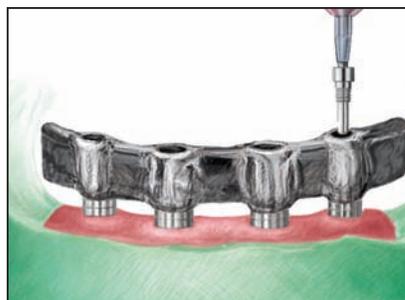
or

Request a CAM StructSURE® Precision Milled Bar.  
See CAM StructSURE Manual (ART861)



### 7.

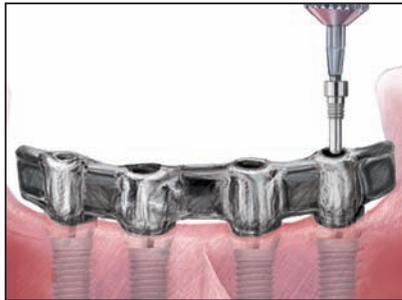
 Carefully remove the UCLA Abutments from the verification index. Place the UCLA Abutments onto the implant analogs and thread waxing screws into the analogs until finger tight using a .048" Large Hex Driver. Adjust the height of the sleeves as necessary. Wax the bar patterns (and attachments, if used) to the waxing sleeves. Use the matrix on the cast to position the bar within the confines of the wax try-in.



### 8.

 Remove the Hader Bar wax-up from the cast. Invest, burnout and cast the Hader Bar in a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Divest, finish and polish the bar with polishing protectors in place. Return the bar to the restorative dentist for try in and fit verification.

## Bar Supported Overdenture UCLA Abutment Hader Bar



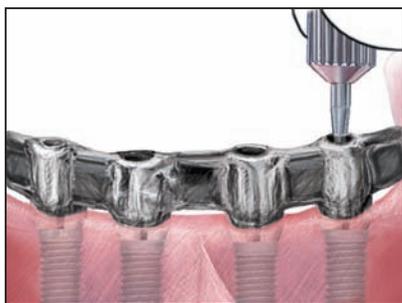
### 9. Restorative Dentist

 Remove the healing abutments from the implants. Place the bar onto the implants. Thread a try-in screw into one posterior-most implant. Radiograph the interfaces to verify that the bar is seated passively on all implants. Repeat after removing the screw and placing it into the opposite posterior-most implant. If a fit discrepancy is found, cut and index the bar intraorally for soldering. Immediately replace the healing abutments on the implants.



### 10. Laboratory

 Transfer the denture teeth back onto the cast using the matrix and wax the denture for processing. Flask the waxed denture and boil out. Separate the flask and attach the Hader Bar onto the analogs in the cast using try-in screws. Block out all undercuts and access openings with wax. Place the Hader clips and/or other attachments onto the bar. Process and finish the denture following conventional procedures.



### 11. Restorative Dentist

 Remove the healing abutments from the implants. Place the Hader Bar onto the implants.

 Thread a Certain® Gold-Tite® Hexed Large Diameter Screw into each implant until finger tight using a .048" Large Hex Driver.

**or**

 Thread a Square Gold-Tite Screw into each implant until finger tight using a Square Driver.

 Radiograph the interface of the implants to verify a passive fit. Torque the Certain Gold-Tite Hexed Large Diameter Screws to 20Ncm and Square Gold-Tite Screws to 32-35Ncm using the proper driver tip and a torque device.



**12.**  Place the overdenture onto the Hader Bar in the mouth and engage the retentive attachments. Make occlusal or tissue adjustments as necessary. Instruct patient on insertion and removal of the prosthesis and oral hygiene maintenance.

## Implant Retained Fixed Prosthesis UCLA Abutment Fixed Hybrid



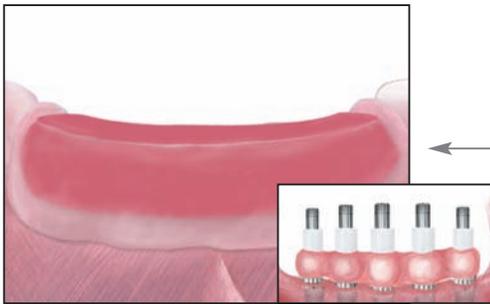
### 1. Restorative Dentist

 Follow the steps for Implant Level Impressions on pages 12-13 for the Pick-Up Technique and pages 14-16 for the Twist Lock™ Transfer Technique.



### 2. Laboratory

 Place the **Non-Hexed** Gold or Castable UCLA Abutments onto the implant analogs and thread waxing or try-in screws into the analogs until finger tight using a .048" Large Hex Driver. Fabricate a verification index by luting the plastic sleeves together using a low expansion light cure composite resin or autopolymerizing acrylic resin. Also, fabricate a baseplate and wax occlusal rim.



### 3. Restorative Dentist

 Remove the healing abutments using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the occlusal rim into the mouth. Make the interocclusal records. Place the verification index onto the implants. Thread a try-in screw into one posterior-most UCLA Abutment and finger tighten. Radiograph the interfaces to verify that all cylinders are seated passively on the implants. Remove the screw and place it into the opposite posterior-most UCLA Abutment and repeat. If a fit discrepancy is found, section the index and reassemble intraorally. Remove the index. Immediately replace the healing abutments.



### 4. Laboratory

 Verify that the analog positions on the cast are accurate using the verification index. If a fit discrepancy is found, remove the analog and replace it in the cast using the verification index. Articulate the casts using the inter-occlusal record. Set the denture teeth on the baseplate to first molar occlusion only and wax for try in.

## Implant Retained Fixed Prosthesis UCLA Abutment Fixed Hybrid



### 5. Restorative Dentist

 Place the wax try-in into the mouth. Verify the occlusion, aesthetics and phonetics. Make any adjustments necessary. If major adjustments are necessary, make a new interocclusal record and return to the laboratory for a new set up and try-in.

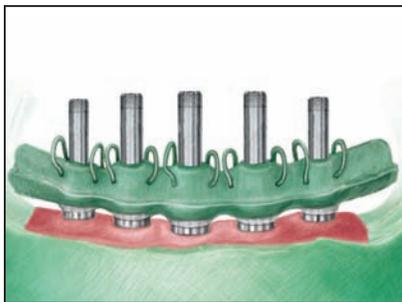


### 6. Laboratory

 Make a plaster or silicone matrix of the verified wax try-in and remove the denture teeth inside it.

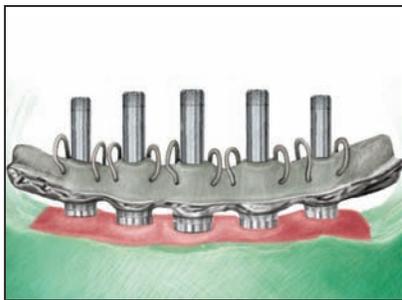
or

Request a CAM StructSURE® Precision Milled Bar.  
See CAM StructSURE Manual (ART861)



### 7.

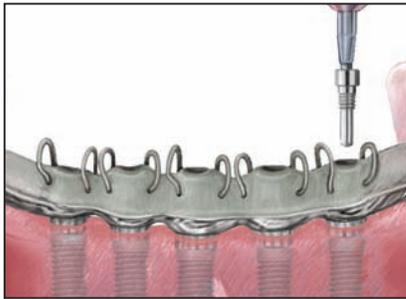
 Carefully remove the UCLA Abutments from the verification index. Place the **Non-Hexed** UCLA Abutments onto the implant analogs and thread try-in or waxing screws into the analogs until finger tight using a .048" Large Hex Driver. Adjust the height of the plastic sleeves as necessary. Wax the hybrid bar patterns to the wax sleeves and add acrylic resin retention on the top. Use the matrix on the cast to position the bar within the confines of the wax try-in.



### 8.

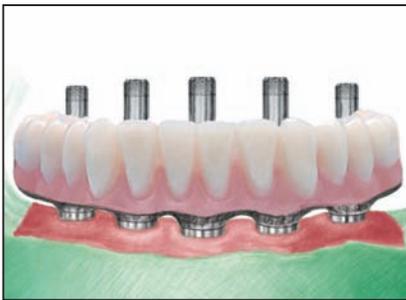
 Remove the hybrid bar wax-up from the cast. Invest, burnout and cast the hybrid bar in a semi-precious or high noble alloy (see page 9 for casting alloy specifications). Divest, finish and polish the under surface of the bar with polishing protectors in place. Return the bar to the restorative dentist for try in and fit verification.

## Implant Retained Fixed Prosthesis UCLA Abutment Fixed Hybrid



### 9. Restorative Dentist

 Remove the healing abutments from the implants. Place the bar onto the implants. Thread a try-in screw into one posterior-most implant. Radiograph the interface of all implants. Repeat after removing the screw and placing it into the opposite posterior-most implant. If a fit discrepancy is found, cut and index the bar intraorally for soldering. Immediately replace the healing abutments on the implants.



### 10. Laboratory

 Attach the bar onto the implant analogs with waxing screws using a Large Hex Driver. Transfer the denture teeth from the matrix onto the bar on the cast and wax the hybrid prosthesis for processing. Flask the waxed prosthesis and boil out. Separate the flask. Opaque the bar in areas where the acrylic will be processed to it. Block out all undercuts with wax. Process and finish the hybrid prosthesis in conventional fashion. Polishing protectors should be in place during all finishing and polishing procedures.



### 11. Restorative Dentist

 Remove the healing abutments from the implants. Place the Fixed Hybrid prosthesis onto the implants.

 Thread a Certain® Gold-Tite® Hexed Large Diameter Screw into each implant until finger tight using a Large Hex Driver.

or

 Thread a Square Gold-Tite Screw into each implant until finger tight using a Square Driver.

 Radiograph the interface of the implants to verify a passive fit. Torque the Certain Gold-Tite Hexed Large Diameter Screws to 20Ncm and Square Gold-Tite Screws to 32-35Ncm using the proper driver tip and a torque device. Place a protective material over the screw heads. Seal the access holes with acrylic resin. Make any occlusal adjustments necessary. Instruct the patient on oral hygiene maintenance of the prosthesis.

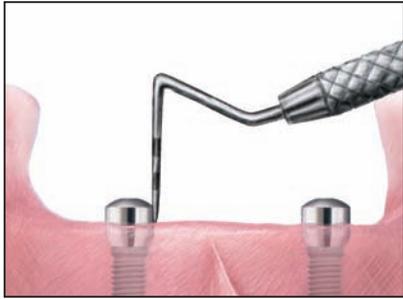
## Tissue Supported Overdenture LOCATOR® Abutment Indirect Technique

**Material:**

 Abutment: Titanium Alloy With Gold Colored Titanium Nitride Coating  
 Housing: Titanium Alloy  
 Males: Nylon

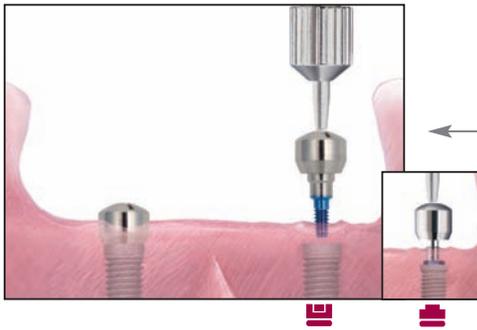
**Indications:**

- Tissue Supported Removable Overdentures on Two to Four Implants
- Partially Edentulous Overdentures With One or More Implants
- Minimum Interarch Distance of 4mm
- Angle Correction With Up to 40° Between Divergent Implants

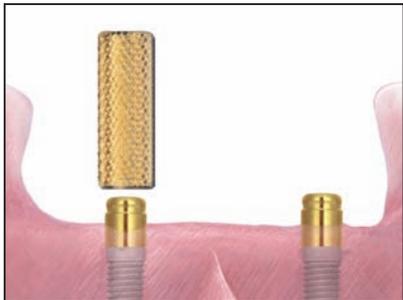


**1. Surgeon Or Restorative Dentist**

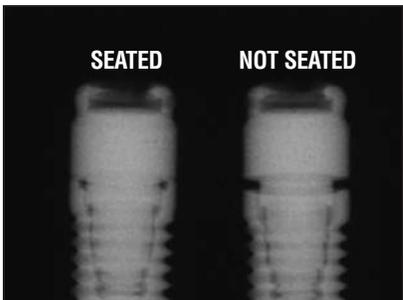
 Select the proper LOCATOR Abutment collar height for each implant by measuring the height of the healing abutment above tissue, not including the dome portion. Subtract the measurement from the total height of the healing abutment and add 1mm.



**2.**  Remove the healing abutments from the implants, one at a time, using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

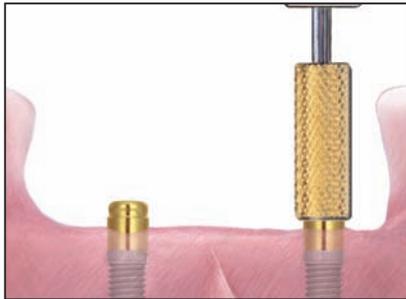


**3.**  Thread the proper height LOCATOR Abutment into the implant using the plastic delivery tool packaged with the abutment. Use the LOCATOR Driver to finger tighten.



**4.**  Radiograph the interfaces to verify complete seating of the abutments on the implants. Place the film perpendicular to the interface of the abutment on the implant.

## Tissue Supported Overdenture LOCATOR® Abutment Indirect Technique



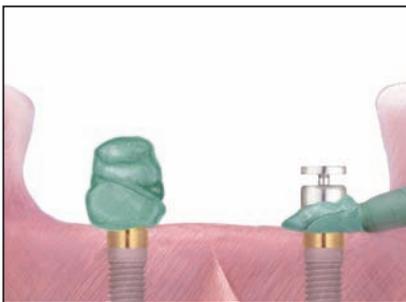
5.  Torque the LOCATOR Abutments into the implants at 20Ncm, using the LOCATOR Abutment Driver and a .050 inch hex driver tip in a torque device. (If the surgeon places the abutments, the patient's existing denture will be relieved to allow for the abutments.)

or

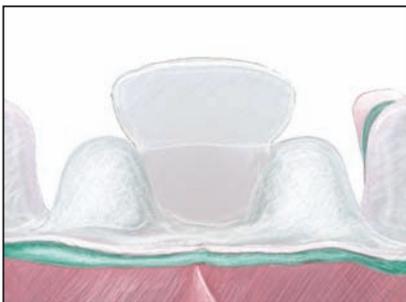
Place the LOCATOR Driver Tip into the torque device and torque the abutments to 20Ncm.



6. **Restorative Dentist**  
 A custom or stock **closed top** impression tray may be used. Provide relief for the height of the LOCATOR Abutments and impression copings plus 2mm. The impression copings are 4.5mm in height.



7.  Place the LOCATOR Impression Copings on the abutments and verify complete seating. A medium or heavy body impression material is recommended. Syringe impression material around each of the entire LOCATOR Impression Copings.



8.  Load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.

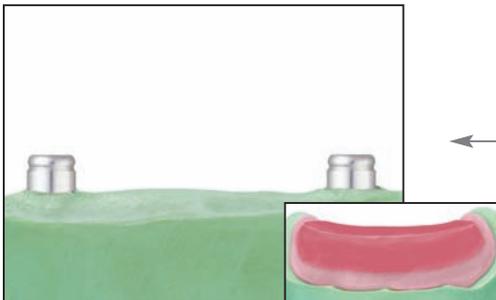
## Tissue Supported Overdenture LOCATOR® Abutment Indirect Technique



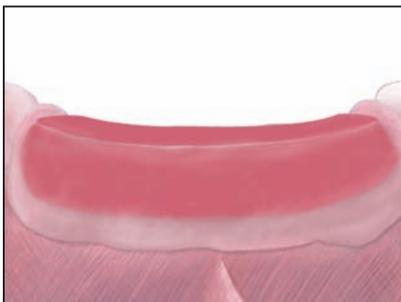
9.  Remove the impression from the mouth and verify that the impression material completely adapted around each coping. The impression copings should remain inside the impression. Relieve the patient's existing denture to allow for the LOCATOR Abutments. Place a chair side soft liner into the denture around the abutments and seat the denture. Have the patient close into centric occlusion. Allow the soft liner to set per the manufacturer's instructions.



10. **Laboratory**  
 Insert the LOCATOR Lab Analogs into the impression copings using firm pressure until these fully engage.



11.  Pour the cast in die stone, being careful to not dislodge the analogs. Fabricate a baseplate and a wax occlusal rim.



12. **Restorative Dentist**  
 Place the occlusal rim into the mouth. Make the interocclusal records.

## Tissue Supported Overdenture LOCATOR® Abutment Indirect Technique



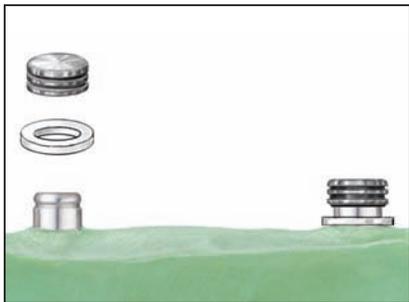
### 13. Laboratory

 Articulate casts using the interocclusal record. Set the denture teeth on the baseplate and wax for try in.



### 14. Restorative Dentist

 Place the wax try-in into the mouth. Verify occlusion, aesthetics and phonics. Make any adjustments necessary. If major adjustments are necessary, make a new interocclusal record and return to the laboratory for a new set up and try-in.



### 15. Laboratory

 After the wax try-in is verified, flask the denture on the cast. Boil out the wax and separate the flask. Place the LOCATOR White Spacer Rings over the analogs to prevent acrylic from flowing under the housings. Place the Housing/Black Processing Male Attachment assemblies onto the analogs.



16.  Process and finish the denture with the LOCATOR Housings in place. Remove the Black Processing Males and replace with Final Male Attachments (see step 18).

## Tissue Supported Overdenture LOCATOR® Abutment Indirect Technique



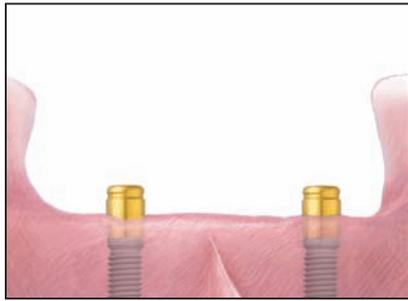
### 17. Restorative Dentist

Place the overdenture onto the LOCATOR Abutments in the mouth engaging the attachments. Make any occlusal or tissue adjustments necessary. Instruct the patient on insertion and removal of the prosthesis and oral hygiene maintenance.



18. Remove the Black Processing Male by placing the Removal Tip end of the LOCATOR Core Tool into the Housing/Black Processing Male assembly and turning the spinner three rotations counter clockwise. Place the Final Male Attachment on the attachment insertion end of the Core Tool and press it firmly into the housing. The attachment retention on the abutment may be reduced by placing the pink Light Retention Male or the blue Extra Light Retention Male rather than the clear Final Male. The male attachments are replaced after normal wear by inserting the Removal Tip straight into the bottom of the nylon male. Tilt the tool so the sharp edge will grab hold of the male and pull it out of the cap.

## Tissue Supported Overdenture LOCATOR® Abutment Direct Technique



### 1. Restorative Dentist

 Follow steps 1-5 on pages 91 and 92 for LOCATOR Abutment Indirect Technique selection and placement.



### 2.

 A direct chair side processing technique may be used for a patient's existing denture or a new denture by cutting relief and lingual vent windows in the acrylic resin denture base over the abutment areas.



### 3.

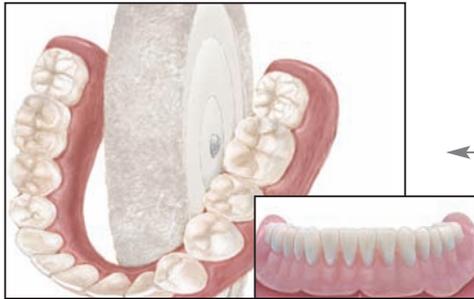
 Cut two small pieces of rubber dam and place a hole in the center of each. Place these over the abutments to protect the tissue. Place the White Spacer Rings over the LOCATOR Abutments to prevent acrylic resin from flowing into under-cuts around the housings. Place the Housing/Black Processing Male Attachment assemblies onto the LOCATOR Abutments in the mouth. Try in the denture over the housings to verify it is fully seated on the ridge and the housings are not in contact with the denture.



### 4.

 Place autopolymerizing acrylic resin or light cure composite resin over the LOCATOR Housings and into relief areas of the denture. Place the denture into position in the mouth and have the patient close into centric occlusion. Allow the acrylic resin to set per the manufacturer's instructions.

## Tissue Supported Overdenture LOCATOR® Abutment Direct Technique

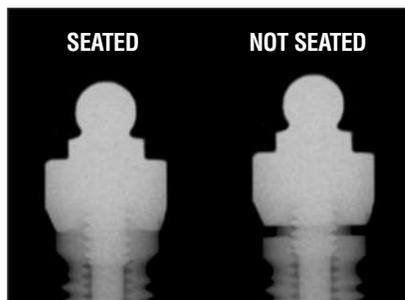
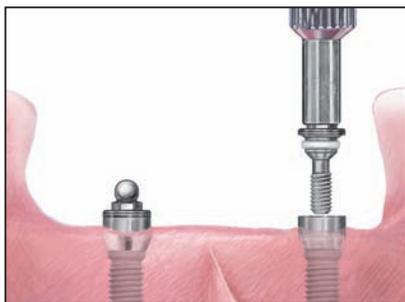
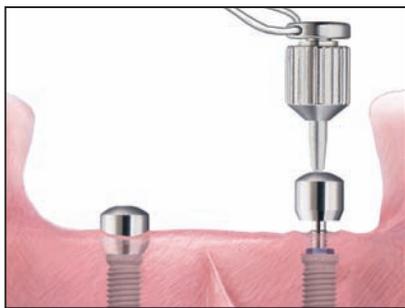


5. Remove the denture, fill any voids around the housings and polish. Remove the Black Processing Males and replace these with the Final Male Attachments (see step 6). Place the overdenture onto the LOCATOR Abutments in the mouth, engaging the attachments. Make any occlusal or tissue adjustments necessary. Instruct the patient on insertion and removal of the prosthesis and oral hygiene maintenance.



6. Remove the Black Processing Male by placing the Removal Tip end of the LOCATOR Core Tool into the Housing/Black Processing Male assembly and turning the spinner three rotations counter clockwise. Place the Final Male Attachment on the attachment insertion end of the Core Tool and press it firmly into the housing. The attachment retention on the abutment may be reduced by placing the pink Light Retention Male or the blue Extra Light Retention Male rather than the clear Final Male. The male attachments are replaced after normal wear by inserting the Removal Tip straight into the bottom of the nylon male. Tilt the tool so the sharp edge will grab hold of the male and pull it out of the cap.

## Tissue Supported Overdenture Dal-Ro Abutment Indirect Technique



### Material:

Abutment: Titanium Alloy

Housing: Titanium

Females: Gold Alloy

### Indications:

- Tissue Supported Overdentures on Two to Four Implants
- Partially Edentulous Overdentures With One or More Implants
- Rigid Retention
- Minimum Interarch Space of 5mm
- Maximum Tissue Height of 6mm
- Recommended for Parallel Implants;  
(See Castable Dal-Ro System for Divergent Implants)
- 250–1000 Grams of Retention; May Be Adjusted

### 1. Surgeon Or Restorative Dentist

Select the proper Dal-Ro Abutment collar height for each implant by measuring the height of the healing abutment above tissue, not including the dome portion. Subtract the measurement from the total height of the healing abutment and add 1mm.

### 2. Remove the healing abutments from the implants,

one at a time, using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

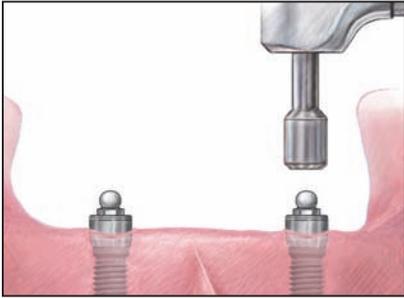
### 3. Place the proper height Dal-Ro Abutment collar

onto the implant engaging the hex. Thread the Dal-Ro Abutment Screw into the implant by engaging the hex below the ball with the O-Ring/Dal-Ro Driver. Finger tighten the screws.

### 4. Radiograph the interface to verify complete seating

of the abutments on the implants. Place the film perpendicular to the interface of the abutment on the implant.

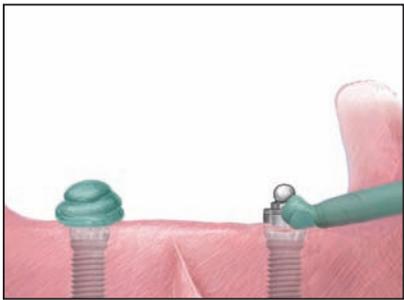
## Tissue Supported Overdenture Dal-Ro Abutment Indirect Technique



5.  Torque the Dal-Ro Abutment Screws into the implants at 20Ncm using the O-Ring/Dal-Ro Driver Tip in a torque device. (If the surgeon places the abutments, the patient's existing denture will be relieved to allow for the abutments.)



6. **Restorative Dentist**  
 A custom or stock **closed top** impression tray may be used. Provide relief for the height of the Dal-Ro Abutments plus 2mm.



7.  A medium or heavy body impression material is recommended. Syringe impression material around each Dal-Ro Abutment.

**Note:**

There are no impression copings for Dal-Ro Abutments.

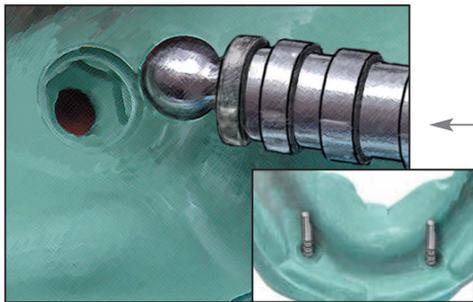


8.  Load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.

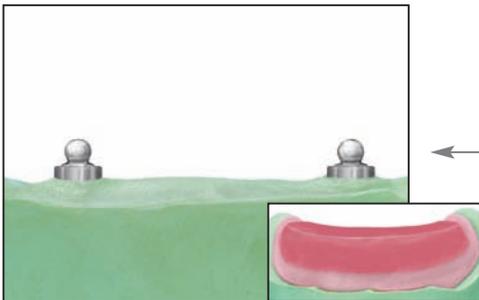
## Tissue Supported Overdenture Dal-Ro Abutment Indirect Technique



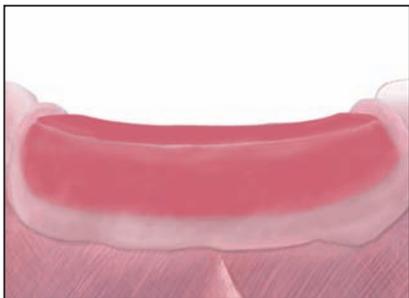
9.  Remove the impression from the mouth and verify that the impression material completely adapted around each abutment. Relieve the patient's existing denture to allow for the Dal-Ro Abutments. Place a chair side soft liner into the patient's existing denture around the abutments and seat the denture. Have the patient close into centric occlusion. Allow the soft liner to set per the manufacturer's instructions.



10. **Laboratory**  
 Insert the Dal-Ro Lab Analogs into the impression using firm pressure until the ball portion fully engages the undercut.



11.  Pour the cast in die stone, being careful to not dislodge the analogs. Fabricate a baseplate and a wax occlusal rim.



12. **Restorative Dentist**  
 Place the occlusal rim into the mouth. Make the interocclusal records.

## Tissue Supported Overdenture Dal-Ro Abutment Indirect Technique



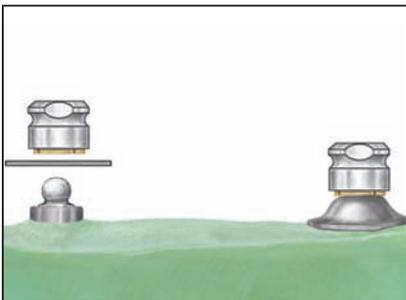
### 13. Laboratory

Articulate casts using the interocclusal record. Set the denture teeth on the baseplate and wax for try in.



### 14. Restorative Dentist

Place the wax try-in into the mouth. Verify occlusion, aesthetics and phonics. Make any adjustments necessary. If major adjustments are necessary, make a new inter-occlusal record and return to the laboratory for a new set up and try-in.



### 15. Laboratory

After the wax try-in is verified, flask the denture on the cast. Boil out the wax and separate the flask. Place the Dal-Ro Spacer Rings over the ball portion of the analogs and conform to the ridges. Screw the Gold Female Attachments into the housings using the Female Driver Tool. Place the housing/attachment assemblies onto the analogs.



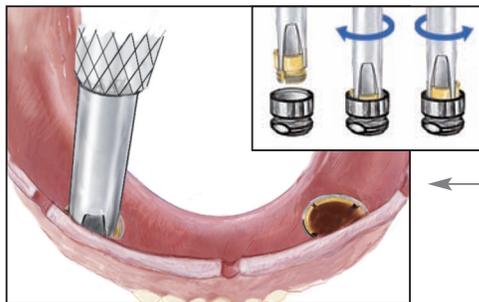
16. Process and finish the denture with the Dal-Ro Housings in place.

## ***Tissue Supported Overdenture Dal-Ro Abutment Indirect Technique***



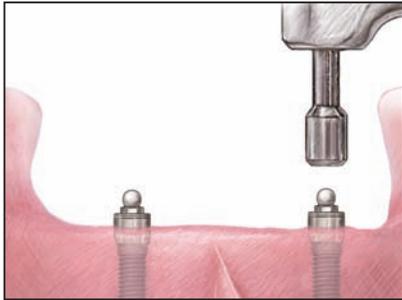
### **17. Restorative Dentist**

 Place the overdenture onto the Dal-Ro Abutments in the mouth engaging the attachments. Make any occlusal or tissue adjustments necessary. Instruct the patient on insertion and removal of the prosthesis and oral hygiene maintenance.



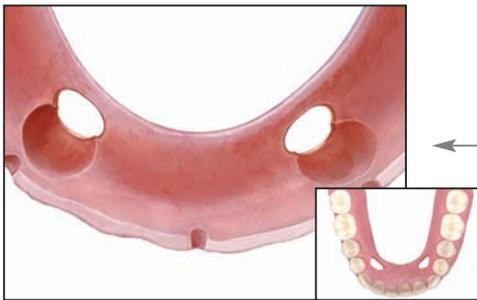
**18.**  The Gold Female Attachment retention on the abutment may be adjusted by tightening the housing for more retention and loosening for less retention, using the Female Attachment Tool. The Gold Females may be replaced using the same technique.

## Tissue Supported Overdenture Dal-Ro Abutment Direct Technique



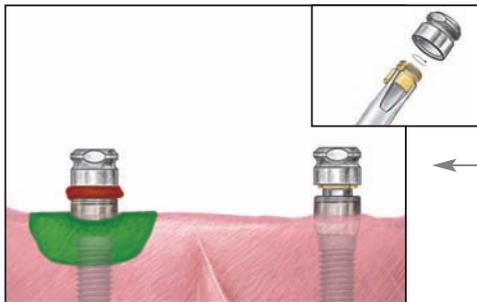
### 1. Restorative Dentist

Follow steps 1-5 on pages 98 and 99 for Dal-Ro Abutment selection and placement.



### 2.

A direct chair side processing technique may be used for a patient's existing denture or a new denture by cutting relief and lingual vent windows in the acrylic resin denture base over the abutment areas.



### 3.

Cut two small pieces of rubber dam and place a hole in the center. Place these over the abutments to protect the tissue. Screw the Gold Female Attachments into the housings using the Female Attachment Tool. Place the housing/attachment assemblies onto the Dal-Ro Abutments in the mouth. Block out the undercuts with wax to prevent acrylic resin from flowing under the housings. Try in the denture over the housings to verify it is fully seated on the ridge and the housings are not in contact with the denture.



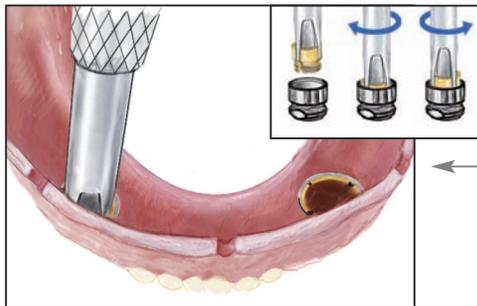
### 4.

Place autopolymerizing acrylic resin or light cure composite resin over the Dal-Ro Housings and into relief areas of the denture. Place the denture into position in the mouth and have the patient close into centric occlusion. Allow the acrylic resin to set per the manufacturer's instructions.

## ***Tissue Supported Overdenture Dal-Ro Abutment Direct Technique***



5.  Remove the denture, fill any voids around the housings and polish. Place the overdenture onto the Dal-Ro Abutments in the mouth engaging the attachments. Make any occlusal or tissue adjustments necessary. Instruct the patient on insertion and removal of the prosthesis and oral hygiene maintenance.



6.  The Gold Female Attachment retention on the abutment may be adjusted by tightening the housing for more retention and loosening for less retention using the Female Attachment Tool. The Gold Females may be replaced using the same technique.

## Tissue Supported Overdenture O-Ring Abutment Indirect Technique

**Material:**

- Abutment: Commercially Pure Titanium
- O-Ring: Buna
- Housing: Titanium Alloy

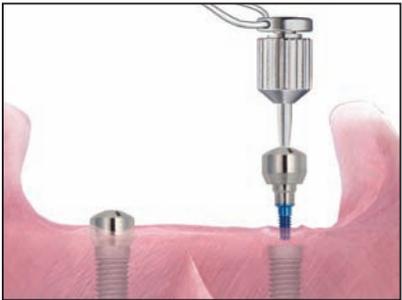
**Indications:**

- Tissue Supported Overdenture Retained by Two to Four Implants
- Partially Edentulous Overdentures With One or More Implants
- Resilient Retention
- Minimum Interarch Space of 7mm
- Maximum Tissue Height of 6mm
- Recommended for Parallel Implants  
(See Castable O-Ring System for Divergent Implants)
- 850 Grams of Retention



**1. Surgeon or Restorative Dentist**

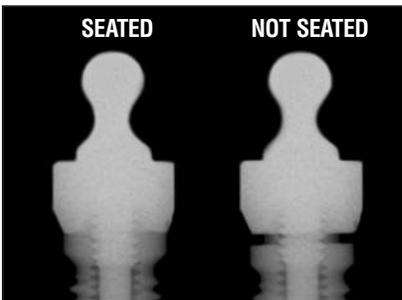
■ ■ Select the proper O-Ring Abutment collar height for each implant by measuring the height of the healing abutment above tissue, not including the dome portion. Subtract the measurement from the total height of the healing abutment and add 1mm.



**2.** ■ ■ Remove the healing abutments from the implants, one at a time, using a .048" Large Hex Driver. To help prevent accidental swallowing, thread floss through the spinner on the driver.

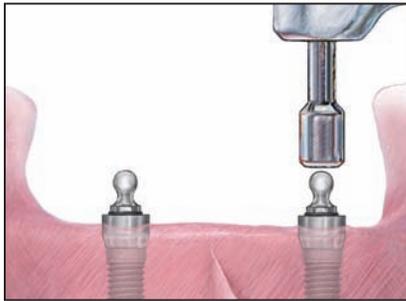


**3.** ■ ■ Place the proper height O-Ring Abutment collar onto the implant engaging the hex. Thread the O-Ring Abutment Screw into the implant by engaging the hex below the ball with the O-Ring/Dal-Ro Driver. Finger tighten the screws.



**4.** ■ ■ Radiograph the interfaces to verify complete seating of the abutments on the implants. Place the film perpendicular to the interface of the abutment on the implant.

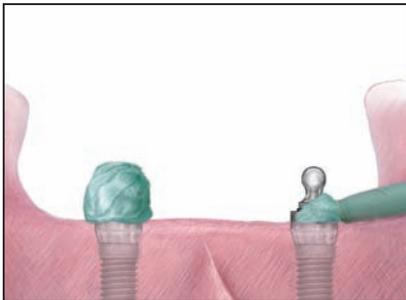
## Tissue Supported Overdenture O-Ring Abutment Indirect Technique



5.  Torque the O-Ring Abutment Screws into the implants at 20Ncm using the O-Ring/Dal-Ro Driver Tip in a torque device. (If the surgeon places the abutments, the patient's existing denture will be relieved to allow for the abutments.)



6. **Restorative Dentist**  
 A custom or stock **closed top** impression tray may be used. Provide relief in the tray for the height of the O-Ring Abutments plus 2mm.



7.  A medium or heavy body impression material is recommended. Syringe impression material around each O-Ring Abutment.

**Note:**  
There are no impression copings for O-Ring Abutments.

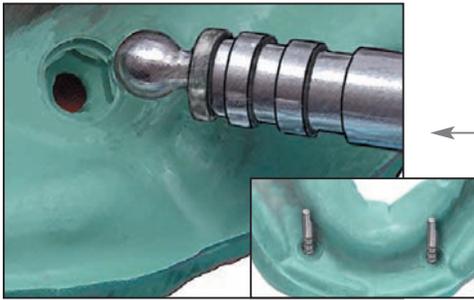


8.  Load the impression tray and seat in the mouth. Allow the impression material to set per the manufacturer's instructions.

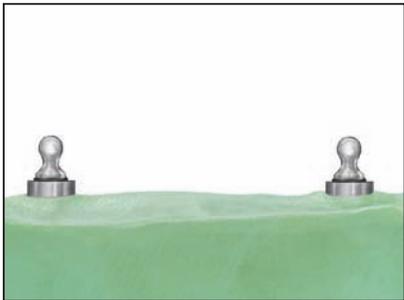
## Tissue Supported Overdenture O-Ring Abutment Indirect Technique



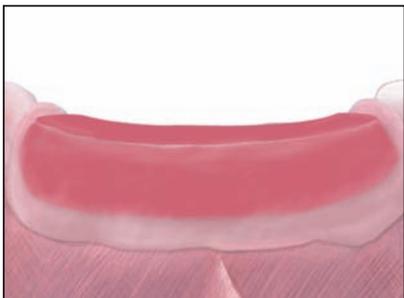
- 9.**  Remove the impression from the mouth and verify that the impression material completely adapted around each abutment. Relieve the patient's existing denture to allow for the Dal-Ro Abutments. Place a chair side soft liner into the denture around the abutments and seat the denture. Have the patient close into centric occlusion. Allow the soft liner to set per the manufacturer's instructions.



- 10. Laboratory**  
 Insert the O-Ring Lab Analogs into the impression using firm pressure until the ball portion fully engages the undercut.



- 11.**  Pour the cast in stone, being careful to not dislodge the analogs. Fabricate a baseplate and a wax occlusal rim.



- 12. Restorative Dentist**  
 Place the occlusal rim into the mouth. Make the interocclusal records.

## Tissue Supported Overdenture O-Ring Abutment Indirect Technique



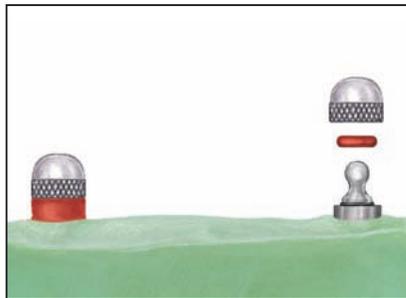
### 13. Laboratory

  Articulate casts using the interocclusal record. Set the denture teeth on the baseplate and wax for try-in.



### 14. Restorative Dentist

  Place the wax try-in into the mouth. Verify occlusion, aesthetics and phonics. Make any adjustments necessary. If major adjustments are necessary, make a new interocclusal record and return to the laboratory for a new set up and try-in.



### 15. Laboratory

  After the wax try-in is verified, flask the denture on the cast. Boil out the wax and separate the flask. Place the Red Processing O-Rings into the Housings. Place the Housing/O-Ring assemblies onto the analogs. Block out the undercuts with wax to prevent acrylic resin from flowing under the Housings.



16.   Process and finish the denture with the O-Ring Housings in place. Remove the Red Processing O-Rings and replace with the Black O-Rings (see step 18).

**Tissue Supported Overdenture  
O-Ring Abutment  
Indirect Technique**

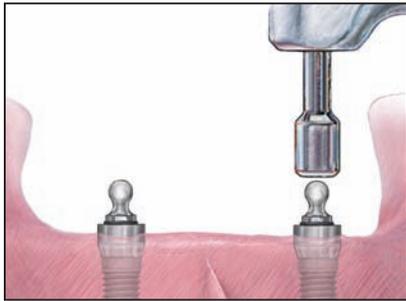


**17. Restorative Dentist**  
 Place the overdenture onto the O-Ring Abutments in the mouth engaging the attachments. Make any occlusal or tissue adjustments necessary. Instruct the patient on insertion and removal of the prosthesis and oral hygiene maintenance.



**18.**  Normal wear will require that the O-Rings be replaced periodically. Remove the existing O-Ring from the housing using an explorer and replace with a new Black O-Ring.

## Tissue Supported Overdenture O-Ring Abutment Direct Technique



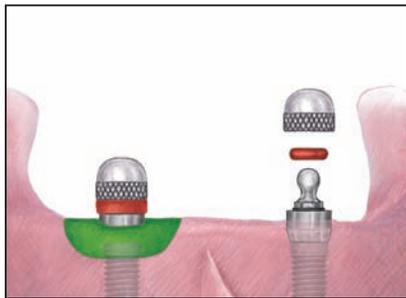
### 1. Surgeon Or Restorative Dentist

 Follow steps 1-5 on pages 105 and 106 for O-Ring Abutment selection and placement.



### 2.

 A direct, chair side processing technique may be used for a patient's existing denture or a new denture by cutting relief and lingual vent windows in the acrylic resin denture base over the abutment areas.



### 3.

 Cut two small pieces of rubber dam and place a hole in the center. Place these over the abutments to protect the tissue. Place the Red Processing O-Rings into the housings. Place the O-Ring Housing assemblies onto the O-Ring Abutments in the mouth. Block out the undercuts with wax to prevent acrylic resin from flowing under the housings. Try in the denture over the housings to verify it is fully seated on the ridge and the housings are not in contact with the denture.



### 4.

 Place autopolymerizing acrylic resin or light cure composite resin over the O-Ring Housings and into the relief areas of the denture. Place the denture into position in the mouth and have the patient close into centric occlusion. Allow the acrylic resin to set per the manufacturer's instructions.

**Tissue Supported Overdenture  
O-Ring Abutment  
Direct Technique**



5.  Remove the denture, fill any voids around the housings and polish. Remove the Red Processing O-Rings and replace with the Black O-Rings (see step 6). Place the overdenture onto the O-Ring Abutments in the mouth engaging the attachments. Make any occlusal or tissue adjustments necessary. Instruct the patient on insertion and removal of the prosthesis and oral hygiene maintenance.



6.  Normal wear will require that the O-Rings be replaced periodically. With an explorer, remove the existing O-Ring from the Housing and replace with a new Black O-Ring.







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Fax: +44-1628-820182

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Fax: +81-66868-2444

##### KOREA

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##### MEXICO

Phone: +52-55-2282-0120  
Fax: +52-55-2282-0120 ext. 20

##### THE NETHERLANDS

Phone: +31-(0)78-629-2800  
Fax: +31-(0)78-629-2801

##### NEW ZEALAND

Phone: +64-508-122-221  
Fax: +64-508-133-331

##### NORDIC REGION

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##### PORTUGAL

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##### SPAIN

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##### U.K.

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#### DISTRIBUTORS

##### ARGENTINA

Dentalmax, SA  
Phone: +541-1482-71001  
Fax: +541-1482-67373

##### CHILE

Cybel, SA  
Phone: +56-2-2321883  
Fax: +56-2-2330176

##### CHINA

Atek Inc.  
Phone: +86-21-6329-1265  
Fax: +86-21-6329-1620

##### COLOMBIA

3i Colombia  
Phone: +571-612-9362  
Fax: +571-620-6412

##### COSTA RICA

Implantec S.A.  
Phone: +506-234-9043  
Fax: +506-224-7620

##### EL SALVADOR

Dentimer SA de CV  
Phone: +503-263-6350  
Fax: +503-263-6676

##### GREECE

Impladend Dental Implants, LLC  
Phone: +30-2310-501-651  
Fax: +30-2310-862-090

##### ISRAEL

H.A. Systems  
Phone: +972-3-6138777  
Fax: +972-3-6138778

##### HONG KONG

Ositek Inc., Ltd.  
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Fax: +852-3747-3754

##### ITALY

Biomax, srl.  
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##### MIDDLE EAST

3i MENA s.a.l.  
Middle East And North Africa  
Phone: +961-1-694000  
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##### PARAGUAY

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##### POLAND

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##### SINGAPORE

Asia Implant Support & Services  
Phone: +65-6223-2229  
Fax: +65-6220-3538

##### SOUTH AFRICA

Selective Surgical CC  
Phone: +27-11-991-7007  
Fax: +27-11-672-1391

##### TAIWAN

Kuo Hwa Dental Suppliers Co., Ltd.  
Phone: +886-2-2226-1770  
Fax: +886-2-2226-8747

##### THAILAND

3i (Thailand) Co., LTD.  
Phone: +662-252-6685  
Fax: +662-252-6686

##### TURKEY

Tamer Med. A.Ş.-Turkey  
Phone: +90-212-465-3352  
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##### UKRAINE

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Fax: +38-044-5017117

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