

# BIOMET 3i™ Restorative Manual

Flexibility By Design



### Icon Key:

Certain® Internal Connection  
Implant System:



External Hex Connection  
Implant System:



Certain Internal and External Hex  
Connection Implant Systems:



### How To Use The Icon Key:

The icons represent the connection types of the BIOMET **3i** Implant and Abutment Systems for both internal and external connection types represented in this manual. In the fully illustrated protocols, each icon is present next to each step. When a solid blue icon and a light blue icon are present together, the solid blue indicates which system is illustrated. When both icons are solid blue, then both systems are illustrated together.

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# Introduction

**BIOMET 3i**™ Implant Systems have been developed to meet the diverse needs of patients and to offer practitioners a choice of surgical and restorative techniques customized to meet each individual's requirements. This manual is designed to serve as a reference guide for dental practitioners utilizing BIOMET **3i** Restorative Components and instruments. The success of any dental implant and abutment 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. The clinician should use medically sound treatment planning and procedures for predictable results.

BIOMET **3i** offers unique implant and restorative components designed to provide practitioners with a wide range of restorative solutions, including support for single crowns, fixed and removable prostheses and attachments for securing overdentures. BIOMET **3i** Implant and Abutment Systems utilize proven restorative designs and provide clinicians and patients with predictable treatment options.

## **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 cautious and detailed assessment of the patient's general health, current medical status, 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.

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.

## **Preoperative Planning:**

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 definitive prosthesis is designed, implant locations are determined and restorative components are selected prior to initiating implant surgery.

Proper treatment planning, as well as the selection of the proper implant length and diameter, are crucial to the long-term success of the implant and restoration. Before an implant can be selected, the anatomical foundation available to receive the implant, must be carefully assessed.

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 enough 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 relative to the available restorative space. Diagnostic casts should be used to evaluate tooth and ridge positions, occlusal relationships, amount of space available for implant restorations, implant positioning and angulations. 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 preoperative 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.

# BIOMET 3i™ Implant & Abutment System Connections

**Materials:**

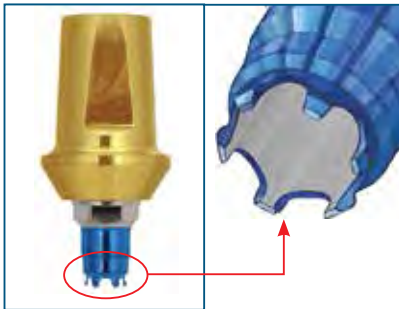
**3i T3® Implants:** Commercially Pure Titanium  
**Abutments:** Titanium Alloy



## Certain® Internal Connection

The internal connection aspect of the implant and abutment are designed for ease of use and simplicity.

- QuickSeat® Connection: It Clicks! The Certain Implant and Abutment Systems feature the QuickSeat Connection. This unique connection produces an audible and tactile “click” that confirms placement of Impression Copings and Abutments.



- 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 the restoration is being tried in or definitively placed.



- The 6/12 hex inside the internal connection incorporates both a 6-point single and a 12-point double hex. The 6-point single 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 30° rotational positioning for pre-angled abutments.



- Impression Copings: Pick-Up and Twist Lock™ Transfer Copings are available in the Certain Internal Connection design, in three EP® (Emergency Profile) diameters and a straight diameter to match the corresponding Healing Abutment. The Impression Copings also “click” when properly seated. These copings have a different finger design that engages 2mm internally into the implant, as compared to the abutment’s design that engages 4mm deep into the implant. This shorter engagement into the implant is important because it allows off-axis draw for implant impressions that are divergent.

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

- Color-Coding: Certain Implants and all interfacing components are color-coded by restorative platform diameter for easy identification and selection.

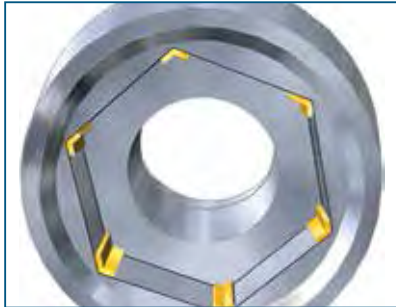
# BIOMET 3i™ Implant & Abutment System Connections (Cont'd)

## Materials:

OSSEOTITE® Implants: Commercially Pure Titanium

NanoTite™ Implants: Titanium Alloy

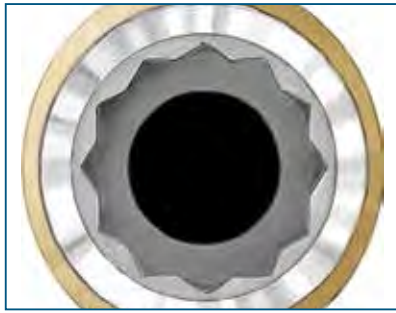
Abutments: Titanium Alloy



## External Hex Connection

The external hex connection implant and abutment designs have been widely used in implant dentistry.

- Gold Standard ZR (Zero Rotation) is a patented design incorporating 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® and Conical Abutments.



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



- Precise Abutment Placement: The ASYSY 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 ASYSY seating device. The plastic seating device facilitates precise placement of the abutment on the implant, thus reducing chair time. The ASYSY Tool is packaged with Low Profile, Standard and Conical Abutments.



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

# Certain® QuickSeat® Activator Tool

The QuickSeat Activator Tool is used to verify that the fingers on impression copings and abutments are in the proper position for proper retention when placed into the implant (Figure 1).

The QuickSeat Activator Tool is marked on both ends to indicate impression coping activation or abutment activation.

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 (Figure 2).
- **Abutments:** Insert the abutment onto the pin, fingers first and slide inward until the platform meets the tool (Figure 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 (Figure 4). This may be necessary during waxing, finishing or porcelain application when laboratory technicians prefer to insert and remove the abutment from the analog without finger retention. After the custom abutment or crown is completed, the UCLA fingers must be reactivated (Figure 5).

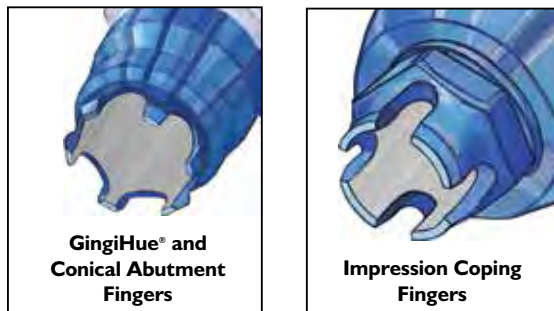


Figure 1



Figure 2

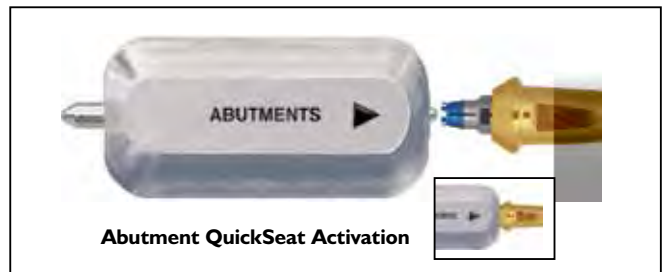


Figure 3

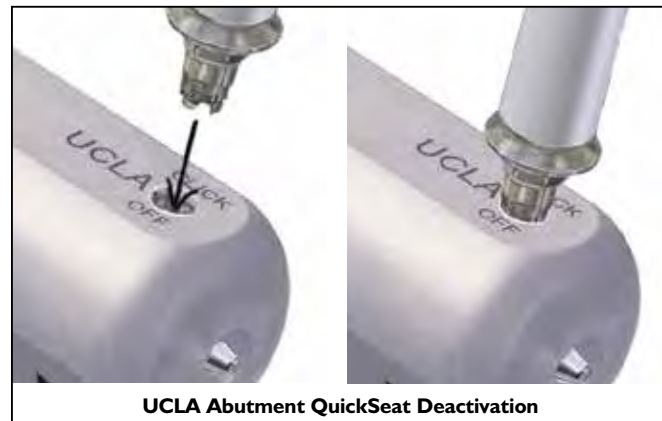


Figure 4



Figure 5



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

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

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 (Figure 1).



**Figure 1**  
30° Per Implant

## 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 impressing a multiple-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 (Figure 2).



**Figure 2**  
Pick-Up Impression Copings Rigidly Splinted  
(Parallel Implants)

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 (Figure 3).

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 should be used in place of the Hexed Pick-Up Impression Copings (Figure 4).



**Figure 4**  
Non-Hexed Pick-Up Impression Copings Rigidly  
Splinted (Non-Parallel Implants)



**Figure 3**  
40° Divergence Between Splinted Implants

# Certain® UCLA Abutment

The Certain Internal Connection line of restorative components includes UCLA Abutments. This design provides greater predictability and more flexibility for laboratory technicians when waxing and casting implant level restorations relative to conventional prefabricated abutments.

- **Cylinder Retention Design**

The cylinder retention design incorporates machined vertical grooves that reduce the potential for miscasts due to the smoother alloy flow onto the gold alloy cylinder during casting. The vertical grooves provide mechanical retention for the alloy by stopping on the horizontal retention instead of flowing to the margin (Figure 1).

- **Chamfer Margin**

The chamfer margin design provides a smooth transition from the gold alloy cylinder to the cast alloy at the junction of the two metals. It also aids in preventing the alloy from flowing onto the implant restorative platform of the gold alloy cylinder during casting (Figure 1).

- **Collar Height**

The collar height is 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 (Figure 2).

- **Collar Adjustment After Casting**

The 0.25mm collar height may cause an undercut laterally around the implant platform. The undercut should be removed after casting by tapering the collar back (Figure 3).

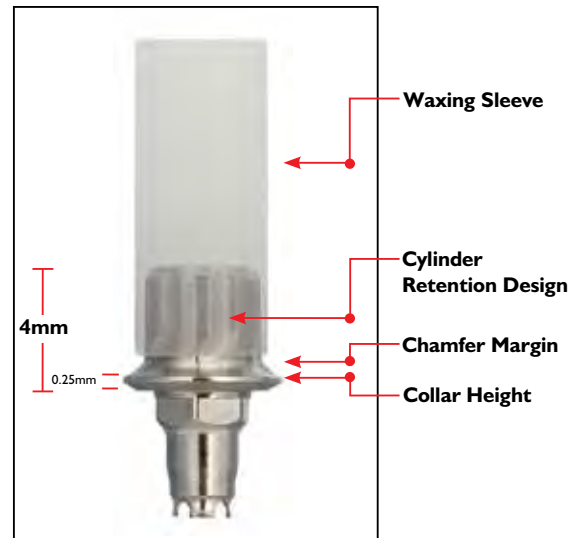


Figure 1

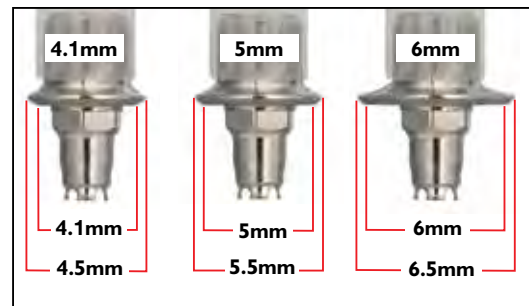


Figure 2

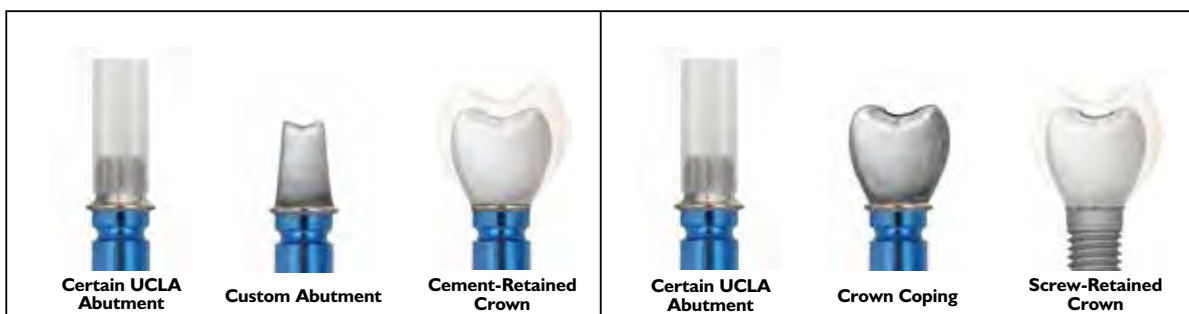


Figure 3

# Certain® Non-Hexed Abutments

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

- **Internal Engagement**

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 (Figure 1).

- **Large Diameter Abutment Screw**

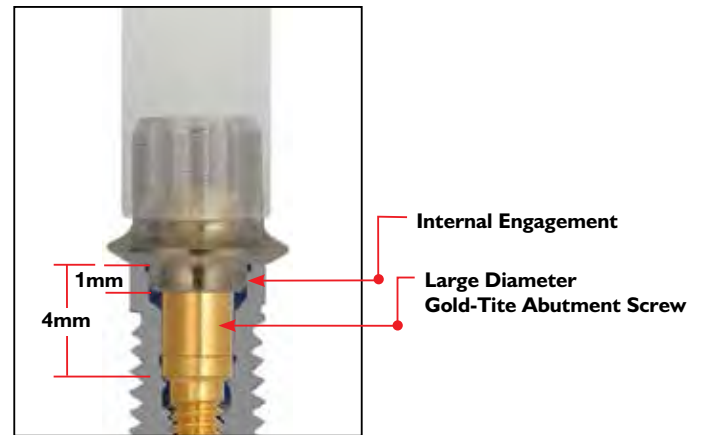
Non-hexed abutments are retained into the implants with a unique Large Diameter Gold-Tite® or Titanium Abutment Screw. The larger diameter screws provide lateral stability to the restoration. It goes into the full depth of the internal connection, replacing the 4mm length of the hexed abutment's connection (Figure 1).

- **Maximum Draw Of Non-Hexed Abutments**

Non-hexed abutments have a maximum draw angle of 40° between implants (Figure 2).

- **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.



**Figure 1**  
Certain Non-Hexed UCLA Abutment



**Figure 2**  
40° Divergence Between Splinted Implants

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

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

# Implant & Abutment Level Impressions

## How To Choose A Coping

### Choices

#### Pick-Up Impression Coping (open tray)

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 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 (see page 5).

#### Twist Lock™ Transfer Coping (closed tray)

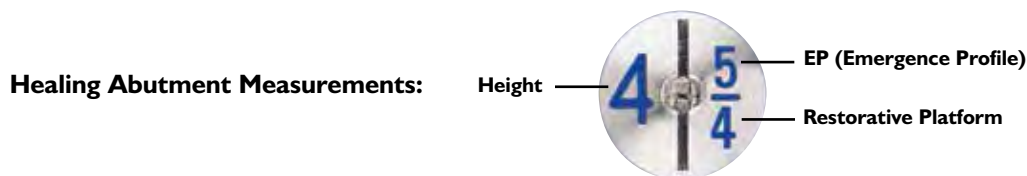
The Twist Lock Transfer Coping transfers the position of an implant hex to a laboratory cast. The coping is designed to stay on the implant when the impression is removed from the mouth. The coping is then removed from the implant, an implant analog is seated into the hex connection and the impression coping/analog complex is seated onto the impression.

#### Note

- Twist Lock Impression Copings are ideal for use in limited, interarch 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:



If using the Pick-Up Impression Coping, turn to page 9.

If using the Twist Lock Transfer Impression Coping, turn to page 12.

### Components Needed

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

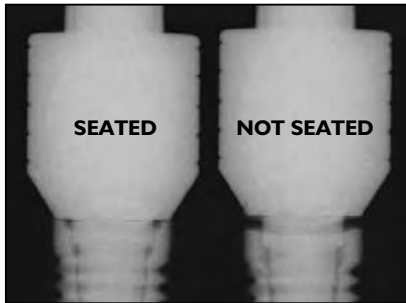
### Instruments Needed

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


# Implant & Abutment Level Impressions





## Pick-Up Impression Copings


(Certain® Internal Connection System Is Illustrated)



### 1. Restorative Dentist


 Select the proper Pick-Up Impression Coping by matching the EP® Diameter of the healing abutment and the color of the implant platform. To determine platform diameter, see below. Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.


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


2.  Activate the fingers using the QuickSeat® Activator Tool (see page 4). Place the Pick-Up Impression Coping into the implant, line up the hex and press firmly until feeling a 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 fingertight. Tighten the screw using a .048" Large Hex Driver (PHD02N or PHD03N).

3.  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.


4.  A custom or stock **open** impression tray is used for the Pick-Up Impression Technique. Cut a small hole into the tray so that the clinician has access to the screw head.

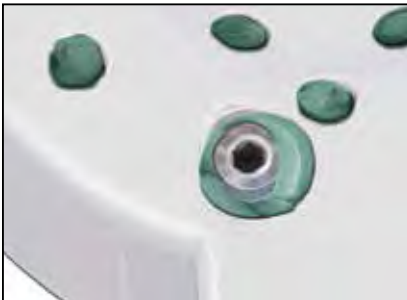
# Implant & Abutment Level Impressions


## Pick-Up Impression Copings (Cont'd)

**(Certain® Internal Connection System Is Illustrated)**




5.  Medium or heavy body impression material is recommended for the impression material in the impression tray. Use light-body or injection consistency impression material and syringe impression material around the entire Pick-Up Impression Coping.




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



7.  After the impression material has set, unscrew and remove the Pick-Up Impression Coping Screw using a .048" Large Hex Driver (PHD02N or PHD03N). Remove the impression from the mouth.




8.  Verify that the impression material has completely adapted around the coping and that there is no impression material on the impression coping's restorative platform.

# Implant & Abutment Level Impressions

## Pick-Up Impression Copings (Cont'd)


**(Certain® Internal Connection System Is Illustrated)**




9.  Immediately replace the healing abutment on the implant using a .048" Large Hex Driver Tip (RASH3N or RASH8N) with a torque device and torque to 20Ncm.



### 10. Laboratory

10.  Place the proper diameter Implant Lab Analog onto the impression coping, engaging the hex. Hold the analog in place while tightening the screw with a .048" Large Hex Driver. Verify that the impression coping is completely seated on the analog. If the clinician is sending the impression to a commercial laboratory to pour the impression, do not attach the analog.

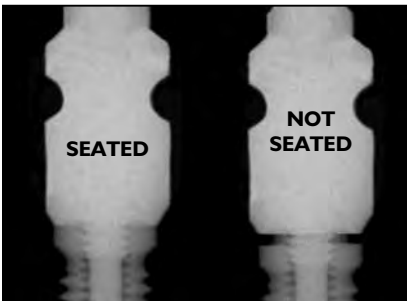


11.  Syringe soft-tissue material around the coping and analog interface. Pour the cast in die stone. Articulate with the opposing cast.


# Implant & Abutment Level Impressions





## Twist Lock™ Transfer Impression Copings


(External Connection Is Illustrated)



### Restorative Dentist


1.  Select the proper Twist Lock Impression Coping by matching the EP® Diameter of the healing abutment and the color of the implant platform. To determine platform diameter, see below. Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.


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


2.  Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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 fingertight. Tighten the screw using the Impression Coping Driver (ICD00).

3.  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.

4.  A custom or stock 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 & Abutment Level Impressions


## Twist Lock™ Transfer Impression Copings (Cont'd)

(External Connection Is Illustrated)




5.  Medium or heavy body impression material is recommended for the impression material in the impression tray. Use light-body or injection consistency impression material around the entire Twist Lock Impression Coping.



6.  Load the impression tray and seat it 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 (ICD00).

# Implant & Abutment Level Impressions

## Twist Lock™ Transfer Impression Copings (Cont'd)


(External Connection Is Illustrated)




9.  Immediately replace the healing abutment on the implant using a .048" Large Hex Driver Tip (RASH3N or RASH8N) with a torque device and torque to 20Ncm.




### Laboratory

10.  Place the proper diameter Implant Lab Analog into the impression coping, engaging the hex. Hold the components together while fingertightening the screw. Verify that the impression coping is completely seated on the analog.

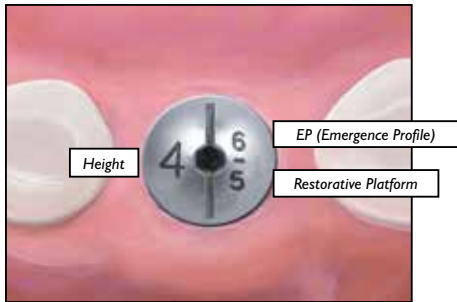


11.  Re-index the impression coping/analogue assembly into the impression using firm pressure to its full depth. Slightly rotate the coping/analogue clockwise until feeling antirotational resistance. This indicates that the orientation grooves are locked into place and the implant hex is accurately transferred.



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

# Abutment Selection Guide



## Restorative Dentist

1. Note the size of the implant platform and the EP® Diameter from the healing abutment for selecting the proper size abutment. The implant platform diameter is also identified by the color code anodized on the implants and components (see below).

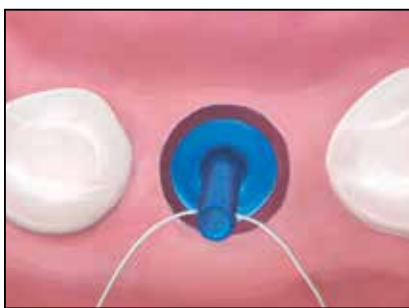
(purple)	(blue)	(yellow)	(green)
3.4mm	4.1mm	5mm	6mm



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



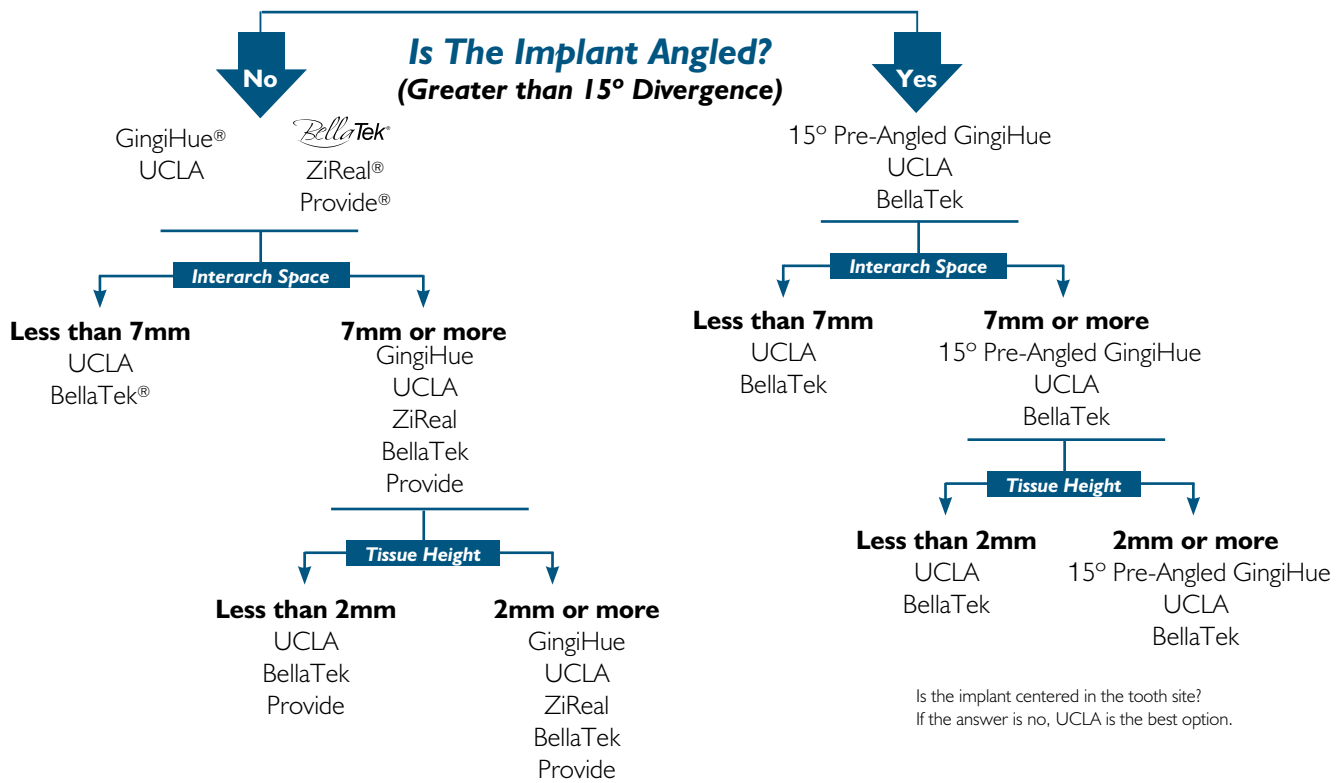
3. Using a .048" Large Hex Driver (PHD02N or PHD03N), evaluate angulation by inserting the driver into the healing abutment hex. To help prevent accidental swallowing, thread floss through the spinner on the driver. If the angle appears to be more than 10°, use the Prosthetic Angle Guide Kit to determine 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. To use angled guides, healing abutments must be removed from the implants.



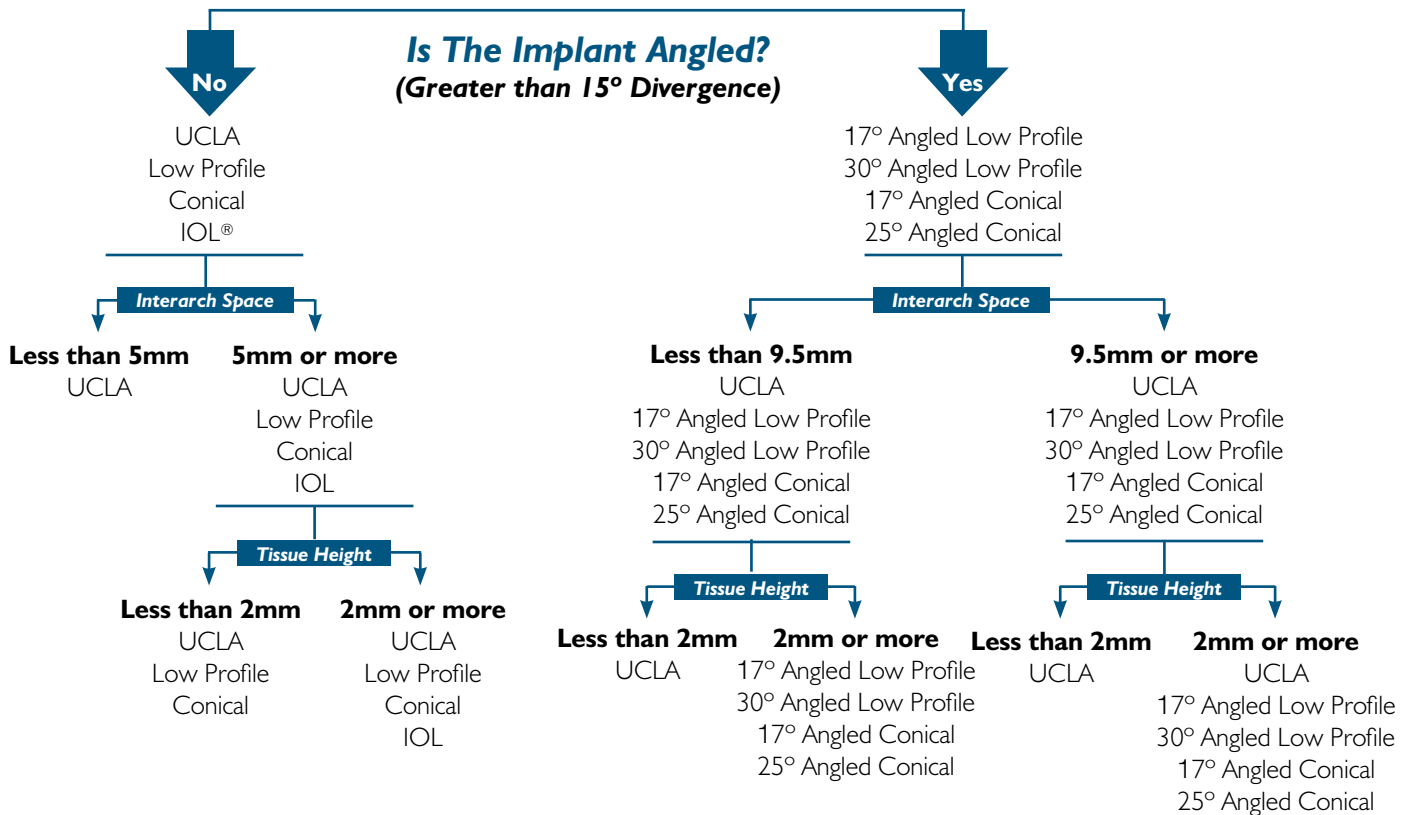
4. Place the pins into the implant to select the proper angled abutment. To help prevent accidental swallowing, thread floss through the spinner on the driver. The correct angle will have the guide pin in line with the central fossa of the adjacent posterior teeth or the incisal line angle of the adjacent anterior teeth.

# Restorative Products Flow Chart

## Cement-Retained Restorations



## Screw-Retained Restorations



Is the implant centered in the tooth site?  
If the answer is no, UCLA is the best option.


# 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> PAAP48 <i>Prepared</i>	PAA485 <i>Non-Prepared</i> PAAP48 <i>Prepared</i>	PAA654 <i>Non-Prepared</i> PAAP65 <i>Prepared</i>	PAA654 <i>Non-Prepared</i> PAAP65 <i>Prepared</i>	PAA655 <i>Non-Prepared</i> PAAP65 <i>Prepared</i>	PAA655 <i>Non-Prepared</i> PAAP65 <i>Prepared</i>
<b>Waxing Sleeves</b>	PWS48S <i>Single-Unit</i> PWS48M <i>Multiple-Unit</i>	PWS48S <i>Single-Unit</i> PWS48M <i>Multiple-Unit</i>	PWS65S <i>Single-Unit</i> PWS65M <i>Multiple-Unit</i>	PWS65S <i>Single-Unit</i> PWS65M <i>Multiple-Unit</i>	PWS65S <i>Single-Unit</i> PWS65M <i>Multiple-Unit</i>	PWS65S <i>Single-Unit</i> PWS65M <i>Multiple-Unit</i>
<b>Temporary Cylinders</b>	PUA48S <i>Single-Unit</i> PUA48M <i>Multiple-Unit</i>	PUA48S <i>Single-Unit</i> PUA48M <i>Multiple-Unit</i>	PUA65S <i>Single-Unit</i> PUA65M <i>Multiple-Unit</i>	PUA65S <i>Single-Unit</i> PUA65M <i>Multiple-Unit</i>	PUA65S <i>Single-Unit</i> PUA65M <i>Multiple-Unit</i>	PUA65S <i>Single-Unit</i> PUA65M <i>Multiple-Unit</i>

\*b: Collar height selection depends on tissue depth

# Provide® Abutment Selection


## Material:

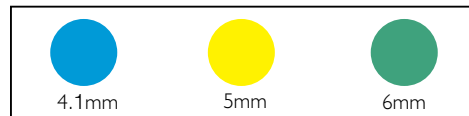
 Titanium Alloy


## Indications:

- Single and Multiple-Unit Porcelain-Fused-to-Metal Restorations with Minimal Gingival Scallop
- 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 surface, not including the domed 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 surface. However, the margin may be significantly deeper in the interproximal areas, depending on the degree of gingival scallop. Next, select the proper post height that will allow approximately 2mm of interarch distance 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 (PHD02N or PHD03N). 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 (see page 4).

# Provide® Abutment Placement



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



2.  Thread the Certain® Gold-Tite® Abutment Screw (IUNIHG) into the implant until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver. Radiograph the interface to verify an accurate fit. Torque the abutment screw to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device. Seal the top of the access opening with temporary filling material.

# Cement-Retained


## Provide® Abutment - Non-Prepared Post Indirect Technique

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


See pages 18 and 19 for Provide Abutment selection and placement.

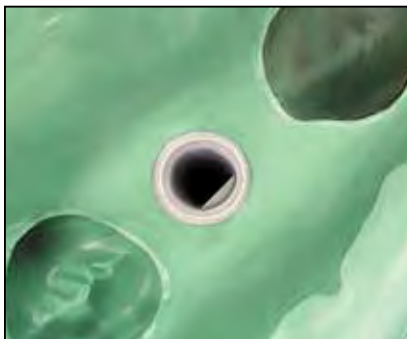



### Impression Procedure

1.  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.



2.  Syringe regular or injection viscosity impression material around the Provide Impression Coping, load the impression tray with heavy- or regular-body impression material and seat it 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.



3.  Send the impression to the laboratory with an opposing cast or impression and the occlusal registration.

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




# Cement-Retained

## Provide® Abutment - Non-Prepared Post

### Indirect Technique (Cont'd)




#### Provisionalization Procedure

- 4a.  Place the appropriate Provide Protection Cap over the abutment and press firmly to snap it over the abutment margin area.

Or



- 4b.  Fabricate a provisional crown utilizing a Provide Temporary Cylinder. Place a small amount of temporary cement on the internal margins of the temporary cylinder and cement the provisional crown to the abutment. This ensures that the cylinder remains in its proper position on the Provide Abutment during fabrication of the provisional crown.

*For a single-unit provisional crown, align 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 are no anti-rotational flat surfaces to align.*

*Masticatory contacts and lengths of the multiple-unit spans should be evaluated and the addition of reinforcement materials such as ortho wire or stainless steel mesh 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 as necessary.


Remove the provisional crown from the abutment. The Provide Temporary Cylinder should adhere to the provisional restoration. Remove all cement from the internal aspect of the cylinder. Fill any voids that exist between the cylinder and the provisional crown with autopolymerizing acrylic resin. Finish the provisional crown with the appropriate contours and polish the provisional restoration. Cement the provisional restoration to the Provide Abutment.

# Cement-Retained


## Provide® Abutment - Non-Prepared Post Indirect Technique (Cont'd)




### Laboratory Procedure

5.  Use the appropriate, color-coded Provide Analog that matches the impression coping. Align the flat side of the analog post with the flat side of 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.



6.  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 definitive crown or coping. Place the waxing sleeve over the post, align the flat side and verify that it is seated to the margin. Tack the sleeve in position with wax.



7.  Wax the single-unit crown coping to the waxing sleeve. Invest, burnout and cast the coping in a low, medium or high noble alloy.

# Cement-Retained


## Provide® Abutment - Non-Prepared Post Indirect Technique (Cont'd)



8.  Opaque, build porcelain, stain and glaze the crown.



### Delivery Of Restoration

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

# Cement-Retained

## Provide® Abutment - Prepared Post

### Indirect Technique

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


See pages 18 and 19 for Provide Abutment selection and placement.

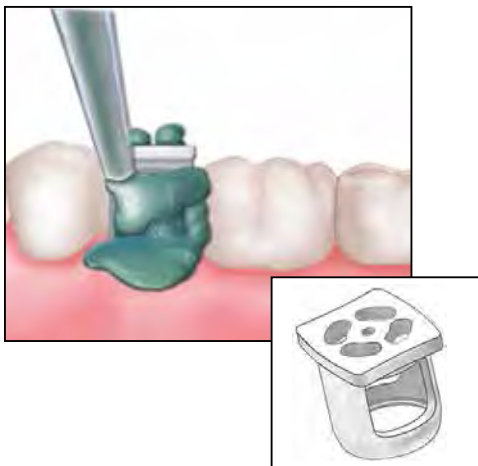


#### Post Preparation


1.  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 definitive restoration. **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.**



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



#### Impression Procedure

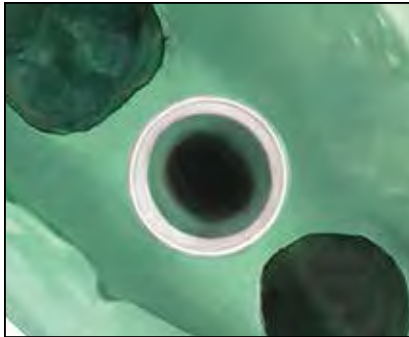
3.  Syringe regular or injection viscosity impression material around the Provide Abutment and into both of the large openings at the sides of the Impression Coping With Holes, causing the flow of impression material to the margin area, without any voids or bubbles. Impression material should be injected until it can be observed extruding from the four small holes on the occlusal surface of the Impression Coping With Holes. This ensures that there are no voids or bubbles. Load a full arch impression tray with impression material and seat it 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 - Prepared Post


### Indirect Technique (Cont'd)




4.  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

- 5a.  Place the appropriate Provide Protection Cap over the abutment and press firmly to snap it over the abutment margin area.

Or

- 5b.  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, align 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 are no anti-rotation flat surfaces to align.*

*Occlusal contacts and lengths of the multiple-unit spans should be evaluated and the addition of reinforcement materials such as ortho wire or stainless steel mesh may be required.*

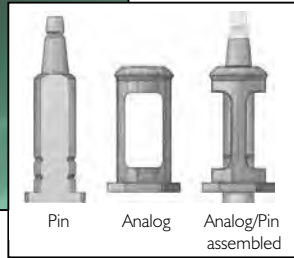


Once the Provide Temporary Cylinder is secure on the Provide Abutment, try in and adjust the fit of a prefabricated crown shell over the cylinder. Reduce the height of the cylinder as needed. Add acrylic resin or composite material inside the prefabricated crown shell and into the retention facets of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


Remove the provisional crown from the abutment. The Provide Temporary Cylinder should adhere to the provisional restoration. Remove all cement from the internal aspect of the cylinder. Fill any voids that exist between the cylinder and the provisional crown with autopolymerizing acrylic resin. Finish the provisional crown with the appropriate contours and polish the provisional restoration. Cement the provisional restoration to the Provide Abutment.

# Cement-Retained

## Provide® Abutment - Prepared Post Indirect Technique (Cont'd)




### Laboratory Procedure

6.  Insert the appropriate Provide Laboratory Analog with a 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.




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



8.  Apply die spacer and wax the single-unit porcelain-fused-to-metal (PFM) crown coping on the stone die. Invest, burnout and cast the coping in a low, medium or high noble alloy. Opaque, build porcelain, stain and glaze the crown.



### Delivery Of Restoration



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

# Cement-Retained

## PreFormance® Provisional 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
- Guided Soft-Tissue Healing of Single and Multiple-Unit Restorations of Integrated Implants

#### Restorative Dentist



1.   Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 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 a Hexed Titanium Screw (IUNIHT or UNIHT) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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 according to fixed prosthodontic principles, 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 at least .5mm of wall thickness during preparation.

# Cement-Retained


## PreFormance® Provisional Post

### Indirect Technique (Cont'd)




5.  Block out the screw access opening with wax. Fabricate the provisional crown on the prepared PreFormance Post using the provisional material of choice.

#### Restorative Dentist


6.  Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.




 Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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 (IUNIHT or UNIHT) into the implant until fingertight using a .048" Large Hex Driver.

**NOTE:** The abutment should be placed in the same position as it was prepared on the cast. A dimple on the facial surface guides clinicians with accurate placement.

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

Remove the provisional crown. Torque the Hexed Titanium Screw (IUNIHT or UNIHT) to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

Place protective material into the screw access opening. Seal the access opening with temporary filling material. Cement the crown on the post using temporary cement. Remove excess cement.

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

- Do not splint to natural dentition.
- If splinting to other integrated implants, all lateral and centric contacts should be eliminated. The restoration should be completely out of occlusion. Masticatory contacts on the recently placed implants should be minimized/eliminated. Dietary restrictions and compliance are critical for success in these types of cases.
- 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


## PreFormance® Provisional Post

### Direct Technique





#### Clinician

1.  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 (see page 4). 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 a Hexed Titanium Screw (IUNIHT or UNIHT) into the implant until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver. Mark the PreFormance Post with a pencil in areas requiring preparation.

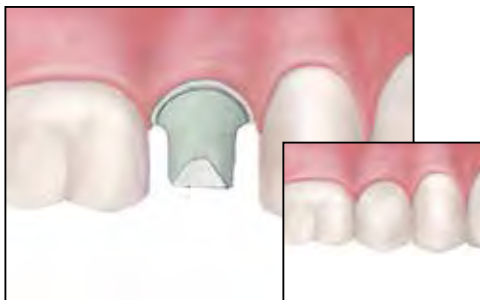


2.  Prepare the PreFormance Post in areas marked using a high-speed handpiece, carbide bur and irrigation. Refine with a coarse diamond bur. Prepare margins according to fixed prosthodontic principles. The post can be prepared intraorally or removed and placed on a laboratory abutment holder for preparation. Maintain three walls of the abutment and at least .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 (RASH3N or RASH8N) and a torque device.

4.  Place protective material into the screw access opening. Seal the access opening with temporary filling material. Fabricate a provisional crown on the PreFormance Post and cement it in place using temporary cement. Remove excess cement. Adjust the occlusion as necessary. For easier occlusal adjustments, the prosthesis should be polished outside of the mouth prior to cementation.



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


- Do not splint to natural dentition.
- If splinting to other integrated implants, all lateral and centric contacts should be eliminated. The restoration should be completely out of occlusion. Masticatory contacts on the recently placed implants should be minimized/eliminated. Dietary restrictions and compliance are critical for success in these types of cases.
- 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


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




### Restorative Dentist


1.  Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.


### Laboratory


2.  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's 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 a Hexed Titanium Screw (IUNIHT or UNIHT) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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 at least .5mm of wall thickness during preparation.


# Cement-Retained

## 15° Pre-Angled PreFormance® Provisional Post Indirect Technique (Cont'd)




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

### Restorative Dentist


6.  Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.



 Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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 fingertight using a .048" Large Hex Driver.

**NOTE:** The abutment should be placed in the same position as it was prepared on the cast. A dimple on the facial surface guides clinicians with accurate placement.



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

Torque the Hexed Titanium Screw (IUNIHT or UNIHT) to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device. Place protective material into the screw access opening. Seal the access opening with temporary filling material. Cement the crown on the post using temporary cement. Remove excess cement.

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


- Do not splint to natural dentition.
- If splinting to other integrated implants, all lateral and centric contacts should be eliminated. The restoration should be completely out of occlusion. Masticatory contacts on the recently placed implants should be minimized/eliminated. Dietary restrictions and compliance are critical for success in these types of cases.
- 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

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




### Clinician

1.  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 (see page 4). 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 a Hexed Titanium Screw (IUNIHT or UNIHT) into the implant until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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 at least .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 (RASH3N or RASH8N) and a torque device.

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

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



- Do not splint to natural dentition.
- If splinting to other integrated implants, all lateral and centric contacts should be eliminated. The restoration should be completely out of occlusion. Masticatory contacts on the recently placed implants should be minimized/eliminated. Dietary restrictions and compliance are critical for success in these types of cases.
- 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

## PreFormance® Provisional Cylinder - Single-Unit Indirect Technique

### Material:



  PEEK; titanium alloy connection



### Indications:



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

### Restorative Dentist

1.   Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.





### Laboratory


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



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.





3.   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 4).

**Or**

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

  Thread a Waxing Screw (IWSU30 OR WSU30) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).




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

# Screw-Retained


## PreFormance® Provisional Cylinder - Single-Unit Indirect Technique (Cont'd)




5.  Cut a hole in the template to accommodate the waxing screw (IWSU30 or WSU30). 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. Place a matching laboratory analog onto the restorative platform. Fill in any voids around the subgingival area. Contour and polish the crown. Place the crown back onto the cast and thread the Hexed Titanium Screw (IUNIHT or UNIHT) into the analog until fingertight. Adjust the occlusion as necessary.




### Restorative Dentist

6.  Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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 the Hexed Titanium Screw (IUNIHT or UNIHT) into the implant until fingertight using the .048" Large Hex Driver. Check the interproximal contacts. Torque the screw to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device. Place protective material into the screw access opening. Seal the access opening with temporary filling material and composite resin. Make any occlusal adjustments necessary.

# Screw-Retained

## PreFormance® Provisional Cylinder - Multiple-Unit Indirect Technique

### Material:



  PEEK; titanium alloy connection

### Indications:







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



### Restorative Dentist

1.   Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.

### Laboratory


2.   Set denture teeth on the cast where the multiple-unit fixed provisional restoration 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 (IWSU30 OR WSU30) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).




# Screw-Retained

## PreFormance® Provisional Cylinder - Multiple-Unit Indirect Technique (Cont'd)




5.  Reduce or adjust the cylinders as necessary. The cylinders may be connected with ortho wire or a framework 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 prosthesis. Place the template on the cast. Allow the acrylic resin to set per the manufacturer's instructions. Remove the waxing screws and the template from the cast. Remove the provisional prosthesis from the template. Place matching laboratory analogs onto the restorative platforms. Fill in any voids around the subgingival areas. Contour and polish the prosthesis. Place the prosthesis back on the cast and thread the Hexed Titanium Screws (IUNIHT or UNIHT) into the analogs until fingertight. Adjust the occlusion as necessary.



### Restorative Dentist

7.  Remove the healing abutments from the implants using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the multiple-unit provisional restoration onto the implants. Thread the Hexed Titanium Screws (IUNIHT or UNIHT) into the implants until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).

Check the interproximal and occlusal contacts. Torque the screws to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device. Place protective material into the screw access opening. Seal the access openings with temporary filling material and composite resin. Make any necessary occlusal adjustments.



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

## Material:


 Titanium Alloy




## Indications:


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


## Restorative Dentist

1.  Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.


## Laboratory


2.  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 4).

**Or**


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

 Thread a Waxing Screw (IWSU30 OR WSU30) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).


# Screw-Retained

## Titanium Provisional Cylinder - Single-Unit Indirect Technique (Cont'd)




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. Place a matching laboratory analog onto the restorative platform. 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 (IUNIHT or UNIHT) into the analog until fingertight. Adjust the occlusion as necessary.




### Restorative Dentist

7.  Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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

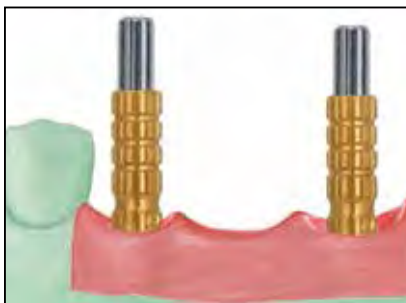
 Place the single-unit provisional crown on the implant, engaging the hex.

 Thread the Hexed Titanium Screw (IUNIHT or UNIHT) into the implant until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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 (RASH3N or RASH8N) and a torque device. Place protective material into the screw access opening. Seal the access opening with temporary filling material and composite resin. Make any necessary occlusal adjustments.

# Screw-Retained Titanium Provisional Cylinder - Multiple-Unit Indirect Technique

## Material:



  Titanium Alloy









## Indications:

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

## Restorative Dentist

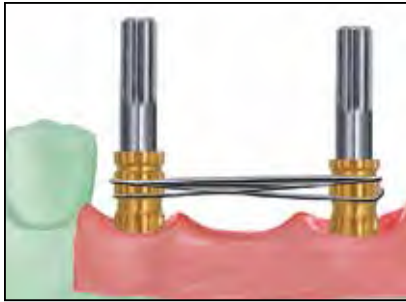
1.   Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.


## Laboratory

2.   Set denture teeth on the cast where the multiple-unit fixed provisional restoration 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 the Waxing Screws (WSK10 or WSK15) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).


# Screw-Retained

## Titanium Provisional Cylinder - Multiple-Unit Indirect Technique (Cont'd)




5.  Reduce or adjust the cylinders as necessary. The cylinders may be connected with ortho wire or a framework 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 prosthesis. Place the template on the cast. Allow the acrylic resin to set per the manufacturer's instructions. Remove the waxing screws and the template from the cast. Remove the provisional prosthesis from the template. Place matching laboratory analogs onto the restorative platforms. Fill in any voids around the subgingival areas. Contour and polish the prosthesis. Place the prosthesis back on the cast and thread Hexed Titanium Screws (IUNIHT or UNIHT) into the analogs until fingertight. Adjust the occlusion as necessary.





### Restorative Dentist

7.  Remove the healing abutments from the implants using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the multiple-unit provisional restoration onto the implants. Thread the Hexed Titanium Screws (IUNIHT or UNIHT) into the implants until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).

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 (RASH3N or RASH8N) and a torque device. Place protective material into the screw access openings. Seal the access openings with temporary filling material and composite resin. Make any necessary occlusal adjustments.

# 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 Multiple-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



Straight



Pre-Angled

## Restorative Dentist

1.   Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.



## Laboratory

2.   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 (IUNITS or UNITS) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Mark the GingiHue Post with a pencil in areas requiring preparation.

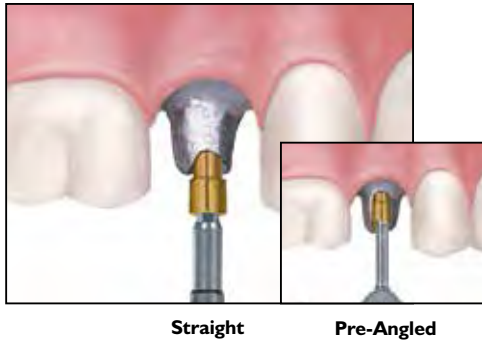
3.   Prepare the GingiHue Post in areas marked using a high-speed handpiece and an aggressive carbide bur. Prepare margins 1mm subgingival following the gingival contours. The post can be prepared on the cast or may be removed and placed on a laboratory abutment holder for preparation.




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



# Cement-Retained GingiHue® Post Indirect Technique (Cont'd)



## Restorative Dentist

5.  Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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 (IUNIHG) into the implant until fingertight using the .048" Large Hexed Driver.


Or

 Place the prepared GingiHue Post onto the implant, engaging the hex. Thread a Square Gold-Tite Screw (UNISG) into the implant until fingertight.


 Radiograph the interface to verify an accurate fit.




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

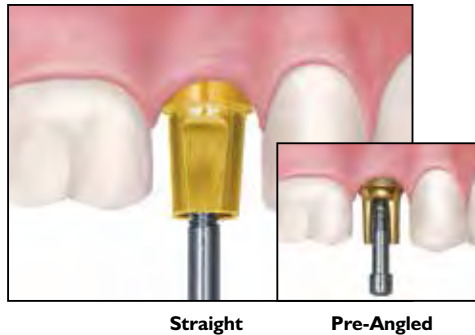
 Torque the Certain Gold-Tite Hexed Screw to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

Or


 Torque the Square Gold-Tite Screw to 32-35Ncm using a Square Driver Tip (RASQ3N or RASQ8N) and a torque device.


 Place protective material into the screw access opening. Seal the access opening with temporary filling material. Cement the crown on the post using temporary or permanent cement.

# Cement-Retained GingiHue® Post Direct Technique




## Restorative Dentist

1.  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 (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.


 Activate the fingers using the QuickSeat® Activator Tool (see page 4). Place the GingiHue Post into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

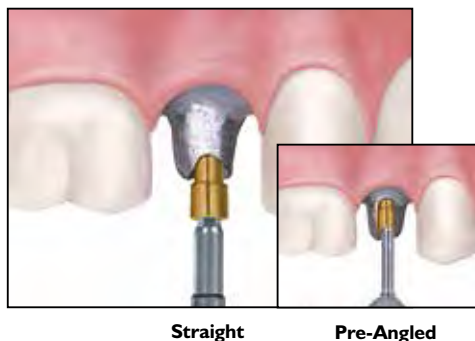
Or


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

 Thread a Try-in Screw (IUNITS or UNITS) into the implant until fingertight using the .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 according to fixed prosthodontic principles. 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 (IUNIHG) torqued to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

Or


 the Square Gold-Tite Screw (UNISG) torqued to 32-35Ncm using the Square Driver Tip (RASQ3N or RASQ8N) and a torque device.

# Cement-Retained

## GingiHue® Post


### Direct Technique (Cont'd)




4.  Place protective material into the screw access opening. Seal the access opening with temporary filling material. Place a retraction cord subgingivally to retract the gingiva from the margin prepared on the GingiHue Post. Syringe regular or injection viscosity impression material around the abutment. Load the impression tray with medium or heavy viscosity impression material and seat it in the mouth. Allow the impression material to set per the manufacturer's instructions.

**NOTE:** Placing a retraction cord around implant abutments is typically more difficult than placing a retraction cord around natural teeth.




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



6.  Fabricate a provisional crown on the GingiHue Post using conventional fixed prosthodontic techniques and materials. Block out the screw access opening with wax prior to cementing the crown.



#### Laboratory

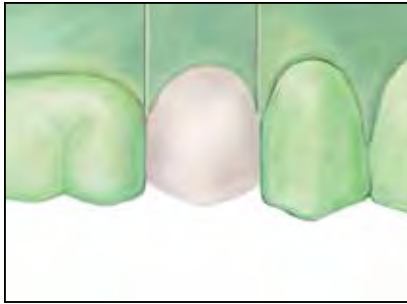
7.  Pour the cast in die stone, pin, section and articulate with the opposing cast.




# Cement-Retained

## GingiHue® Post


### Direct Technique (Cont'd)



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



#### Restorative Dentist

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

# Cement-Retained ZiReal® Post (All-Ceramic) Indirect Technique


## Material:

 Zirconium Oxide With A Fused Titanium Alloy Interface

## Indications:

- Single and Multiple-Unit All-Ceramic Restorations
- Restorations in the Aesthetic Zone
- Aesthetic Restorations with Minimal, Thin Peri-implant Soft-Tissue
- Maximum Angulation of 10°
- Minimum Interarch Space of 6mm


## Restorative Dentist

1.  Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.



## Laboratory

2.  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 (IZIRTS)** into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).


Or

 Place the proper ZiReal Post onto the implant analog, engaging the hex. Thread a Square Try-in Screw (UNITS) into the analog until fingertight 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 the margins consistent with fixed prosthodontic principles. 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 at least .5mm of wall thickness during preparation. In anterior cases where the implants are labially inclined, placing the flat surface interproximally is recommended. If the flat, anti-rotation surface is placed on the facial aspects after the abutment is prepared, many times the flat surface has been removed; the anti-rotation design has therefore been minimized.

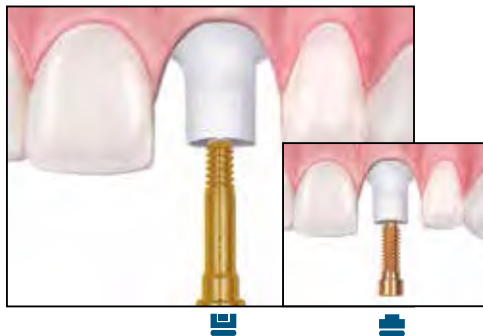
# Cement-Retained

## ZiReal® Post (All-Ceramic)


### Indirect Technique (Cont'd)




5.  Fabricate the all-ceramic crown on the prepared post using conventional fixed prosthodontic techniques and materials.




#### 6. Restorative Dentist

 Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.

 Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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 (IZSHG)** into the implant until fingertight using the .048" Large Hex Driver.


Or


 Place the prepared ZiReal Post onto the implant, engaging the hex. Thread a Square Gold-Tite Screw (UNISG) into the implant until fingertight using the Square Driver (PSQD0N or PSQD1N).

 Radiograph the interface to verify an accurate fit.

**NOTE:** The abutment should be placed in the same position as it was prepared on the cast. A dimple on the facial surface guides clinicians with accurate placement.




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

 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 (RASQ3N or RASQ8N) and a torque device.

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

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

# Cement-Retained

## ZiReal® Post (All-Ceramic)

### Direct Technique



#### Restorative Dentist

1. 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 (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.

Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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 (IZIRTS)** into the implant until fingertight using the .048" Large Hex Driver.

Or

Place the ZiReal Post onto the implant, engaging the hex. Thread a Square Try-in Screw (UNITS) into the implant until fingertight using the .048" Large Hex Driver.

Radiograph the interface to verify an accurate fit. Mark the ZiReal Post with a pencil in areas requiring preparation.

**NOTE:** The abutment should be placed in the same position as it was prepared on the cast. A dimple on the facial surface guides clinicians with accurate placement.



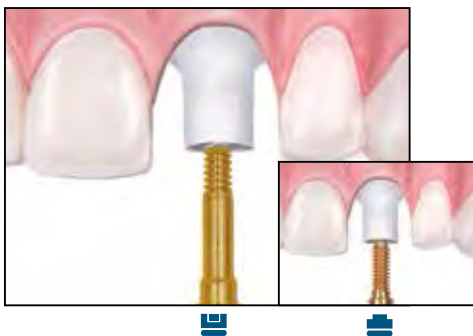
2. Prepare the ZiReal Post in areas marked using a high-speed handpiece, a coarse diamond bur from the ZiReal Post Preparation Kit and irrigation. Prepare margins consistent with fixed prosthodontic principles. The post can be prepared intraorally or removed and placed on a laboratory abutment holder for preparation. Maintain three walls of the abutment and at least .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 (IZSHG)** torqued to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

Or

the Square Gold-Tite Screw (UNISG) torqued to 32-35Ncm using the Square Driver Tip (RASQ3N or RASQ8N) and a torque device. **Be sure the driver tip is parallel with the access opening to avoid fracture during torque application.**



4. Place protective material into the screw access opening. Seal the access opening with temporary filling material. Place a retraction cord subgingivally to retract the gingiva from the margin prepared on the GingiHue Post. Syringe regular or injection viscosity impression material around the abutment. Load the impression tray with medium or heavy viscosity impression material and seat it in the mouth. Allow the impression material to set per the manufacturer's instructions.

**NOTE:** Placing a retraction cord around implant abutments is typically more difficult than placing a retraction cord around natural teeth.




# Cement-Retained


## ZiReal® Post (All-Ceramic)

### Direct Technique (Cont'd)




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



6.  Fabricate a provisional crown on the ZiReal Post using conventional fixed prosthodontic techniques and materials. Cement the provisional crown using temporary cement.




#### Laboratory

7.  Pour the cast in die stone, pin, section and articulate with the opposing cast. Fabricate the all-ceramic crown using the all-ceramic system of choice. Finish and polish the crown.



#### Restorative Dentist

8.  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 occlusion, marginal fit and interproximal contacts. Cement the crown on the post using temporary or permanent cement. Remove excess cement. The ZiReal Post may be etched and the crown bonded, if preferred.

# Cement-Retained

## UCLA Custom Abutment - Single-Unit Indirect Technique



### Material:

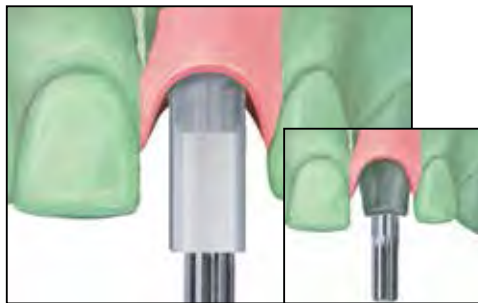
  Machined Gold Alloy Cylinder  
With Plastic Unitube

### Indications:



- Customized Abutments
- Single and Multiple-Unit Porcelain-Fused-to-Metal or All-Ceramic/Metal Restorations
- Minimum Interarch Space of 6mm
- Aesthetic Restorations When Tissue Height and Thickness are Limited
- Maximum Angulation Correction of 30°

### Restorative Dentist



1.   Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.





### Laboratory



2.   Deactivate the fingers on the Certain® Hexed Gold UCLA Abutment using the QuickSeat® Activator Tool (see page 4). Place the proper diameter Hexed Gold UCLA Abutments into each implant analog.

Or



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

  Thread a Try-in Screw (IUNITS or UNITS) or a Waxing Screw (WSK10 or WSK15) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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 low, medium or high noble alloy (see page 7 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 fingertight. Cover the access opening with wax. Wax the single-unit porcelain-fused-to-metal (PFM) crown coping on the custom abutment. Invest, burnout and cast the coping in a low, medium or high noble alloy. Opaque, build porcelain, stain and glaze the single-unit crown. Similar procedures can be used for all-metal implant restorations.



# Cement-Retained

## UCLA Custom Abutment - Single-Unit Indirect Technique (Cont'd)





### Restorative Dentist

5.   Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.

  Activate the fingers of the custom-made UCLA Abutment using the QuickSeat® Activator Tool (see page 4). 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 (IUNIHG) into the implant until fingertight using a .048" Large Hex Driver.



Or



  Place the custom abutment on the implant, engaging the hex. Thread a Square Gold-Tite Screw (UNISG) into the implant until fingertight using a Square Driver (PSQD0N or PSQD1N).

  Radiograph the interface to verify an accurate fit.

**NOTE:** The abutment should be placed in the same position as it was prepared on the cast. A dimple on the facial surface guides clinicians with accurate placement.





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

  Torque the Certain Gold-Tite Hexed Screw to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

Or

  Torque the Square Gold-Tite Screw to 32-35Ncm using the Square Driver Tip (RASQ3N or RASQ8N) and a torque device.


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

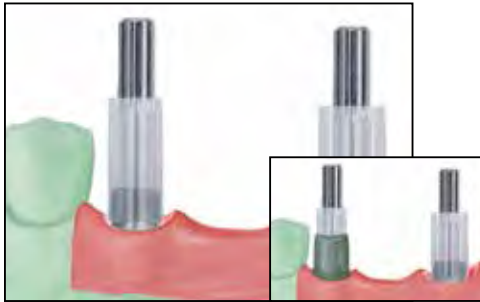
# Cement-Retained

## UCLA Custom Abutment - Multiple-Unit Indirect Technique




### Restorative Dentist

1.  Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.




### Laboratory


2.  Deactivate the fingers on the Certain® Hexed Gold UCLA Abutment using the QuickSeat® Activator Tool (see page 4). Place the proper diameter Hexed Gold UCLA Abutments into each implant analog.

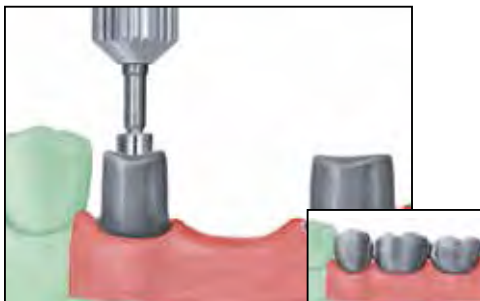
Or


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

 Thread Try-in Screws (IUNITS or UNITS) or Waxing Screws (WSK10 or WSK15) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Reduce or adjust the plastic sleeves as necessary. Add wax to the waxing sleeves to form the custom abutments with ideal emergence, angulation, parallelism and crown margins.



3.  Carefully remove the wax custom abutments from the analogs. Invest, burnout and cast the custom abutments to the UCLA Gold Cylinders using a low, medium or high noble alloy (see page 7 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 fingertight using the .048" Large Hex Driver. Cover the access openings with wax. Wax the multiple-unit framework on the custom abutments. Invest, burnout and cast the multiple-unit framework in a low, medium or high noble alloy. Return to the restorative dentist for the metal framework try-in.




# Cement-Retained

## UCLA Custom Abutment - Multiple-Unit Indirect Technique (Cont'd)

### Restorative Dentist (framework try in)


5.  Remove the healing abutments from the implants using the .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 (see page 4). 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 the try-in screw into each abutment until fingertight using the .048" Large Hex Driver. Radiograph the interface of the implants to verify an accurate fit. Place the multiple-unit framework on the custom abutments and verify a passive fit. A passive fit is indicated with the framework accurately fitting the margins of the abutments. Radiographs are sometimes necessary with sub-gingival margins. Cut and index the framework intraorally if a fit discrepancy is found. Immediately replace the healing abutments on the implants.

**NOTE:** The abutments should be placed in the same position as they were prepared on the cast. A dimple on the facial surface guides clinicians with accurate placement.

 Return the framework to the laboratory for soldering or welding. Another framework try in may be necessary to verify accuracy.



### Laboratory


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


# Cement-Retained

## UCLA Custom Abutment - Multiple-Unit Indirect Technique (Cont'd)





### Restorative Dentist

7.  Remove the healing abutments from the implants.

 Activate the fingers using the QuickSeat® Activator Tool (see page 4). 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 (ILRGHG) into each implant until fingertight using the .048" Large Hex Driver.


Or

 Place the custom abutments onto the implants, engaging the hex. Thread the Square Gold-Tite Screws (UNISG) into the implants until fingertight using a Square Driver (PSQD0N or PSQD1N).

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

**NOTE:** The abutments should be placed in the same position as they were prepared on the cast. A dimple on the facial surface guides clinicians with accurate placement.




8.  Try the multiple-unit prosthesis onto the custom abutments. Check the occlusion, marginal fit and interproximal contacts.

 Torque the Certain Gold-Tite Large Hexed Screws (ILRGHG) to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

Or

 Torque the Square Gold-Tite Screws to 32-35Ncm using the Square Driver Tip (RASQ3N or RASQ8N) and a torque device.

9.  Place protective material into the screw access openings. Seal the access openings with temporary filling material and composite resin. Cement the prosthesis on the abutments using a temporary or permanent cement. Remove excess cement. Adjust the occlusion as necessary.

**NOTE:** The prosthesis should be polished outside of the mouth prior to cementation.

# Screw-Retained UCLA Abutment - Single-Unit Indirect Technique

## Material:



  Machined Gold Alloy Cylinder  
With Plastic Unitube

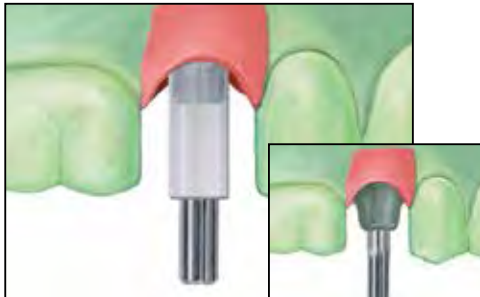
## Indications:

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





## Restorative Dentist



1.   Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.





## Laboratory



2.   Deactivate the fingers on the Certain® Hexed Gold UCLA Abutment using the QuickSeat® Activator Tool (see page 4). 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.

  Thread Try-in Screws (IUNITS or UNITS) or Waxing Screws (WSK10 or WSK15) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Reduce or adjust the plastic sleeves as necessary. Add wax to the waxing sleeves to form the custom abutments with ideal emergence, angulation, parallelism and crown margins.



3.   Remove the try-in or waxing screw and carefully remove the wax coping from the analog. Invest, burnout and cast the single-unit coping to the UCLA Gold Cylinder using a low, medium or high noble alloy (see page 7 for casting alloy specifications). Chemically divest and finish the coping.

# Screw-Retained

## UCLA Abutment - Single-Unit Indirect Technique (Cont'd)



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 fingertight. 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.



### Restorative Dentist

5. 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 (see page 4). 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 (IUNIHG) into the implant until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).

**Or**

Place the single-unit crown onto the implant, engaging the hex. Thread a Square Gold-Tite Screw (UNISG) into the implant until fingertight using a Square Driver (PSQD0N or PSQD1N).

Radiograph the interface of the implant to verify an accurate fit. Adjust the occlusion, marginal fit and interproximal contacts as needed.

6. Torque the Certain Gold-Tite Hexed Screws to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

**Or**

Torque the Square Gold-Tite Screw to 32-35Ncm using a Square Driver Tip (RASQ3N or RASQ8N) and a torque device.


7. Place protective material into the screw access opening. Seal the access opening with temporary filling material and composite resin. Make any occlusal adjustments as necessary.

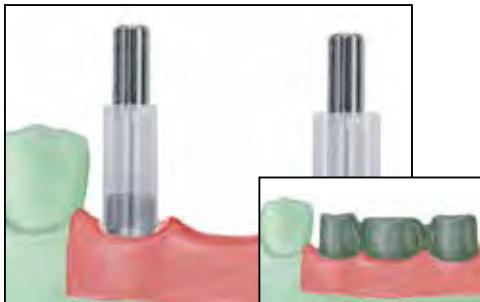
# Screw-Retained

## UCLA Abutment - Multiple-Unit Indirect Technique





### Restorative Dentist

1.  Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.




### Laboratory

2.  Deactivate the fingers on the Certain® Hexed Gold UCLA Abutment using the QuickSeat® Activator Tool (see page 4). Place the proper diameter Hexed Gold UCLA Abutments into each implant analog.


 Place the proper diameter Non-Hexed Gold or Castable UCLA Abutments onto the implant analogs and thread Try-in Screws (IUNITS or UNITS) or Waxing Screws (WSK10 or WSK15) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Reduce or adjust the plastic sleeves as necessary. Wax the multiple-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 multiple-unit porcelain-fused-to-metal (PFM) framework to the UCLA Gold Cylinders using a low, medium or high noble alloy (see page 7 for casting alloy specifications). Chemically divest and finish the framework. Return to the restorative dentist for the metal framework try in.



### Restorative Dentist - One Screw Test


4.  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 framework onto the implants. Place a try-in screw into the anterior-most abutment using a .048" Large Hex Driver. Radiograph the interfaces of the implants/abutments. The framework fits passively if no space is visible between the abutments and implants. Remove the anterior screw and repeat this procedure on the posterior abutment. Take a new radiograph and evaluate it for implant/abutment fit. If there is a misfit, section the framework into individual pieces (extraoral), place all of the segments back into the implants with try-in screws and index/splint the individual segments together with autopolymerizing resin or plaster. Return the framework to the laboratory for soldering or welding. Repeat the metal try-in to make sure that an accurate and passive fit has been obtained post soldering/welding. Immediately replace the healing abutments onto the implants.

# Screw-Retained

## UCLA Abutment - Multiple-Unit Indirect Technique (Cont'd)





### Laboratory

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




### Restorative Dentist

6.  Remove the healing abutments from the implants. Place the multiple-unit prosthesis onto the implants.

 Activate the fingers on the Certain® Hexed Gold UCLA Abutments using the QuickSeat® Activator Tool (see page 4). Thread Certain Gold-Tite® Large Hexed Screws (ILRGHG) into each implant until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).

Or


 Thread Square Gold-Tite Screws (UNISG) into each implant until fingertight using a Square Driver (PSQD0N or PSQD1N).

 Radiograph the interface of the prosthesis on the implants to verify an accurate and passive fit. Adjust the occlusion and interproximal contacts as needed. Polish and insert the definitive prosthesis.

7.  Torque the Certain Gold-Tite Hexed Large Screws to 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

Or

 Torque the Square Gold-Tite Screw to 32-35Ncm using the Square Driver Tip (RASQ3N or RASQ8N) and a torque device.

8.  Place protective material into the screw access openings. Seal the access openings with composite resin. Make any occlusal adjustments necessary.

# Screw-Retained

## Low Profile Abutment - Single-Unit Indirect Technique


### Material:

 Titanium Alloy


### Indications:

- Single and Multiple-Unit Screw-Retained Restorations
- Minimum Interarch Space of 7.5mm
- Minimum Tissue Height of 1mm
- Angle correction up to 30°
- External Hex 3.4mm(D) Low Profile Abutments (should only be used in the anterior)


### Surgeon Or Restorative Dentist

1.  Select the proper Low Profile Abutment collar height and angle (0°, 17° or 30°) for the implant by measuring the height of the healing abutment above the tissue, not including the domed portion. Subtract the measurement from the total height of the healing abutment and subtract 2mm. Match the color of the implant platform. See page 16 for the Prosthetic Abutment Selection Guide.




2.  Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.




3.  Activate the fingers using the QuickSeat® Activator Tool (see page 4). Place the proper height Low Profile Abutment into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.

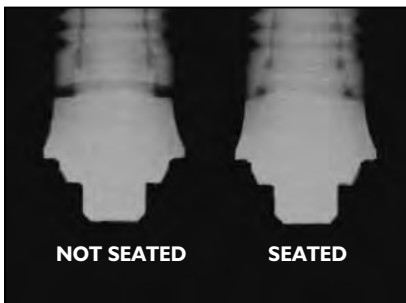
Or

 Place the proper height Low Profile Abutment onto the implant, engaging the hex.

 Thread the Low Profile Abutment Screw into the implant by turning the spindle on the ASYST Tool until fingertight. Remove the ASYST Tool.

If correcting an angle using the 17 or 30 degree Angled Low Profile 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 the 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

## Low Profile Abutment - Single-Unit Indirect Technique (Cont'd)



5.  **Straight Abutments:** Torque the Low Profile Abutment Screw into the implant at 20Ncm using the Abutment Driver Tip (RASA3) and a torque device.

Or

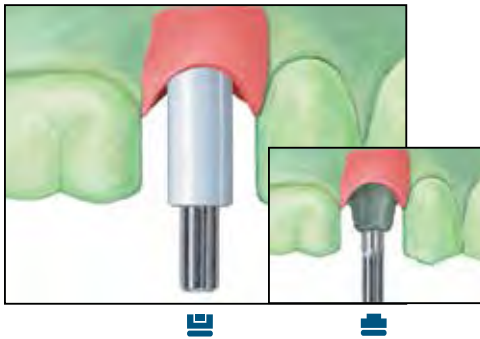
-  **Angled Abutments:** Torque the Low Profile Angled Abutment Screw into the implant at 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

If the surgeon places the abutment, a Low Profile Abutment Healing Cap is threaded onto the abutment using the .048" Large Hex Driver (PHD02N or PHD03N).




### Restorative Dentist


6.  Follow the steps for Abutment Level Impressions on pages 9-11 for the Pick-Up Impression Technique and pages 12-14 for the Twist Lock™ Transfer Technique.



### Laboratory

7.  Place a Hexed Low Profile Gold or Castable Cylinder onto the Low Profile analog. Thread with a Low Profile Waxing Screw (LPCWS) or the Low Profile Gold-Tite® Retaining Screw (LPCGSH) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Reduce or adjust the plastic sleeve as necessary. Wax the single-unit porcelain-fused-to-metal coping to the waxing sleeve.




8.  Remove the Low Profile Waxing or Retaining Screw and carefully remove the wax coping from the Low Profile Analog. Invest, burnout and cast the coping to the Low Profile Gold Cylinder using a low, medium or high noble alloy (see page 7 for casting alloy specifications). Divest and finish the restoration.



# Screw-Retained


## Low Profile Abutment - Single-Unit Indirect Technique (Cont'd)




9.  Place the finished coping back onto the Low Profile Analog in the cast and thread a Low Profile Waxing or Low Profile Gold-Tite® Retaining Screw (LPCGSH) into the Low Profile Analog until fingertight. Opaque and build porcelain on the single-unit coping. Stain and glaze the porcelain. Polish the gold collar with a polishing protector in place.



### Restorative Dentist

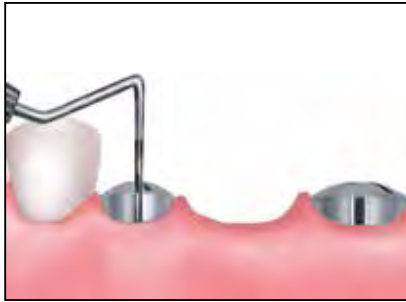
10.  Remove the healing cap from the abutment using a .048" Large Hex Driver (PHD02N or PHD03N). Place the single-unit crown on the abutment, engaging the hex. Thread a Low Profile Gold-Tite Retaining Screw (LPCGSH) into the abutment until fingertight using the .048" Large Hex Driver. Radiograph the interface to verify an accurate fit. Check the interproximal and occlusal contacts. Torque the screw to 10Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.




11.  Place protective material into the screw access opening. Seal the access opening with temporary filling material and composite resin.

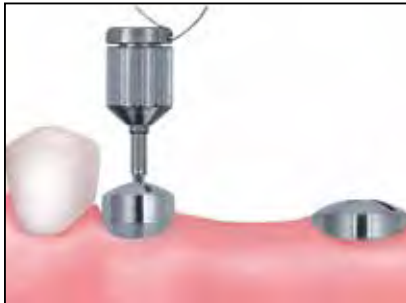
# Screw-Retained


## Low Profile Abutment - Multiple-Unit Indirect Technique




### Surgeon Or Restorative Dentist

1.  Select the proper Low Profile Abutment collar height and angle (0°, 17° or 30°) for the implant by measuring the height of the healing abutment above the tissue, not including the domed portion. Subtract the measurement from the total height of the healing abutment and subtract 2mm. Match the color of the implant platform. See page 16 for the Prosthetic Abutment Selection Guide.




2.  Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.



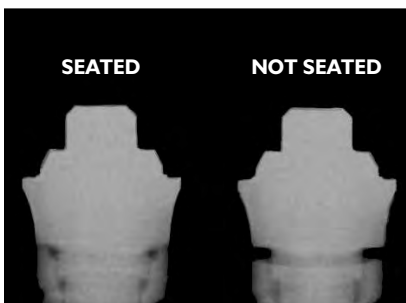
3.  Activate the fingers using the QuickSeat® Activator Tool (see page 4). Place the proper height Low Profile Abutment into the implant, line up the hex and press firmly until hearing and feeling the audible and tactile click.


Or

 Place the proper height Low Profile Abutment onto the implant, engaging the hex.

 Thread the Low Profile Abutment Screw into the implant by turning the spindle on the ASYST Tool until fingertight. Remove the ASYST Tool.

If correcting an angle using the 17 or 30 degree Angled Low Profile 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 the 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

## Low Profile Abutment - Multiple-Unit Indirect Technique (Cont'd)



5.   **Straight Abutments:** Torque the Low Profile Straight Abutment Screw into the implant at 20Ncm using an Abutment Driver Tip (RASA3) and a torque device.


Or

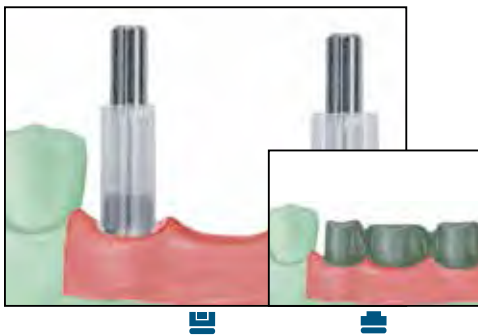
-   **Angled Abutments:** Torque the Low Profile Angled Abutment Screw into the implant at 20Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.

If the surgeon places the abutment, a Low Profile Abutment Healing Cap is threaded onto the abutment using the .048" Large Hex Driver (PHD02N or PHD03N).





### Restorative Dentist



6.   Follow the steps for Abutment Level Impressions on pages 9-11 for the Pick-Up Impression Technique and pages 12-14 for the Twist Lock™ Transfer Technique.



### Laboratory

7.   Place a Non-Hexed Low Profile Gold Cylinder or Castable Cylinder onto the Low Profile analogs. Thread with Low Profile Waxing Screws (LPCWS) or Low Profile Gold-Tite® Retaining Screws (LPCGSH) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Reduce or adjust the plastic sleeves as necessary. Wax the multiple-unit porcelain-fused-to-metal (PFM) framework to the waxing sleeves.





8.   Remove the Low Profile Waxing or Retaining Screw and carefully remove the wax coping from the Low Profile Analog. Invest, burnout and cast the coping to the Low Profile Gold Cylinder using a low, medium or high noble alloy (see page 7 for casting alloy specifications). Divest and finish the coping. Return to the restorative dentist for the metal framework try in.

# Screw-Retained

## Low Profile Abutment - Multiple-Unit Indirect Technique (Cont'd)





### Restorative Dentist

9.   Remove the healing caps from the abutments using a .048" Large Hex Driver (PHD02N or PHD03N). Place the multiple-unit framework onto the abutments. Thread a Low Profile Gold-Tite® Retaining Screw (LPCGSH) into the posterior most abutment using a .048" Large Hex Driver (PHD02N or PHD03N). Radiograph the interface on the abutments. 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. If the framework does not fit the implant(s); cut and index the framework. Return the framework to the laboratory for soldering or welding. Repeat the metal try in to make sure an accurate and passive fit is obtained. Take another radiograph to access the fit between the framework and implants. Immediately replace the healing caps on the abutments.





### Laboratory

10.   Place the verified framework back onto the Low Profile Analogs in the cast and thread Low Profile Waxing Screws (LPCWS) or Low Profile Gold-Tite Retaining Screws (LPCGSH) into the analogs until fingertight. Opaque and build porcelain on the multiple-unit framework. Stain and glaze the porcelain. Polish the gold collars with polishing protectors in place.



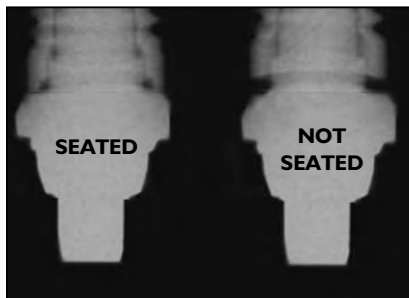
### Restorative Dentist

11.   Remove the healing caps from the abutments. Place the multiple-unit prosthesis onto the abutments. Thread Low Profile Gold-Tite Retaining Screws into the abutments until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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 (RASH3N or RASH8N) and a torque device. Place protective material into the screw access openings. Seal the access openings with temporary filling material and composite resin. Make any occlusal adjustments necessary.

# Screw-Retained Conical Abutment - Single-Unit Indirect Technique

## Material:



-  Titanium Alloy
-  Commercially Pure Titanium







## Indications:

- Single and Multiple-Unit Screw-Retained Restorations
- Minimum Interarch Space of 7mm
- Minimum Tissue Height of 2mm
- Angle correction up to 25°

## Surgeon Or Restorative Dentist



1.   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 the tissue, not including the domed portion. Subtract the measurement from the total height of the healing abutment and subtract 2mm. Match the color of the implant platform. See page 16 for the Prosthetic Abutment Selection Guide.

2.   Remove the healing abutment from the implant using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.



3.   Activate the fingers using the QuickSeat® Activator Tool (see page 4). Place the proper height Conical Abutment into the implant, line up the hex and press firmly until hearing and feeling an 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 fingertight. Remove the ASYST Tool or Waxing Screw (WSK10 or WSK15).

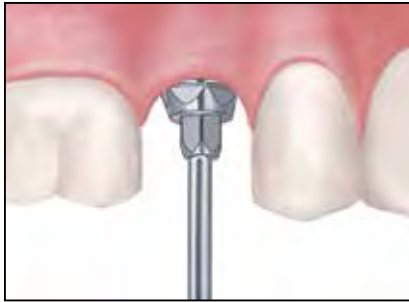
If correcting an angle using the 17 or 25 degree Angled Conical Abutment, place the abutment in or on the implant hex to correct angulation while holding onto the delivery tool. Place the abutment screw onto the implant driver and thread into the implant.


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

## Conical Abutment - Single-Unit


### Indirect Technique (Cont'd)

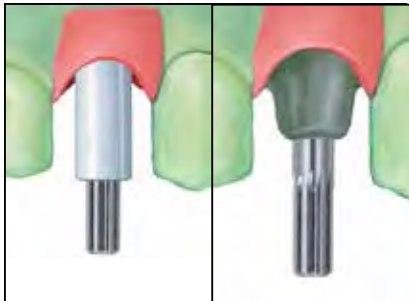


5.  Torque the Conical Abutment Screw into the implant at 20Ncm using the Abutment Driver Tip and a torque device. If the surgeon places the abutment, a Conical Abutment Healing Cap is threaded onto the abutment using the .048" Large Hex Driver (PHD02N or PHD03N).




#### Restorative Dentist


6.  Follow the steps for Abutment Level Impressions on pages 9-11 for the Pick-Up Impression Technique and pages 12-14 for the Twist Lock™ Transfer Technique.



#### Laboratory

7.  Place a Hexed Conical Gold or Castable Cylinder onto the conical analog. Thread with a Waxing Screw (WSK10 or WSK15) or Hexed Gold-Tite® Retaining Screw (GSHxx) into the analog until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Reduce or adjust the plastic sleeve as necessary. Wax the single-unit restoration to the waxing sleeve.




8.  Remove the waxing screw and carefully remove the wax coping from the analog. Invest, burnout and cast the single-unit restoration to the Conical Gold Cylinder using a low, medium or high noble alloy (see page 7 for casting alloy specifications). Divest and finish the restoration.

# Screw-Retained


## Conical Abutment - Single-Unit Indirect Technique (Cont'd)




9.  Place the finished coping back onto the Conical analog in the cast and thread a waxing or Hexed Gold-Tite® Retaining Screw (GSHxx) into the analog until fingertight. Opaque and build porcelain on the single-unit coping. Stain and glaze the porcelain. Polish the gold collar with a polishing protector in place.



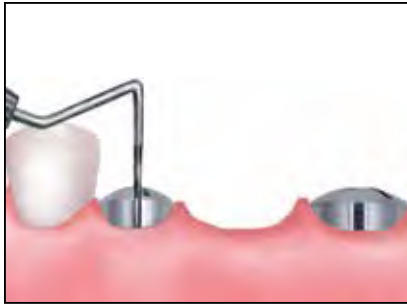
### Restorative Dentist

10.  Remove the healing cap from the abutment using a .048" Large Hex Driver (PHD02N or PHD03N). Place the single-unit crown on the abutment, engaging the hex. Thread a Gold-Tite Retaining Screw into the abutment until fingertight using the .048" Large Hex Driver. Radiograph the interface to verify an accurate fit. Check the occlusion, marginal fit and interproximal contacts. Torque the screw to 10Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device.




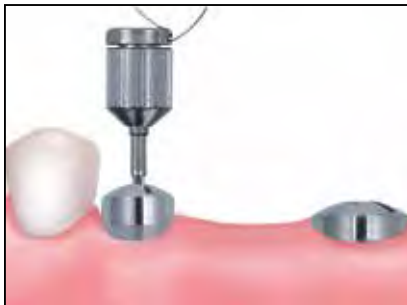
11.  Place protective material into the screw access opening. Seal the access opening with temporary filling material and composite resin. Make any occlusal adjustments necessary.


# Screw-Retained Conical Abutment - Multiple-Unit Indirect Technique




## Surgeon Or Restorative Dentist

1.  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 the tissue, not including the domed 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 (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.



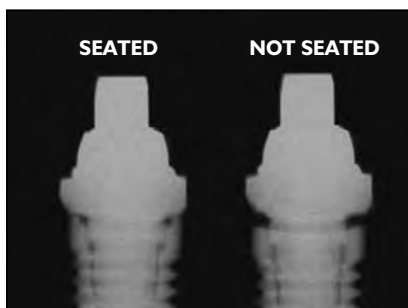
3.  Activate the fingers using the QuickSeat® Activator Tool (see page 4). Place the proper height Conical Abutment into the implants, line up the hex and press firmly until hearing and feeling the audible and tactile click.


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 fingertight. 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 it into the 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 Conical Abutment - Multiple-Unit Indirect Technique (Cont'd)

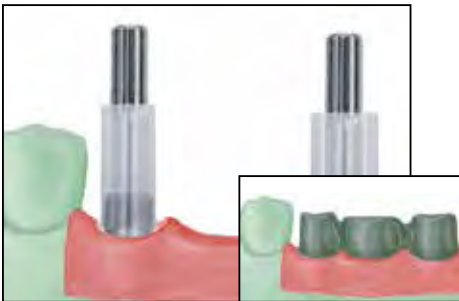


5.  Torque the Conical Abutment Screws into the implants at 20Ncm using the Abutment Driver Tip and a torque device. If the surgeon places the abutments, Conical Abutment Healing Caps are threaded onto the abutments using a .048" Large Hex Driver (PHD02N or PHD03N).




## Restorative Dentist


6.  Follow the steps for Abutment Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.



## Laboratory

7.  Place the Non-Hexed Conical Gold or Castable Cylinders onto the Conical Analogs and thread Waxing Screws (WSK10 or WSK15) or Hexed Gold-Tite® Retaining Screw (GSHxx) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Reduce or adjust the plastic sleeves as necessary. Wax the multiple-unit 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 multiple-unit framework to the Conical Gold Cylinders using a low, medium or high noble alloy (see page 7 for casting alloy specifications). Divest and finish the framework. Return to the restorative dentist for the metal framework try in.

# Screw-Retained Conical Abutment - Multiple-Unit Indirect Technique (Cont'd)




## Restorative Dentist

9.  Remove the healing caps from the abutments. Place the multiple-unit framework onto the abutments. Thread a Hexed Gold-Tite® Retaining Screw (GSHxx) into the posterior most abutment using a .048" Large Hex Driver (PHD02N or PHD03N). Radiograph the interface on the abutments. Repeat after removing the screw and placing it into the anterior most abutment. If the framework does not fit the implant(s); cut and index the framework. Return the framework to the laboratory for soldering or welding. Repeat the metal try in to make sure an accurate and passive fit is obtained. Take additional radiographs as needed to verify an accurate fit between the implants and abutments. Immediately replace the healing caps on the abutments.




## Laboratory

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



## Restorative Dentist

11.  Remove the healing caps from the abutments. Place the multiple-unit prosthesis onto the abutments. Thread Hexed Gold-Tite® Retaining Screws into the abutments until fingertight using the 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 (RASH3N or RASH8N) and a torque device. Place protective material into the screw access openings. Seal the access openings with temporary filling material and composite resin.


# Denture Conversion To Fixed Prosthesis

## QuickBridge® Provisional Components

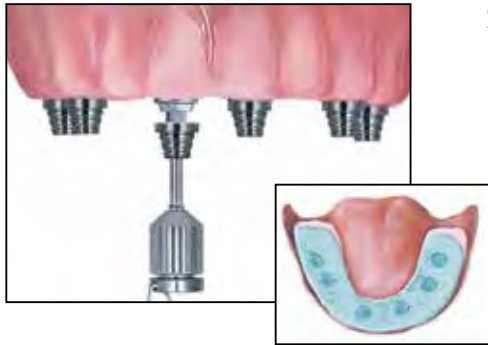
### Indirect Technique




#### Clinician


1.  Prior to placing the abutments, make an interocclusal registration with the patient in centric occlusion. This is made with the patient's existing denture.

**NOTE:** One piece interocclusal registrations (one U shaped interocclusal record) are easier to handle than two individual (right and left segments) interocclusal registrations. Two interocclusal registrations can be mixed up (right and left; up and down). One piece interocclusal registrations are much easier to orient correctly in the mouth.



2.  After placing the proper Low Profile Abutments, thread a QuickBridge Titanium Cylinder onto each of the abutments and hand tighten using a .048" Large Hex Driver (PHD02N or PHD03N). Torque the cylinders to 10Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device. Try in the denture and make sure that the vertical dimension of occlusion is not increased (the denture seats freely onto the titanium cylinders). Adjust the denture until all interferences from the cylinders have been eliminated. Place fast setting impression material onto the intaglio surface of the denture, insert it into the mouth and press lightly over the QuickBridge Titanium Cylinder assemblies to mark their locations. Allow the impression material to set per the manufacturer's instructions. The patient should be in centric occlusion during this step; the midline should be consistent with the facial midline; the occlusal plane should be horizontal.

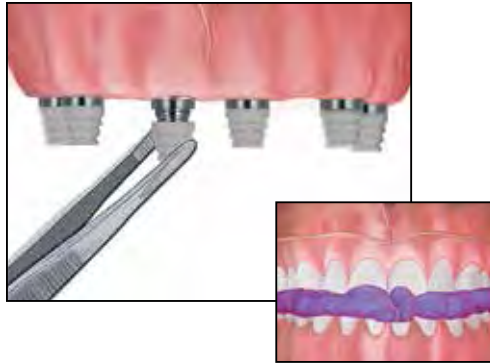



3.  Remove the denture from the mouth. The locations of the cylinders will be identified in the impression material. Remove the impression material from the denture. Drill holes completely through the denture base and denture teeth with a large round bur. Enlarge the holes with an acrylic bur so that the QuickBridge Components do not interfere with the denture base. Make sure the vertical dimension of occlusion has not been changed.

# Denture Conversion To Fixed Prosthesis

## QuickBridge® Provisional Components


### Indirect Technique (Cont'd)



4.  Snap the QuickBridge Caps onto the QuickBridge Titanium Cylinders. Try in the denture over the QuickBridge Caps to verify that there are no interferences and it is completely seated. Place self curing acrylic resin into the retention facets on each QuickBridge Cap and fill the relieved areas of the denture with acrylic resin. Seat the denture over the QuickBridge Caps and have the patient close into occlusion using the interocclusal registration. Verify that the denture is completely seated and that the vertical dimension of occlusion has not been changed. Allow the acrylic resin to set per the manufacturer's instructions. The maxillary midline should be consistent with the facial midline.

**NOTE:** If this is performed immediately following implant placement for immediate occlusal loading, cut and place a rubber dam around the QuickBridge Titanium Cylinders prior to relining the denture with acrylic resin.



5.  Remove the denture from the mouth. The QuickBridge Caps will remain inside the denture. Remove the palate and flanges from the denture using an acrylic bur. Fill in any voids around the QuickBridge Caps with self curing acrylic resin. Be careful not to let any resin flow into the QuickBridge Caps that will interfere with seating over the QuickBridge Titanium Cylinders. Finish and polish the denture. Place a small amount of temporary cement into the QuickBridge Caps and seat the provisional prosthesis on the QuickBridge Titanium Cylinders. Have the patient close into occlusion. Remove excess cement from around the margin areas of each cap. Allow the cement to set per the manufacturer's instructions. Adjust the occlusion as necessary.


# Denture Conversion To Fixed Prosthesis

## QuickBridge® Provisional Restoration


### Indirect Technique




#### Clinician

1.  Make an impression of the patient's existing fixed prosthesis or denture and the opposing arch. Make an occlusal registration with quick setting polyvinylsiloxane impression material.

#### Laboratory


2.  Pour stone casts of the impressions. Articulate the stone casts using the interocclusal registration.

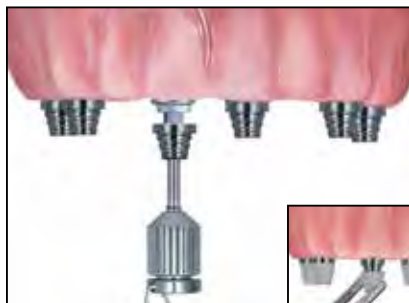



3.  Make a vacuum formed template over the stone cast. A 2mm thick flexible vacuum formed material is recommended. Remove the template from the stone cast and trim away excess material. Leave the palate and flanges on the template. Make an interocclusal registration between the template and the opposing cast using the articulator.



#### Clinician

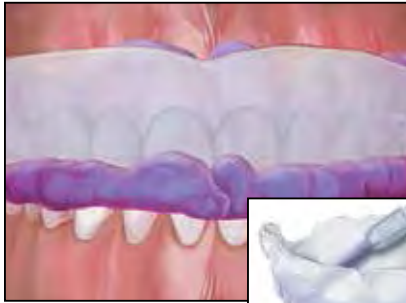
4.  Fill the tooth portion of the vacuum formed template with impression material and place it in the mouth over the Low Profile Abutments. Have the patient close into the interocclusal registration and allow the impression material to set. Remove the impression material from the template. Place the impression material replica of the teeth in the mouth and verify the occlusion and tooth position. Set aside the replica of the teeth for the laboratory to use as a guide when fabricating the definitive restoration.




5.  The Low Profile Abutments should be torqued to 20Ncm. Thread a QuickBridge Titanium Cylinder onto each of the Low Profile Abutments and hand tighten using a .048" Large Hex Driver (PHD02N or PHD03N). Torque the cylinders to 10Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device. Snap the QuickBridge Caps onto the QuickBridge Titanium Cylinders.

# Denture Conversion To Fixed Prosthesis


## QuickBridge® Provisional Restoration Indirect Technique (Cont'd)




6.  Add self curing acrylic resin into the retention facets on the QuickBridge Caps and into the tooth portion of the template. Place the template into the mouth over the QuickBridge Caps and have the patient close into the interocclusal registration. Allow the acrylic resin to set per the manufacturer's instructions.

**NOTE:** Irrigate with water during polymerization. Be aware of the amount of heat generated by the acrylic resin during setting and polymerization.



7.  Remove the template from the mouth. The QuickBridge Caps will remain in the acrylic resin. Be careful to not let any resin flow into the QuickBridge Caps that will interfere with seating over the QuickBridge Titanium Cylinders. Remove the provisional prosthesis from the template. Remove the excess acrylic resin from around the margin areas and fill in any voids. Finish the provisional restoration to the desired contour and polish.



8.  Place the provisional restoration into the mouth and snap the QuickBridge Caps onto the Titanium Cylinders. Verify the fit and aesthetics. Adjust the occlusion as necessary. Remove the provisional restoration. Place a small amount of temporary cement into the QuickBridge Caps and seat the provisional prosthesis on the QuickBridge Titanium Cylinders. Have the patient close into occlusion. Remove excess cement from around the margin areas of each cap. Allow the cement to set per the manufacturer's instructions. Adjust the occlusion as necessary.

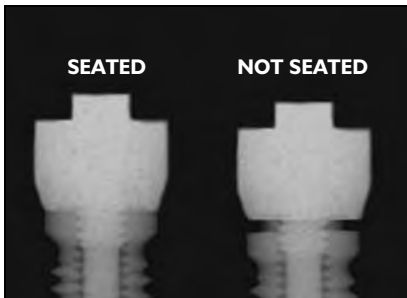
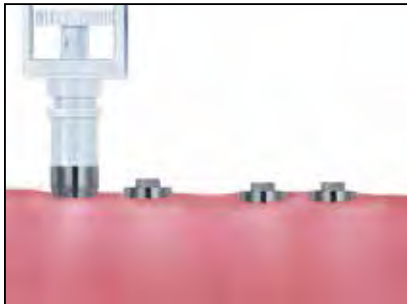
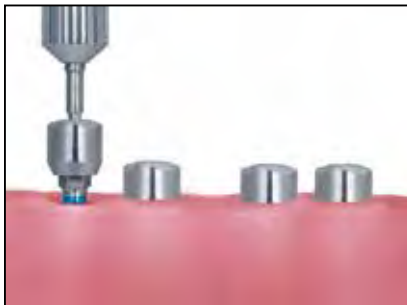
**NOTE:** If this is performed immediately following implant placement for immediate occlusal loading, cut and place a rubber dam around the QuickBridge Titanium Cylinders.

# Bar Supported Overdenture

## Standard Abutment Hader Bar

### Material:

- ☒ Titanium Alloy
- ☒ Commercially Pure Titanium



### Indications:

- Multiple Implant, Bar Retained and Removable Overdentures
- Minimum Space For Bar Construction is 9-11mm
- Maximum Divergence of 30°

### Surgeon Or Restorative Dentist

1. ☒☒ Select the proper Standard Abutment collar height for each implant by measuring the height of the healing abutment above the tissue, not including the domed 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 (PHD02N or PHD03N). 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 fingertight.

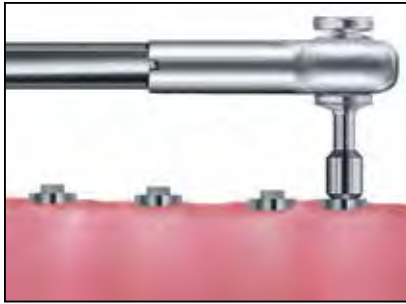
Or


☒☒ 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 fingertight. 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

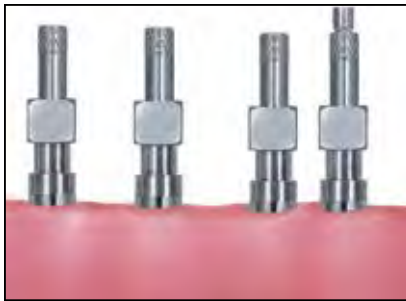
## Standard Abutment Hader Bar (Cont'd)




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 (PHD02N or PHD03N). The patient's existing denture is then relieved to be supported by the abutments. A tissue conditioning material is sometimes necessary for retention and support of the overdenture. The abutment caps are not designed to provide retention for the overdenture.


### **Pick-Up Impression Technique** (See page 78 for Transfer Impression Technique)

#### **Restorative Dentist-Pick-Up Technique**

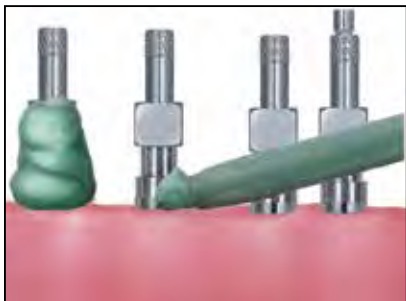



- 6a.  Place the Standard Abutment Pick-Up Impression Copings onto the abutments. Thread the coping screws into the abutments until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Visually verify all copings are seated passively on the abutments. Impression copings may be splinted prior to the definitive impression.



- 7a.  A custom or stock **open** 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.

**NOTE:** If the impression is to be used to fabricate the overdenture, a custom impression tray should be made.

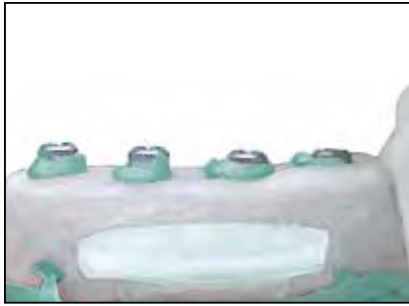



- 8a.  Syringe regular or injection viscosity impression material around the impression copings, load the impression tray with medium or heavy body impression material and seat it in the mouth. Allow the impression material to set per the manufacturer's instructions.




# Bar Supported Overdenture

## Standard Abutment Hader Bar (Cont'd)




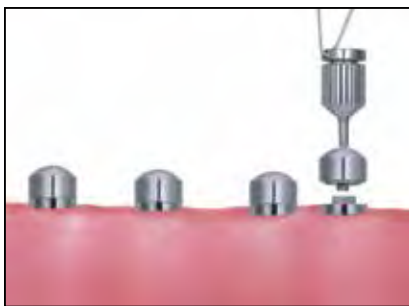
- 9a.**  Load the impression tray and seat it in the mouth. Wipe impression material off the top of the screws before it sets. Allow the impression material to set per the manufacturer's instructions.




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



- 11a.**  Verify that the impression material has completely adapted around each of the copings and that the copings are not mobile within the impression. If any copings are loose, the impression should be repeated.





- 12a.**  Replace the Standard Abutment Healing Caps onto the abutments using the .048" Large Hex Driver (PHD02N or PHD03N). Reline the patient's existing denture with a soft reline material over the abutments and healing caps.

# Bar Supported Overdenture

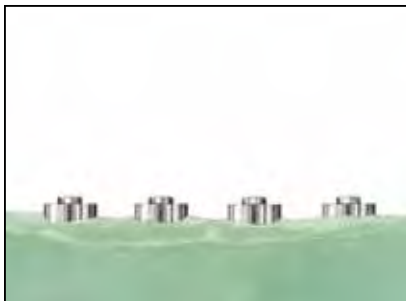
## Standard Abutment Hader Bar (Cont'd)





### 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 completely seated.

**NOTE:** In some cases, it may be necessary to place soft-tissue replication material around the impression coping/analog prior to pouring the stone cast. Check with your laboratory for specific procedures.





14a.   Pour the cast in die stone. After the stone has set, loosen the screws using a .048" Large Hex Driver (PHD02N or PHD03N) until these disengage from the analogs. Remove the impression from the stone cast. **Go to Step 15.**



## Transfer Impression Technique

### Restorative Dentist



6b.   Thread the Standard Abutment Transfer Copings into the abutments until fingertight; then tighten using the Transfer Impression Coping Driver (ICD00). Visually verify that all copings are completely seated 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 the top of the copings. The copings are 9mm in height.

**NOTE:** If the impression is to be used to fabricate the overdenture, a custom impression tray should be made.


# Bar Supported Overdenture

## Standard Abutment Hader Bar (Cont'd)




**8b.**  Syringe regular or injection viscosity impression material around the impression copings, load the impression tray with medium or heavy body impression material and seat it in the mouth. Allow the impression material to set per the manufacturer's instructions.



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



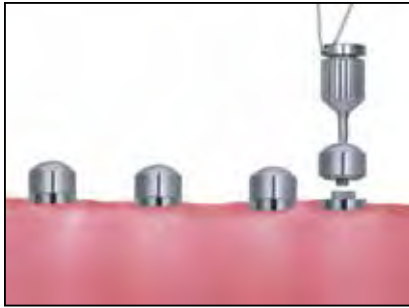
**10b.**  After the impression material has set, remove the impression from the mouth. The transfer impression copings will stay on the abutments in the mouth. Verify that the material completely adapted around each of the copings.




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

# Bar Supported Overdenture


## Standard Abutment Hader Bar (Cont'd)




- 12b.**  Replace the Standard Abutment Healing Caps onto the abutments using a .048" Large Hex Driver (PHD02N or PHD03N). Reline the patient's existing denture with a soft reline material over the abutments and healing caps.



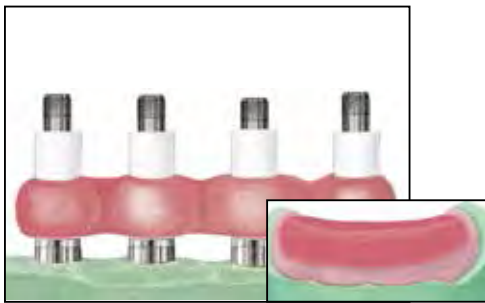
### Laboratory


- 13b.**  Screw the transfer copings onto the Standard Abutment Analogs and verify that these are passively seated. Holding on to the analog, press each transfer coping firmly into the impression. 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.**

**NOTE:** In some cases, it may be necessary to place soft-tissue replication material around the impression coping/analogs prior to pouring the stone cast. Check with your laboratory for specific procedures.

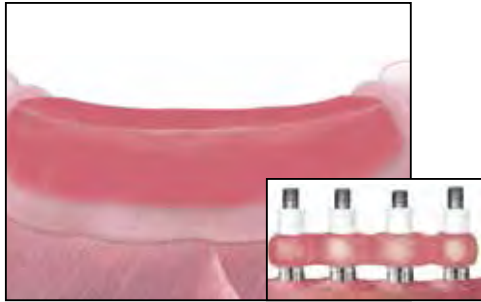


- 15.**  Place the Standard Abutment Gold or Non-Hexed Castable Cylinders onto the Standard Abutment Analogs and thread Waxing Screws (WSK10 or WSK15) or Hexed Gold-Tite® Retaining Screws (GSHxx) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). Non-Hexed Pick-up Impression Copings may also be used for this step. Fabricate a verification index by luting the plastic sleeves together using a low expansion light cure composite resin or autopolymerizing acrylic resin. It is often helpful to fabricate a record base and occlusion rim at this step to facilitate jaw relation records.


**NOTE:** If using autopolymerizing acrylic resin, allow at least 24 hours to polymerize prior to using.

# Bar Supported Overdenture

## Standard Abutment Hader Bar (Cont'd)




### Restorative Dentist

16.  Remove the healing caps using the .048" Large Hex Driver (PHD02N or PHD03N). Place the record base and occlusion rim in the mouth, over the abutments. Make the interocclusal records. Place the verification index onto the abutments. Place a Hexed Gold-Tite® Retaining Screw (GSHxx) into one posterior-most cylinder and fingertighten. Visually verify that all cylinders are seated passively and completely 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 and return the index to the laboratory for refitting into the master cast. Replace the healing caps.




### Laboratory

17.  Verify that the analog positions on the cast are accurate using the verification index. Articulate casts using the interocclusal record. Set denture teeth on the record base and wax for try in. If the verification index was not clinically accurate, section and re-attach the segments until accurately seated on all the abutments. Take this index back to the cast and identify the inaccurate analog(s). Remove the inaccurate analog(s) from the cast and attach it to the verification index. Re-seat the index on the other remaining analogs into the cast. Verify that the analog does not touch the stone of the cast. Inject a mix of die stone to re-attach the analog back into the cast.




### Restorative Dentist

18.  Place the wax denture 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 articulator mounting, set-up and try in.



### Laboratory

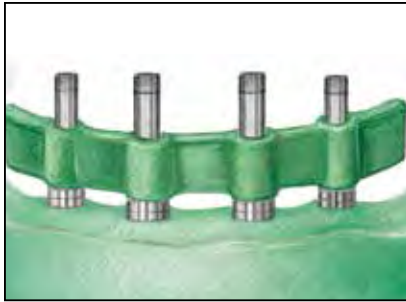
19.  For a cast bar, make a plaster or silicone matrix of the verified wax denture. This will facilitate setting the teeth in their proper positions after the casting has been made.



Or

If the clinician and/or laboratory technician would like to use CAD/CAM technology, request a *BellaTek* Bar. See the BellaTek® Bars & Frameworks Manual (ART868).

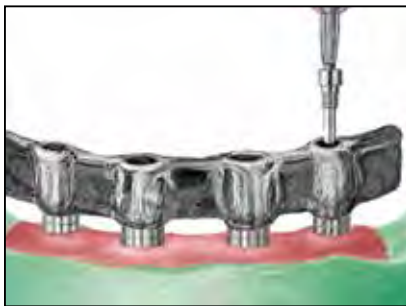
# Bar Supported Overdenture



## Standard Abutment Hader Bar (Cont'd)



20.   Carefully remove the Standard Abutment Gold or Castable Cylinders from the verification index. Place the cylinders onto the analogs and thread Waxing Screws (WSK10 or WSK15) into the analogs until fingertight. 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 denture.



**NOTE:** Adequate space is required for the bar, attachments, denture base and denture teeth.



21.   Remove the Hader Bar wax pattern from the cast. Invest, burnout and cast the bar in a low, medium or high noble alloy (see page 7 for casting alloy specifications). Divest, finish and polish the bar with polishing protectors in place. Return the bar to the restorative dentist for in and fit verification.





### Restorative Dentist

22.   Remove the healing caps from the abutments. Place the bar onto the abutments. Thread a Hexed Gold-Tite® Retaining Screw (GSHxx) into one posterior-most abutment and fingertighten. 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 a fit discrepancy is found, cut and index the bar intraorally for soldering. Replace the healing caps.



### Laboratory



23.   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 (Cont'd)



### Restorative Dentist

**24.**   Remove the healing caps. Place the Hader Bar onto the abutments. Thread the Hexed Gold-Tite® Retaining Screws (GSHxx) into the abutments and torque these to 10Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) 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, removal, maintenance and oral hygiene of the prosthesis.

# Implant-Retained Fixed Prosthesis

## Low Profile Abutment Fixed Hybrid




### Restorative Dentist

1.  Follow the steps for Abutment Level Impressions on pages 9-11 for the Pick-Up Impression Technique and pages 12-14 for the Twist Lock™ Transfer Technique.

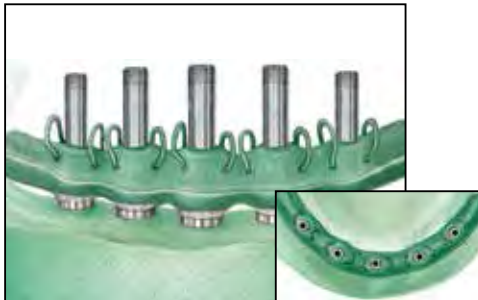



### Laboratory

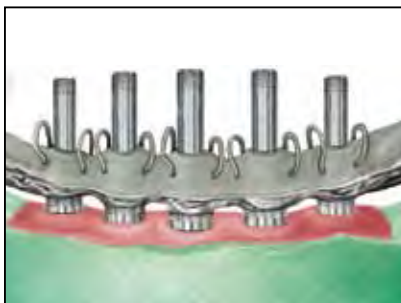
2.  Follow the steps on pages 81-82 for fabrication of the verification index, record base and wax occlusion rim, wax try-in and plaster or silicone matrix.


Or

If the clinician and/or laboratory technician would like to use CAD/CAM technology, request a *BellaTek* Bar. See the BellaTek® Bars & Frameworks Manual (ART868).



3.  Carefully remove the Low Profile Abutment Gold or Castable Cylinders from the verification index. Place the cylinders onto the analogs and attach with Low Profile Waxing Screws (LPCWS) using a .048" Large Hex Driver (PHD02N or PHD03N). Adjust the height of the sleeves as necessary. Wax the hybrid bar pattern to the waxing sleeves and add acrylic resin retention to the occlusal surface of the wax pattern. Use the matrix on the cast to position the bar within the confines of the wax denture.

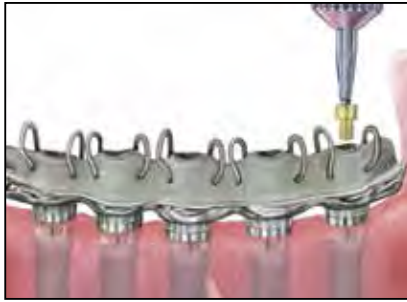


4.  Remove the hybrid bar wax pattern from the cast. Invest, burnout and cast the bar in a low, medium or high noble alloy (see page 7 for casting alloy specifications). Divest, finish and polish the tissue surface of the bar with polishing protectors in place. Return the bar to the restorative dentist for try in and fit verification.





# Implant-Retained Fixed Prosthesis

## Low Profile Abutment Fixed Hybrid (Cont'd)





### Restorative Dentist

5.   Remove the healing caps from the abutments using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the bar onto the abutments. Thread a Low Profile Hexed Gold-Tite® Retaining Screw (LPCGSH) into one posterior-most cylinder and fingertighten. Visually verify that the bar is seated passively on all implants. Repeat after removing the screw and placing it into the opposite posterior-most cylinder. Return the framework to the laboratory for soldering or welding. If a fit discrepancy is found, cut and index the bar intraorally for soldering. Return the framework to the laboratory for soldering or welding. Replace the healing caps.





### Laboratory

6.   Attach the bar onto the analogs with waxing screws using a Large Hex Driver (PHD02N or PHD03N). 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 resin will be processed to it. Block out all undercuts between the framework and cast with plaster. Process and finish the hybrid prosthesis in a conventional manner. Polishing protectors should be in place during all finishing and polishing procedures.

**NOTE:** A wax/framework try in appointment may be necessary for optimal results.



### Restorative Dentist


7.   Remove the healing caps. Place the fixed hybrid prosthesis onto the abutments. Screw the Low Profile Hexed Gold-Tite Retaining Screws (LPCGSH) into the abutments. Adjust occlusion, remove and polish. Replace the prosthesis and torque the screws to 10Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device. Place protective material into the screw access openings. Seal the access openings with acrylic resin. Make any occlusal adjustments necessary. Instruct the patient on oral hygiene and maintenance of the prosthesis.

# Implant-Retained Fixed Prosthesis

## Standard Abutment Fixed Hybrid




### Restorative Dentist

1.  Follow the steps for Abutment Level Impressions on pages 9-11 for the Pick-Up Impression Technique and pages 12-14 for the Twist Lock™ Transfer Technique.

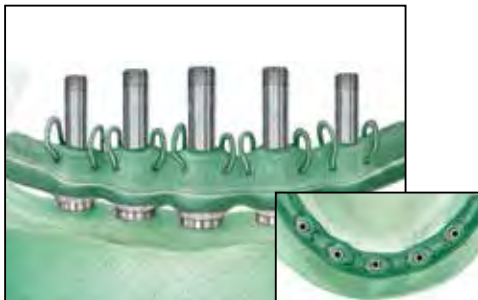



### Laboratory

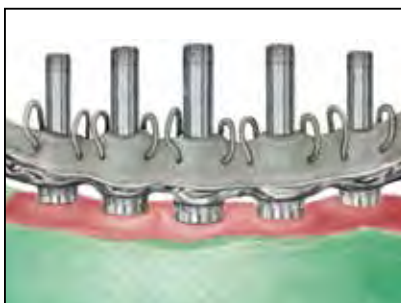
2.  Follow the steps on pages 81-82 for fabrication of the verification index, record base and wax occlusal rim, wax try-in and plaster or silicone matrix.


Or

If the clinician and/or laboratory technician would like to use CAD/CAM technology, request a *BellaTek* Bar. See the *BellaTek*® Bars & Frameworks Manual (ART868).



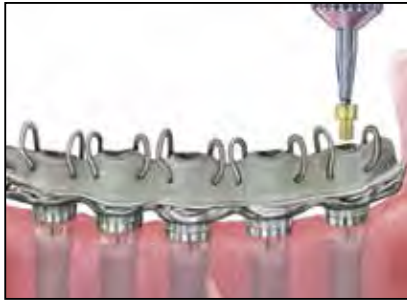
3.  Carefully remove the Standard Abutment Gold or Castable Cylinders from the verification index. Place the cylinders onto the analogs and attach with Waxing Screws (WSK10 or WSK15) using a .048" Large Hex Driver (PHD02N or PHD03N). Adjust the height of the sleeves as necessary. Wax the hybrid bar pattern to the waxing sleeves and add acrylic resin retention to the occlusal surface of the wax pattern. Use the matrix on the cast to position the bar within the confines of the wax denture.





4.  Remove the hybrid bar wax pattern from the cast. Invest, burnout and cast the bar in a low, medium or high noble alloy (see page 7 for casting alloy specifications). Divest, finish and polish the tissue 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 (Cont'd)





### Restorative Dentist

5.   Remove the healing caps from the abutments using a .048" Large Hex Driver (PHD02N or PHD03N). 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 (GSHxx) into one posterior-most cylinder and fingertighten. Visually verify that the bar is seated passively on all implants. Repeat after removing the screw and placing it into the opposite posterior-most cylinder. Return the framework to the laboratory for soldering or welding. If a fit discrepancy is found, cut and index the bar intraorally for soldering. Return to the laboratory for soldering or welding. Replace the healing caps.





### Laboratory

6.   Attach the bar onto the analogs with waxing screws using a Large Hex Driver (PHD02N or PHD03N). 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 resin will be processed to it. Block out all undercuts between the framework and cast with plaster. Process and finish the hybrid prosthesis in a conventional manner. Polishing protectors should be in place during all finishing and polishing procedures.

**NOTE:** A wax/framework try in appointment may be necessary for optimal results.



### Restorative Dentist

7.   Remove the healing caps. Place the fixed hybrid prosthesis onto the abutments. Screw the Hexed Gold-Tite Retaining Screws (GSHxx) into the abutments. Adjust occlusion, remove and polish. Replace the prosthesis and torque the screws to 10Ncm using a .048" Large Hex Driver Tip (RASH3N or RASH8N) and a torque device. Place protective material into the screw access openings. Seal the access openings with acrylic resin. Make any occlusal adjustments necessary. Instruct the patient on insertion, removal, maintenance and oral hygiene of the prosthesis.

# Bar Supported Overdenture

## UCLA Abutment Hader Bar

### Material:


 Machined Gold Alloy Cylinder With Plastic Unitube




### Indications:

- Multiple Implant Bar Retained and Removable Overdentures
- Minimum Space For Bar Construction is 9-11mm
- Maximum Angulation Correction of 30°


### Restorative Dentist

1.  Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.


### Laboratory

2.  Place the Non-Hexed Gold or Castable UCLA Abutments onto the implant analogs and thread Try-in Screws (IUNITS or UNITS) or Waxing Screws (WSK10 or WSK15) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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 record base and occlusion rim.

### Restorative Dentist

3.  Place the record base and occlusion rim over the healing abutments. Make the interocclusal records using the clinician's preferred method. Remove the healing abutments using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the record base and occlusion rim over the UCLA Abutments. Make the interocclusal records. Place the verification index onto the abutments. Place a Try-in Screw (IUNITS or UNITS) into one posterior-most UCLA Abutment and fingertighten. Visually verify that all cylinders are seated passively and completely 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 into individual segments and reassemble intraorally. Splint the segments together with autopolymerizing acrylic resin and allow it to set. Remove the index and return it to the laboratory for re-fitting of the master cast. Immediately replace the healing abutments.

### Laboratory


4.  Verify that the analog positions on the cast are accurate using the verification index. Articulate casts using the interocclusal record. Set denture teeth on the record base and wax for try in. If the verification index needs to be modified, remove the inaccurate analog(s) from the cast and attach it to the verification index. Re-seat the index on the other remaining analogs into the cast. Verify that the analog does not touch the stone of the cast. Inject a mix of die stone to re-attach the analog back into the cast. The cast has now been verified.

# Bar Supported Overdenture

## UCLA Abutment Hader Bar (Cont'd)




### Restorative Dentist

5.  Place the wax denture 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 it to the laboratory for a new articulator mounting, wax denture and try in.

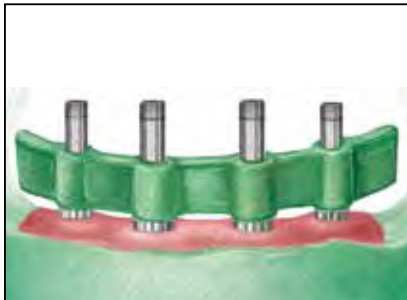



### Laboratory

6.  Make a plaster or silicone matrix of the verified wax try-in and remove the denture teeth inside it. Wax and cast the framework consistent with fixed and removeable prosthodontic design parameters.

Or


If the clinician and/or laboratory technician would like to use CAD/CAM technology, request a *BellaTek* Bar. See the BellaTek® Bars & Frameworks Manual (ART868).



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 fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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.

**NOTE:** Adequate space (9-11 mm) is required for the implant restorative components, denture base and denture teeth.



8.  Remove the Hader Bar wax-up from the cast. Invest, burnout and cast the Hader Bar in a low, medium or high noble alloy (see page 7 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 (Cont'd)



### Restorative Dentist

9. Remove the healing abutments from the implants. Place the bar onto the implants. Thread a Try-in Screw (IUNITS or UNITS) 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.



### Laboratory

10. 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 plaster. Place the Hader clips and/or other attachments onto the bar. Process and finish the denture following conventional procedures.



### Restorative Dentist

11. Remove the healing abutments from the implants. Place the Hader Bar onto the implants.  
 Thread a Certain® Gold-Tite® Hexed Large Diameter Screw (ILRGHG) into each implant until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).

Or

Thread a Square Gold-Tite Screw (UNISG) into each implant until fingertight using a Square Driver (PSQD0N or PSQD1N).

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 the patient on insertion, removal, maintenance and oral hygiene of the prosthesis.

# Implant-Retained Fixed Prosthesis

## UCLA Abutment Fixed Hybrid




### Restorative Dentist

1.  Follow the steps for Implant Level Impressions on pages 9-11 for the Pick-Up Technique and pages 12-14 for the Twist Lock™ Transfer Technique.




### Laboratory

2.  Place the Non-Hexed Gold or Castable UCLA Abutments onto the implant analogs and thread Try-in Screws (IUNITS or UNITS) or Waxing Screws (WSK10 or WSK15) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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 record base and wax occlusion rim.




### Restorative Dentist

3.  Remove the healing abutments using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver. Place the occlusion rim into the mouth. Make the interocclusal records. Place the verification index onto the implants. Thread a Try-in Screw (IUNITS or UNITS) into one posterior-most UCLA Abutment and fingertighten. 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.



### Laboratory


4.  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 interocclusal record. Set the denture teeth on the record base to first molar occlusion only and wax for try in.

# Implant-Retained Fixed Prosthesis

## UCLA Abutment Fixed Hybrid (Cont'd)




### Restorative Dentist

5.  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.

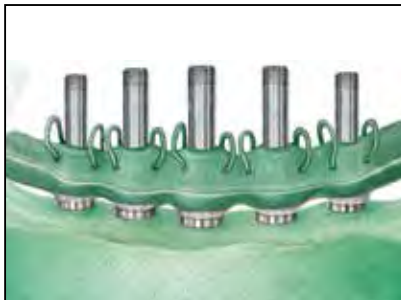



### Laboratory

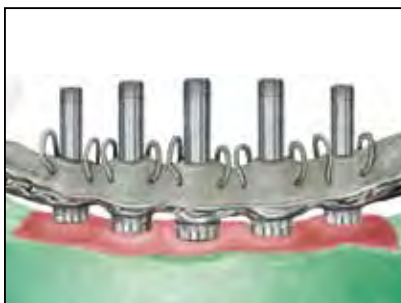
6.  Make a plaster or silicone matrix of the verified wax try-in and remove the denture teeth inside it.


Or

If the clinician and/or laboratory technician would like to use CAD/CAM technology, request a *BellaTek* Bar. See the BellaTek® Bars & Frameworks Manual (ART868).



7.  Carefully remove the UCLA Abutments from the verification index. Place the Non-Hexed UCLA Abutments onto the implant analogs and thread Try-in Screws (IUNITS or UNITS) or Waxing Screws (WSK10 or WSK15) into the analogs until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N). 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.

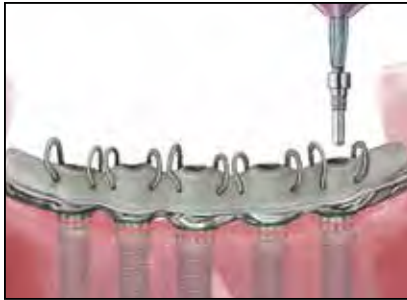


8.  Remove the hybrid bar wax pattern from the cast. Invest, burnout and cast the bar in a low, medium or high noble alloy (see page 7 for casting alloy specifications). Divest, finish and polish the tissue surface of the bar with polishing protectors in place. Return the bar to the restorative dentist for try in and fit verification.




# Implant-Retained Fixed Prosthesis

## UCLA Abutment Fixed Hybrid (Cont'd)




### Restorative Dentist

9.  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.





### Laboratory

10.  Attach the bar onto the implant analogs with waxing screws using a .048" Large Hex Driver (PHD02N or PHD03N). 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 resin will be processed to it. Block out all undercuts between the framework and cast with plaster. Process and finish the hybrid prosthesis in a conventional manner. Polishing protectors should be in place during all finishing and polishing procedures.




### Restorative Dentist

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

 Thread a Certain® Gold-Tite® Hexed Large Diameter Screw (ILRGHG) into each implant until fingertight using a .048" Large Hex Driver (PHD02N or PHD03N).

**Or**

 Thread a Square Gold-Tite Screw (UNISG) into each implant until fingertight 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 protective material into the screw access openings. Seal the access openings with acrylic resin. Make any occlusal adjustments necessary. Instruct the patient on insertion, removal, maintenance and oral hygiene 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:

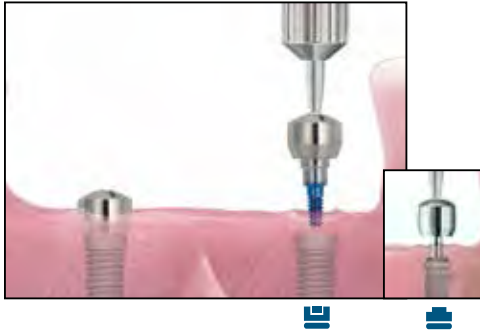
- Tissue Supported Removable Overdentures on Two to Four Implants
- Minimum Interarch Distance of 4mm
- Angle Correction With Up to 40° Between Divergent Implants


#### Surgeon Or Restorative Dentist

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




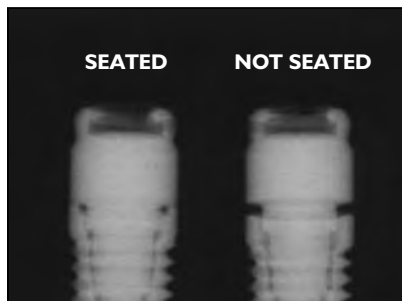
2.  Remove the healing abutments from the implants, one at a time, using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.



3.  Thread the proper height LOCATOR Abutment into the implant using the plastic delivery tool packaged with the abutment. Use the LOCATOR Core Tool/Abutment Driver (LCTDR1) to fingertighten.

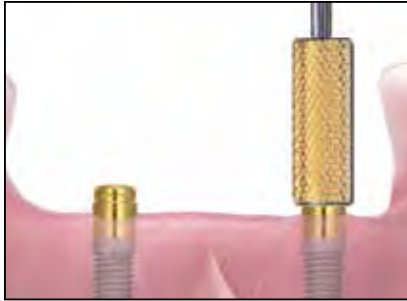



4.  Radiograph the interfaces to verify complete seating of the abutments on the implants. Place the film perpendicular to the interface of the abutment on the implant.



# Tissue Supported Overdenture

## LOCATOR® Abutment Indirect Technique (Cont'd)




5.  Torque the LOCATOR Abutments into the implants at 20Ncm, using the LOCATOR Core Tool/Abutment Driver (LCTDR1) and a .050 inch hexed 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 (LOADT) into the torque device and torque the abutments to 20Ncm.




### Restorative Dentist

6.  A custom or stock **closed** 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.


**NOTE:** If the impression is to be used to fabricate the overdenture, a custom impression tray should be made.



7.  Place the LOCATOR Impression Copings (LAIC1) on the abutments and verify complete seating. Use injection viscosity impression material to inject the material around the attachments intraorally. Use medium or heavy body viscosity impression material for the tray.

**NOTE:** Sometimes it is helpful to place impression adhesive on the impression copings to ensure their removal in the impression.




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

# Tissue Supported Overdenture

## LOCATOR® Abutment

### Indirect Technique (Cont'd)

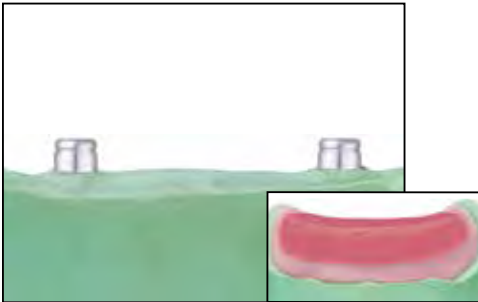



9.  Remove the impression from the mouth and verify that the impression material completely adapted around each coping. The impression copings should remain inside the impression. Relieve the patient's existing denture to allow for the LOCATOR Abutments. Place a chairside soft liner into the denture 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.



#### Laboratory

10.  Insert the LOCATOR Laboratory Analogs (LALA1) 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 record base and wax occlusion rim.



#### Restorative Dentist


12.  Place the occlusion rim into the mouth. Make the interocclusal records.

# Tissue Supported Overdenture

## LOCATOR® Abutment Indirect Technique (Cont'd)




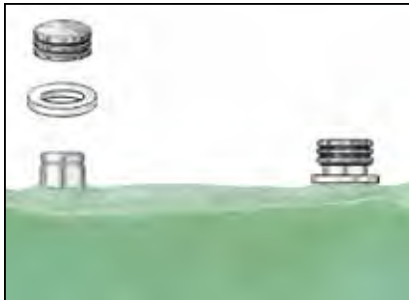
### Laboratory

13.  Articulate casts using the interocclusal record. Set the denture teeth on the record base for the wax try in.




### Restorative Dentist


14.  Place the wax denture into the mouth. Verify 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 articulator mounting, wax denture and try-in.



### Laboratory

15.  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 resin 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 (Cont'd)





### Restorative Dentist

- 17.**   Remove the Black Processing Male by placing the Removal Tip end of the LOCATOR Core Tool/Abutment Driver (LCTDR1) 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.

#### Male Attachments:

	1lb. of retention LAELM
	3lb. of retention LLRMS
	5lb. of retention LARMS

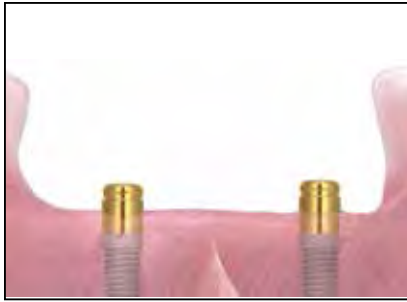


- 18.**   Place the overdenture onto the LOCATOR Abutments in the mouth, engaging the attachments. Make any occlusal or tissue adjustments necessary. Instruct the patient on insertion, removal, maintenance and oral hygiene of the prosthesis.


# Tissue Supported Overdenture

## LOCATOR® Abutment


### Direct Technique




#### Restorative Dentist

1.  Follow steps 1-5 on pages 94-95 for LOCATOR Abutment Indirect Technique selection and placement.




2.  A direct chairside 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 undercuts 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. Eliminate all contacts between the LOCATOR Abutments and denture base.

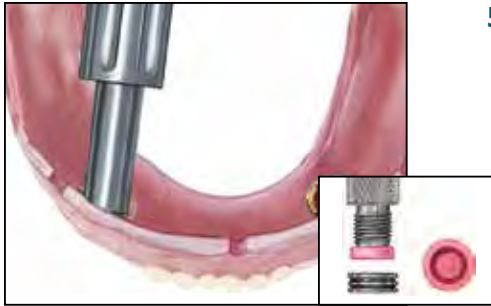



4.  Place autopolymerizing acrylic resin or light cure composite resin over the LOCATOR Housings and into relief areas of the denture. Place the denture into position in the mouth and have the patient close into centric occlusion. Allow the acrylic resin to set per the manufacturer's instructions.

# Tissue Supported Overdenture




## LOCATOR® Abutment

### Direct Technique (Cont'd)




5.  Remove the Black Processing Male by placing the Removal Tip end of the LOCATOR Core Tool/Abutment Driver (LCTDR1) 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.

#### Male Attachments:

	1lb. of retention LAELM
	3lb. of retention LLRMS
	5lb. of retention LARMS



6.  Remove the denture, fill any voids with a new mix of acrylic or composite resin around the housings and polish. Remove the Black Processing Males and replace these with the Final Male Attachments (see step 5). 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.



# Tissue Supported Overdenture

## Dal-Ro Abutment

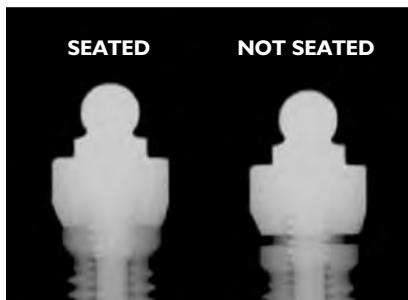
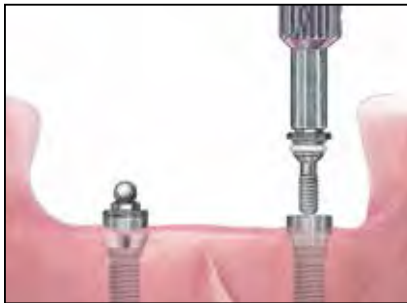
### Indirect Technique

#### Material:

**Abutment:** Titanium Alloy

**Housing:** Titanium





**Females:** Gold Alloy



#### Indications:

- Tissue Supported Overdentures on Two to Four Implants
- Overdentures with One or More Implants
- 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

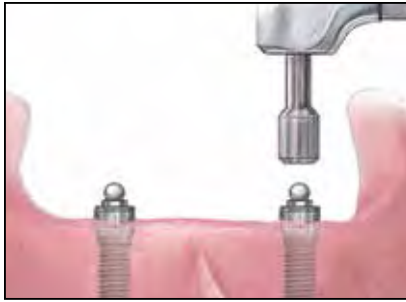
#### Surgeon Or Restorative Dentist


1.  Select the proper Dal-Ro Abutment collar height for each implant by measuring the height of the healing abutment above the tissue, not including the domed 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 (PHD02N or PHD03N). 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 (PAD01). Fingertighten 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

## Dal-Ro Abutment


### Indirect Technique (Cont'd)



5.  Torque the Dal-Ro Abutment Screws into the implants at 20Ncm using the O-Ring/Dal-Ro Driver Tip (RAOR1) in a torque device. (If the surgeon places the abutments, the patient's existing denture will be relieved to allow for the abutments.)




#### Restorative Dentist

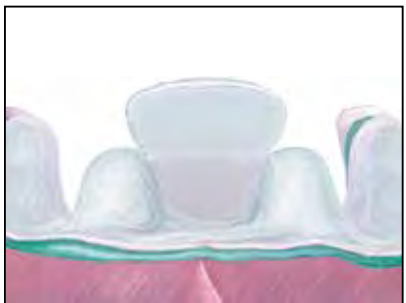
6.  A custom or stock **closed** impression tray may be used. Provide relief for the height of the Dal-Ro Abutments plus 2mm.


**NOTE:** If the impression is to be used to fabricate the overdenture, a custom impression tray should be made.



7.  Syringe impression material around each Dal-Ro Abutment. Use injection viscosity impression material to inject the material around the attachments intraorally. Use medium or heavy body viscosity impression material for the tray.

**NOTE:** There are no impression copings for Dal-Ro Abutments.




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

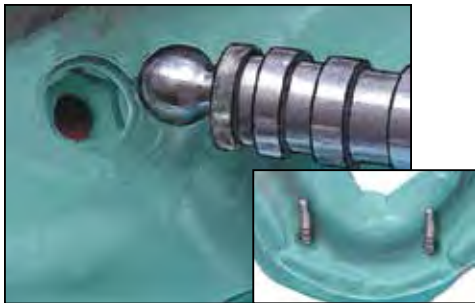
# Tissue Supported Overdenture

## Dal-Ro Abutment


### Indirect Technique (Cont'd)

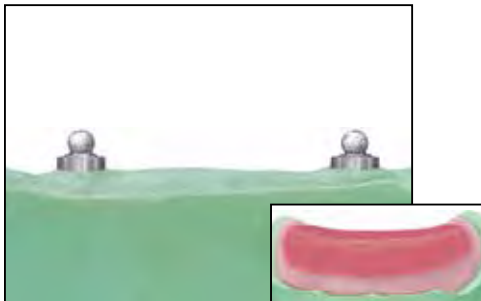



9.  Remove the impression from the mouth and verify that the impression material completely adapted around each abutment. Relieve the patient's existing denture to allow for the Dal-Ro Abutments. Place a chairside soft liner into the patient's existing denture around the abutments and seat the denture.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



#### Laboratory

10.  Insert the Dal-Ro Laboratory Analogs (DRLAU) 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 record base and wax occlusion rim.



#### Restorative Dentist

12.  Place the occlusion rim into the mouth. Make the interocclusal records.


# Tissue Supported Overdenture

## Dal-Ro Abutment

### Indirect Technique (Cont'd)




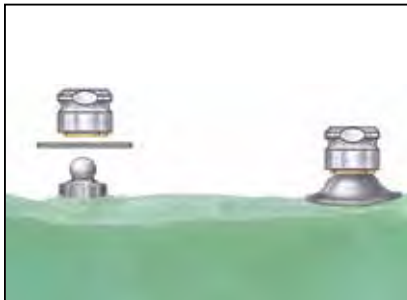
#### Laboratory

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




#### Restorative Dentist


14.  Place the wax denture into the mouth. Verify 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 articulator mounting, wax denture set-up and try-in.



#### Laboratory

15.  After the wax denture 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 (DRTTH) into the housings using the Female Driver Tool (DRFAT 1). Place the housing/attachment assemblies onto the analogs.



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



# Tissue Supported Overdenture

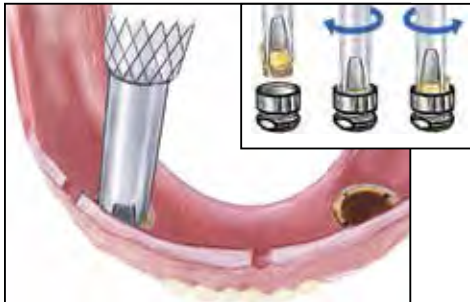
## Dal-Ro Abutment



### Indirect Technique (Cont'd)



#### Restorative Dentist

17.   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, removal, maintenance and oral hygiene of the prosthesis.



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


# Tissue Supported Overdenture

## Dal-Ro Abutment


### Direct Technique




#### Restorative Dentist

1.  Follow steps 1-5 on pages 101-102 for Dal-Ro Abutment selection and placement.




2.  A direct chairside 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 (DRTH) into the housings using the Female Driver Tool (DRFAT1). 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.

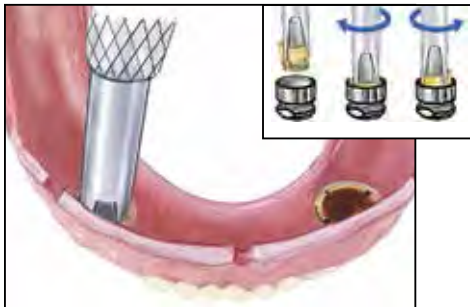
# Tissue Supported Overdenture



## Dal-Ro Abutment

### Direct Technique (Cont'd)



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, removal, maintenance and oral hygiene of the prosthesis.



6.   The Gold Female Attachment (DRT) retention on the abutment may be adjusted by tightening the housing for more retention and loosening for less retention by 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 (Edentulous Patients)
- Overdentures with One or More Implants (Partially Edentulous Patients)
- 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



### Surgeon Or Restorative Dentist

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





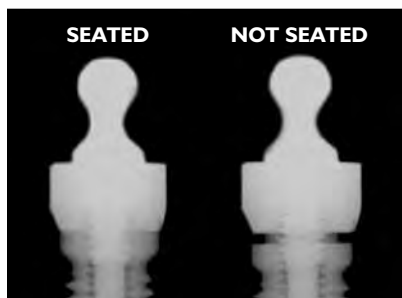
2.   Remove the healing abutments from the implants, one at a time, using a .048" Large Hex Driver (PHD02N or PHD03N). To help prevent accidental swallowing, thread floss through the spinner on the driver.



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 (PAD01). Fingertighten 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 (Cont'd)



5.  Torque the O-Ring Abutment Screws into the implants at 20Ncm using the O-Ring/Dal-Ro Driver Tip (RAOR1) in a torque device. (If the surgeon places the abutments, the patient's existing denture will be relieved to allow for the abutments.)




#### Restorative Dentist

6.  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.


**NOTE:** If the impression is to be used to fabricate the overdenture, a custom impression tray should be made.



7.  Use injection viscosity impression material to inject the material around the impression copings intraorally. Use low, medium or heavy body viscosity impression material for the tray.

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




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

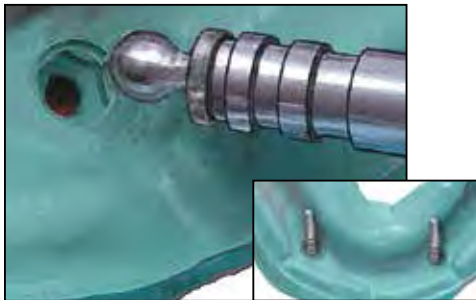
# Tissue Supported Overdenture

## O-Ring Abutment


### Indirect Technique (Cont'd)

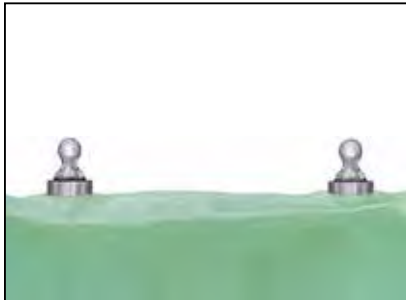



9.  Remove the impression from the mouth and verify that the impression material completely adapted around each abutment. Relieve the patient's existing denture to allow for the Dal-Ro Abutments. Place a chairside soft liner into the denture around the abutments and seat the denture. Have the patient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



#### Laboratory


10.  Insert the O-Ring Laboratory Analogs (ORLAN) 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 record base and wax occlusion rim.



#### Restorative Dentist

12.  Place the record base and occlusion rim into the mouth. Make the interocclusal records.


# Tissue Supported Overdenture

## O-Ring Abutment

### Indirect Technique (Cont'd)




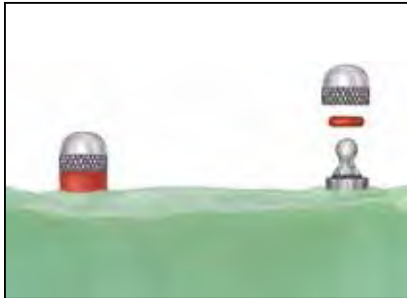
#### Laboratory

13.  Articulate casts using the interocclusal record. Set the denture teeth on the record base for the wax try in appointment.




#### Restorative Dentist


14.  Place the wax denture into the mouth. Verify 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 articulator mounting, wax set-up and try in appointment.



#### Laboratory

15.  Flask the denture on the cast. Boil out the wax and separate the flask. Place the Red Processing O-Rings (OSORED) into the Housings (OSODH). Place the Housing/O-Ring assemblies onto the analogs. Block out the undercuts with plaster 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 (OSOBLK) (see step 18).

# Tissue Supported Overdenture



## O-Ring Abutment Indirect Technique (Cont'd)



### Restorative Dentist

17.   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, removal, maintenance and oral hygiene of the prosthesis.



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

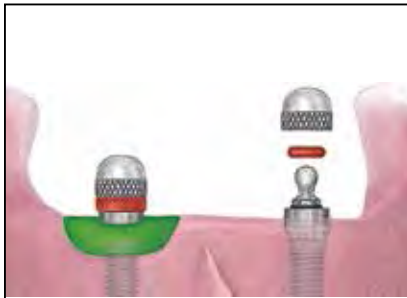



#### Surgeon Or Restorative Dentist

1.  Follow steps 1-5 on pages 108-109 for O-Ring Abutment selection and placement.




2.  A direct, chairside 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 Red Processing O-Rings (OSORED) into the Housings (OSODH). 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 (Cont'd)



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, removal, maintenance and oral hygiene of the prosthesis.



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.

## Important Product Information For Restorative Products

### Instructions For Use:

For detailed information on the specific procedure for the product you are using, please refer to the individual product labels or the appropriate manual on the BIOMET **3i** Website.

### Description:

BIOMET **3i** Restorative Products are manufactured from biocompatible titanium, titanium alloy, gold, gold alloy, zirconium, vanadium, stainless steel, polyetheretherketone (PEEK), cobalt chromium alloy, and polyoxymethylene (Delrin). Please refer to product guidelines for use/Surgical Manual for additional device information.

### Indications For Use:

BIOMET **3i** Restorative Products are intended for use as accessories to endosseous dental implants for placement in the maxilla and mandible.

Provisional Abutments are intended for use as accessories to endosseous dental implants to support a prosthetic device in a partially or fully edentulous patient. They are intended for use to support a prosthesis in the mandible or maxilla for up to 180 days during endosseous and gingival healing, and are for non-occlusal loading of provisional restorations. The prostheses will either be cemented, mechanically or screw-retained to the abutment system based on individual product design. For compatibility of BellaTek® Patient Specific Abutments, please refer to the BellaTek Compatibility Chart (ART1145).

### Contraindications:

Placement of BIOMET **3i** Restorative Products are precluded by known patient hypersensitivity to any of the materials listed in the Description section above.

### Warnings:

Mishandling of small components inside the patient's mouth carries a risk of aspiration and/or swallowing. Fracture of a restoration may occur when an abutment is loaded beyond its functional capability. Reuse of BIOMET **3i** Products that are labeled for single-use may result in product contamination, patient infection and/or failure of the device to perform as intended.

PEEK components are intended for use to support single- or multiple-unit provisional prostheses in the mandible or maxilla for up to 180 days, at which time definitive prostheses should be inserted.

### Sterility:

Some BIOMET **3i** Restorative Products are supplied sterile. Refer to individual product labels for sterilization information; all sterile products are labeled "STERILE". All products sold sterile are for single-use before the "use by" date printed on the product label. Do not use sterile products if the packaging has been damaged or previously opened. Products provided non-sterile may need to be cleaned and sterilized prior to use. Please refer to the individual product labels or Restorative Manual for more information. For products provided non-sterile requiring

sterilization prior to use, BIOMET **3i** recommends the following sterilization parameters for wrapped items:

Steam gravity sterilization method (gravity-displacement cycle) - Minimum exposure of fifteen (15) minutes timing at a temperature of 270°F (132°C)\* **or**

Pre-vacuum sterilization method (dynamic-air-removal cycle) - Minimum exposure of four (4) minutes, four (4) pulses timing at a temperature of 270°F (132°C).\*

\*Post sterilization, devices should be thoroughly dried for 30 minutes. Please refer to the Surgical and Restorative Manual or package insert for the remaining care and cleaning instructions.

Do not re-sterilize or autoclave components except where indicated on the individual product label, where instructions have been provided in the Restorative Manual or in any additional product literature for the given component.

### MRI Statement:

BIOMET **3i** Restorative Products have not been evaluated for safety, heating, migration, or compatibility in the Magnetic Resonance Imaging (MRI) environment.

### Precautions:

BIOMET **3i** Restorative Products should only be used by trained professionals. The surgical and restorative techniques required to properly utilize these products are highly specialized and complex procedures. Improper technique can lead to implant failure, loss of supporting bone, restoration fracture, screw loosening and aspiration. Components made from PEEK material are intended for use for up to 180 days.

### Potential Adverse Events:

Potential adverse events associated with the use of restorative products may include: failure to integrate; loss of integration; dehiscence requiring bone grafting; infection as reported by: abscess, fistula, suppuration, inflammation, radiolucency; gingival hyperplasia; excessive bone loss requiring intervention; fracture; and nerve injury.

### Storage And Handling:

BIOMET **3i** Restorative Products should be stored at room temperature. Refer to the Surgical Manual for special storage or handling conditions.

### Caution:

U.S. Federal Law restricts this device to sale by or on the order of a licensed dentist or physician.

# Want More Restorative Options?

VISIT:  
[www.biomet3i.com](http://www.biomet3i.com)

*For More Information, Please Contact Your Local BIOMET 3i Sales Representative*

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