

SS system Prosthetic Procedure

SS Implant System

2013 PROSTHETIC PROCEDURE

OSSTEM[®]
IMPLANT

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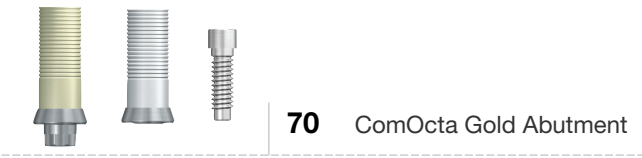
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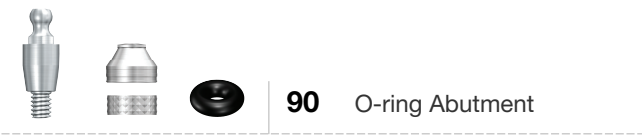
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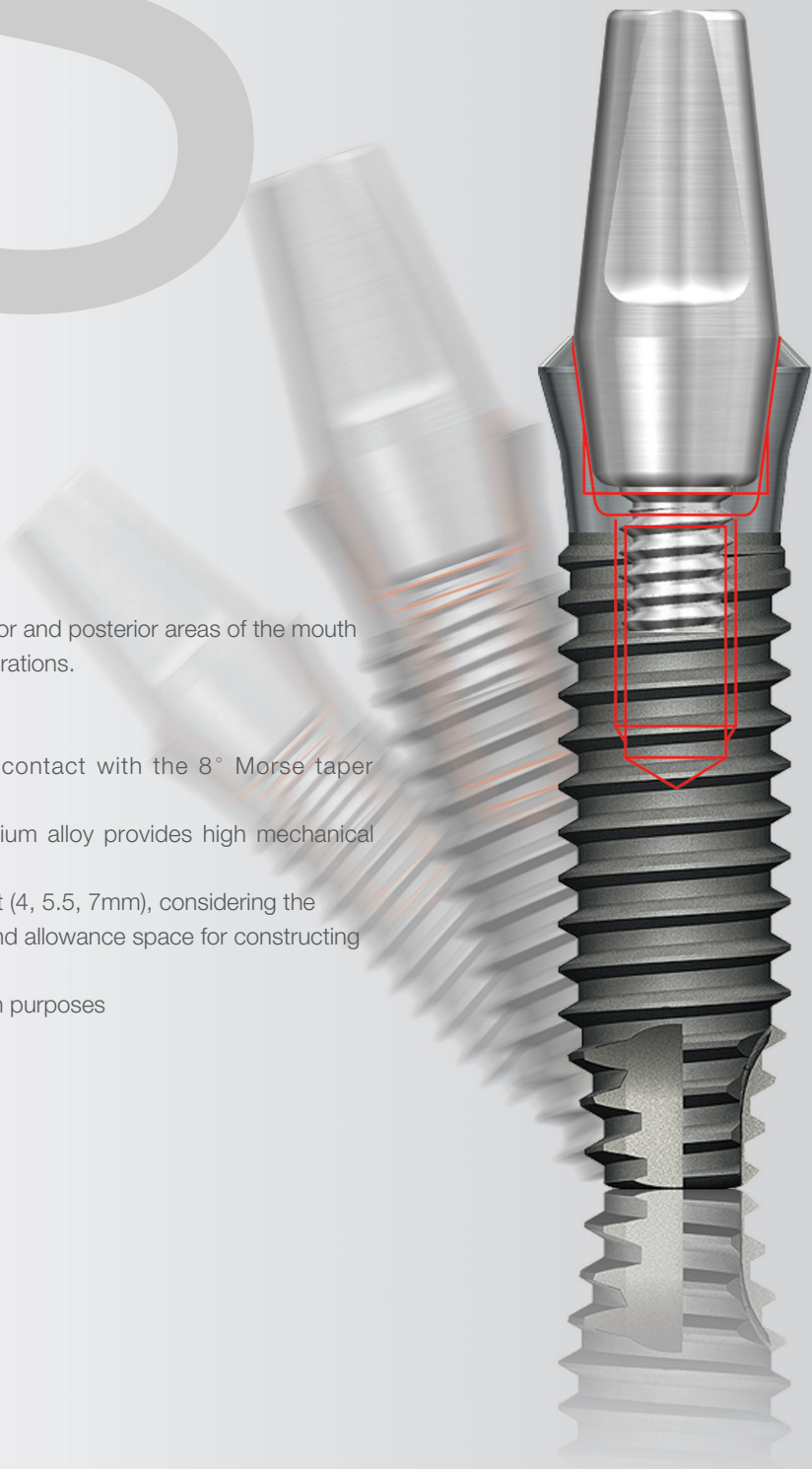
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SS





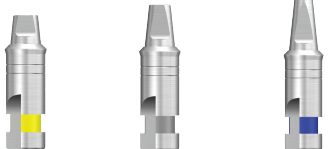




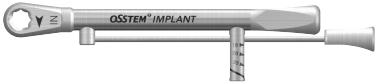
Solid Abutment

- **Indications**
Solid abutments can be used in both anterior and posterior areas of the mouth for cement retained crown and bridge restorations.
- **Features & benefits**
 - Minimized screw loosening owing to contact with the 8° Morse taper connection, enabling perfect sealing
 - The solid one-piece body made of titanium alloy provides high mechanical properties.
 - Abutment designed with an optimal height (4, 5.5, 7mm), considering the average crown length of a natural tooth and allowance space for constructing a prosthesis
 - Color-coded components for identification purposes
- **Material**
 - Ti-6Al-4V
- **Tightening torque** : 30Ncm



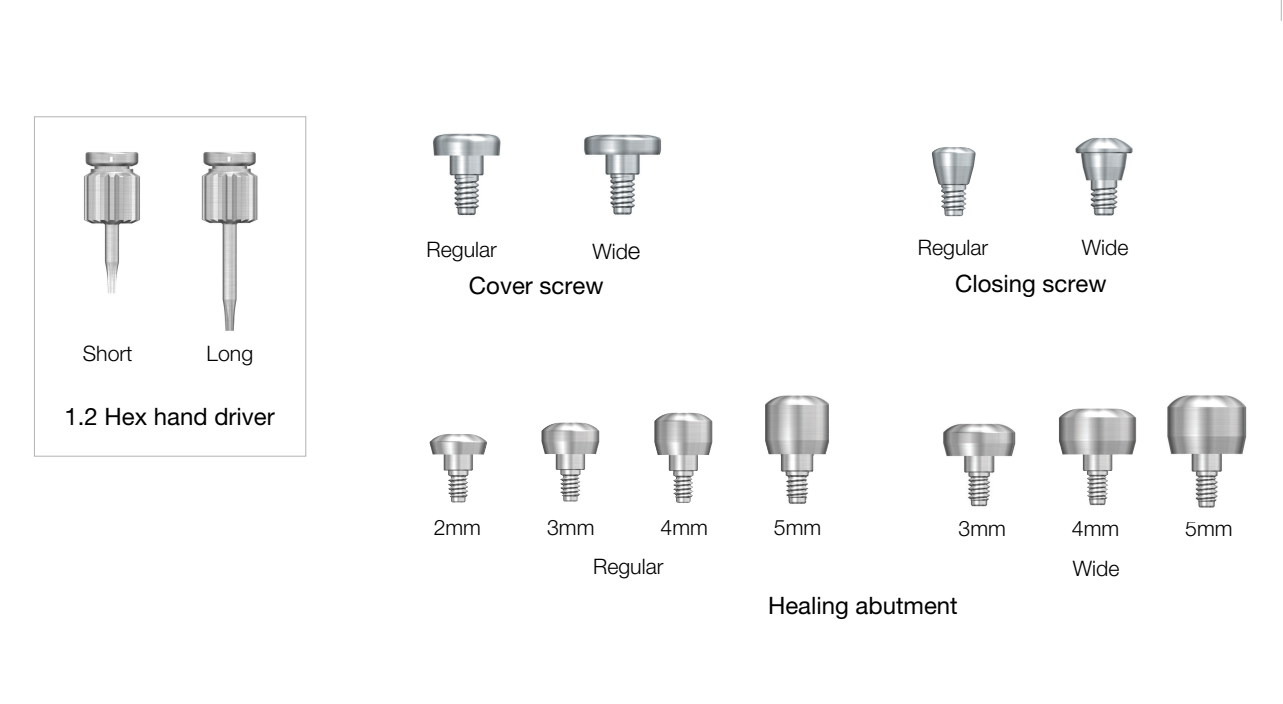
Solid Abutment

Product list for prosthetic procedure

Product list			
Abutment			
Protect cap			
Impression component	For non-modified abutment		For modified abutment
			
Lab analog			
Burn-out cylinder			
Finishing reamer			
Driver			
Torque wrench			

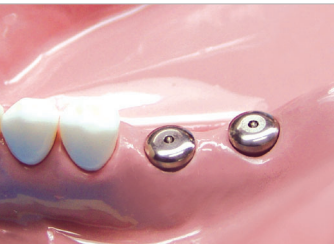
Step1 Separating the Healing abutment

Components & instruments

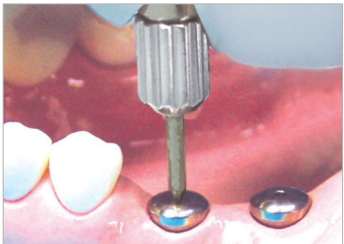


Prosthetic procedure

Separate the cover screw or Healing abutment using a 1.2 hex hand driver.
To prevent the patient from swallowing the hand driver, tie dental floss to the spinner on the handle of the driver.



67 Healing abutment



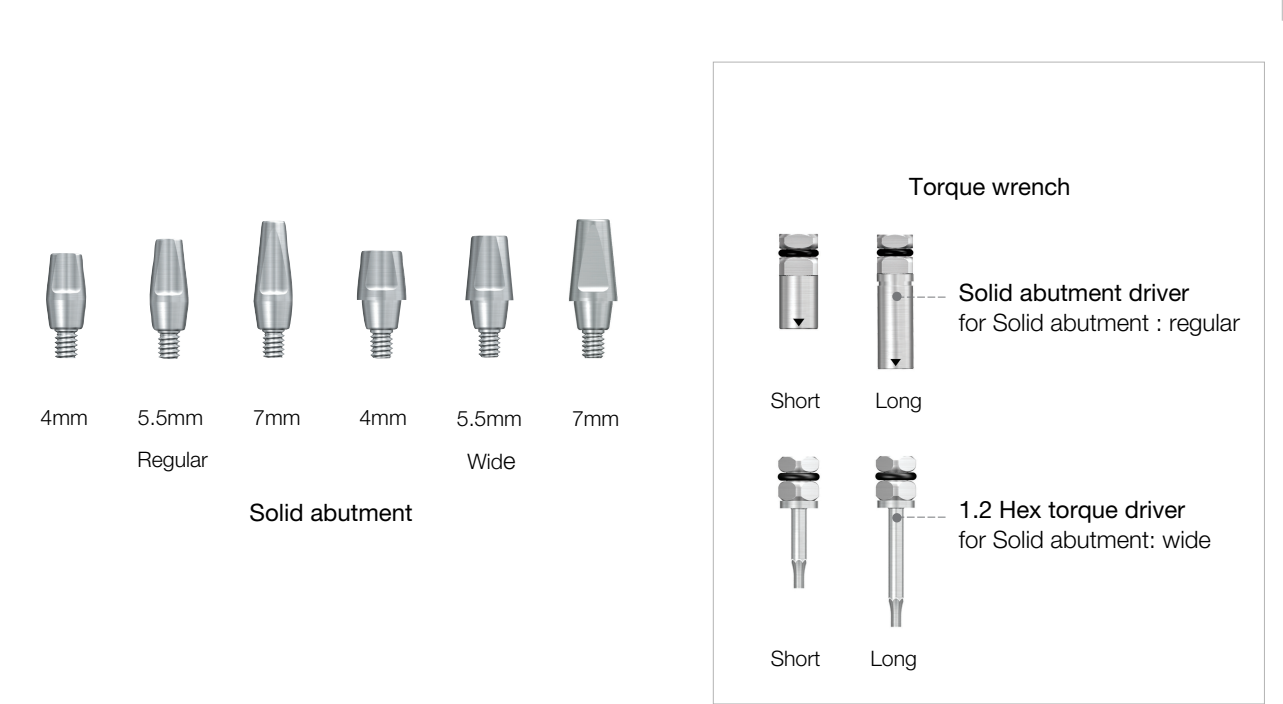
Separating the Healing abutment using a driver



After the separation of the Healing abutment

Step2 Selecting and placing the abutment

Solid abutments & instruments



Prosthetic procedure

Check the occlusion gap and select the abutment with an appropriate height.
Bring the abutment to the mouth with the appropriate driver and insert it into the implant. Use finger pressure to tighten it down. And use a 1.2 hex torque driver or Solid abutment driver and a torque wrench to tighten 30Ncm. The Solid abutment is in place and ready for the impression to be taken. Once the abutment has been torqued in, it should not be removed.

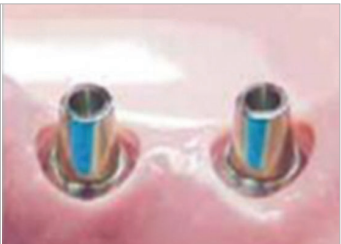
* Important : Tightening torque = 30Ncm



Connecting the implant and abutment



Tightening the abutment with 30Ncm



The attached Solid abutment

Solid abutment instruments usage

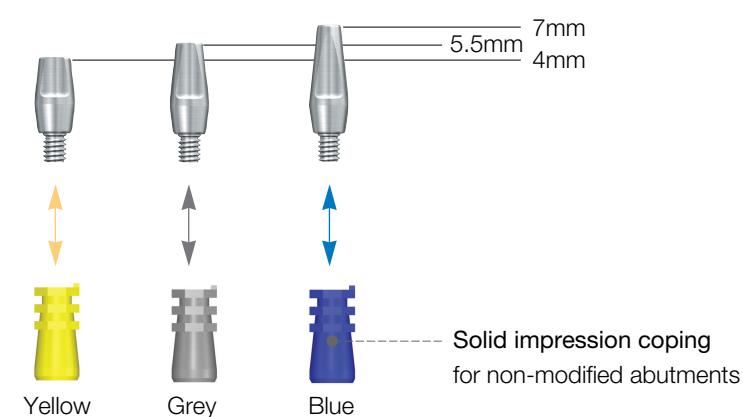


Using the Solid abutment driver:
Align the groove of Solid abutment(regular) with the arrow on the driver shaft and insert the abutment into the driver.

Using the 1.2 hex torque driver :
The 1.2 hex torque driver tip connects to the occlusal opening of the abutment

Step3 Taking the impression

Solid impression copings



Color-coding :

In order to facilitate identification, the Solid impression copings are color-coded :

Height 4.0mm = yellow

Height 5.5mm = grey

Height 7.0mm = blue

Caution :

Since the plastic impression products are not sterilized, treatment using a general reagent is recommended. Avoid high heat or radioactivity to prevent loss of elasticity and deformation.

Prosthetic procedure

Both the implant shoulder and the abutment must be cleaned of any blood or tissue prior to the impression procedure. If a wide Solid abutment is used, the occlusal opening of the abutment must be sealed with wax or guttapercha.

Select an impression coping that is the same size of the abutment and align the flat surface of the Solid abutment with the upper projecting part of the impression coping and press until it is locked with a clicking sound.

And then impression material is injected around the impression coping and an impression is taken.

Check for any defect on the impression. Send it to the lab.



Placing the impression coping



Injecting impression material around the impression coping



Finished the impression

Step4 Placing the protect cap

Solid protect caps



Prosthetic procedure

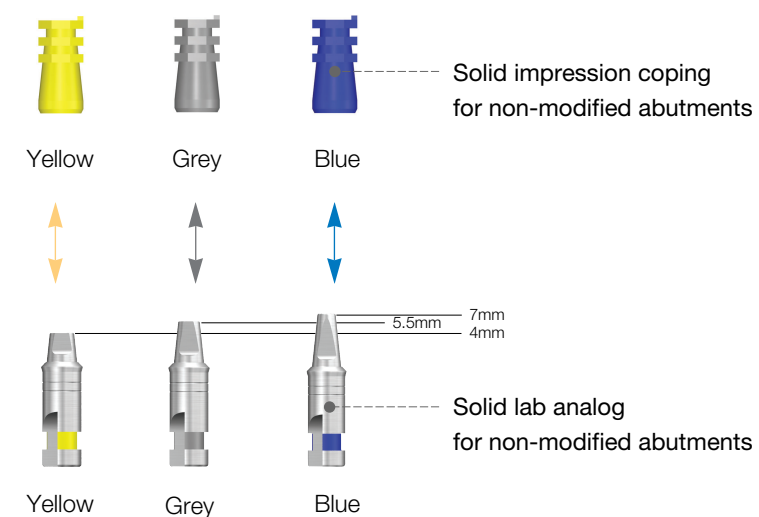
Cover the abutment with the protect cap to eliminate the foreign body sensation felt by the patient and protect the abutment while constructing the upper prosthesis. Place the protect cap by pressing with the finger until it snaps “clicks”. You can easily fabricate a temporary prosthesis using the protect cap in cases that temporary prostheses are necessary.



Protect cap placed in the oral cavity

Step5 Fabricating the working model

Solid lab analogs



Color-coding :

In order to facilitate identification, the solid lab analogs are color-coded :

Height 4.0mm = yellow

Height 5.5mm = grey

Height 7.0mm = blue

Prosthetic procedure

Select the appropriate analog (the color of impression coping in the impression identifies which analog must be used). Align the flat side of the analog with the flat side of the impression coping. Insert the analog into the impression coping until it snaps “clicks” securely into place. Pour up in stone.

If the margin is set in the sub-gingival area, it is necessary to form artificial gum first before creating a working model with stone.



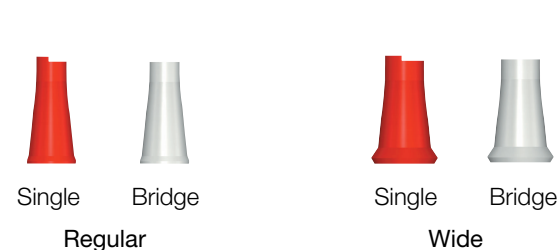
Inserting the analog into the impression coping



Finished working model

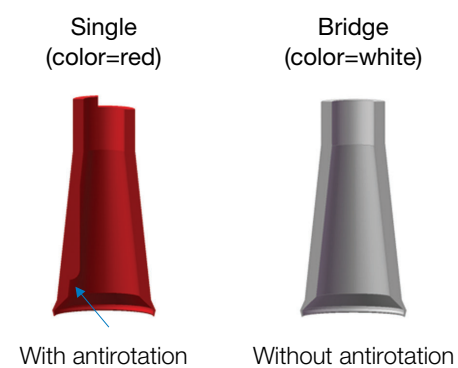
Step6 Wax up

Solid burn-out cylinders



Note :

You can easily connect the single burn-out cylinder by aligning the flat side of the analog with the upper part since the internal flat side and upper projecting part is in the same direction.

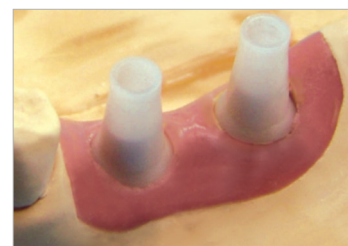


Prosthetic procedure

Select the appropriate burn-out cylinder and snap it “clicks” over the analog. Based on the analog’s height, adjust the length using a bur and fasten with pattern resin. And wax up using the conventional technique for the metal framework.



Analog on the working model



Fastening the burn-out cylinder for the bridge



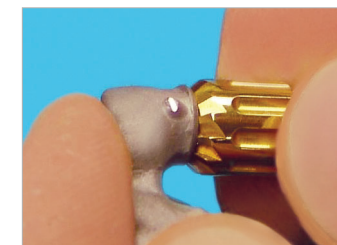
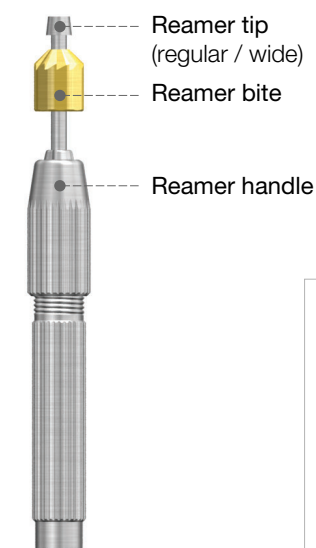
Wax-up

Caution :

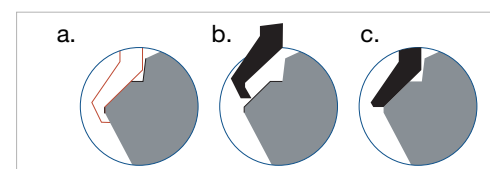
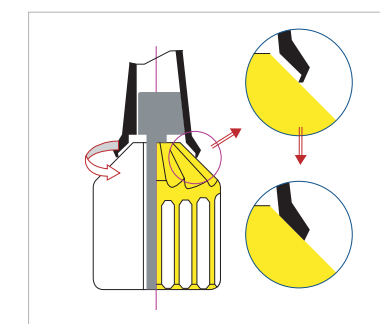
Burn-out plastics are characterized by the fact that they swell up when they are burned out. For that reason, it is important that the outside of the burn-out cylinder is completely covered with wax. The wax burns off and therefore creates sufficient space in the mold for expansion when burned out in the oven.

Step7 Casting and trimming

Finishing reamer



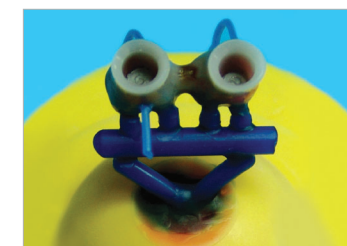
The finishing reamer does not have an automatic stopping mechanism. Only remove as much as necessary, until the protruding lip is flush with the implant shoulder. And working under a stereomicroscope.



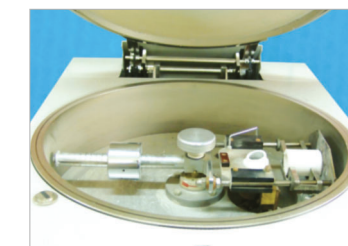
- Snapped on the shoulder due to the burn-out cylinder's elasticity before casting
- Unfit due to metal inelasticity after casting
- Fit after reaming using a reamer

Prosthetic procedure

Once the framework is cast, remove completely the locking area of the casting metal using a reamer before checking its fit with the analog.



Spruing



High-frequency casting



Casting body

Caution :

follow the manufacturer's direction regarding the investing material, annealing temperature and casting metal requirements

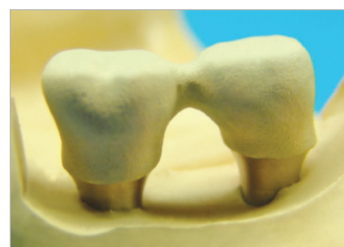
Step8 Porcelain build-up

Prosthetic procedure

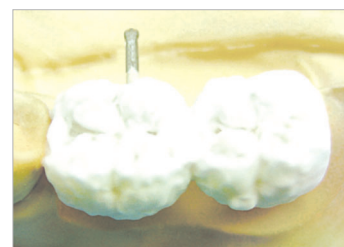
Proceed with porcelain build-up on the adjusted framework according to the anatomical form of teeth.



Finishing



Opaque



Build up



Firing



Contouring



Final prosthesis

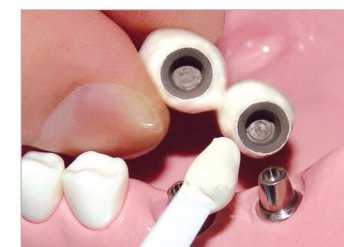
Note :

Natural tooth is elastically grafted and maintained by the periodontal tissue within the alveolar bone. In contrast, an implant adheres to the bone; hence its inelastic and firm maintenance. Accordingly, a load on the implant crown or bridge directly affects the bone, possibly causing damage. Therefore, during lateral occlusion, avoid building a cusp that causes overload, and an occlusion design that makes the vertical masticatory force apply in the direction of the longer shaft of the implant and antagonist teeth should be attempted as much as possible.

Step9 Cementation & delivering

Prosthetic procedure

Check the passive fit of the prosthesis margin, and verify the occlusion and esthetics. If necessary, adjust the occlusion and cement with temporary cement in place.



Cementing



Final prosthesis mounted

Caution :

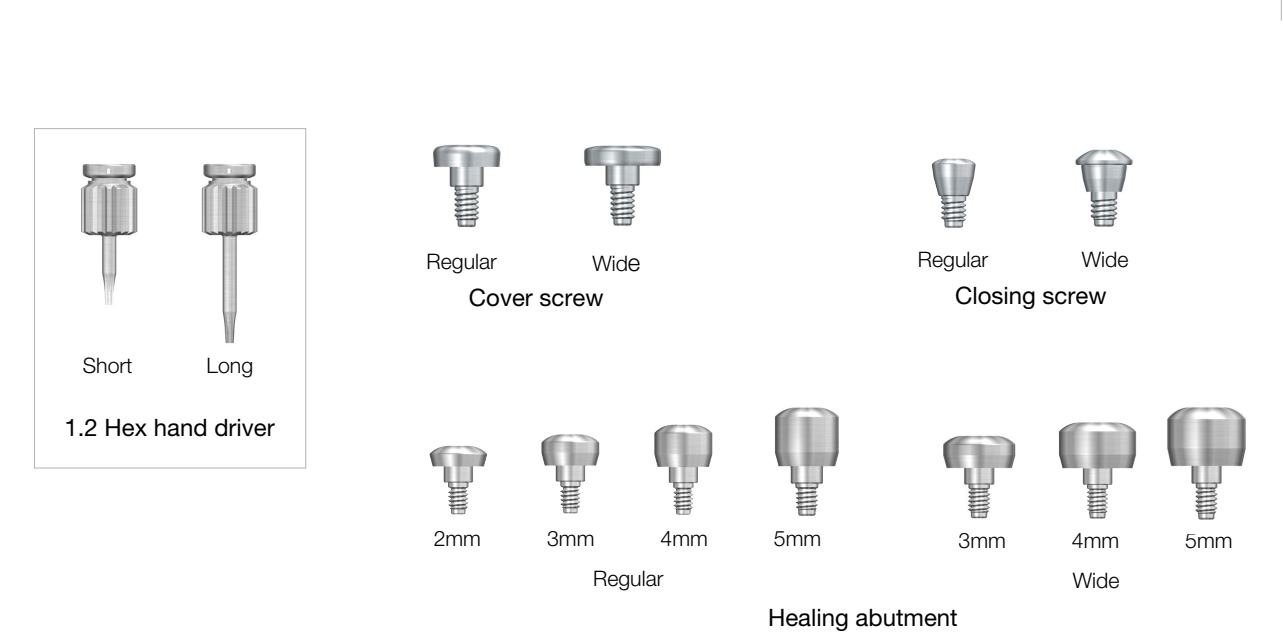
If the margin exists in the subgingival area, check via X-ray

Patient follow-up :

Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup. Later, if the progress and hygienic condition are satisfactory, perform the cementation with permanent cement.

Step1 Separating the Healing abutment

Components & instruments

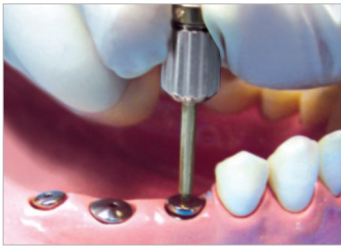


Prosthetic procedure

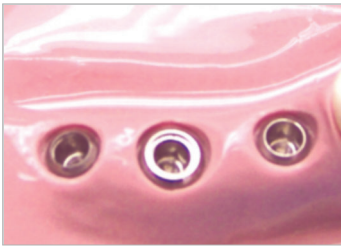
Separate the Cover screw or Healing abutment using a 1.2 hex hand driver.
To prevent the patient from swallowing the hand driver, tie dental floss to the spinner on the handle of the driver.



765 Cover screw



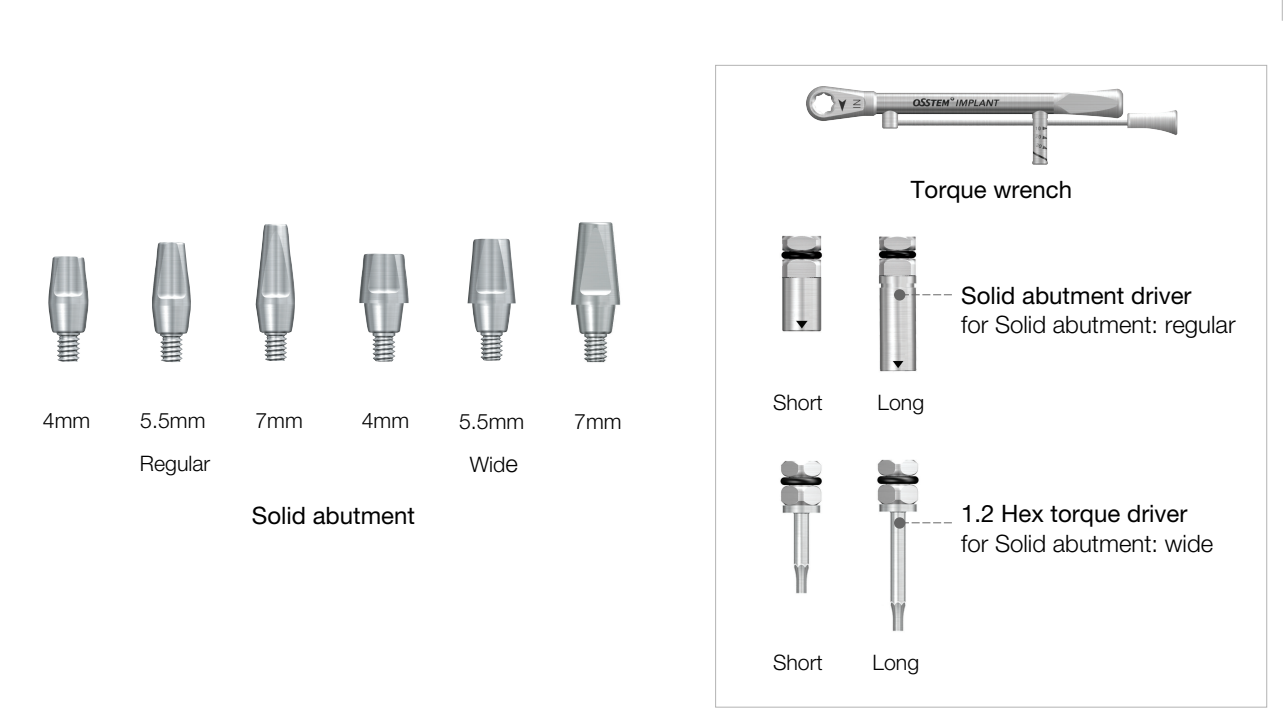
Separating the Cover screw using a driver



After the separation of the Cover screw

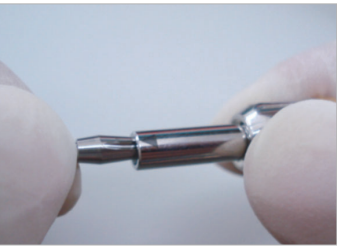
Step2 Selecting and placing the abutment

Solid abutments & instruments



Prosthetic procedure

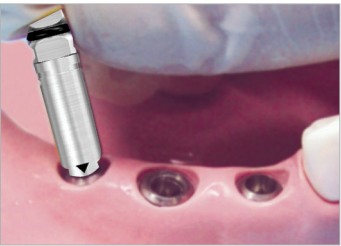
Check the occlusion gap and select the abutment with an appropriate height.
Bring the abutment to the mouth with the appropriate driver and insert it into the implant. Use finger pressure to tighten it down. And then use a 1.2 hex torque driver or Solid abutment driver and a torque wrench to tighten **30Ncm**. The Solid abutment is in place and ready for the impression to be taken. Once the abutment has been torqued in, it should not be removed.



Aligning the groove of abutment with the arrow on the driver shaft

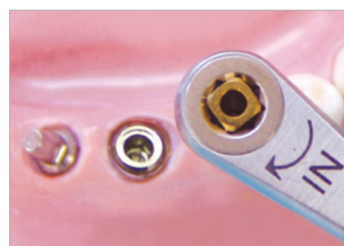


Inserting the abutment into the driver.

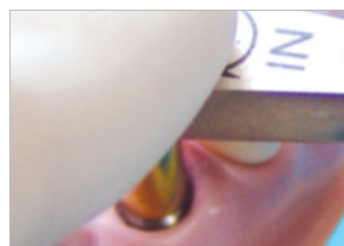


Tightening the implant and abutment

Prosthetic procedure



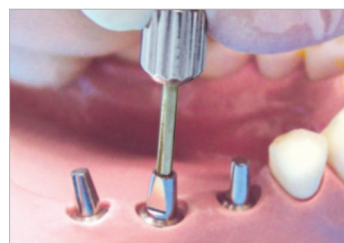
Connecting the Solid abutment and the implant



Tightening the abutment with 30Ncm



Complete connecting the regular Abutment with a Solid abutment driver.



Connecting the wide abutment using a 1.2 hex hand driver



Tightening the abutment with 30Ncm



The attached Solid abutment

* Important : tightening torque = 30Ncm

Step3 Adjusting the path and taking the impression

Solid impression caps



Regular



Wide

Prosthetic procedure

If it is required the modification, maintain the ideal condition of the abutment through sufficient irrigation and adequate preparation.



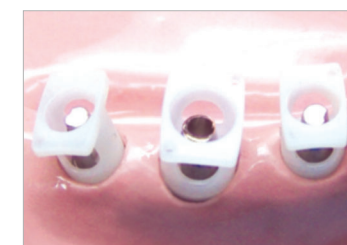
Preparation inside the oral cavity



Prepared abutment

Both the implant shoulder and the abutment must be cleaned of any blood or tissue prior to the impression procedure. If a wide Solid abutment is used, the occlusal opening of the abutment must be sealed with wax or guttapercha. And then the Solid impression caps are pushed over the abutment, and onto the implant shoulder, until the cap "clicks" into place. The impression cap is turned gently in order to check that it is securely snapped onto the implant shoulder. When the cap is seated correctly, it can be rotated smoothly on the implant.

Impression material is injected through the occlusal and lateral openings and an impression is taken. Check for any defect on the impression. Send it to the lab.



Placing the impression cap



Taking the impression



Finished the impression

Step4 Placing the protect cap

Solid protect caps



Prosthetic procedure

Cover the abutment with the protect cap to eliminate the foreign body sensation felt by the patient and protect the abutment while constructing the upper prosthesis. Place the protect cap by pressing with the finger until it snaps “clicks”.

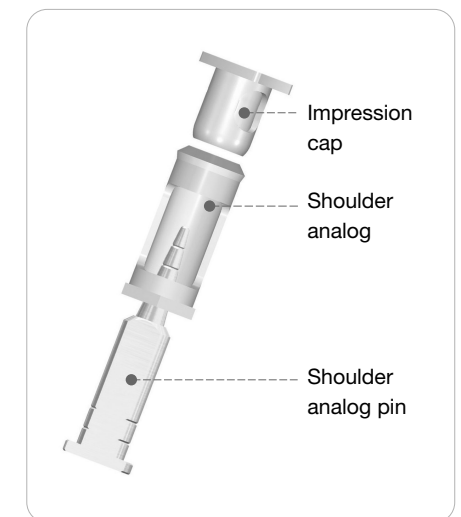
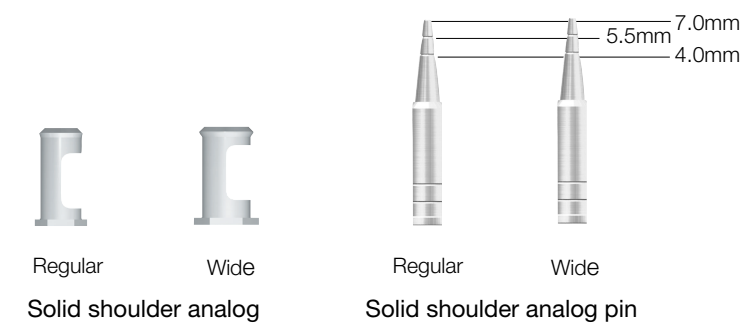
You can easily fabricate a temporary prosthesis using the protect cap in cases that temporary prostheses are necessary.



Protect cap placed in the oral cavity

Step5 Fabricating the working model

Solid shoulder analog & shoulder analog pin



Note :

A shoulder analog pin is designed to be 7 mm. Use a bur to adjust to the same length as the modified abutment. Making it rough improves attachment to the stone.

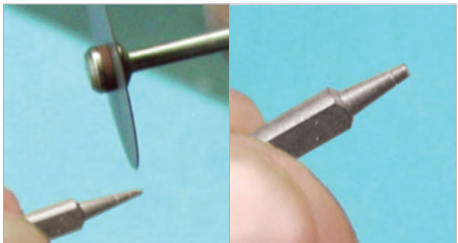
The first notch indicated in the pin is 4 mm abutment, and the second notch 5.5 mm abutment

Prosthetic procedure

The regular or wide Solid shoulder analog is repositioned in the impression; the shoulder analog “clicks” into place. The shoulder analog is turned gently in order to check that it has been snapped on securely. When the shoulder analog has been placed correctly, it can be rotated smoothly. When creating a model, a shoulder analog pin is applied to reinforce the strength of the plaster abutment post. The analog pin strengthens the plaster die in order to reduce the risk of die breaking



Repositioning the shoulder analog



Adjusting the analog pin length



Adapting to the analog pin

Form artificial gum and perform boxing. Fill the abutment area with stone evenly through light vibration, and then insert a shoulder analog pin. Make a working model by pouring stone into the remaining area.



Boxing after forming artificial gum



Fine injection of mixed plaster into the analog



Adapting to the analog pin



Pouring stone



Completed stone working model



Completed working model made of modeling resin

※ Hint :

In case of possible damage to the abutment post, use modeling resin (polyurethane type) with high edge stability for an abutment post. Since resin may undergo shrinking, follow the manufacturer’ s instructions carefully

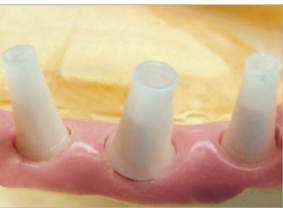
Step6 Framework & porcelain build-up

Solid burn-out cylinders



Prosthetic procedure

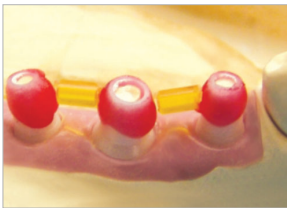
The framework and ceramic build-up procedures are the same as steps 6-8 for Solid abutment (non-modified abutment)



Fastening the plastic coping for the bridge



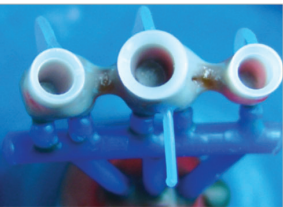
Adjusting the length using a bur



Resin application



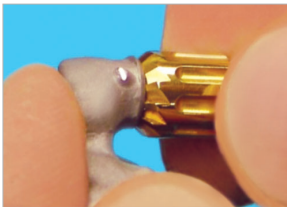
Waxing up



Spruing



Casting body



Reaming



Finishing



Opaque



Build-up



Firing



Final prosthesis

Step7 Cementation & delivering

Prosthetic procedure

Check the passive fit of the prosthesis margin, and verify the occlusion and esthetics. If necessary, adjust the occlusion and cement with temporary cement in place.



Cementing



Mounting the final prosthesis

Caution :
If the margin exists in the subgingival area, check via X-ray

Patient follow-up :

Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup. Later, if the progress and hygienic condition are satisfactory, perform the cementation with permanent cement.



Excellent Solid Abutment

- **Indications**
Excellent Solid abutments can be used in both anterior and posterior areas of the mouth for cement retained crown and bridge restorations.
- **Features & benefits**
 - The Excellent Solid abutment has increased body volume that provides standard body volume and strength even after preparation to correct the path.
 - Minimized screw loosening owing to contact with the 8° Morse taper connection, enabling perfect sealing
 - The solid one-piece body made of titanium alloy provides high mechanical properties.
 - Abutment designed with an optimal height (4, 5.5, 7 mm), considering the average crown length of a natural tooth and allowance space for constructing a prosthesis
 - Color-coded components for identification purposes
- **Material**
 - Ti-6Al-4V
- **Tightening torque** : 30Ncm

Excellent Solid Abutment

Product list for prosthetic procedure

Product list		
Abutment		
Protect cap		
Impression component	for non-modified abutment	for modified abutment
Lab analog		
Burn-out cylinder		
Finishing reamer		
Driver		
Torque wrench		

Step1 Separating the Healing abutment
Components & instruments

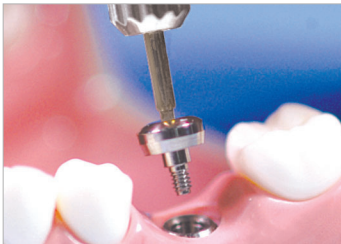


Prosthetic procedure

Separate the cover screw or Healing abutment using a 1.2 hex hand driver.
To prevent the patient from swallowing the Hand driver, tie dental floss to the spinner on the handle of the driver.



Healing abutment

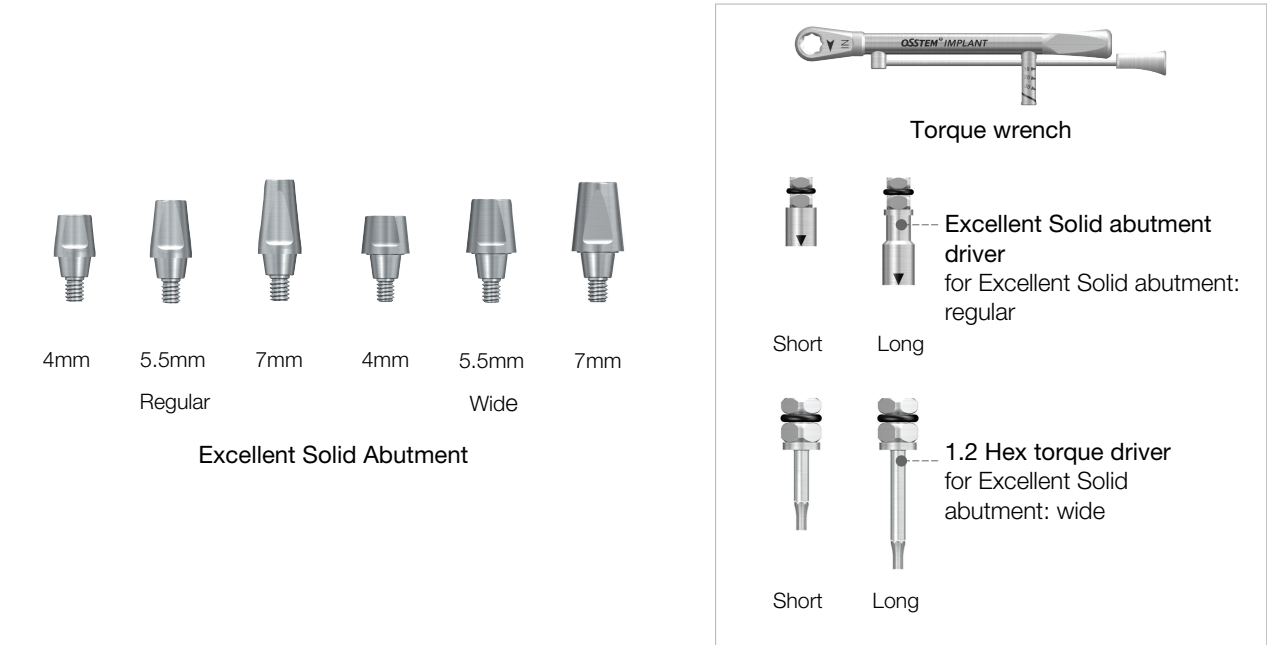


Separating the Healing abutment using a driver



After the separation of the Healing abutment

Step2 Selecting and placing the abutment
Excellent Solid abutments & instruments



Prosthetic procedure

Check the occlusion gap and select the abutment with an appropriate height.
Bring the abutment to the mouth with the appropriate driver and insert it into the implant. Use finger pressure to tighten it down. And then use a 1.2 hex torque driver or Excellent Solid abutment driver and a Torque wrench to tighten **30Ncm**. The Excellent Solid abutment is in place and ready for the impression to be taken. Once the abutment has been torqued in, it should not be removed.

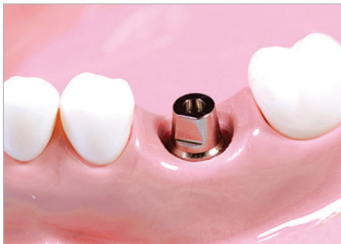
* Important : tightening torque = 30Ncm



Connecting the implant and abutment

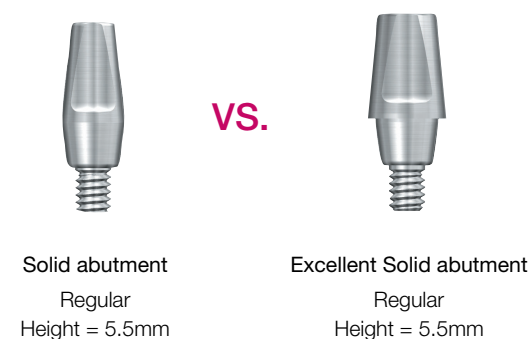


Tightening the abutment with 30Ncm



The attached Excellent Solid abutment

Excellent Solid abutment...

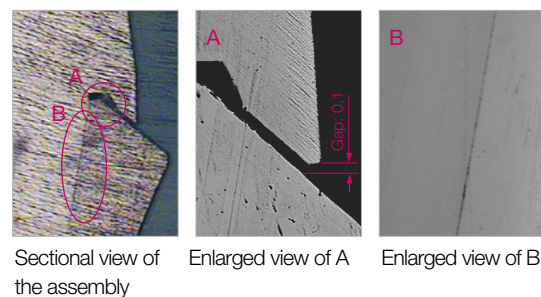


Features of Excellent Solid abutment:

The Excellent Solid abutment has increased body volume that provides appropriate body volume and strength even after preparation to correct.

For gold restoration, the amount of precious metal is reducible based on the increased volume. As such, it is economic, and direct impression taking is easy. The procedure for prosthesis is the same as that for a Solid abutment.

Precision fitness picture of the Excellent Solid abutment

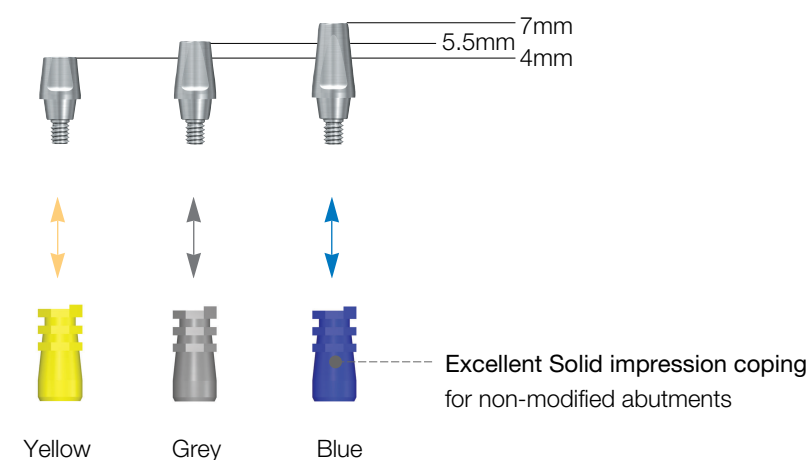


Design of Excellent Solid abutment connection :

The Excellent Solid abutment is structured such that its Morse taper area (B) is always in contact to prevent screw loosening or fracture. In case the gap in the connection part (A) is in contact, the Morse taper may not come into contact.

Step3 Taking the impression

Excellent Solid impression copings



Color-coding :

In order to facilitate identification, the Excellent Solid impression copings are color-coded :

Height 4.0mm = yellow

Height 5.5mm = grey

Height 7.0mm = blue

Caution :

Since the plastic impression products are not sterilized, treatment using a general reagent is recommended. Avoid high heat or radioactivity to prevent loss of elasticity and deformation.

Prosthetic procedure

Both the implant shoulder and the abutment must be cleaned of any blood or tissue prior to the impression procedure. If a wide Excellent Solid abutment is used, the occlusal opening of the abutment must be sealed with wax or guttapercha. Select an impression coping that is the same size of the abutment and align the flat surface of the Excellent Solid abutment with the upper projecting part of the impression coping and press until it is locked with a clicking sound. And then impression material is injected around the impression coping and an impression is taken. Check for any defect on the impression. Send it to the lab.



Placing the impression coping



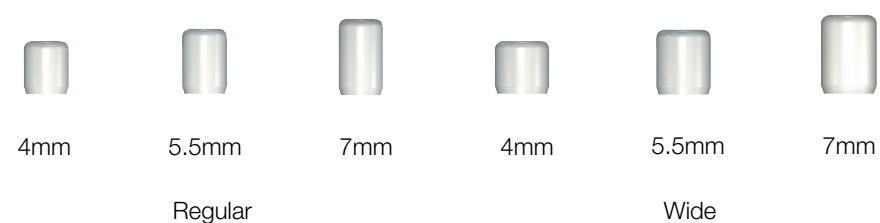
Injecting impression material around the impression coping



Finished the impression

Step4 Placing the protect cap

Excellent Solid protect caps



Prosthetic procedure

Cover the abutment with the protect cap to eliminate the foreign body sensation felt by the patient and protect the abutment while constructing the upper prosthesis. Place the protect cap by pressing with the finger until it snaps “clicks”.

You can easily fabricate a temporary prosthesis using the protect cap in cases that temporary prostheses are necessary.



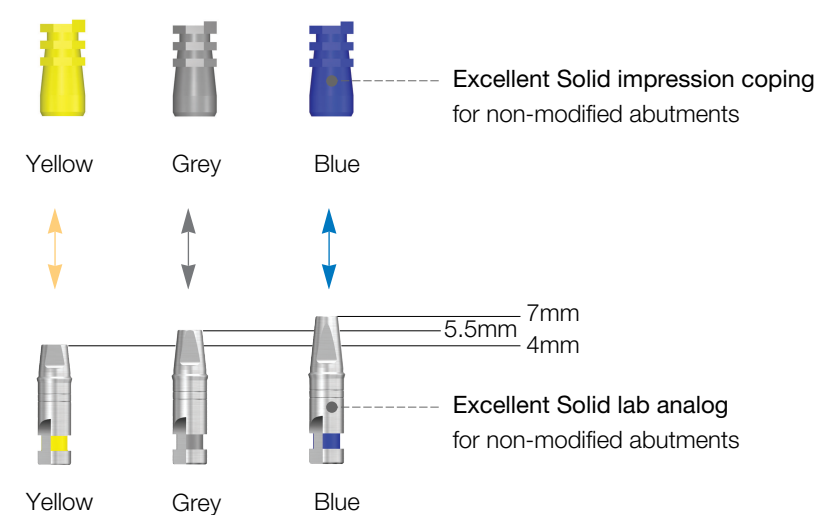
Protect cap placed in the oral cavity



Resin temporary crown

Step5 Fabricating the working model

Excellent Solid lab analogs



Color-coding :

In order to facilitate identification, the Excellent Solid lab analogs are color-coded :

Height 4.0mm = yellow

Height 5.5mm = grey

Height 7.0mm = blue

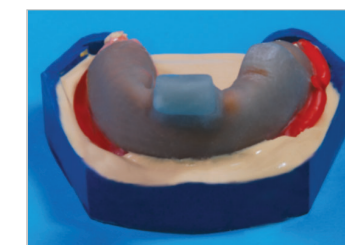
Prosthetic procedure

Select the appropriate analog (the color of impression coping in the impression identifies which analog must be used). Align the flat side of the analog with the flat side of the impression coping. Insert the analog into the impression coping until it snaps “clicks” securely into place. Pour up in stone.

If the margin is set in the sub-gingival area, it is necessary to form artificial gum first before creating a working model with stone.



Positioning an analog and forming artificial gum before boxing



Pouring plaster



Finished working model

Step6 Wax up

Excellent Solid burn-out cylinders

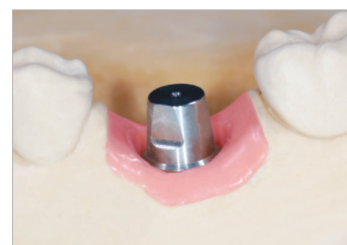


Note :

You can easily connect the single burn-out cylinder by aligning the flat side of the analog with the upper part since the internal flat side and upper projecting part is in the same direction.

Prosthetic procedure

Select the appropriate burn-out cylinder and snap it “clicks” over the analog. Adjust the length according to the height of the analog and perform the wax-up procedure for the occlusal surface and resin facing.



Analog on the working model



Fastening the single burn-out cylinder



Adjusting the length using a bur

Prosthetic procedure



Completed adjustment



Wax-up procedure



Labial surface opening



Coating adhesive



Beading



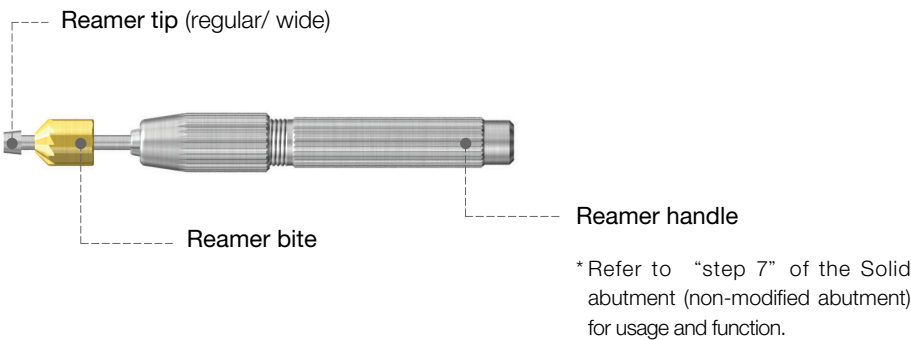
Spruing

Caution :

Burn-out plastics are characterized by the fact that they swell up when they are burned out. For that reason, it is important that the outside of the burn-out cylinder is completely covered with wax. The wax burns off and therefore creates sufficient space in the mold for expansion when burned out in the oven.

Step7 Casting and trimming

Finishing reamer



Prosthetic procedure

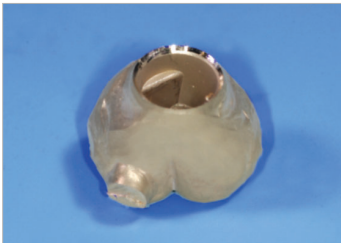
After gold casting is completed, remove the lip (of the burn-out cylinder) inside the casting body using a reamer. Finally, check the fit on a model and start resin facing.



Casting body



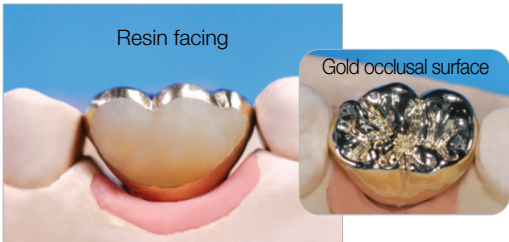
Reaming



Completed reaming



Fitting on the model



Final prosthesis

Caution:
follow the manufacturer's direction regarding the investing material, annealing temperature and casting metal requirements

Step8 Selecting and placing the abutment

Prosthetic procedure

Check the passive fit of the prosthesis margin, and verify the occlusion and esthetics. If necessary, adjust the occlusion and cement with temporary cement in place.



Cementing



Mounting the final prosthesis

Caution :
If the margin exists in the subgingival area, check via X-ray

Patient follow-up :

Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup. Later, if the progress and hygienic condition are satisfactory, perform the cementation with permanent cement.



ComOcta Abutment

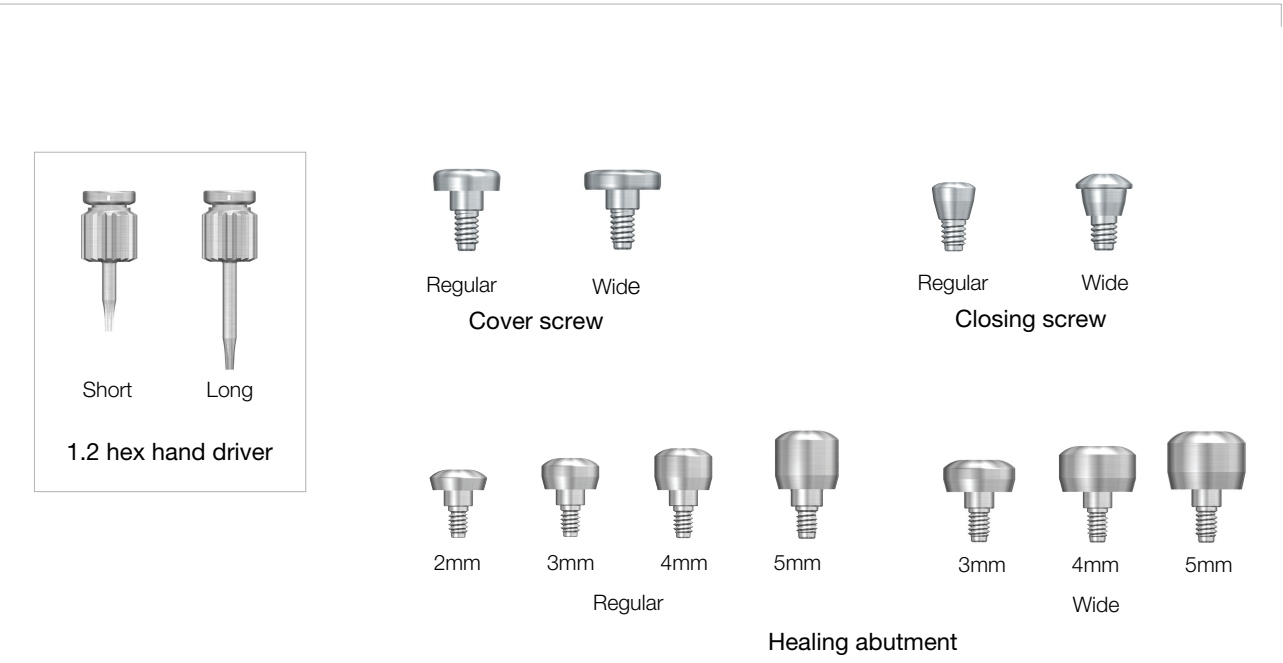
- **Indications**
ComOcta abutments can be used in both anterior and posterior areas of the mouth for cement retained crown and bridge restorations.
- **Features & benefits**
 - Capable of milling the abutment on the model
 - Abutment and screw separated into two pieces
 - An octa located at the base section for the purpose of positioning
 - Capable of precise impression and accurate realization of margin for constructing prosthesis
 - Abutment designed with an optimal height (4, 5.5, 7 mm), considering the average crown length of a natural tooth and allowance space for constructing a prosthesis
- **Material**
 - Abutment : Ti-6Al-4V
 - Screw : Ti-6Al-4V
- **Tightening torque : 30Ncm**

Product list for prosthetic procedure

Product list	
Abutment	
Abutment screw	
Impression coping	Transfer type (for close tray)
	Pick-up type (for open tray)
Lab analog	
Driver	
Torque wrench	

Step1 Separating the Healing abutment

Components & instruments



Prosthetic procedure

Separate the Cover screw or Healing abutment using a 1.2 hex hand driver. To prevent the patient from swallowing the hand driver, tie dental floss to the spinner on the handle of the driver.



Healing abutment



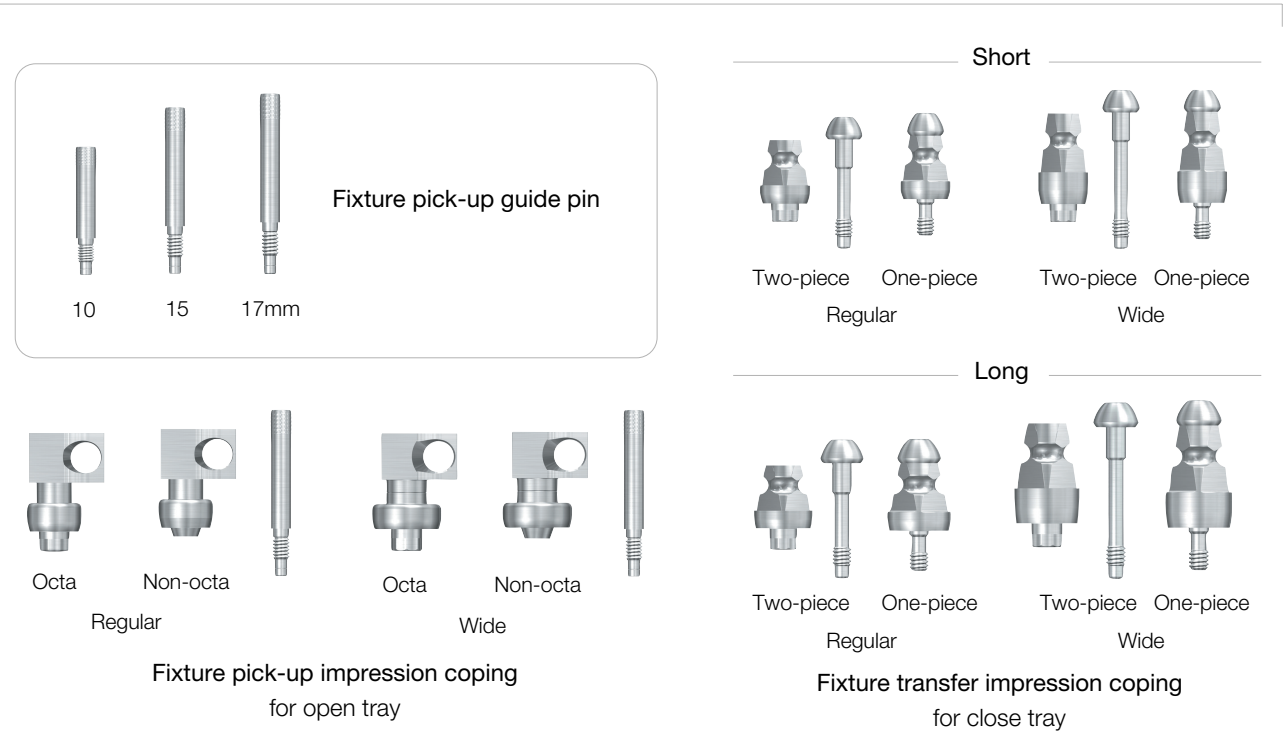
Separating the Healing abutment using a driver



After the separation of the Healing abutment

Step2 Connecting the impression coping

Impression system



Prosthetic procedure

Both the implant shoulder and the internal connection must be cleaned of blood and tissue prior to the impression procedure. The impression coping is pushed onto the implant and tightened with the integral guide pin using a 1.2 hex hand driver. Check the connection between the implant and impression coping via X-ray.



Positioning the impression coping

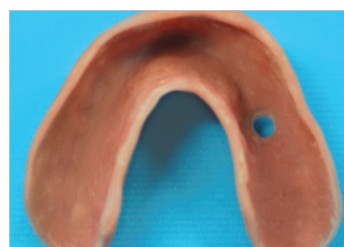


Connecting with the guide pin

Step3 Taking the impression

Prosthetic procedure

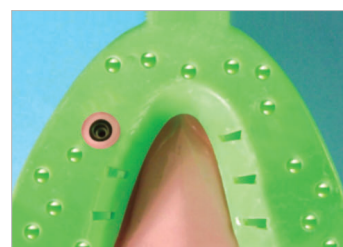
Form a tiny hole in a prepared individual tray to allow the guide pin to protrude outside the tray. Check the fit of the tray to see whether the pin head is seen through the hole.



Individual open tray



Checking the pin hole



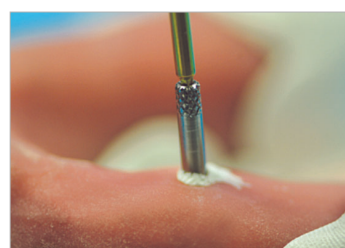
Open tray built from a ready-made tray

Tip : A ready-made tray may be used as an individual tray by creating a hole in it.

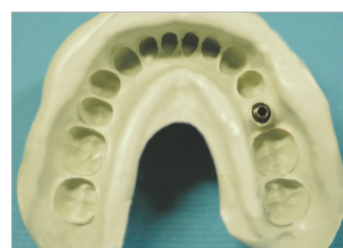
Prepare the rubber impression material and inject around the impression coping completely. Place the tray filled with impression material and take the impression. After the impression material is hardened, separate the tray from the oral cavity by loosening the guide pin and check for defects on the impression. Send it to the lab.



Cleaned surroundings of the pinhole



Separating the guide pin



Finished the Impression

Caution :

Wipe off the impression material around the guide pin hole in order to avoid any complication when separating the tray

Step4 Fixing the Fixture lab analog

Fixture lab analogs



Regular



Wide

Color-coding :

In order to facilitate identification, the Fixture lab analogs are color-coded :

Regular = green

Wide = blue

Prosthetic procedure



Reconnecting the Healing abutment

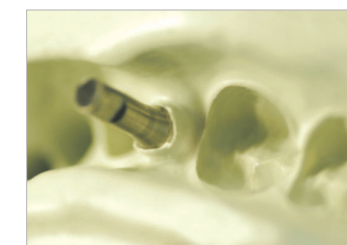
After taking the impression, reconnect the healing abutment to the implant using a 1.2 hex hand driver.

Otherwise, the temporary crown made at the laboratory should be restored.

The lab analog with the same size as the platform is fixed on the Fixture pick-up impression coping inside the impression using the Fixture pick-up guide pin. Do not forget to check the passivity of the connection between the impression coping and lab analog.



Fixing the lab analog to the impression coping



Lab analog positioned on the impression

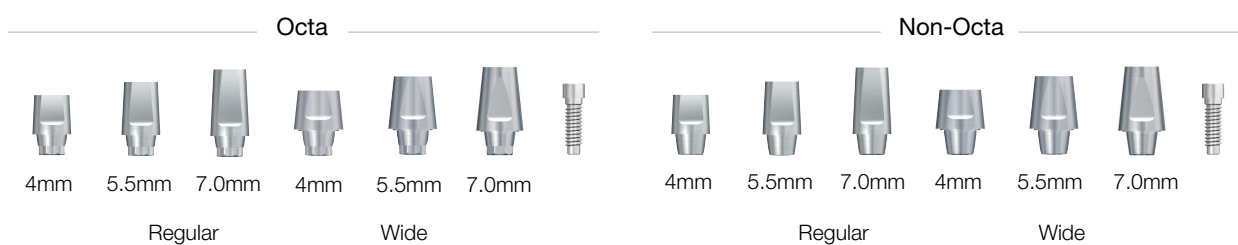
Important :

When tightening the Fixture pick-up guide pin, grasp the retention section of the lab analog in order to prevent the impression coping from rotating.

It is easy to make a mistake at this step which leads to incorrect prostheses.

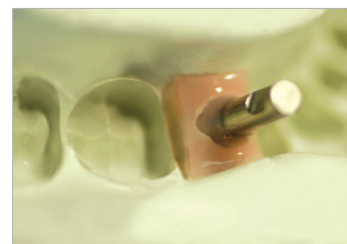
Step5 Fabricating the working model

ComOcta abutments



Prosthetic procedure

Form artificial gum around the area of connection of the coping and the analog (after hardening, clean the adjacent area). After boxing, form the working model without applying force to the impression by filling stone from one side.



Forming artificial gum



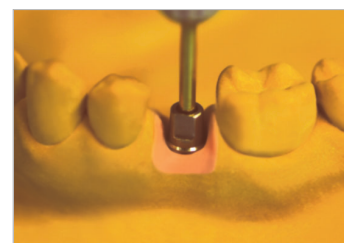
Injecting stone after boxing



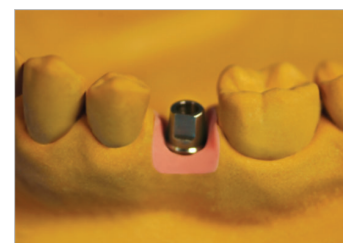
Completed working model

Select an abutment that is appropriate for the space of implant platform and antagonist teeth.

After fitting the selected abutment to octa inside the implant, connect a screw to the analog using a 1.2 hex hand driver.



Connecting the abutment to the analog using a driver



Completed abutment connection on the model

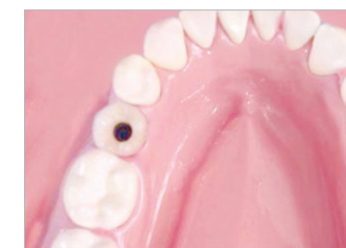
Constructing the superstructure

The doctor can fabricate an appropriate prosthesis considering the oral environment and prognosis of the patient.

Option A Cement retained crown



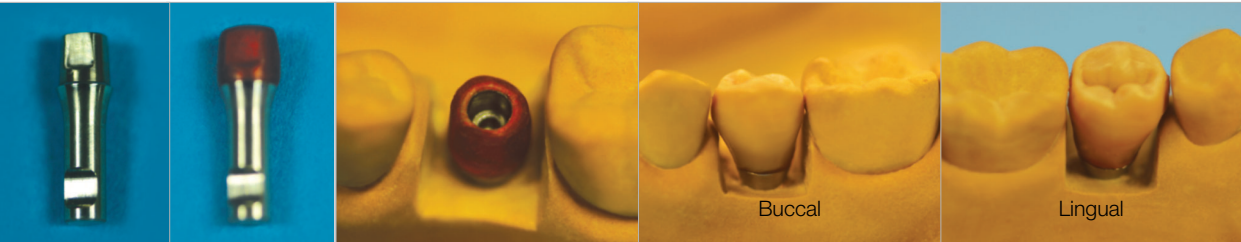
Option B Combination retained crown



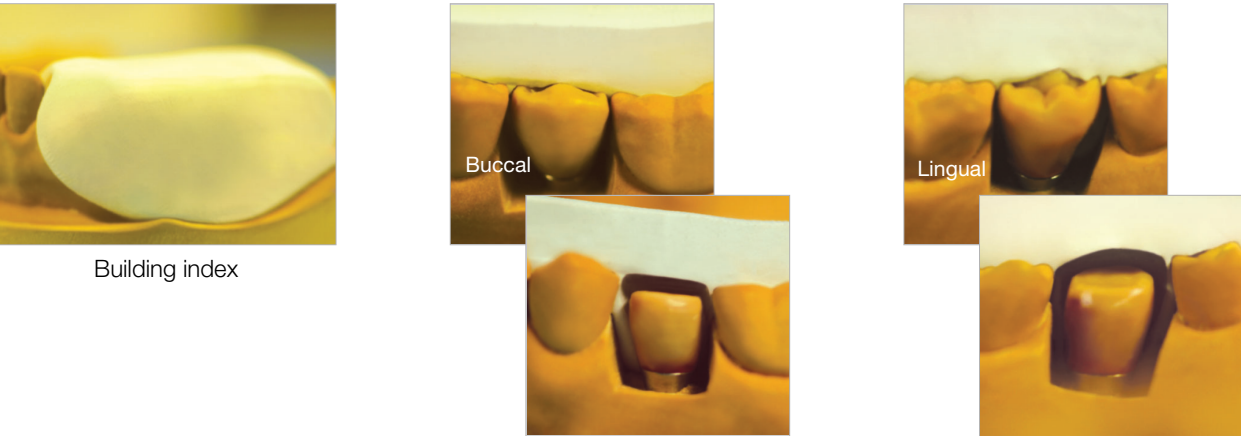
Step6 Wax up & cut back

Prosthetic procedure

Connect an abutment to a dummy fixture or the lab analog, and build a resin cap outside the model. Full wax up the cap, and take a silicon index using putty. During the cut-back procedure for porcelain build-up, this is used as a criterion for measuring the uniformity of the cut-back. Used for cast adjustment and form modification, it plays the role of a guide in building precise prosthesis.



Forming resin cap by fastening the abutment to the analog Fastening the resin cap on the model Full wax-up



Building index Performing the proper cut-back by checking the index

Step7 Casting & porcelain build-up

Prosthetic procedure

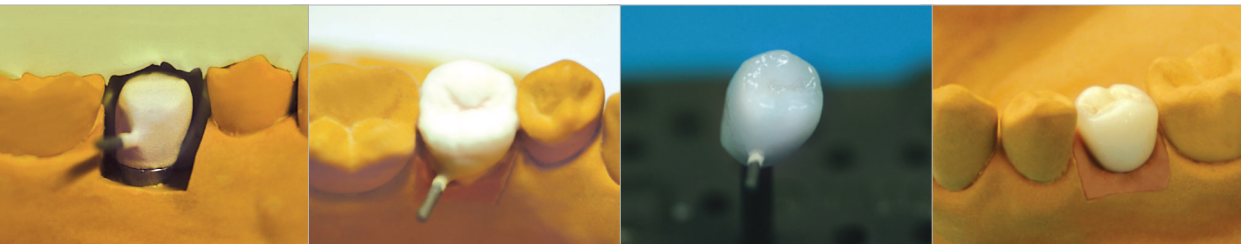
Complete the ceramic building in the conventional manner as follows :
Spruing → investment → burn-out → casting → finishing → cleansing → degassing → opaque → build-up → firing
→ final prosthesis
Finally, send the final prosthesis to the clinic.



Copping wax-up Spruing Investment Casting Casting body



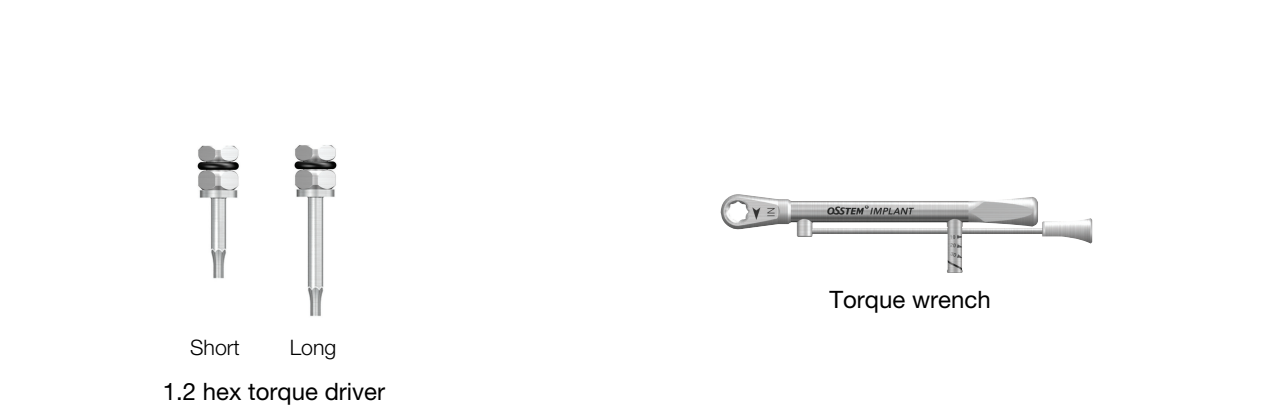
Finishing Cleansing Degassing



Opaque Build-up Firing Final Prosthesis

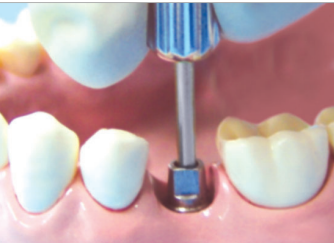
Step8 Placing the abutment

Instruments



Prosthetic procedure

Remove the Healing abutment and fit an abutment to the octa inside the implant. Use finger pressure to tighten abutment screw down and then it is tightened on 30Ncm with the 1.2 hex torque driver and a torque wrench.



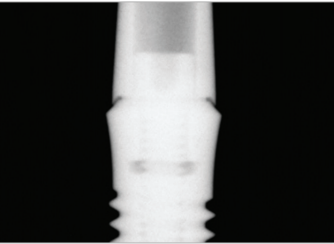
Tightening the implant and abutment



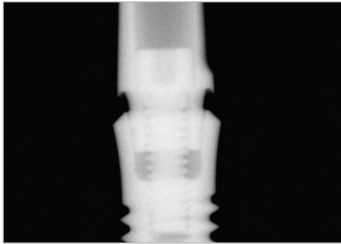
Tightening the abutment with 30Ncm

* Important :
tightening torque = 30Ncm

Caution :
Check the preciseness of the fit between the implant and abutment after connecting by taking an x-ray.



Correct connection between ComOcta abutment and implant (X-ray)



Incorrect connection between ComOcta abutment and implant (X-ray)

Step9 Cementation & delivering

Prosthetic procedure

Check the passive fit of the prosthesis margin, and verify the occlusion and esthetics. Block out the screw access hole with a cotton pellet and adjust the occlusion if necessary, then cement the abutment on the right location using temporary cement.



Cementing



Mounting the final prosthesis

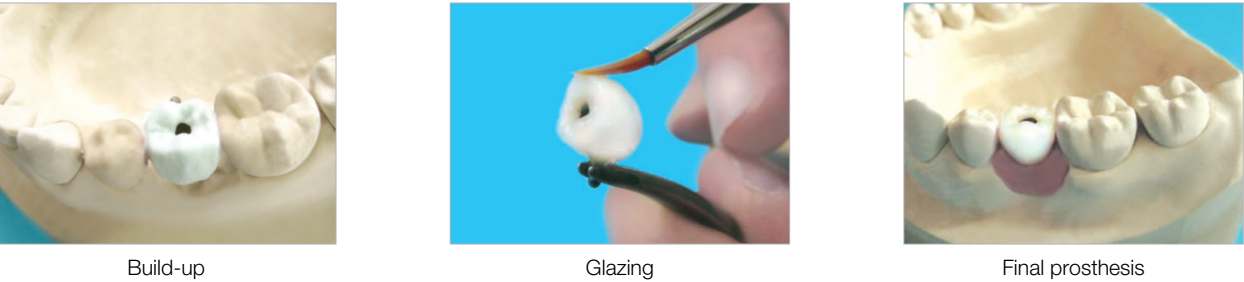
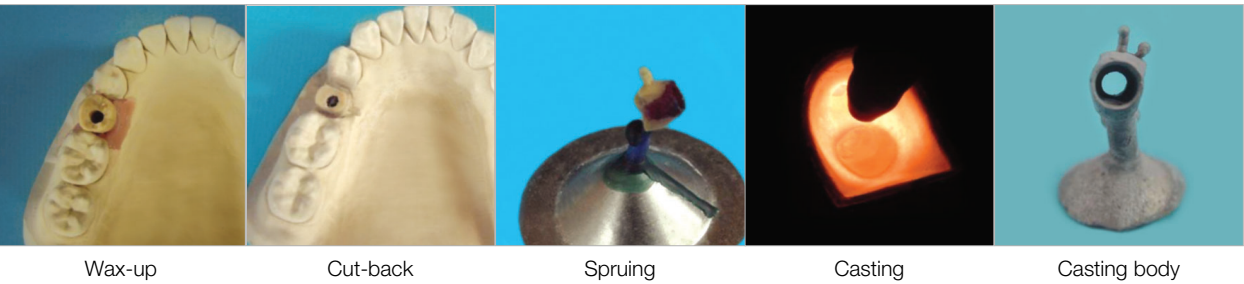
Patient follow-up :

Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup. Later, if the progress and hygienic condition are satisfactory, perform the cementation with permanent cement.

Step6 From wax up to porcelain build-up

Prosthetic procedure

When performing the wax-up procedure, form an access hole for a screw type on the occlusal surface. The following steps are carried out in the same way as in the option A: cement retained crown procedures



Note :
Combination retained prosthesis
As a form of maintaining prosthesis by combining the cement-retained type and the screw-retained type, this prosthesis building method enhances function and convenience of prosthesis by addressing the retrievability problem of the cemented type.

Step7 Cementation & delivering

Prosthetic procedure

Remove the Healing abutment and fit an abutment to the octa inside the implant. Use finger pressure to tighten abutment screw down and then it is tightened on 30Ncm with the 1.2 hex torque driver and a Torque wrench.



Caution :
Check the preciseness of the fit between the implant and abutment after connecting by taking an X-ray.

* Important : Tightening torque = 30Ncm

After adjusting the occlusion, perform the cementation and complete the procedure of forming an occlusal surface inside the oral cavity using resin to address the esthetic problem caused by the occlusal surface hole.



Patient follow-up :



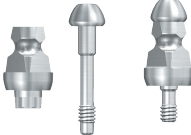
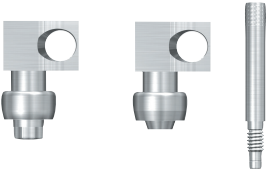


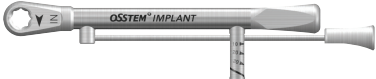
Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup. Later, if the progress and hygienic condition are satisfactory, perform the cementation with permanent cement.



ComOcta Plus Abutment

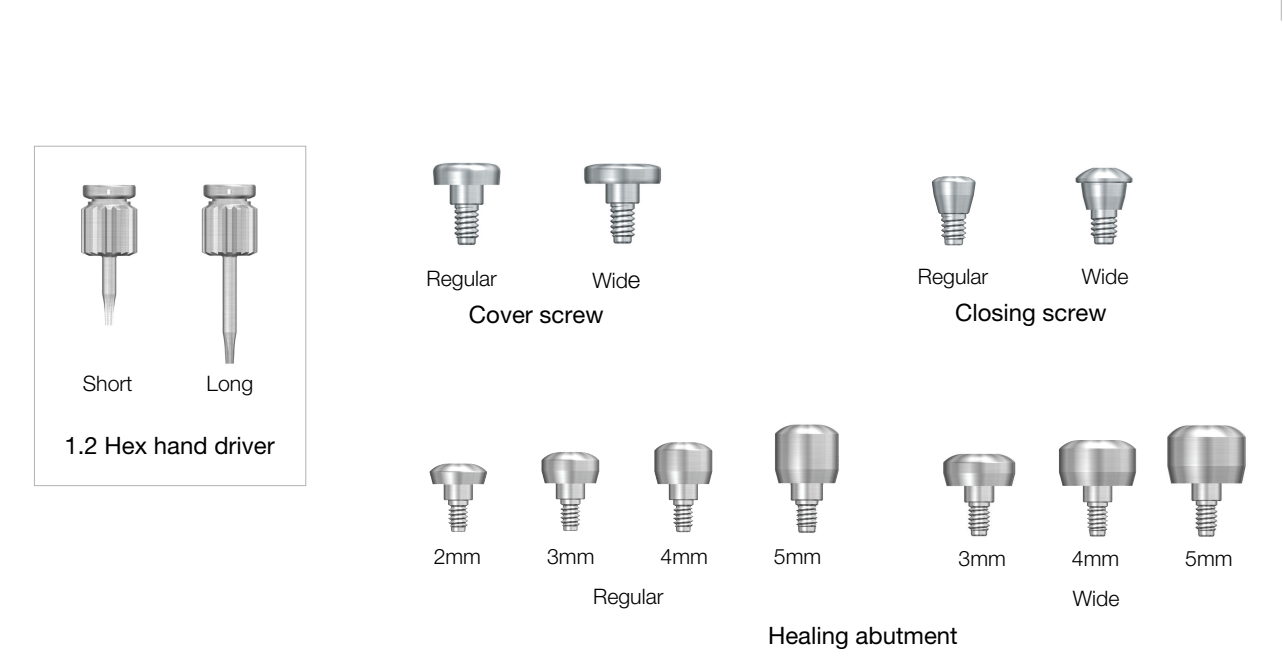
- **Indications**
ComOcta Plus abutments can be used to adjust the margin when thick gingiva is formed as a result of deep grafting of fixture
- **Features & benefits**
 - The margin of the prosthesis is placed on the abutment.
 - Capable of milling the abutment on the model
 - Abutment and screw separated into two pieces
 - An octa located at the base section for the purpose of positioning
 - Instead of a 8° Morse taper contact a shoulder contact of the fixture is made.
 - The gold color rendered by the TiN coating minimizes the gray shading of the crown
- **Material**
 - Abutment : Ti-6Al-4V
 - Screw : Ti-6Al-4V
- **Tightening torque : 30Ncm**

Product list for prosthetic procedure

Product list		
Abutment		
Abutment screw		
Impression coping	Transfer type (for close tray)	Pick-up type (for open tray)
		
Lab analog		
Driver		
Torque wrench		

Step1 Separating the Healing abutment

Components & instruments

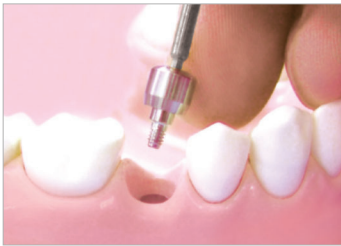


Prosthetic procedure

Separate the cover screw or Healing abutment using a 1.2 hex hand driver.
To prevent the patient from swallowing the hand driver, tie dental floss to the spinner on the handle of the driver.



5|Healing abutment



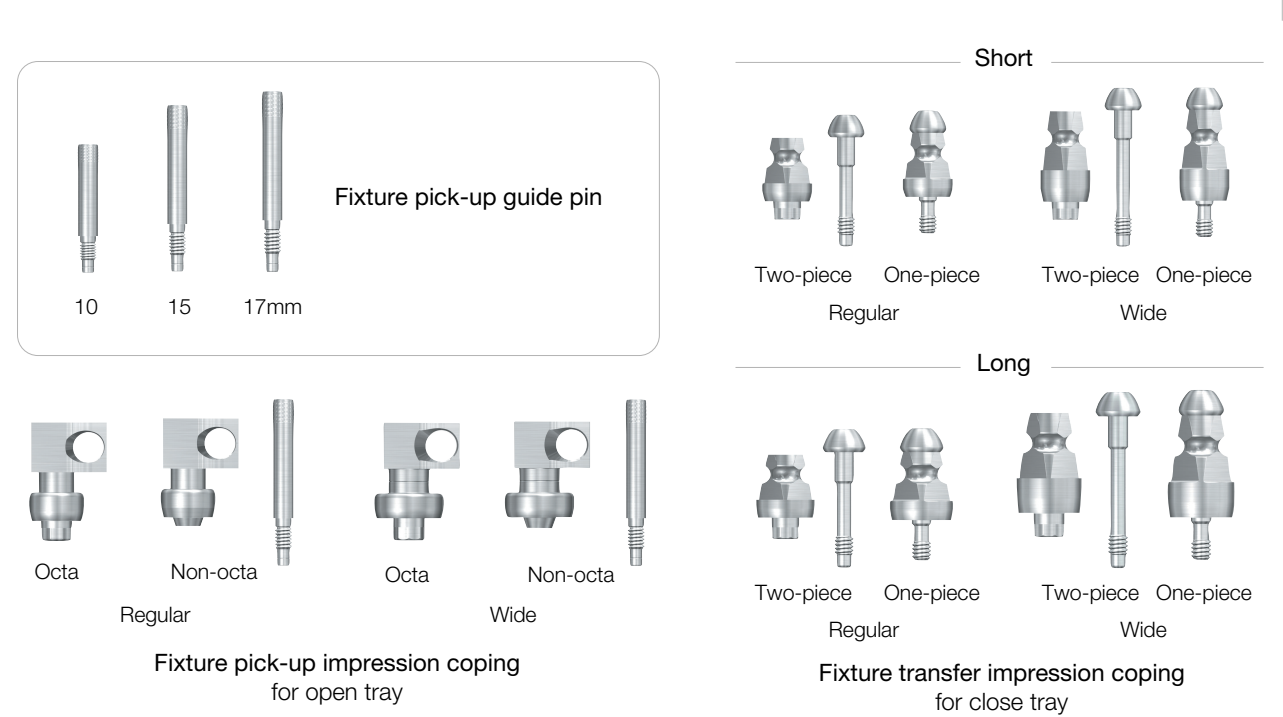
Separating the Healing abutment using a driver



After the separation of the Healing abutment

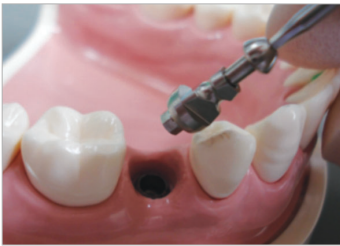
Step2 Connecting the impression coping

Impression system



Prosthetic procedure

Both the implant shoulder and the internal connection must be cleaned of blood and tissue prior to the impression procedure. The impression coping is pushed onto the implant and tightened with the integral guide pin using a 1.2 hex hand driver. Check the connection between the implant and impression coping via X-ray.



Connecting the fixture transfer impression coping



Placing the fixture transfer impression coping

Step3 Taking the impression & fabricating the working model

Fixture lab analogs



Regular



Wide

Color-coding:

In order to facilitate identification, the Fixture lab analogs are color-coded :

Regular = green

Wide = blue

Prosthetic procedure

Prepare the rubber impression material and inject around the impression coping completely. Place the tray filled with impression material and take the impression. After the impression material is hardened, separate the tray from the oral cavity.



Hex hole block-out



Injecting impression material around the impression coping



Taking the impression

Important:

We recommend you to block-out the driver hole of the impression coping (Refer to P105 "Benefit of Fixture transfer impression coping")

Prosthetic procedure

The impression coping is removed from the mouth and connected with the appropriate Fixture lab analog. The coping with analog is then indexed into its corresponding position (the triangle circle structure replicated on the coping) in the impression. Do not forget to check the passivity of the connection between the impression coping and lab analog. Send it to the lab.

Form artificial gum around the area of connection of the coping and the analog (after hardening, clean the adjacent area). After boxing, form the working model without applying force to the impression by filling stone from one side.



The impression



Connecting the coping and lab analog



The triangle circle structure replicated on the coping



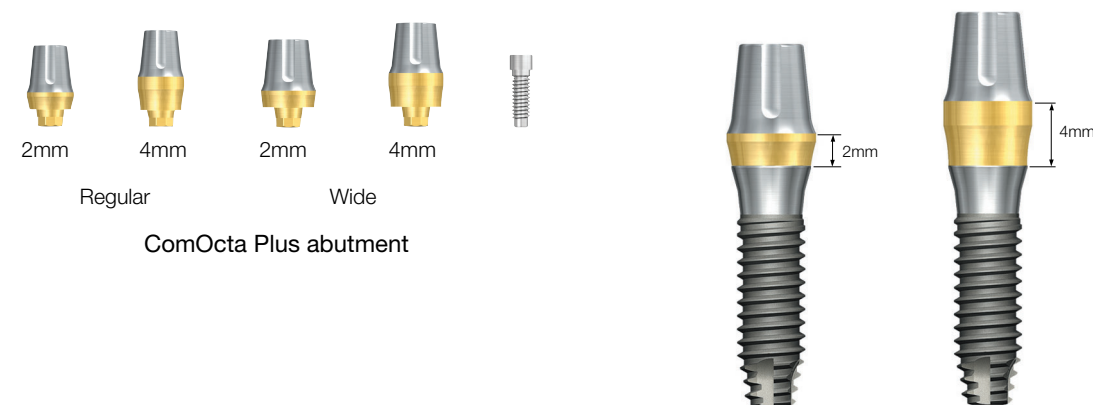
Repositioned coping with analog



Completed working model

Step4 Abutment preparation

ComOcta Plus abutments



Prosthetic procedure

Select an appropriate abutment that is right for the gingival height. After fitting the selected abutment to octa inside the lab analog, connect a screw to the analog using a 1.2 hex hand driver. Modify the abutment and place additional anti-rotation grooves when necessary.



Connecting the abutment on the model



Preparation



Completed preparation

Step5 Wax up & cut back

Prosthetic procedure

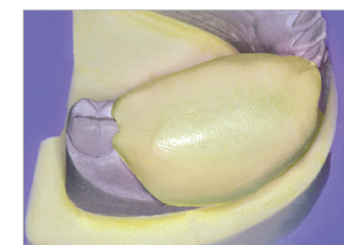
Connect an abutment to a dummy fixture or the lab analog, and build a resin cap outside the model. Fully wax up the cap, and take a silicon index using putty. During the cut-back procedure for porcelain build-up, this is used as a criterion for measuring the uniformity of the cut-back. Used for cast adjustment and form modification, it plays the role of a guide in building precise prosthesis.



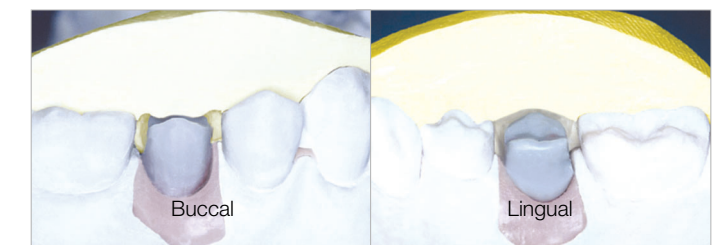
Resin cap



Full wax-up



Building index



Cut-back

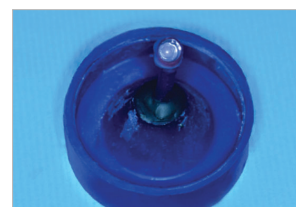
Step6 Casting & porcelain build-up

Prosthetic procedure

Complete the ceramic building in the conventional manner as follows :

Spruing → investment → burn-out → casting → finishing → cleansing → degassing → opaque → build-up → firing → final prosthesis

Finally, send the final prosthesis to the clinic.



Spruing



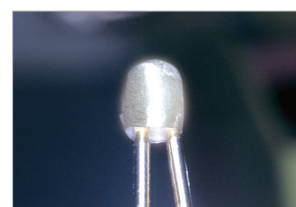
Casting body



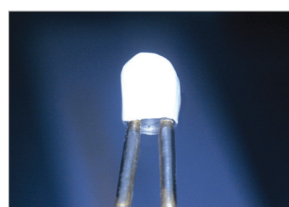
Fit on the model



Cleansing



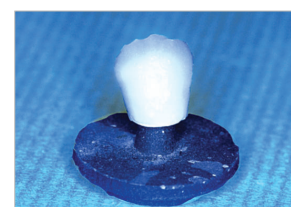
Degassing



Opaque



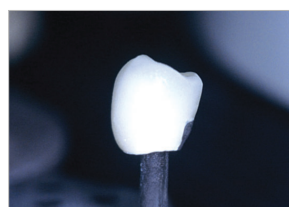
Build-up



Firing



Contouring



Glazing

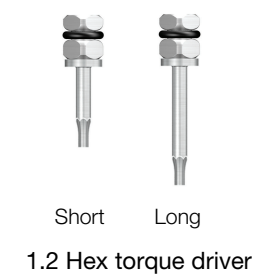


Final prosthesis

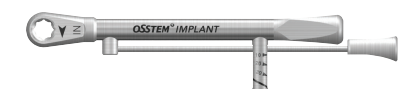


Step7 Cementation & delivering

Instruments



Short Long
1.2 Hex torque driver



Torque wrench

Prosthetic procedure



Connecting the abutment inside the oral cavity



Connect the abutment with 30Ncm



Cementation



Mounting the final prosthesis

After removing the Healing abutment or temporary crown mounted inside the oral cavity, tighten the abutment using a 1.2 hex hand driver. Check the connection via X-ray. Finally, complete the procedure by applying torque of 30 Ncm.

*** Important: tightening torque = 30Ncm**

Check the passive fit of the prosthesis margin, and verify the occlusion and esthetics. Block out the screw access hole with a cotton pellet and adjust the occlusion if necessary, then cement the abutment on the right location using temporary cement.

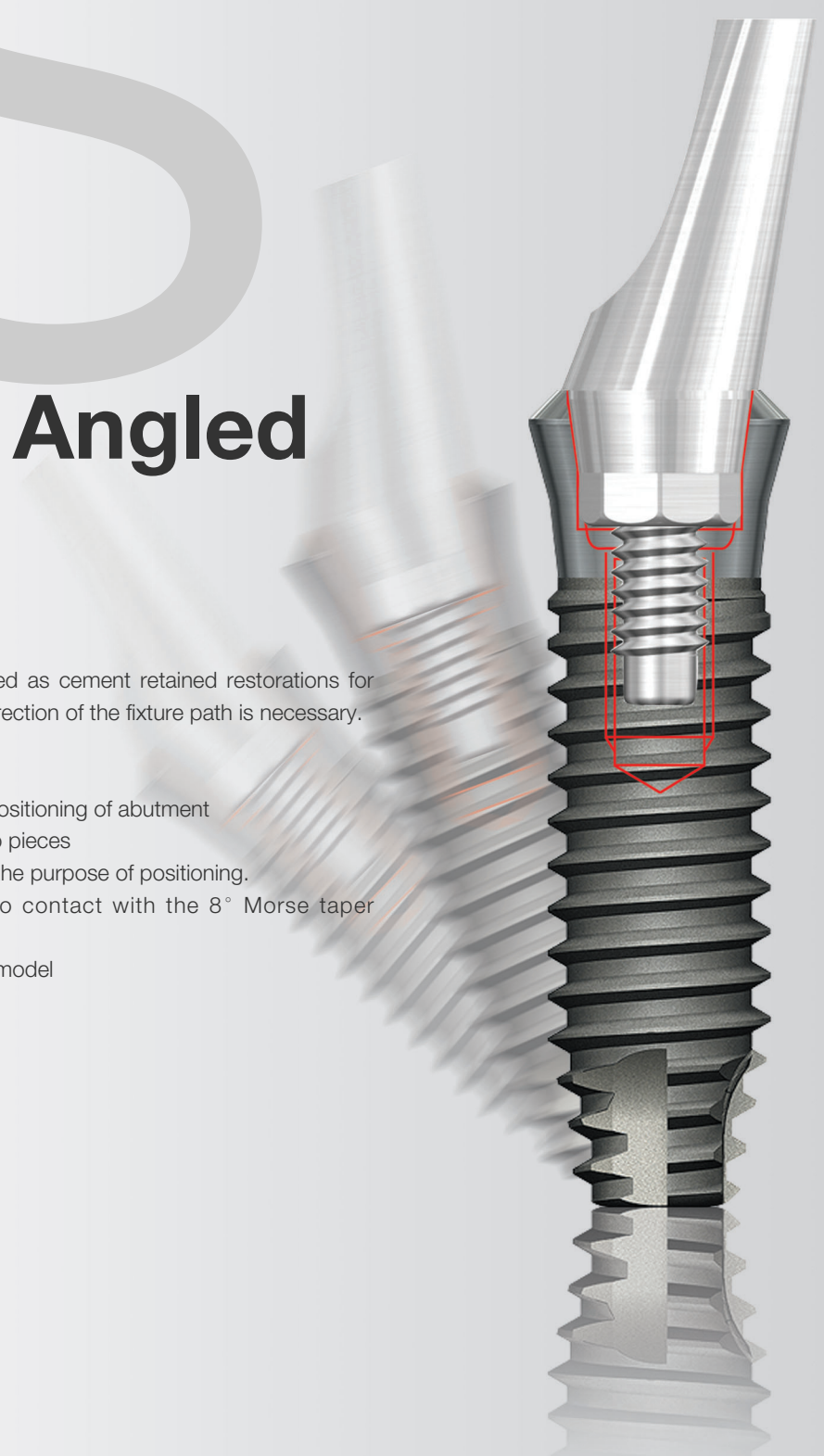
Patient follow-up:

Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup. Later, if the progress and hygienic condition are satisfactory, perform the cementation with permanent cement.



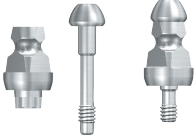
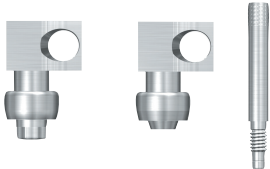


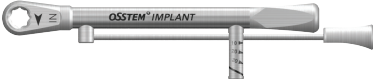
SS

ComOcta Angled Abutment

- **Indications**
ComOcta Angled abutments can be used as cement retained restorations for the anterior and posterior teeth when correction of the fixture path is necessary.
- **Features & benefits**
 - Available in 15 and 20 angles for ideal positioning of abutment
 - Abutment and screw separated into two pieces
 - An octa located at the base section for the purpose of positioning.
 - Minimized screw loosening owing to contact with the 8° Morse taper connection.
 - Capable of milling the abutment on the model
- **Material**
 - Abutment : Ti-6Al-4V
 - Screw : Ti-6Al-4V
- **Tightening torque : 30Ncm**

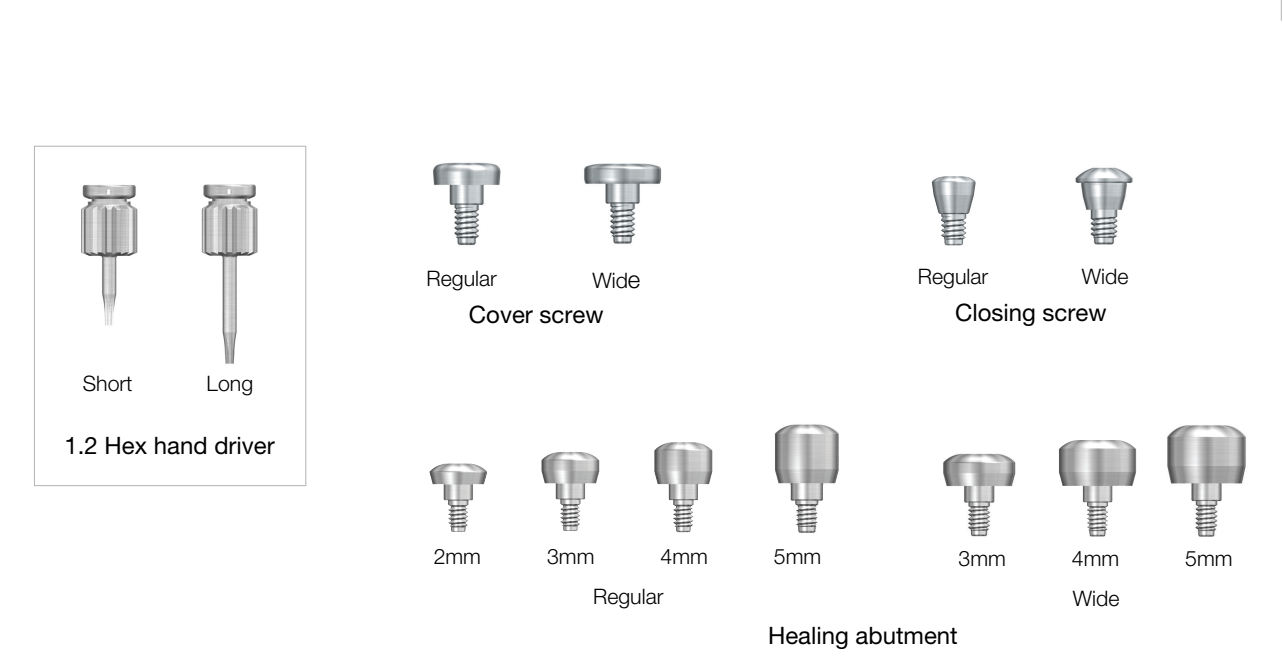


Product list for prosthetic procedure

Product list		
Abutment		
Abutment screw		
Impression coping	Transfer type (for close tray)	Pick-up type (for open tray)
		
Lab analog		
Driver		
Torque wrench		

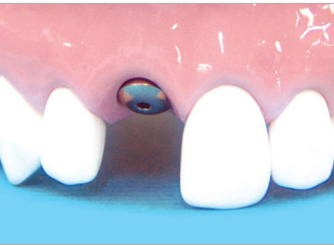
Step1 Separating the Healing abutment

Components & instruments



Prosthetic procedure

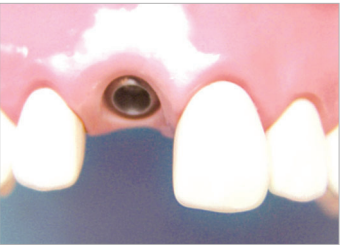
Separate the cover screw or Healing abutment using a 1.2 hex hand driver.
To prevent the patient from swallowing the hand driver, tie dental floss to the spinner on the handle of the driver.



1) Healing abutment



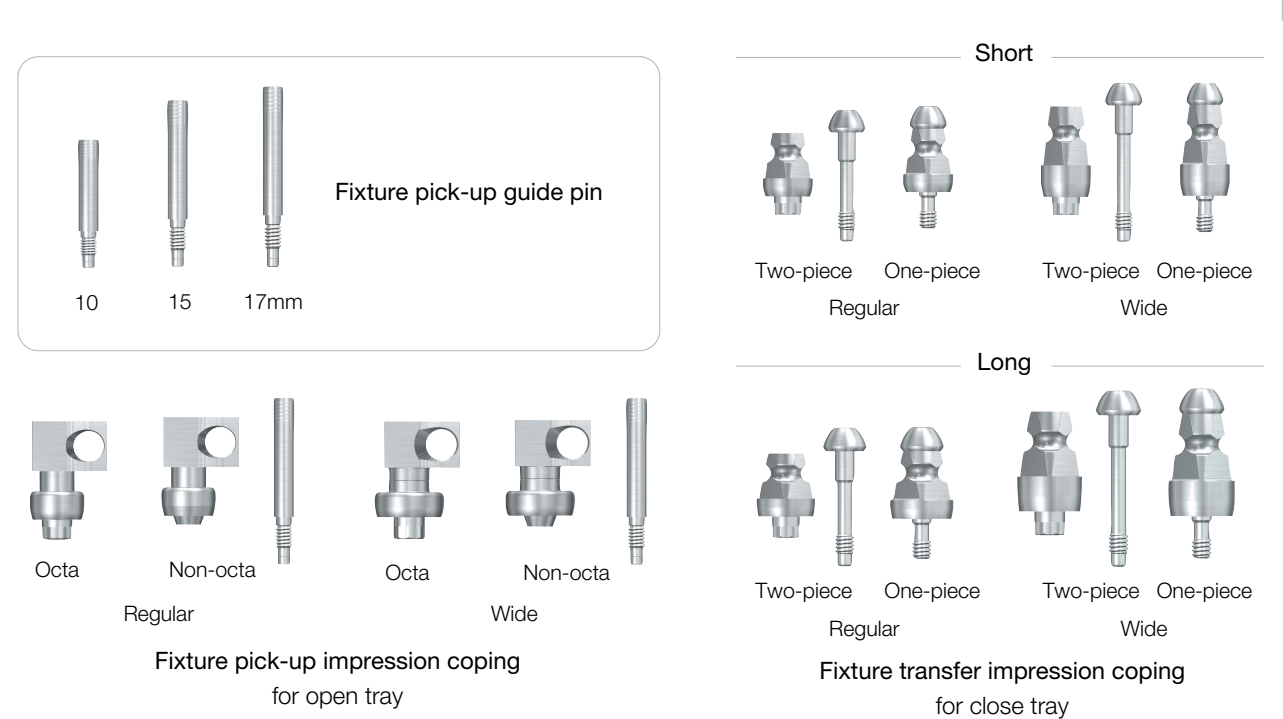
Separating the Healing abutment using a driver



After the separation of the Healing abutment

Step2 Connecting the impression coping

Impression system



Prosthetic procedure

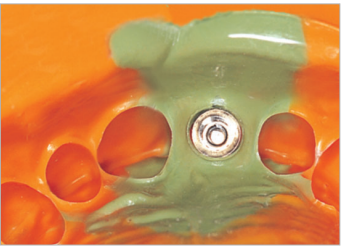
Refer to step 2 ~ 3 of the prosthetic procedures for ComOcta abutment .



Connecting the impression coping



Preparing an open tray



Taking the impression

Step3 Fabricating the working model

Fixture lab analogs



Regular



Wide

Color-coding:

In order to facilitate identification, the Fixture lab analogs are color-coded :

Regular = green

Wide = blue

Prosthetic procedure



Fixing the lab analog to the impression coping

The lab analog with the same size as the platform is fixed on the Fixture pick-up impression coping inside the impression using the Fixture pick-up guide pin. Do not forget to check the passivity of the connection between the impression coping and lab analog.



Completed working model

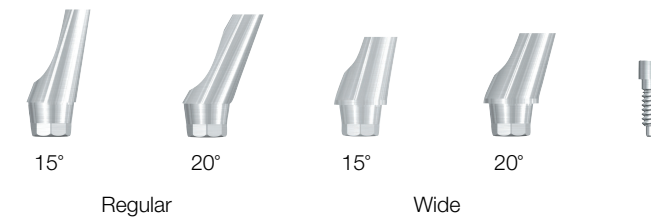
Form artificial gum around the area of connection of the coping and the analog (after hardening, clean the adjacent area). After boxing, form the working model without applying force to the impression by filling stone from one side.

Important:

When tightening the fixture pick-up guide pin, grasp the retention section of the lab analog in order to prevent the impression coping from rotating. It is easy to make a mistake at this step which leads to incorrect prostheses.

Step4 Wax up

ComOcta Angled abutments



Prosthetic procedure

Since the axial position of the implant does not conform to the path of adjacent teeth, apply ComOcta Angled abutment (15°, 20°) instead of ComOcta abutment if angulation of abutment is necessary.



Mismatched the angulation when applying the ComOcta abutment



Applying the ComOcta Angled abutment (20°)



Fastening the angled abutment (before preparation)



After preparation



Building a resin cap



Waxing up

Select an abutment with an angle that can compensate the axial position of the implant. After fitting the selected abutment to octa inside the lab analog, connect a screw to the analog using a 1.2 hex hand driver. Modify the abutment when necessary. Fill the screw hole with wax and apply separator over the abutments, then resin up and wax up the abutment for framing work.

Step5 Casting & porcelain build-up

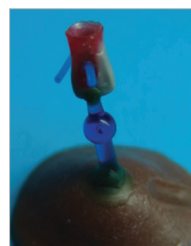
Prosthetic procedure

Fabricate PFM restoration in the conventional manner as follows :

Spruing → investment → burn-out → casting → finishing → cleansing → degassing → opaque → build-up → firing → final prosthesis

Finally, send the final prosthesis to the clinic.

Note : It is recommended that the passive fit in the oral cavity be verified prior to completing prosthesis.



Spruing



Casting



Casting body



Finishing



Opaque



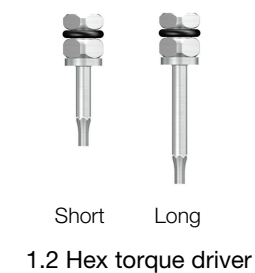
Build-up



Final prosthesis

Step6 Cementation & delivering

Instruments

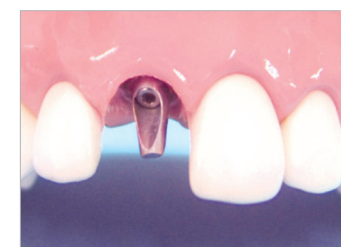


Short Long
1.2 Hex torque driver

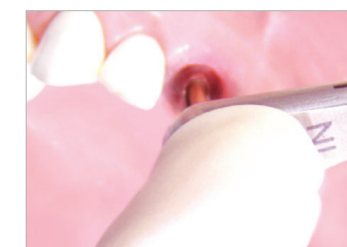


Torque wrench

Prosthetic procedure



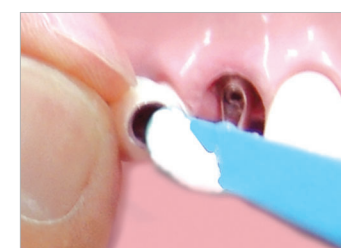
Connecting the abutment
Inside the oral cavity



Tightening the abutment with 30Ncm

After removing the Healing abutment or temporary crown mounted inside the oral cavity, tighten the abutment using a 1.2 hex hand driver. Check the connection via X-ray. Finally, complete the procedure by applying torque of 30 Ncm.

*** Important: tightening torque = 30Ncm**



Cementation



Mounting the final prosthesis

Check the passive fit of the prosthesis margin, and verify the occlusion and esthetics. Block out the screw access hole with a cotton pellet and adjust the occlusion if necessary, then cement the abutment on the right location using temporary cement.

Patient follow-up:

Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup. Later, if the progress and hygienic condition are satisfactory, perform the cementation with permanent cement.

ComOcta Gold Abutment

• Indications

ComOcta Gold abutments can be used in both anterior and posterior areas of the mouth for screw retained crown and bridge restorations.

• Features & benefits

- Minimum vertical clearance: 4mm
- Easy removal and good retrievability of prosthesis, owing to the screw retained restoration
- Capable of milling the abutment on the model
- Abutment and screw separated into two pieces
- An octa located at the base section for the purpose of positioning
- Instead of a 8° Morse taper contact a shoulder contact of the fixture is made.
- Customized abutment for convenient prosthesis fabrication of low vertical clearance and random placement of abutment angle and also for esthetic prosthesis with subgingival margins.



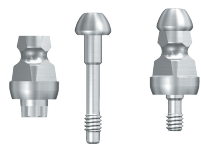
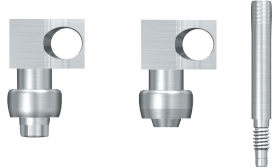


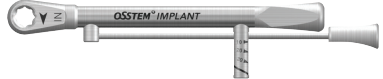
• Material

- Abutment : Gold alloy
- Screw : Ti-6Al-4V

• Tightening torque : 30Ncm

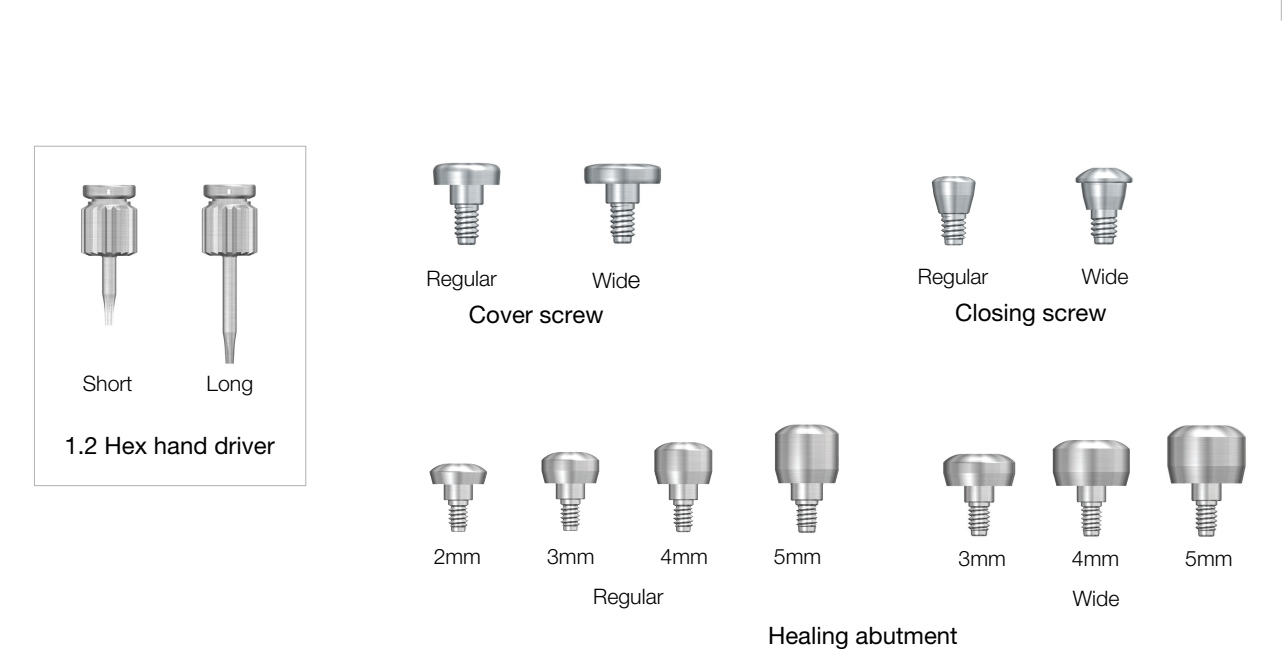
ComOcta Gold Abutment

Product list for prosthetic procedure

Product list		
Abutment		
Abutment screw		
Impression coping	Transfer type (for close tray)	Pick-up type (for open tray)
		
Lab analog		
Driver		
Torque wrench		

Step1 Separating the Healing abutment

Components & instruments



Prosthetic procedure

Separate the Cover screw or Healing abutment using a 1.2 hex hand driver.
To prevent the patient from swallowing the hand driver, tie dental floss to the spinner on the handle of the driver.



6| 7|Healing abutment



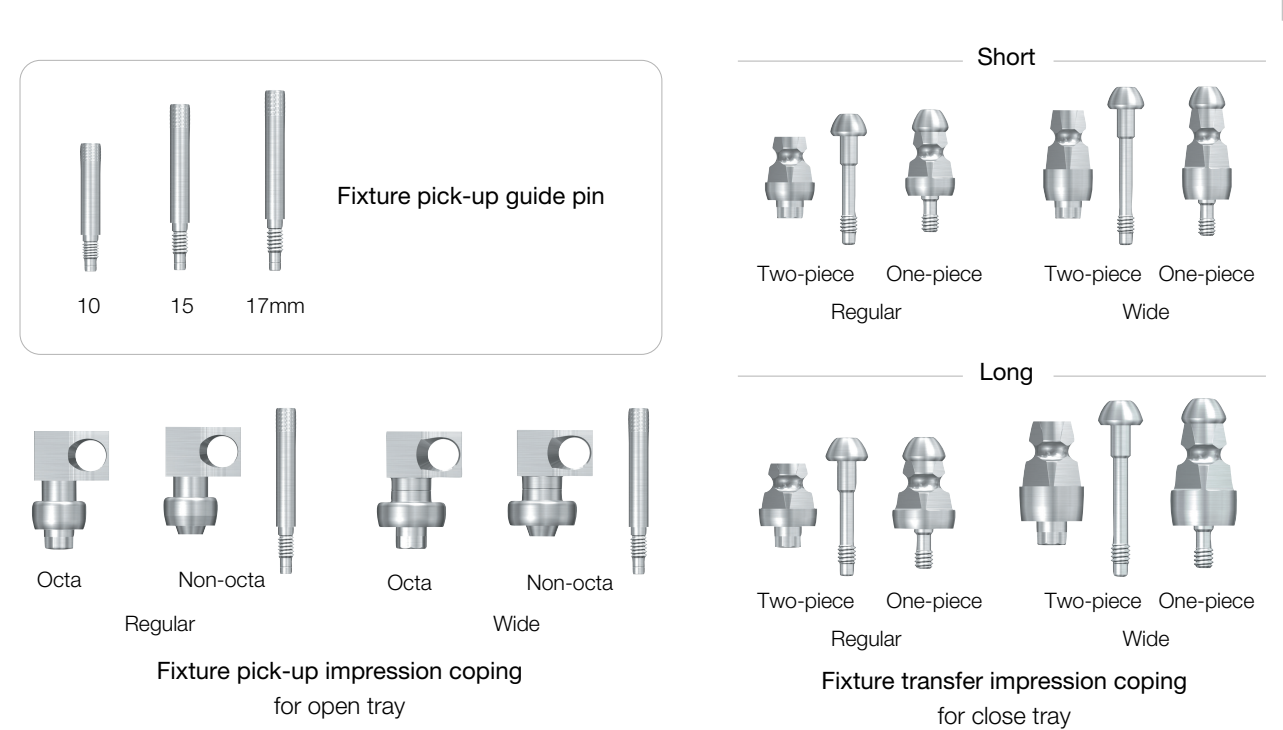
Separating the Healing abutment using a driver



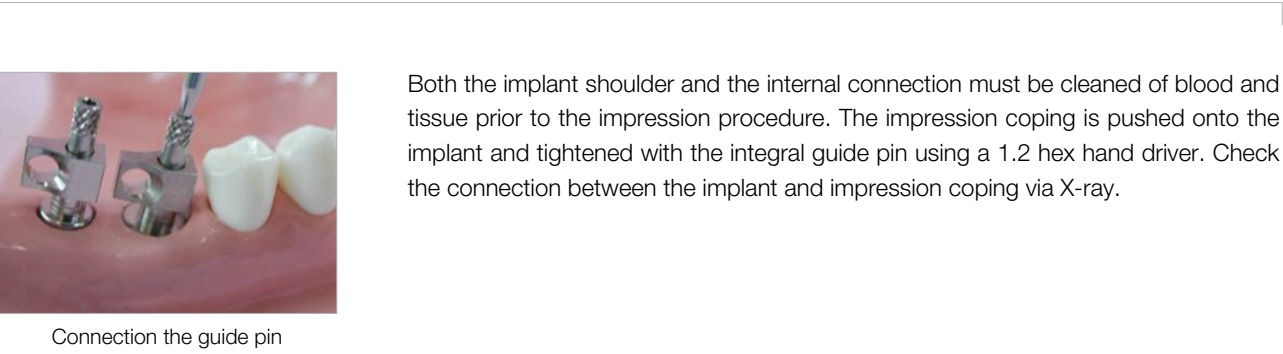
After the separation of the Healing abutment

Step2 Connecting the impression coping

Impression system



Prosthetic procedure



Step3 Taking the impression

Prosthetic procedure

Inject the impression material carefully around the coping before filling a prepared open tray with heavy impression material, and place in the oral cavity for impression taking.



Injecting impression material around the impression coping



Taking the impression

Caution :

Wipe off the impression material around the guide pin hole in order to avoid any complication when separating the tray

When the impression material is completely hardened, separate the tray from the oral cavity by loosening the guide pin using a 1.2 hex hand driver and check for defects on the impression. Send it to the lab.



Separating the guide pin



The impression



Reconnection the Healing abutment

After taking the impression, reconnect the Healing abutment to the implant using a 1.2 hex hand driver. Otherwise, the temporary bridge made at the laboratory should be restored.

Step4 Fabricating the working model

Fixture lab analogs



Regular



Wide

Color-coding:

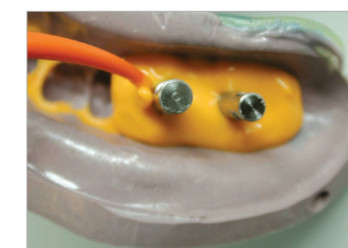
In order to facilitate identification, the fixture lab analogs are color-coded :
Regular = green
Wide = blue

Prosthetic procedure

The lab analog with the same size as the platform is fixed on the fixture pick-up impression coping inside the impression using the fixture pick-up guide pin. Do not forget to check the passivity of the connection between the impression coping and lab analog.



Fastening the impression coping and lab analog



Forming the artificial gum



Completed working model

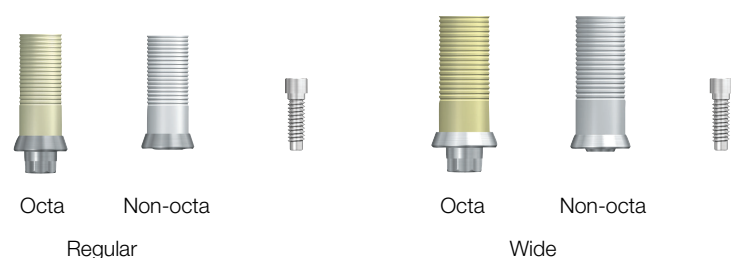
Form artificial gum around the area of connection of the coping and the analog (after hardening, clean the adjacent area). After boxing, form the working model without applying force to the impression by filling stone from one side.

Important:

When tightening the fixture pick-up guide pin, grasp the retention section of the lab analog in order to prevent the impression coping from rotating. It is easy to make a mistake at this step which leads to incorrect prostheses.

Step5 Wax up

ComOcta Gold abutments



Color-coding :

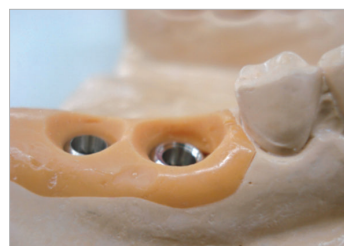
In order to facilitate identification, the ComOcta Gold abutments are color-coded:

Octa = ivory

Non-octa = white

Prosthetic procedure

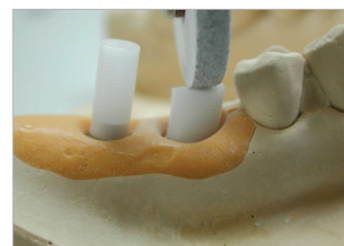
Select the ComOcta Gold abutments with the same size as the platform. After fitting the selected abutment to octa inside the lab analog, connect a screw to the analog using a 1.2 hex hand driver. Adjust the plastic sleeve to an appropriate height, and wax up the ComOcta Gold abutment. As it is a screw type, make an access hole when performing the wax-up procedure



Fixture lab analog on the working model



Placing the selected abutment



Adjusting the length of plastic sleeve



Wax up

Caution:

When using a gold abutment, the casting metal must be ceramic gold. Using a non-precious metal will result in the deformation of the gold cylinder during the casting and affect the accuracy of the prosthesis

Step6 Casting & porcelain build-up

Prosthetic procedure

Complete the ceramic building in the conventional manner as follows :

Spruing → investment → burn-out → casting → finishing → cleansing → degassing → opaque → build-up → firing → final prosthesis

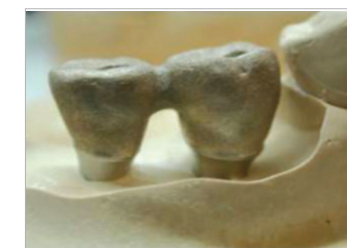
Finally, send the final prosthesis to the clinic.



Spruing



Casting body



Fit on the model



Degassing



Opaque



Final prosthesis



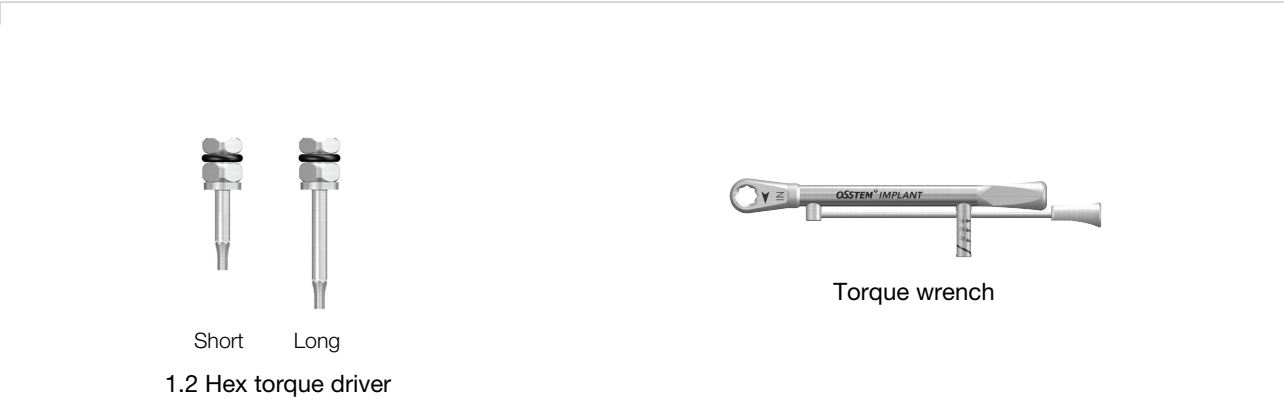
Final prosthesis (buccal)



Final prosthesis (lingual)

Step7 Cementation & delivering

Instruments



Prosthetic procedure

Remove the Healing abutment or temporary crown mounted inside the oral cavity.
Check the passive fit of the final prosthesis margin, and verify the occlusion and esthetics. Make the initial connection using a 1.2 hex hand driver, followed by the complete connection at 30 Ncm using a 1.2 hex torque driver and a torque wrench. Cover the screw head with protecting material and complete the occlusal surface with resin on the access hole in the oral cavity.



Tightening the abutment with 30Ncm



Mounting the final prosthesis



Forming an occlusal surface

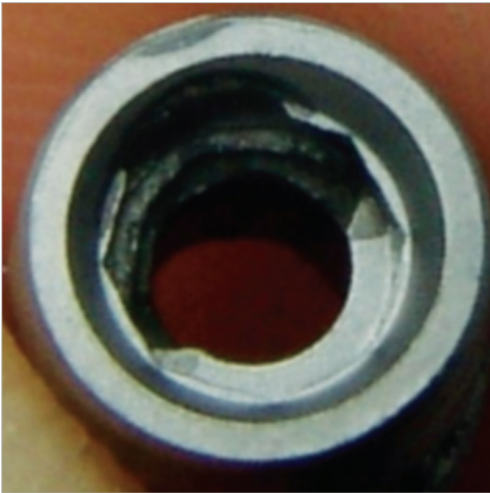
* Important : tightening torque = 30Ncm

Patient follow-up:

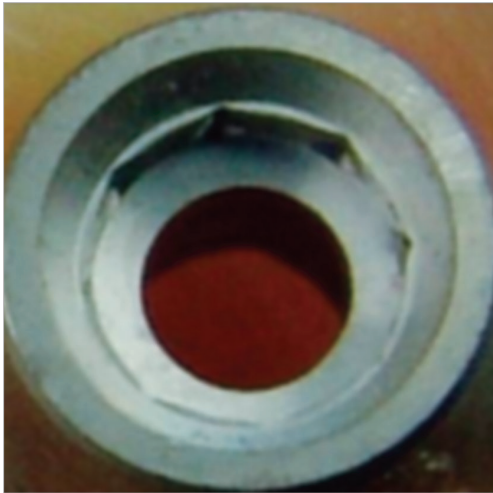
Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup.

What happens when casting non-precious metal to a gold abutment / cylinder?

ComOcta Gold abutment and Octa gold cylinder products made of gold alloy are casting abutments exclusive for precious alloy of dental use. Since the melting point of gold abutment, cylinder and non-precious metal is similar, casting with non-precious metal will cause damage and deformation to the abutment or cylinder during casting, so the use of non-precious metal is prohibited.



Casted with non-precious alloy metal



Casted with precious alloy metal




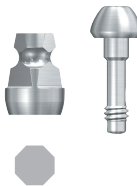
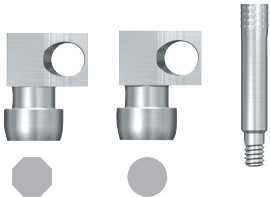


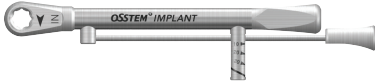
Alloy	Melting range (°C)
ComOcta Gold abutment Octa gold cylinder	1400~1450
Dental Ni-Cr alloy	1200~1400
Dental gold alloy	950~1150



Octa Abutment

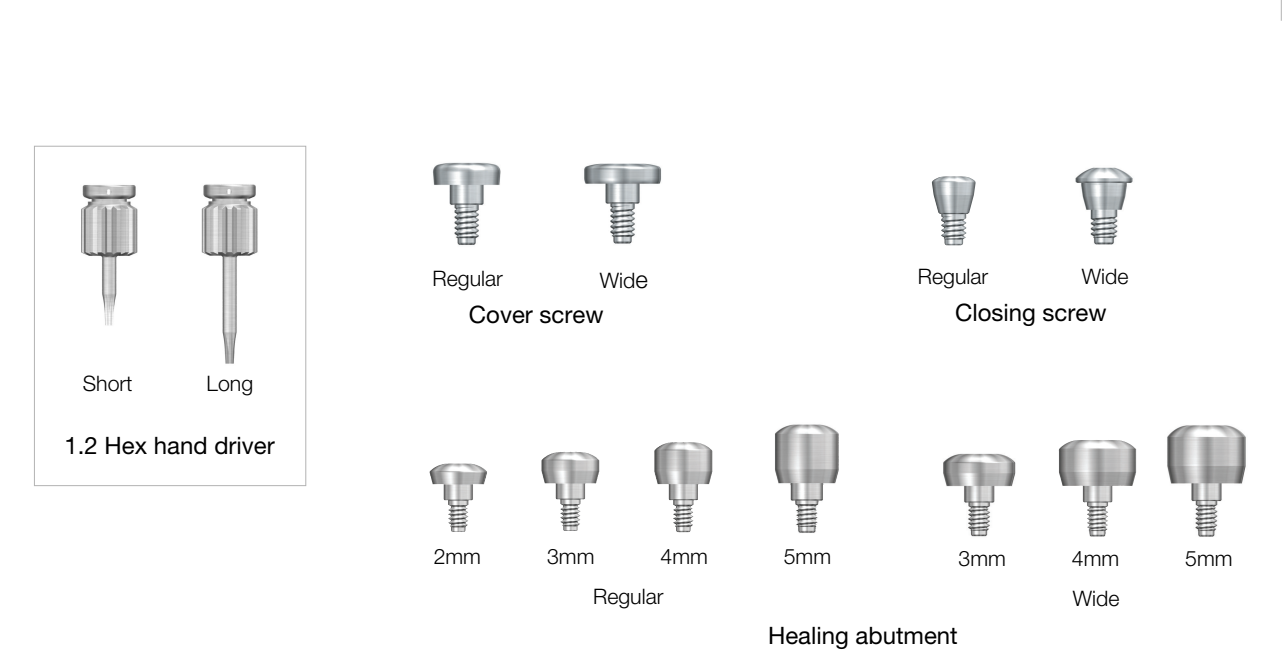
- **Indications**
Octa abutments can be used in both anterior and posterior areas of the mouth for screw retained crown and bridge restorations.
- **Features & benefits**
 - Abutment system of 3 piece type composed of Abutment, cylinder, and screw.
 - Minimum vertical clearance: 5.7mm
 - Customized abutment that allows modification of the prosthesis angle and form according to the oral environment .
 - Easy removal and good retrievability of prosthesis, owing to the screw retained restoration.
- **Material**
 - Abutment : Ti-6Al-4V
 - Cylinder : Gold alloy
 - Screw : Ti-6Al-4V
- **Tightening torque**
 - Abutment : 30Ncm
 - Cylinder : 20Ncm

Product list for prosthetic procedure

Product list		
Abutment		
Gold cylinder		
Cylinder screw		
Impression coping	Transfer type (for close tray)	Pick-up type (for open tray)
		
Lab analog		
Driver		
Torque wrench		

Step1 Separating the Healing abutment

Components & instruments



Prosthetic procedure

Separate the Cover screw or Healing abutment using a 1.2 hex hand driver.
To prevent the patient from swallowing the hand driver, tie dental floss to the spinner on the handle of the driver.



5|Healing abutment



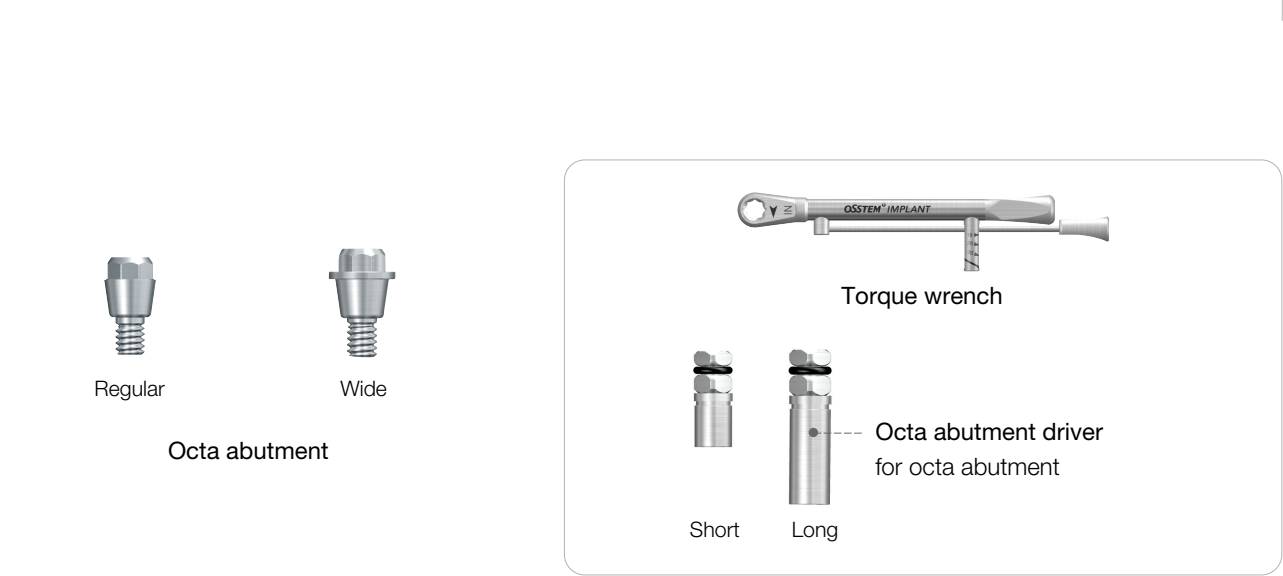
Separating the healing abutment using a driver



After the separation of the healing abutment

Step2 Selecting and placing the abutment

Octa abutments & instruments



Prosthetic procedure

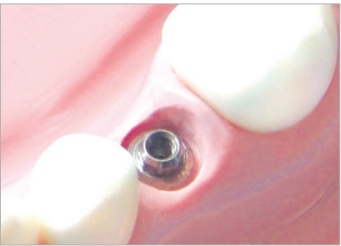
Select the Octa abutment based on the platform.
Bring the abutment to the mouth with the Octa abutment driver and insert it into the implant. Use finger pressure to tighten it down. And use a Octa abutment driver and a torque wrench to tighten 30Ncm. The Octa abutment is in place and ready for the impression to be taken. Once the abutment has been torqued in, it should not be removed.



Connecting the implant and abutment



Tightening the abutment with 30Ncm

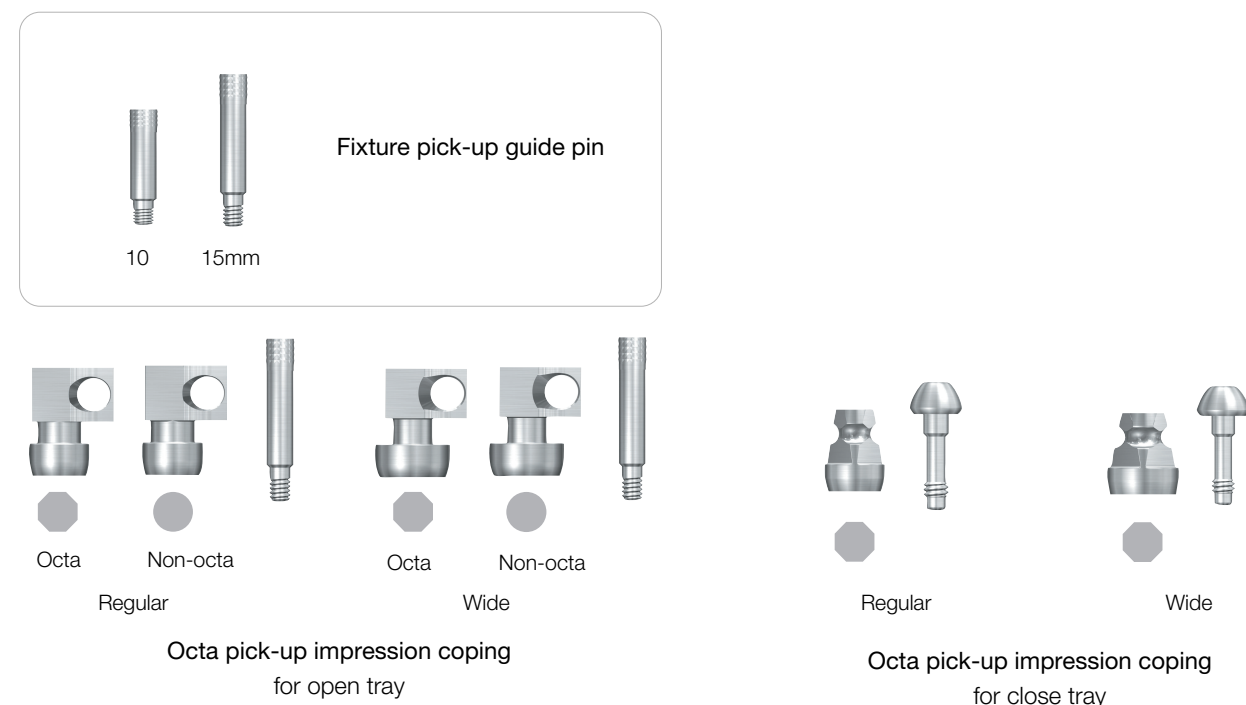


Attached Octa abutment

* Important : tightening torque = 30Ncm

Step3 Connecting the impression coping

Impression system



Prosthetic procedure

Both the implant shoulder and the abutment must be cleaned of blood and tissue prior to the impression procedure. The impression coping is pushed onto the abutment and tightened with the integral guide pin using a 1.2 hex hand driver. Check the connection between the implant and impression coping via X-ray.



Positioning the impression coping



Connecting with the guide pin

Step4 Taking the impression

Octa protect caps



Prosthetic procedure

Prepare an open tray with adequate holes to allow the guide pin to protrude, then take an impression using the rubber impression material. When the impression material is completely hardened, separate the tray from the oral cavity by loosening the guide pin using a 1.2 hex hand driver and check for defects on the impression. Send it to the lab.



Taking the impression



Caution :

Wipe off the impression material around the guide pin hole in order to avoid any complication when separating the tray



Protect cap connected in the oral cavity

While constructing the upper prosthesis, tighten the protect cap with 20Ncm to eliminate the foreign body sensation felt by the patient and protect the abutment. Otherwise, the temporary crown made at the laboratory should be restored.

Step5 Fabricating the working model

Octa lab analogs



Regular



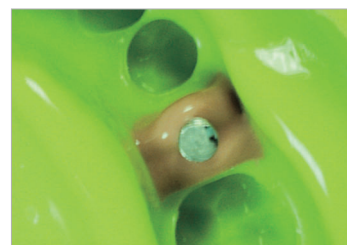
Wide

Color-coding :

In order to facilitate identification, the octa lab analogs are color-coded:
Regular = green
Wide = blue

Prosthetic procedure

The lab analog with the same size as the platform is fixed on the octa pick-up impression coping inside the impression using the Octa pick-up guide pin. Do not forget to check the passivity of the connection between the Impression coping and lab analog.



Forming artificial gum



Completed working model

Form artificial gum around the area of connection of the coping and the analog (after hardening, clean the adjacent area). After boxing, form the working model without applying force to the impression by filling stone from one side.

Important :

When tightening the octa pick-up guide pin, grasp the retention section of the lab analog in order to prevent the impression coping from rotating. It is easy to make a mistake at this step which leads to incorrect prostheses.

Step6 Wax up

Octa gold cylinders



Octa



Non-octa



Regular



Octa



Non-octa



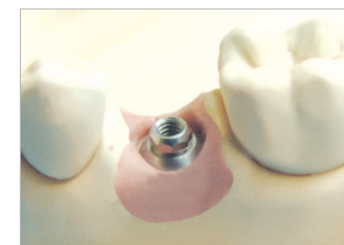
Wide

Color-coding:

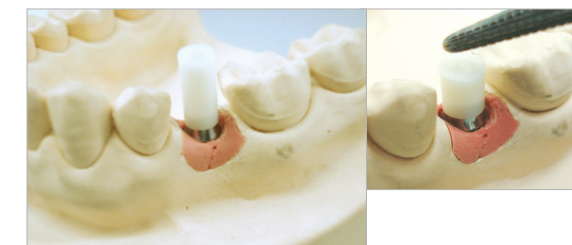
In order to facilitate identification, the octa gold cylinders are color-coded :
Octa = ivory
Non-octa = white

Prosthetic procedure

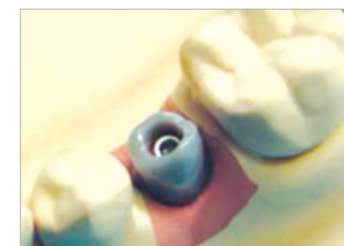
Position the octa gold cylinder whose interior is made of octa on the abutment and connect with a screw using a 1.2 hex hand driver. Adjust the plastic sleeve to an appropriate height, and wax up the octa gold cylinder. As it is a screw type, make an access hole when performing the wax-up procedure.



Octa lab analog on the working model



Adjusting the length of plastic sleeve after connecting the Octa gold cylinder



Wax up

Caution :

When using a gold cylinder, the casting metal must be ceramic gold. Using a non-precious metal will result in the deformation of the gold cylinder during the casting and affect the accuracy of the prosthesis

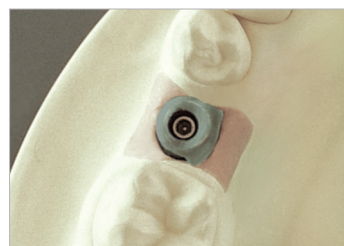
Step7 Casting & porcelain build-up

Prosthetic procedure

Complete the ceramic building in the conventional manner as follows :

Spruing → investment → burn-out → casting → finishing → cleansing → degassing → opaque → build-up → firing → final prosthesis

Finally, send the final prosthesis to the clinic.



wax-up



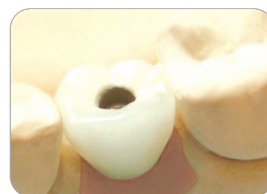
Spruing



casting body

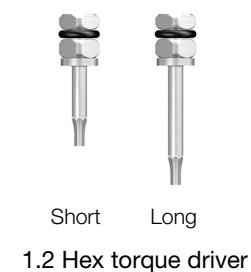


final prosthesis



Step8 Cementation & delivering

Instruments



Short Long
1.2 Hex torque driver



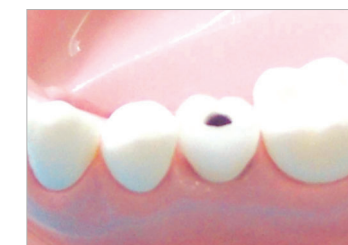
Torque wrench

Prosthetic procedure

Remove the Healing abutment or temporary crown mounted inside the oral cavity. Check the passive fit of the final prosthesis margin, and verify the occlusion and esthetics. Make the initial connection using a 1.2 hex hand driver, followed by the complete connection at 20 Ncm using a 1.2 hex torque driver and a torque wrench. Cover the screw head with protecting material and complete the occlusal surface with resin on the access hole in the oral cavity.



Tightening the cylinder with 20Ncm



Mounting the final prosthesis



Forming an occlusal surface

* Important : Tightening torque = 20Ncm

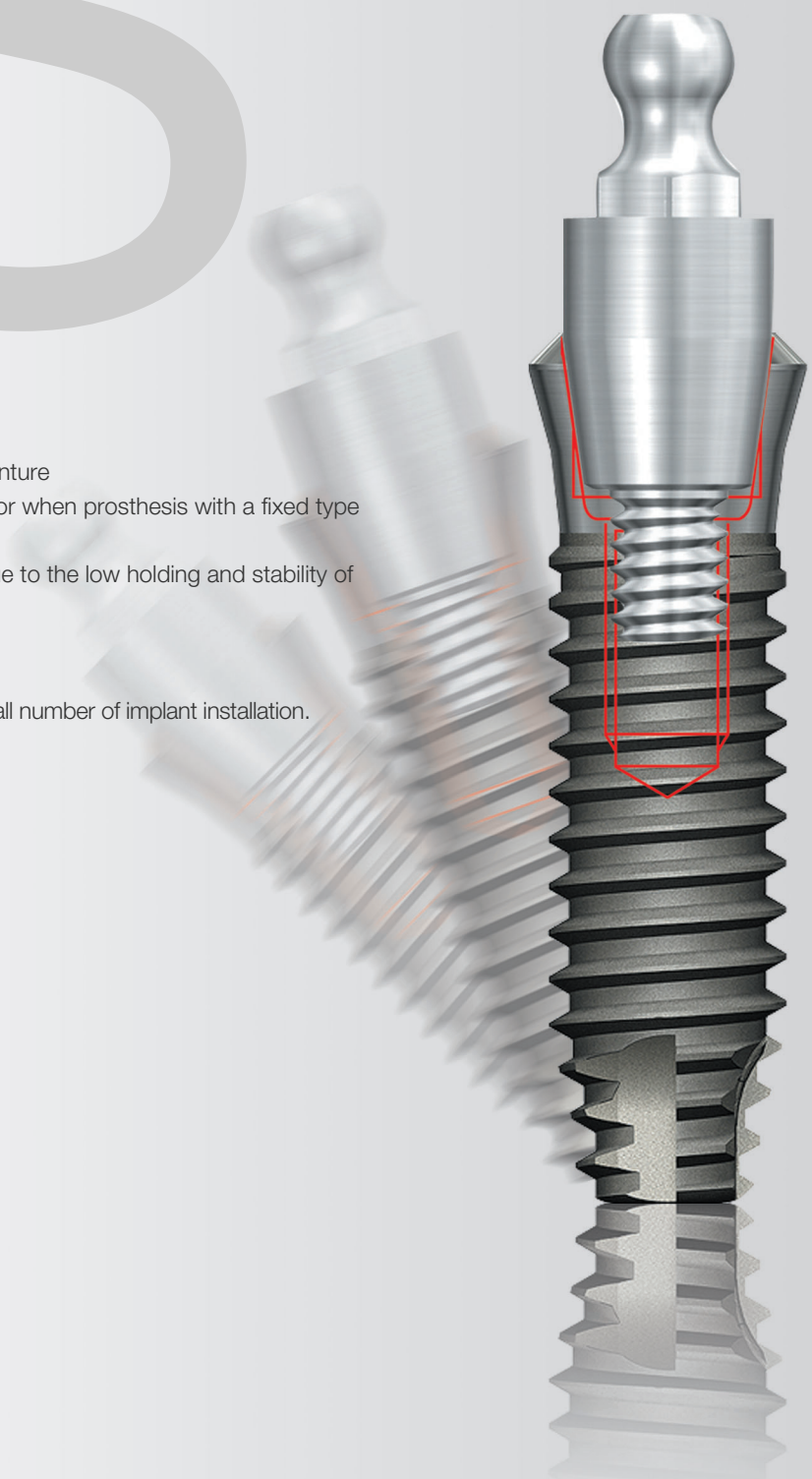
Patient follow-up :

Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup.






SS

O-ring Abutment

- **Indications**
 - Used for prosthetic treatment using overdenture
 - Ideal for severe bone resorption of the jaw or when prosthesis with a fixed type of implant is not feasible
 - Used when the use of denture is difficult due to the low holding and stability of the complete denture.
- **Features & benefits**
 - Fabricate a functional overdenture with a small number of implant installation.
- **Material**
 - Abutment : Ti-6Al-4V
- **Tightening torque : 30Ncm**



Product list for prosthetic procedure

Product list	
Abutment	
Lab analog	
Retainer (cap) + O-ring	
O-ring abutment driver	
Torque wrench	

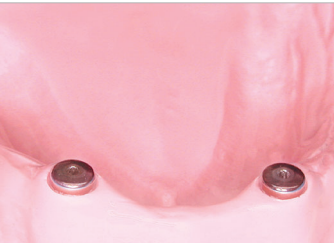
Step1 Separating the Healing abutment

Components & instruments

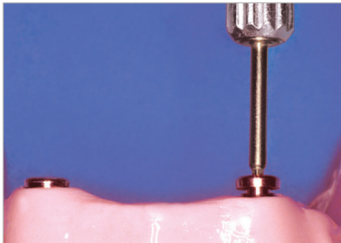


Prosthetic procedure

Once the customized tray is prepared, have the patient visit the clinic. Separate the Cover screw or Healing abutment using a 1.2 hex hand driver, and rinse with air-water syringe. Check the occlusion gap to select an abutment with an appropriate height. To prevent the patient from swallowing the Hand driver, tie dental floss to the spinner on the handle of the driver.



3|3 Healing abutment



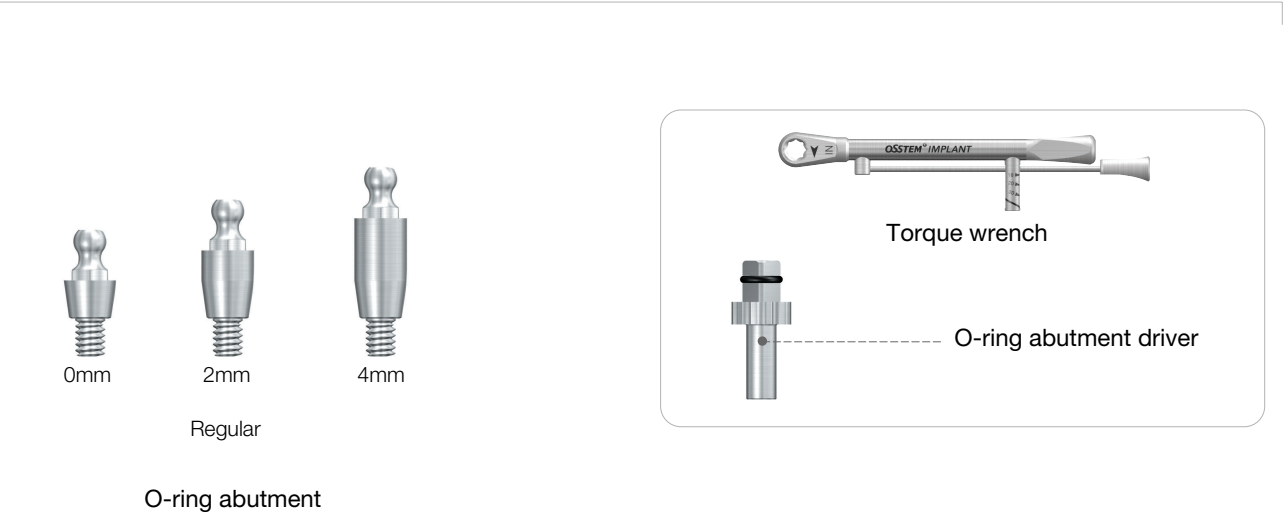
Separating the Healing abutment using a driver



After the separation of the Healing abutment

Step2 Selecting and placing the abutment

Components & instruments



Prosthetic procedure

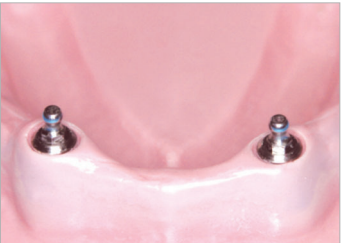
Check the depth of the gingival tissue on the implant and select the abutment with an appropriate height. The shoulder of the abutment must be positioned above the tissue (about 1.5~2 mm). Using a o-ring abutment driver, connect the abutment to the implant. Check the connection via X-ray, then tighten the abutment at a torque of **30Ncm** using a Torque wrench connected to the driver. The o-ring abutment is in place and ready for the impression to be taken. Once the abutment has been torqued in, it should not be removed.



Connecting the abutment



Tightening the abutment with 30Ncm



Attached o-ring abutment

* Important: tightening torque = 30Ncm

Note:
Since the o-ring abutment driver cannot hold the abutment, place the abutment on the implant first before using the driver.

Step3 Taking the impression

Prosthetic procedure

Inject the rubber impression material carefully around the abutment first before filling the customized tray with the impression material and placing in the oral cavity for impression taking. Check the impression for defects before sending to the lab. If the patient has a denture, the area of abutment fastening may be modified for use for temporary denture.



Injecting the impression material around the abutment carefully



Taking the impression

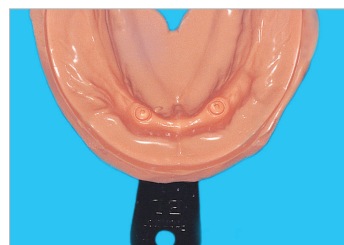


The impression

Preliminary procedure : Before mounting the abutment, take a full-mouth impression of the extension of the edentulous jaw using the alginate impression material for sending to the laboratory for the preparation of a customized tray.

Note :

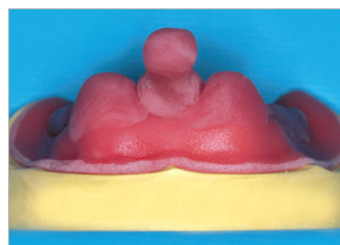
Allot an allowance of about 2 mm for the abutment height.



Preliminary impression using a ready-made tray



Preliminary model



Constructing a customized tray

Step4 Fabricating the working model

O-ring lab analog



O-ring lab analog

Prosthetic procedure

Once the impression is delivered to the laboratory, push the lab analog into the impression coping until insertion in the ball portion is complete. Pour stone carefully without disturbing the position of the analog to create the working model. Make a base plate and a wax occlusal rim to take the occlusion for sending to the clinic together with the model.



Inserting the analog



Completed analog fastening



Boxing



Completed working model



Making the wax rim

Step5 Fabricating wax denture

Prosthetic procedure

Place the occlusal rim inside the oral cavity and take the intermaxillary occlusion, and resend it to the lab, where the denture teeth shall be arranged on the wax rim based on the delivered occlusion record. Resend the wax denture to the clinic to have the occlusion on the arranged teeth checked and the functionality and esthetics of the denture examined.



Trying the fit of the wax rim inside the oral cavity



Making wax denture at the workroom



Trying the fit of wax denture inside the oral cavity

Note :

In case any correction is required, set up with a new occlusion record and try the fit until a satisfactory occlusion is made.

Step6 Constructing resin denture

O-ring components



Retainer cap



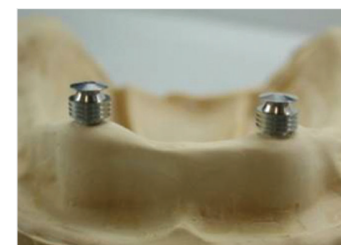
Retainer



O-ring

Prosthetic procedure

Once the fit on the wax denture inside the oral cavity is completed, construct the final resin denture. Insert the o-ring into the retainer cap and place the retainer cap on the analog. Block out the lower part of the retainer cap in order to prevent the acrylic resin from leaking into the bottom of the Retainer cap.



Placing the retainer cap assembly



Block-out

Caution:

When using the Retainer, add about 2 mm to the height of the Retainer with putty to ensure the movement of the retainer on the artificial teeth.

Invest the artificial teeth together with the properly positioned retainer assembly and complete the resin denture making with the conventional procedures of flasking, curing, and finishing.



Flasking



Resin-cured denture



Retainer assembly placed in the denture

Step7 Delivering

Prosthetic procedure

Replace the old o-ring inside the Retainer with the new o-ring reserved for final use. Adjust the occlusion and tissue contact areas as necessary. While connecting the attachments, instruct the patient on oral hygiene and precautions during the attachment and detachment of the denture. Replace the o-ring when the accumulated fatigue prevents it from properly functioning, or approximately once a year.



Replacement of O-ring



Placed overdenture

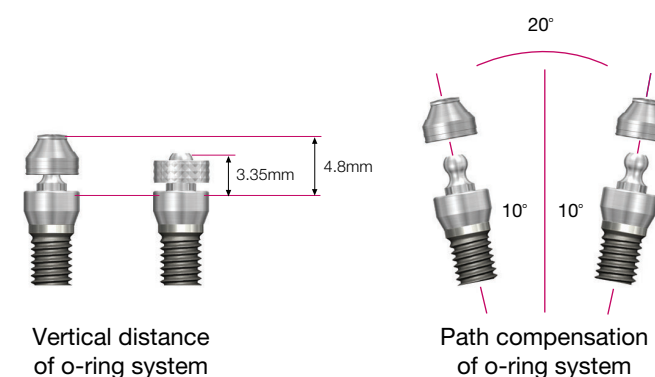
Patient follow-up:

Upon the completion of prosthetic treatment, provide the patient an instruction on oral hygiene and make an appointment for next visiting schedule for a regular checkup.

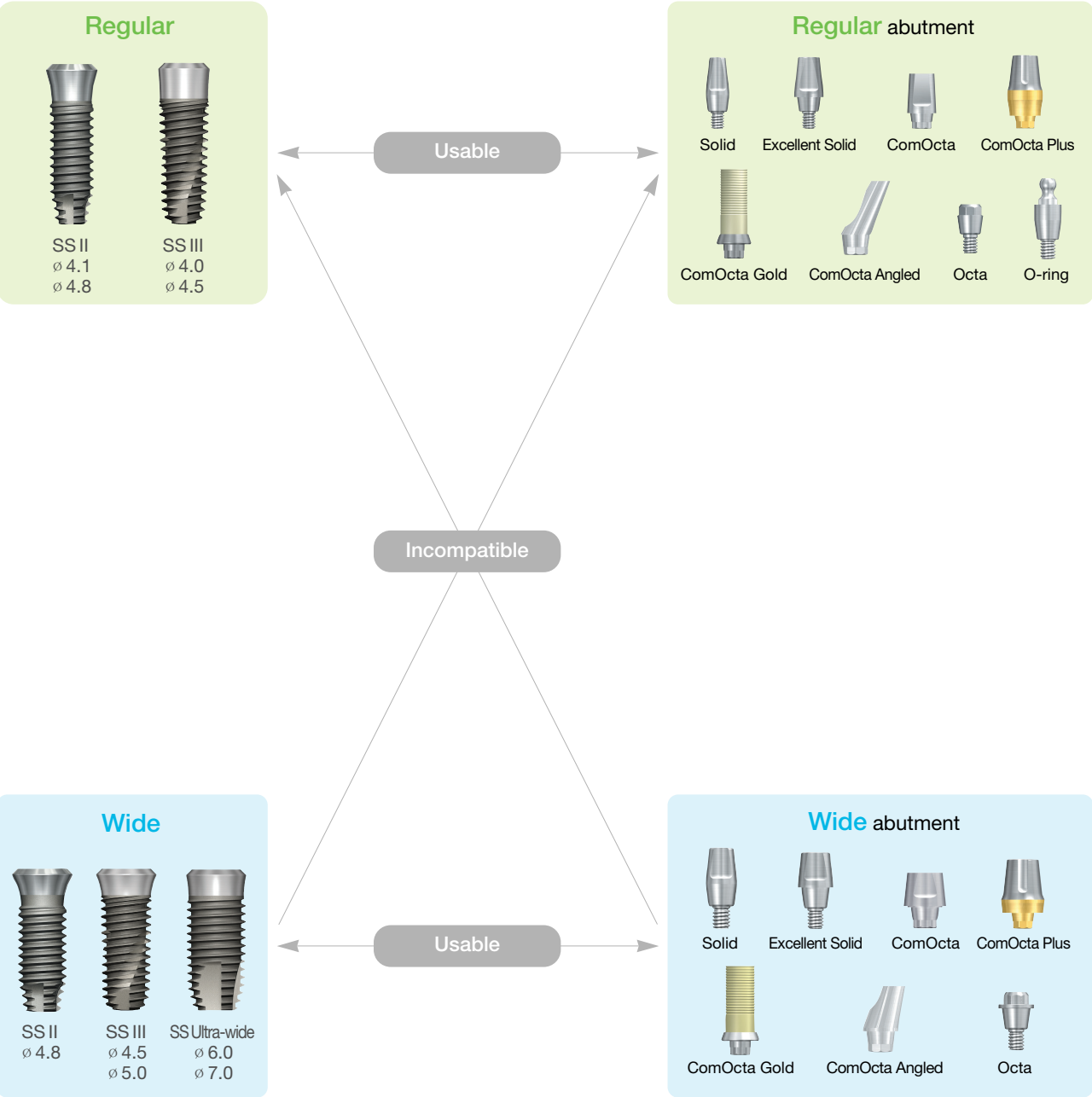
Note for prosthetic procedure

• O-ring system of O-ring abutment

The O-ring system is composed of two types of retainers and two types of o-rings. Generally use the Retainer cap that has good fit. You can decrease the interference between the attachment and prosthesis when the vertical dimension is limited by applying a retainer. When the retention is decreased by usage you can regain retention by easily replacing the o-ring. The path for the o-ring system can be compensated up to 20° and a degree bigger than this will cause frequent o-ring replacement or difficulty in prosthesis removal so caution must be taken.



Use Guide of SS abutment



Torque Wrench User Guide



(Fig1. Torque wrench)




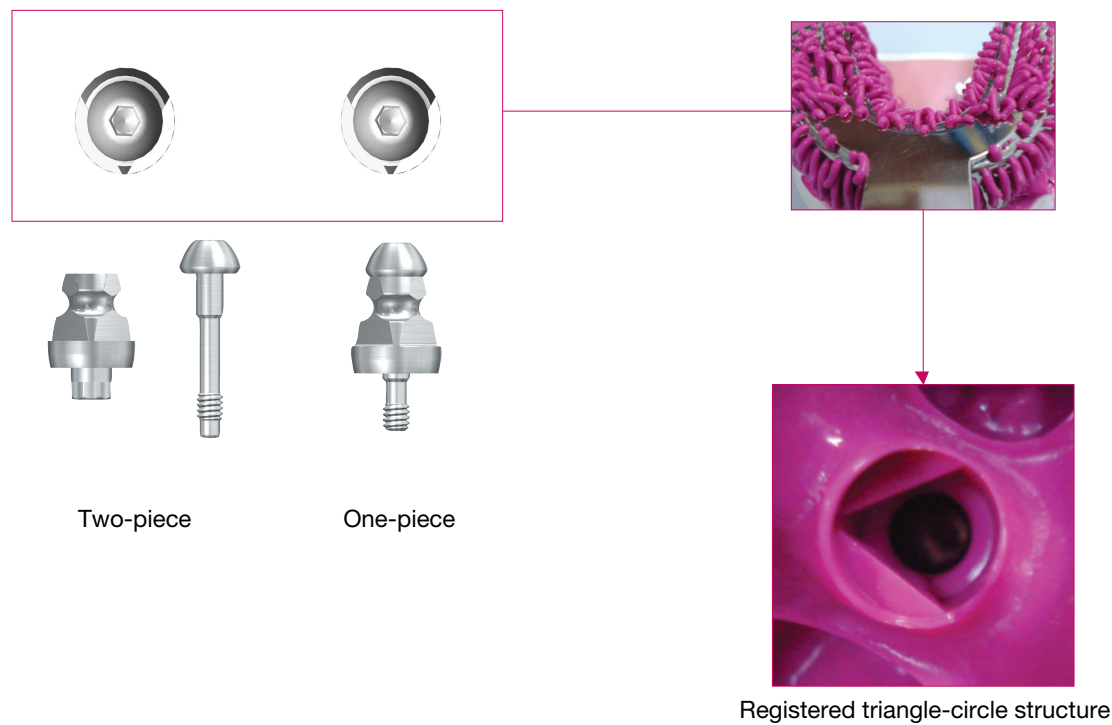
(Fig2. Application of torque)

- Application of tightening torque**
 - Check the direction to apply the torque.
: "Arrow IN" means fastening direction and "Arrow OUT" means loosening direction.
 - Connect the driver with torque wrench wheel (A).
 - Insert the driver connected with torque wrench at the material.
 - Anchor "A" with a finger and pull "C" in order to apply the intended torque. As shown in Fig. 2, make the arrow of intended torque match with the center line of the bar in order to apply the intended torque accurately.
- Application of limitless torque**
 - Follow the tightening torque application processes, ① through ③
 - Anchor "A" with a finger and apply the torque using "C."

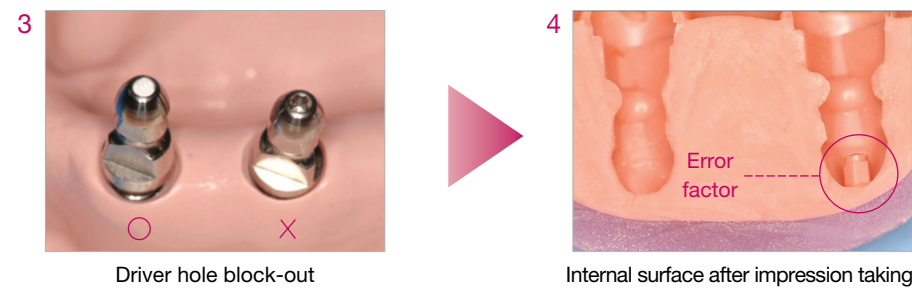
Note) Tightening torque is different depending upon the kind of prosthesis and screw. In Fig. 2, the last line under the torque means the maximum torque and means about 40Ncm.

Benefit of Fixture Transfer Impression Coping



The Fixture transfer impression coping allows easy and exact coping repositioning after impression taking by using the triangle-circle structure () for superior direction and position identification. And also the long/short (12.5mm/9.5mm) two features overcome path and intermaxillary interference. The vertical impression error can be prevented by blocking out the driver hex hole after connecting the coping.



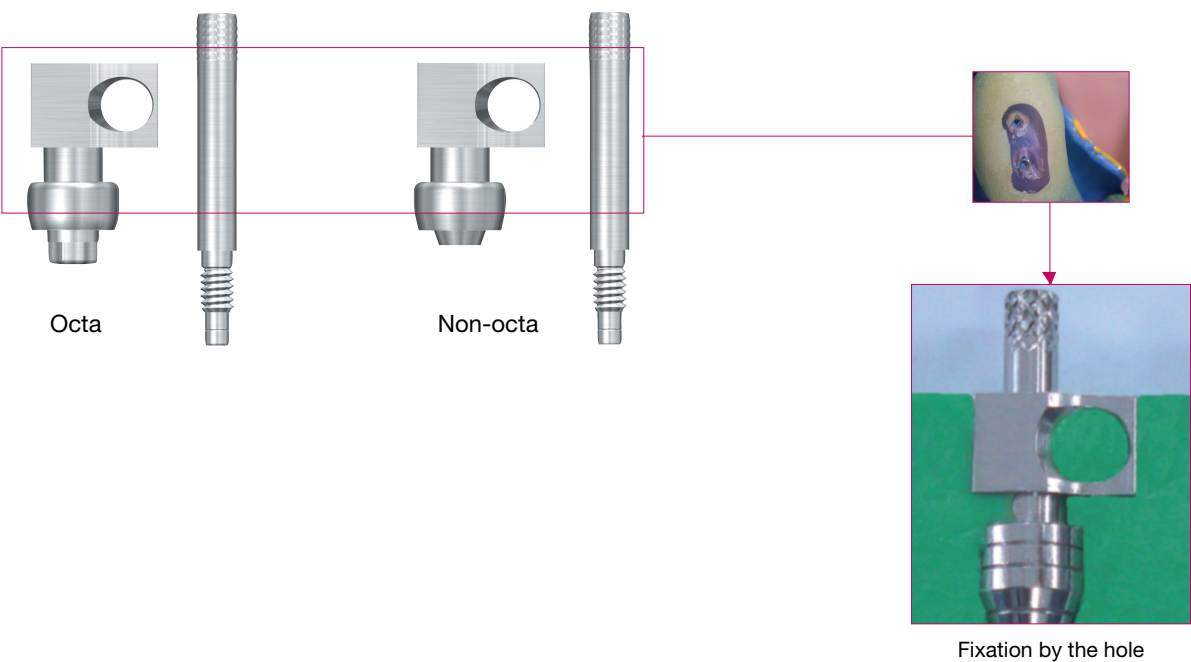
► Error prevention by driver hole block out



Benefit of Fixture Pick-up Impression Coping

You can take an exact impression even when the conventional pattern resin connecting procedure is omitted since the Fixture pick-up impression coping has a hole () structure that allows stable impression material fixation in the rotation/vertical direction. We overcame the interference caused by upper part asymmetry () and interference between tray and opposing tooth.

You should be careful to align the coping parallel to the ridge in free end cases to prevent the interference with the tray.



► Pick-up impression coping arrangement



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