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## Ĉleanlant

## s-Clean Prosthetics Manual



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## Ĉleanlant

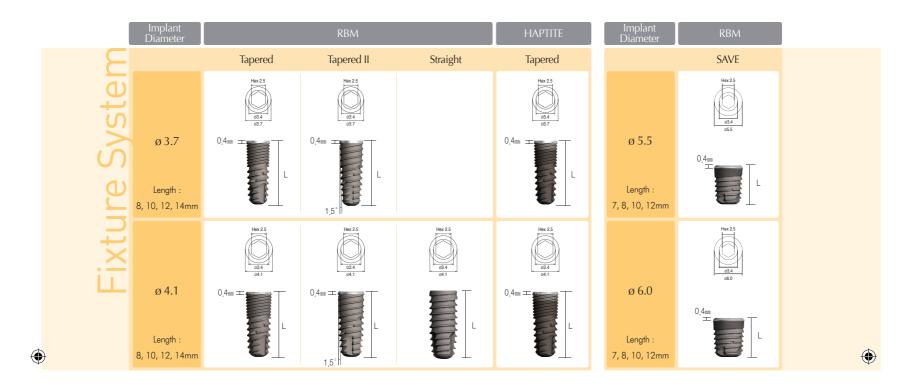


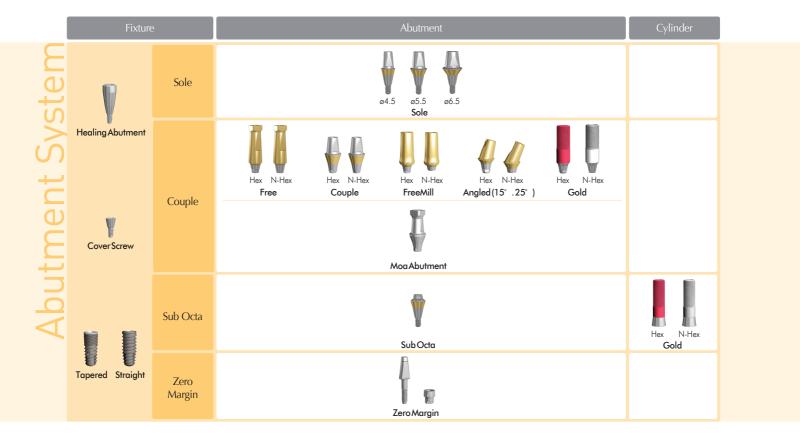
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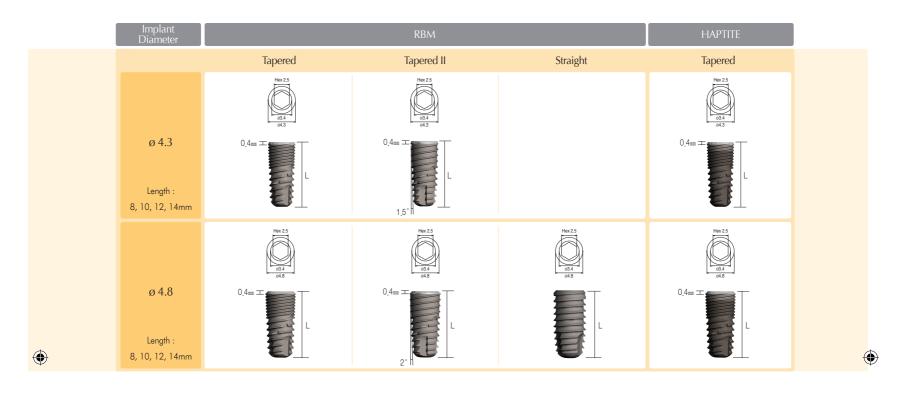
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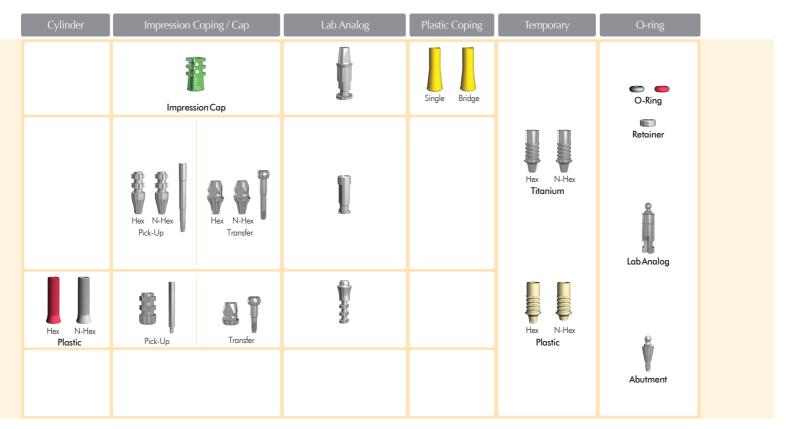






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s-Clean Fixture System 🛽 • 04 • • 05

# Features of s-Clean Fixture

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## S-Clean tapered

#### No-Mount System

The Dentis No-Mount System helps confirm the path on which the procedure is to be performed and enables the surgeon to shorten the surgery time and perform accurately by minimizing interference with the surrounding teeth.

#### Micro Threads to Prevent Bone Loss

The system minimizes bone loss and helps prevent infection-induced absorption of the cortical bone by acting as a wedge even in thin cortical bone and by offering stable initial bonding strength and dispersing the bone's stimulus and stress.

#### Safe Cutting Edge

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The system enables safe, smooth implantation by minimizing bone resistance during implant placement.

#### RBM Surface Treatment (1.5µm ~ 1.8µm

We adopted the RBM (resorbable blast media) method for the surface treatment of the fixture to be inserted into the alveolar bone. Surface roughness (Ra) of  $1.5 \mu m \sim 1.8 \mu m$  is the ideal value for osseointegration.

#### Self-Tapping Groove-

The groove helps with the self-tapping during implantation and serves as the void where surplus bone is to accumulate. It also increases the post-placement bond strength.

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# HAPTITE Fixture

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#### Super High-Speed Resorbable Blast Media (RBM) Coating

The coating technique developed by RIST (POSCO Research Institute) solved the inconsistent coating and peeling problems that had been associated with the conventional under- $2\mu$ m plasma-sprayed hydroxyapatite (HA) coating. Super high-speed RBM coating, the first of such method in the world, was developed via 100% local technology, offering a high level of reliability.

#### Increased Initial Bond Strength via HA Coating on the RBM Surface

Having a modulus of elasticity similar to that of the bone, HA coating offers post-placement effects that are close to natural teeth. The coating also boasts of outstanding biocompatible and bioactive qualities that facilitate initial osseointegration compared to conventional implant models.

#### Realizing Gingival Sealing Effects via Hybrid HA Coating

To help realize the gingival sealing effects resulting from securing biological width, a 1mm section of the anterior micro threads was treated as the safe zone for the RBM surface. This has helped prevent exposure of the HA coating layer resulting from soft tissue complication.

#### Excellent Coating Bond Strength

The excellent bond strength of HAPTITE coating is 60 Mpa or higher.

#### Osteo-Blast Bonding Test

The osteo-blast attached to the surface of the HAPTITE coating has quite a few cells and a highly developed extra-cellular matrix; thus allowing the easy bonding of bone tissues during HAPTITE placement as well as fast osseointegration.

#### High Crystalline HA

The X-ray diffraction test has confirmed the extremely high crystalline content of the HAPTITE HA coating (crystalline content  $\geq$  95%).

#### Tapered Design

The design guarantees excellent initial bond strength in sites with less desirable bone quality. It also enables easy, stabler performance of the procedure and shortens the surgery time.



#### Convenient No-Mount System

The Dentis No-Mount System helps confirm the path on which the procedure is to be performed and enables the surgeon to shorten the surgery time and perform accurately by minimizing interference with the surrounding teeth.

#### Tapered Design

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The design guarantees excellent initial bond strength in sites with less desirable bone quality. It also enables easy, stabler performance of the procedure and shortens the surgery time.

#### Wide-Valley Threads that Increase Initial Bond Strength -

We have adopted a single thread design with wide-valley threads that help secure increased initial bond strength in the cortical bone as well as placement torque value of  $35 N_{cm} \sim 40 N_{cm}$  to help reduce bone stress.

#### RBM Surface Treatment (1.5µm ~ 1.8µm

For the surface treatment for the fixture to be inserted into the alveolar bone, we have adopted the RBM (resorbable blast media) method and have secured surface roughness value (Ra) of  $1.5 \mu m \sim 1.8 \mu m$ , which is considered most desirable for osseointegration.

#### Safe Cutting Edge

The edge design minimizes bone resistance during implant placement and enables safe, smooth implantation.

#### Self-Tapping Groove-

The groove helps with the self-tapping during implantation and serves as the void where surplus bone is to accumulate. It also increases the post-placement bond strength.

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#### Outstanding Implantation in Various Kinds of Bone Quality

The Dentis CLEANLANT straight series enables smooth implantation regardless of bone quality, thereby enhancing the implantation results. The bone is free of excessive stress; thus, stable implantation is guaranteed.

#### Top-Part Compatibility to Maximize Convenience

The series have top-part compatibility with Dentis's existing tapered-body implant models.

#### Convenient No-Mount System

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Our no-mount system helps confirm the path on which the procedure is to be performed and enables the surgeon to shorten the surgery time and perform accurately by minimizing interference with the surrounding teeth.

#### RBM Surface Treatment (1,5µm - 1,8µm

Dentis adopts the RBM (resorbable blast media) method for the surface treatment of the fixture to be inserted into the alveolar bone. Surface roughness (Ra) of  $1.5\mu$ m ~  $1.8\mu$ m is the ideal value for osseointegration.

#### Implant Design to Ensure Outstanding Initial Stability

Using a double-thread screw helps reduce the placement time and increase initial stability. The design also helps with self-tapping during placement -- acting as the void where surplus bone is to accumulate -- and increases post-placement bond strength. The apex taper with a 5-degree angle serves as the guide for the implant to settle securely inside the drilled hole and induces stable implantation of the fixture.



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SAVE Submerged System



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#### Convenient No-Mount System

The Dentis no-mount system helps confirm the path on which the procedure is to be performed and enables the surgeon to shorten the surgery time and perform accurately by minimizing interference with the surrounding teeth.

#### Top-Part Compatibility to Maximize Convenience

The system requires no additional SAVE abutment and allows the use of existing products; thus offering cost-effective benefits.

#### Switching Platform Method

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The application of the switching platform method for the fixture shoulder helps minimize alveolar bone loss. The bone loss is an issue that requires aggressive intervention.

#### Micro-Thread to Prevent Bone Loss

The micro-thread offers stable initial bond strength and appropriate amounts of stimulus to the cortical bone, It also disperses the stress applied on the bone to help minimize bone loss.

#### **Optimal RBM Surface Treatment**

We have adopted the RBM (resorbable blast media) method for the surface treatment of the fixture to be inserted into the alveolar bone. Surface roughness (Ra) of  $1.5\mu$ m ~  $1.8\mu$ m is the ideal value for osseointegration.

#### Safe Cutting Edge/Tapered Design -

For this tapered design, we have adopted a double-thread screw and have implemented -- in addition to the cutting edge at the bottom of the screw -- a fine cutting edge for the entire thread along the screw's rotation arc. This has enabled smooth, stable implantation using the transmission of consistent force during fixture placement.

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# Restorative KIT



## Restorative Kit

- Offers tools needed for the secondary surgery
- Includes tools used exclusively for the abutment and screw fixture
- The 0.9 hex driver is used for external C/S and I-Fix mount screws.
- Allows active steam emissions during autoclave sterilization
- Features a semi-transparent top case (cover) that facilitates the observation of internal components
- Made from engineering plastics with excellent durability and heat resistance

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## s-Clean Abutment System

## I. Sole Abutment

A cemented-type abutment, the sole abutment can accommodate both single- and multi-unit cases. It has the following characteristics:

① Allows abutment impression

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- (2) Accommodates both single- and multi-unit cases
- ③ Features cemented-type prosthetic tooth

④ Offers outstanding stress dispersion via friction fixture enabled by 11° taper connection

(5) Applied ZrN coating to ensure aesthetically pleasing prosthesis

Sole Abutment (ZrN Coating)	Cuff	Height		Code No.	
5.5mm Cuff: 1.0,1.5,2.0, 2.5, 3.5, 4.5, 5.5mm	1.0mm 1.5mm 2.0mm 2.5mm 3.5mm 4.5mm 5.5mm	5.5mm	Ø4.5 DSSA4510PC DSSA4515PC DSSA4520PC DSSA4525PC DSSA4535PC DSSA4545PC DSSA4555PC	Ø5.5 DSSA5510PC DSSA5515PC DSSA5520PC DSSA5525PC DSSA5535PC DSSA5545PC DSSA5555PC	Ø6.5 DSSA6515PC DSSA6520PC DSSA6525PC DSSA6535PC DSSA6545PC DSSA6555PC

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#### • Step 1. Healing Abutment Removal

- Using the 1.25 hex driver, remove the healing abutment.



1) Tissue healing completed after the secondary surgery



2) Healing abutment removal via the 1.25 hex driver



3) Healing abutment removed

#### • Step 2. Impression Cap Fixture

- Connect the torque ratchet to the 1.25 hex driver and attach the fixture to the sole abutment to secure 30 N<sub>cm</sub>. For impression, have the impression cap aligned with the matching diameter and push the cap inward until you hear a clicking sound.

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1) Using the torque ratchet, fix the sole abutment (1.25 driver;  $30N_{cm}$  torque).

2) Complete the inter-oral sole abutment fixture.

3) Push in the impression cap until you hear a clicking sound.

Impression Cap	Abutment Diameter	Code No.
25	Ø4.5	DSIPC45
合	Ø5.5	DSIPC55
	Ø6.5	DSIPC65

#### O Step 3. Pick-up Type

- Inject impression materials and take the impression on the prepared tray.

After the impression-taking, fix the sole healing cap inside the oral cavity to protect the abutment during the prosthesis manufacturing period and to help minimize the feel of foreign substance inside the oral cavity of the patient.



1) Inject impression materials.

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2) Take the impression.



 Fix the sole healing cap until prosthesis is complete (protect the abutment and reduce patient discomfort).

#### O Step 4. Master Model Fabrication

- Detach the impression. Fix the lab analog to the impression cap until you hear a "clicking" sound. Apply artificial gum around the fixture to recreate tissues. Box the impression and inject plaster to complete the model.

Lab Analog	Abutment Diameter	Code No.
	Ø4.5 Ø5.5 Ø6.5	DSSLA45 DSSLA55 DSSLA65



1) Detach the impression.



 2) Fix the lab analog to the impression cap (make sure you hear a "clicking" sound; avoid applying too much force to prevent deformation).

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3) Recreate tissues for fixture implantation using artificial gum.  $\bigcirc$ 







4) Box impression using boxing wax and utility wax.

5) Inject plaster (make sure no deformation occurs when using the vibrator).

6) Complete model fabrication.

#### O Step 5. Wax-up

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- Push the plastic coping into the completed model until you hear a "clicking" sound. Using a bur, adjust the height to that of the surrounding teeth. Perform full wax-up to recreate the tooth pattern.

Plastic Coping	Abutment Diameter	Туре	Code No.
	Ø4.5	Single Bridge	DSSP45S DSSP45B
	Ø5.5	Single Bridge	DSSP55S DSSP55B
Single Bridge	Ø6.5	Single Bridge	DSSP65S DSSP65B

1) Fix the single plastic coping to the lab analog top (push in until you hear a "clicking" sound).



2) Adjust the height to the surrounding teeth using a bur.



3) Complete height adjustment.



4) Perform full wax-up to recreate the tooth pattern.



5) Cut on the full wax crown according to the buccolingual width and core width.

#### • Step 6. Casting & Porcelain

- Fabricate the prosthetic tooth from the cast pattern.



1) Mount the sprue to the wax pattern's nonfunctional cusp.



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2) Centrifugal casting machine used commonly for casting



3)Body completed via centrifugal casting machine



4) Remove the inner lips using a reamer to ensure precision cast match.



5) Carry out metal work.



6) Perform the 1<sup>st</sup> and 2<sup>nd</sup> opaque processes.



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7) Carry out porcelain buildup.



8) Perform contouring and grazing to complete prosthetic fabrication.



9) Prosthetic tooth completed

#### • Step 7. Cementation & Delivering

- Fix the completed prosthetic tooth inside the oral cavity.



1) Remove the previously installed healing cap in the oral cavity.



 Perform cementation on the completed prosthetic tooth, and then fix to the sole abutment to mount the tooth inside the oral cavity.

## Couple Abutment

## An SCRP-type abutment, the couple abutment can accommodate both single- and multi-unit cases. It has the following characteristics:

① Allows impression on both fixture and abutment levels

(2) Accommodates both single- and multi-unit cases

③ Features an SCRP-type prosthetic tooth

④ Offers outstanding stress dispersion via friction fixture enabled by 11° taper connection

(5) Applied ZrN coating to ensure aesthetically pleasing prosthesis

Couple Abutment ZrN Coating Hex	Cuff	Height(H)		Code No.	
н	1.0mm 1.5mm 2.0mm 2.5mm 3.5mm 4.5mm	5.5mm	Ø4.5 DSCA4510HPC DSCA4515HPC DSCA4520HPC DSCA4525HPC DSCA4535HPC DSCA4545HPC DSCA4545HPC	Ø5.5 DSCA5510HPC DSCA5515HPC DSCA5520HPC DSCA5525HPC DSCA5535HPC DSCA5545HPC	Ø6.5 DSCA6515HPC DSCA6520HPC DSCA6525HPC DSCA6535HPC DSCA6545HPC
Cuff Hex	5.5mm 1.0mm 1.5mm 2.0mm 2.5mm 3.5mm 4.5mm 5.5mm	7mm	DSCA4555HPC DSCA4510H7PC DSCA4515H7PC DSCA4520H7PC DSCA4525H7PC DSCA4535H7PC DSCA4545H7PC DSCA4555H7PC	DSCA5555HPC DSCA5510H7PC DSCA5515H7PC DSCA5520H7PC DSCA5525H7PC DSCA5535H7PC DSCA5545H7PC DSCA55555H7PC	DSCA6555HPC DSCA6515H7PC DSCA6520H7PC DSCA6525H7PC DSCA6535H7PC DSCA6545H7PC DSCA6555H7PC

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\* Abutment+Abutment Screw Set Code : Abutment Code + S(ex: DSCA4510NS)

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#### • Step 1. Healing Abutment Removal

- Using the 1.25 hex driver, remove the healing abutment.







2) Healing abutment removal with the 1.25 hex driver



3) Healing abutment removed

#### O Step 2. Pick-up Type

- After connecting the fixture to the impression coping, use the 1.25 hex driver and hold the guide pin with your fingers, and then take the impression.

Impression Coping (Pick-Up)	Туре	Height		Code No.	
38 38 I	Hex	Long Short	Ø4.5 DSIH45L DSIH45S	Ø5.5 DSIH55L DSIH55S	Ø6.5 DSIH65L DSIH65S
Hex N-Hex	N-Hex	Long Short	DSIN45L DSIN45S	DSIN55L DSIN55S	DSIN65L DSIN65S

\* Impression Coping+Guide Pin Set Code : Impression Coping Code + S(ex: DSIH45LS)

#### Cleanlant



1) Connect the pick-up impression coping to take an impression. Using the guide pin and 1,25 hex driver, fix the impression coping to the fixture.



2) Fix the impression coping to minimize errors that may occur during the impression-taking process.



3) Fix using pattern resin.

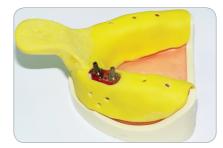
#### • Step 3. Master Model Fabrication

- Remove the impression body and connect the lab analog to the impression cap. Apply artificial gum around the fixture to recreate tissues. Box the impression and inject plaster to complete the master model.

Lab Analog	Code No.
l.	DSCLA



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1) Fabricate the individual tray customized to the patient's oral configuration to ensure precision impressiontaking.



2) Complete the injection of impression materials.



3) Using the 1,25 hex driver, remove the guide pin and detach the impression body.



4) Connect the lab analog to the impression coping. Fix using the 1.25 hex driver and guide pin.



5) Recreate tissues for the fixture implantation area using artificial gum.





6) Perform boxing on the impression using boxing and utility waxes. Mix plaster and inject, taking care not to cause deformation.

7) Complete the master model fabrication.

#### O Step 4. Wax-up

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- Using the 1.25 hex driver, fix the couple abutment to the oral cavity model. Using a bur, adjust the height to that of the surrounding teeth. Perform full wax-up to recreate the tooth pattern.

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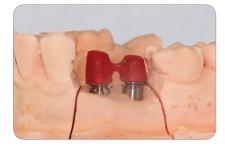
1) Connect the couple abutment to the lab analog. Fix using the 1,25 hex driver.



2) Remove the artificial gum.



 Confirm the abutment height and labiolingual width and diameter. Perform milling with the milling machine and bur.



4) Prevent wax pattern deformation by using pattern resin, Fabricate the resin cap.



5) With full waxing, recreate unique tooth patterns.

#### • Step 5. Casting & Porcelain

- Fabricate the prosthetic tooth from the cast pattern.

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1) Perform wax cut-back to secure a void where porcelain is to be injected.



2) Mount the sprue.



3) Centrifugal casting machine used commonly for casting



4) PFM model with completed casting

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5) Connect the couple abutment to the PFM model to check the match.



6) Perform the 1<sup>st</sup> and 2<sup>nd</sup> opaque processes to remove PFM's signature metallic shine.



7) Carry out porcelain buildup and put it in the porcelain furnace to cure.



8) Final prosthetic tooth completed



9) Using a transfer jig, fix the couple abutment inside the oral cavity.

#### O Step 6. Cementation & Delivering

- Fix the completed prosthetic tooth inside the oral cavity.



1) Fix the abutment screw and tighten with the 1.25 hex driver (30  $N_{\rm Cm})_{\rm .}$ 



2) Mount the final prosthetic tooth inside the oral cavity.



## Angled Abutment

#### Angled abutment is used for cases with poor implantation path, offering 15° and 25° models.

Angled Abutment ZrN Coating Hex	Angle	Cuff		Code No.	
4 4	15°	2mm 4mm	Ø4.5 DSAA45152HC DSAA45154HC	Ø5.5 DSAA55152HC DSAA55154HC	Ø6.5 DSAA65152HC DSAA65154HC
15* 25*	25°	2mm 4mm	DSAA45252HC DSAA45254HC	DSAA55252HC DSAA55254HC	DSAA65252HC DSAA65254HC
		0.11			
Angled Abutment ZrN Coating N-Hex	Angle	Cuff	Code No.		
	458	0	Ø4.5	Ø5.5	Ø6.5
	15°	2mm 4mm	DSAA45152NHC DSAA45154NHC	DSAA55152NHC DSAA55154NHC	DSAA65152NHC DSAA65154NHC

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\* Abutment+Abutment Screw Set Code : Abutment Code + S(ex: DSAA45152S)

#### • Step 1. Healing Abutment Removal

#### - Remove the healing abutment using the 1.25 hex driver.



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1) Tissue healing completed after the secondary surgery



2) Remove the healing abutment with the 1,25 hex driver.



3) Remove the healing abutment.

#### O Step 2. Pick-up Type

- After connecting the fixture to the impression coping, use the 1.25 hex driver and hold the guide pin with your fingers, and then take the impression.

Impression Coping (Pick-Up)	Туре	Height		Code No.	
31 32	Hex	Long Short	Ø4.5 DSIH45L DSIH45S	Ø5.5 DSIH55L DSIH55S	Ø6.5 DSIH65L DSIH65S
Hex N.Hex U	N-Hex	Long Short	DSIN45L DSIN45S	DSIN55L DSIN55S	DSIN65L DSIN65S

\* Impression Coping+Guide Pin Set Code : Impression Coping Code + S(ex: DSIH45LS)

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1) Connect the pick-up impression coping. Using the 1,25 hex driver, connect the guide pin.



2) Inject impression materials around the impression coping.



3) Complete the injection of impression materials.

#### O Step 3. Master Model Fabrication

- Remove the impression body and connect the lab analog to the impression cap. Apply artificial gum around the fixture to recreate tissues. Box the impression and inject plaster to complete the master model.

Lab Analog	Code No.
<u>I</u>	DSCLA



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1) Connect the lab analog to the impression coping and fix using the 1.25 hex driver.



2) After the lab analog connection, form artificial gum to recreate patient-specific tissue patterns.



3) Perform boxing using boxing wax and utility wax.



4) Mix plaster and inject, taking care not to cause impression deformation.



5) Complete the master model fabrication.

#### O Step 4. Wax-up

- Using the 1.25 hex driver, fix the angled abutment to the master model. Using a bur, adjust the height to that of the surrounding teeth. Perform full wax-up to recreate the tooth pattern.



1) Connect the angled abutment to the lab analog.



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 Using the milling machine and bur, confirm the abutment height and labiolingual width and diameter and perform milling.



3) Prevent wax pattern deformation by using pattern resin, Fabricate the resin cap.



4) Perform full waxing to recreate the tooth pattern.

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5) Carry out wax cut-back to secure a void where porcelain is to be injected.

#### • Step 5. Casting & Porcelain

- Fabricate the prosthetic tooth from the cast pattern.



1) Mount the sprue.



2) Centrifugal casting machine used commonly for casting



3) PFM model with completed casting

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4) Check the match by connecting the angled abutment top to the PFM model.



5) Perform porcelain buildup and put it in the porcelain furnace to cure.



6) After glazing, complete the prosthetic tooth.

#### • Step 6. Cementation & delivering

- Fix the completed prosthetic tooth inside the oral cavity.



1) Remove the healing abutment.



2) Connect the completed prosthetic tooth to the fixture inside the oral cavity. Tighten the screw to 30  $N_{\rm Cm}$  using the 1.25 hex driver.



3) Block out the screw hole. Fix the completed prosthetic tooth to the abutment via cementation.

## 4. Gold UCLA Abutment

The gold UCLA abutment in gold casing allows dental professionals to fabricate prosthetic teeth with greater flexibility and precision.

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Gold UCLA	Abutment Diameter	Туре	Code No.
		Hex	DSGCH
Hex W N-Hex		N-Hex	DSGCN

\* Abutment+Abutment Screw Set Code : Abutment Code + S(ex: DSGCHS)

#### O Step 1. Healing Abutment Removal

- Remove the healing abutment using the 1.25 hex driver.



1) Tissue healing completed after the secondary surgery



 Remove the healing abutment with the 1.25 hex driver.



3) Healing abutment removed

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#### ● Step 2. 인상채득(Pick-up Type)

- After attaching the fixture to the impression coping, connect the 1.25 hex driver to the guide pin and fix with a 30 Ncm force. Afterward, take the impression

Impression Coping (Pick-Up)	Туре	Height		Code No.	
446 446	Hex	Long Short	Ø4.5 DSIH45L DSIH45S	Ø5.5 DSIH55L DSIH55S	Ø6.5 DSIH65L DSIH65S
Hex N-Hex	N-Hex	Long Short	DSIN45L DSIN45S	DSIN55L DSIN55S	DSIN65L DSIN65S

\* Impression Coping+Guide Pin Set Code : Impression Coping Code + S(ex: DSIH45LS)



1) Connect the impression coping to take an impression. Connect the guide pin to the 1.25 hex driver and fix the impression coping to the fixture.



2) Pick-up impression coping completed



3) Inject impression materials around the impression coping.



4) Impression material injection completed



5) Fix the 1.25 hex driver to the guide pin to pick up the impression. Rotate and remove.



6) Impression removal completed

#### O Step 3. Master Model Fabrication

- Remove the impression body and connect the lab analog to the impression cap. Apply artificial gum around the fixture to recreate tissues. Box the impression and inject plaster to complete the master model.

Lab Analog	Code No.
	DSCLA



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1) Connect the lab analog to the impression coping and fix using the 1.25 hex driver and guide pin.



2) Form artificial gum to recreate patient-specific tissue patterns.



 Perform boxing on the impression body. Mix plasters and inject, taking care not to cause impression deformation.



4) Master model fabrication completed

#### O Step 4. Wax-up

- Using the 1.25 hex driver, fix the gold UCLA abutment to the master model. Using a bur, adjust the height to that of the surrounding teeth. Perform full wax-up to recreate the tooth pattern.

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 To ensure precision prosthetic fabrication, perform dying to distinguish the target tooth from the surrounding teeth.



2) Cut the master model (target tooth) to ensure the smooth detachment of the surrounding teeth.



 Connect the gold UCLA abutment to the lab analog. Tighten the screw using the 1.25 hex driver.



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4) Using the milling machine and hand piece, cut out the tooth segment to ensure that there is no interference with the surrounding teeth or tooth in the opposite arch.



5) Carry out full waxing to recreate unique tooth patterns.



6) Secure space on the buccolingual side to inject light-curing resin.

#### • Step 5. Casting & Porcelain

- Fabricate the prosthetic tooth from the cast pattern.



1) Mount the sprue on the wax pattern's nonfunctional cusp and perform embedment grouting.



2) Centrifugal casting machine used commonly for casting



3) Gold model completed via centrifugal casting machine

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#### • Step 6. Cementation & Delivering

- Fix the completed prosthetic tooth inside the oral cavity.



1) Connect the gold prosthetic tooth to the lab analog. Tighten the screw with the 1.25 hex driver and confirm the match.



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2) Check the match between teeth in opposite arches and interference with the surrounding teeth, Afterward, perform polishing.



3) Healing abutment or cover screw removed



4) Connect the completed prosthetic tooth to the fixture in the oral cavity. Tighten the screw to 30 Ncm using the 1,25 hex driver.

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5) Fixture of Gold UCLA abutment to prosthetic tooth completed

## 5. Sub-octa Abutment

Sub-octa abutment is used for screw-type prosthetics and multiple-unit cases with poor path.

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Sub-octa Abutment	Abutment Diameter	Cuff	Code No.
ZrN Coating	Ø4.8	1.0mm 1.5mm 2.5mm 3.5mm 4.5mm 5.5mm	ZrN Coating DSOA480PC DSOA481PC DSOA482PC DSOA483PC DSOA484PC DSOA485PC

#### • Step 1. Healing Abutment Removal

- Remove the healing abutment with the 1.25 hex driver.



1) Tissue healing completed after the secondary surgery



2) Remove the healing abutment with the 1,25 hex driver.



3) Healing abutment removed



- After attaching the abutment in the oral cavity using the octa abutment driver, connect the pick-up type impression coping with the 1.25 hex driver (30 Ncm). Take the impression. Afterward, install the healing cap to help minimize the feel of foreign matter inside the oral cavity of the patient.

Impression Coping	Abutment Diameter	Туре	Code No.
Hex NHex Pick-Up	Ø4.8	Pick-Up	DIOIO DIOIN

\* Impression Coping+Guide Pin Set Code : Impression Coping Code + S(ex: DIOIOS)



1) Connect the abutment in the oral cavity using the octa driver.



2) Complete the fixture of the octa abutment in the oral cavity (30  $N_{\rm Cm})_{\rm .}$ 



3) Connect the pick-up impression coping. Connect the 1,25 hex driver to the guide pin. Fix the impression coping to the abutment.

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4) Impression coping fixed in the oral cavity



5) Fix with pattern resin to reduce impression coping error that may occur during impression-taking.



6) Inject impression materials around the impression coping.



7) Impression material injection completed



8) Remove the guide pin with the 1.25 hex driver.



9) Fix the octa healing cap inside the oral cavity.



10) Impression competed

#### • Step 3. Master Model

Lab Analog	Abutment Diameter	Code No.
	Ø4.8	DIOLA



1) Connect the lab analog to the impression coping. Fix with the guide pin and 1.25 hex driver.



2) Form artificial gum.



3) Mix the plaster and inject. Take care not to cause impression deformation.



4) Master model completed.



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#### O Step 4. Wax-up

- Using the 1.25 hex driver, fix the gold cylinder to the master model. Using a bur, adjust the height to that of the surrounding teeth. Perform full wax-up to recreate the tooth pattern.



1) Lab analog as exposed in the master model (matches actual oral cavity patterns)



2) Connect the gold cylinder to the sub-octa lab analog using the 1.2 hex driver.



 Check the abutment height and labiolingual width and diameter. Perform milling using the milling machine and bur.



4) Carry out full waxing to recreate the tooth patterns. With bridge crowns, fix the cylinder with pattern resin, and then wax up to prevent deformation induced by shrinking wax.



5) After gold casting, secure space where lightcuring resin is to be injected to increase labiolingual aesthetics.

Cleanlant

#### O Step 5. Casting

- Fabricate the prosthetic tooth from the cast pattern.



1) Mount the sprue.

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2) Centrifugal casting machine used commonly for casting



3) Gold prosthetic teeth with complete casting



4) Check the bite of teeth in opposite arches. Perform occlusion polishing.

- Remove the cap, and then install the completed prosthetic teeth.

• Step 6. Delivering



5) Labiolingual side filled with light-curing resin to improve aesthetic quality



3) Insert the screw into the fixed prosthetic teeth. Fix with the 1,2 hex driver.



1) Healing cap previously fixed in the oral cavity now removed



2) Connect the completed prosthetic teeth to the abutment in the oral cavity.



4) Using the torque ratchet, fix the prosthetic teeth to the abutment (20  $\ensuremath{\mathsf{Ncm}}$  torque).



 Remove the hole created at the center of the occlusion plane by injecting light-curing resin. Recreate the occlusion plane.

## 6. O-Ring Abutment

An attachment-retained prosthetic product, the O-ring abutment is used with patients with a fully edentulous maxilla.

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0-Ring Abutment	Abutment Diameter	Cuff	Code No.
Cuff: 0.5, 2, 4mm	Ø3.4	0.5mm	DSORA00
	Ø4.5	2mm	DSORA20
	Ø4.5	4mm	DSORA40

#### • Step 1. Healing Abutment Removal

- Remove the healing abutment using the 1.25 hex driver.



1) Tissue healing completed after the secondary surgery



3) Remove the healing abutment using the 1.25 hex driver's torque ratchet.



4) Healing abutment removed

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#### O Step 2. Pick-up Type

- After attaching the O-ring abutment in the oral cavity using the O-ring abutment driver, take the impression.



1) Connect the abutment in the oral cavity using an O-ring abutment driver.



2) Connect the torque ratchet to the driver and tighten the abutment with torque (30  $N_{\rm Cm}$ ).



3) Abutment connection completed in the oral cavity



4) Inject impression materials around the abutment.



5) Complete the injection of impression materials.



6) Impression body completed

#### O Step 3. Master Model Fabrication

- Remove the impression body and connect the lab analog to the impression cap. Apply artificial gum around the fixture to recreate tissues. Box the impression and inject plaster to complete the master model.

O-Ring Lab Analog	Code No.
	DOLA



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1) To fix, push the lab analog into the ball portion in the now-detached master model.



2) Perform boxing to ensure precision recreation of the border area.



3) Mix the plaster and inject. Take care not to cause impression deformation.



4) Master model completed

#### O Step 4. Wax-up



- Considering the patient's interocclusal height, adjust the wax rim and arrange the resin teeth. By adjusting the denture, confirm the occlusion and tooth arrangement. Fix the denture with plaster, and then inject resin into the wax model using a flask. Perform curing and finish the resin denture.

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 Following the wax rim adjustment in the oral cavity, take an interocclusal impression and send it to the fabricator.



3) Arrange the resin teeth according to the occlusion record.



4) Adjust the denture in the oral cavity. Check the occlusion and the tooth arrangement.



5) Place the wax denture inside the flask to fabricate the resin denture. Fix with plaster.



6) With the wax denture fixed, connect the flask wall and inject plaster completely. Cover to remove the air inside.



7) Using hot wax, remove the previously fixed wax to secure space where resin is to be injected.



10) Resin denture complete with curing



8) Inject resin into the flask, pressurize with the press machine, and fill with resin around the wax model.



11) Perform polishing to smooth out the resin tip (generated during pressurization) and rough surface.



9) Resin-filled flask



12) Resin denture fully adjusted inside the oral cavity

#### • Step 5. Delivering

- Place the denture onto the oral cavity model. Confirm the locations where retainers are to be inserted. Create holes and fix the retainers using resin. With the dark O-rings, smooth out the resin-filled sites. Replace the dark rings with the red O-rings and fix them onto the oral cavity.

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O-Ring Retainer	Code No.
	DOR
O-Ring	Code No.
	ORING



 Connect the retainers to the O-ring abutments. Using wax, block out retainer tops so that the denture-fixing resin will not flow into the O-rings.



2) Using a bur, create holes where retainers are to be inserted.



3) Let resin flow into the holes and fix the retainers. At this time, use the dark O-rings.



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 Using a bur, smooth out the surface of sites where resin-filled holes are located. Polish to complete.



5) Replace the dark rings with the red O-rings (final rings).



6) Fix teeth onto the oral cavity.