PROSTHETIC MANUAL

for Izenimplant System

IZEN IMPLANT

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CONTENTS

Restoration Introduction

21p Cemented Abutment

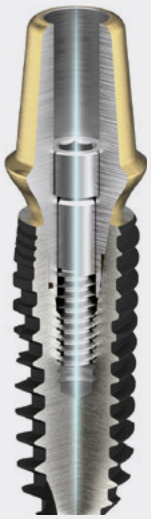
33p Angled Abutment

41p Multi Straight & Multi Angled Abutment

57p Ball Abutment

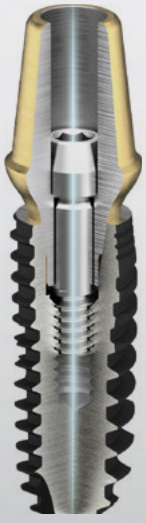
ZENEX IMPLANT SYSTEM

Designed for various types of bone



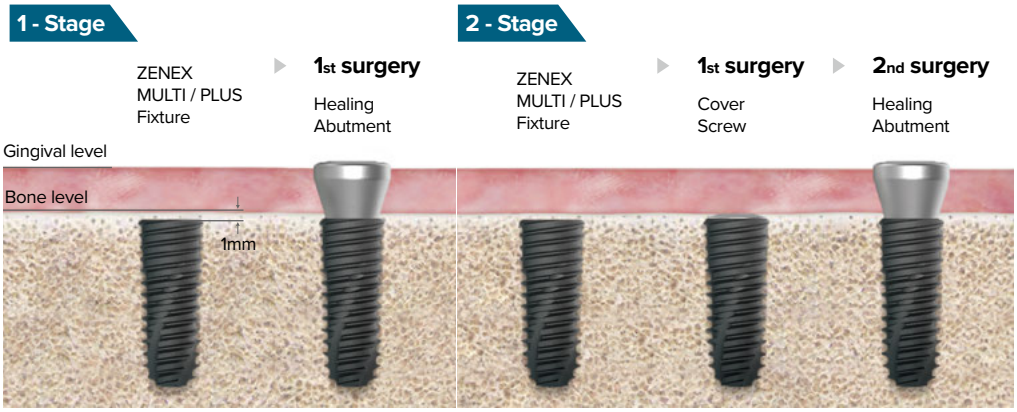
I system

11° tapered double contact connection



T system

Stage



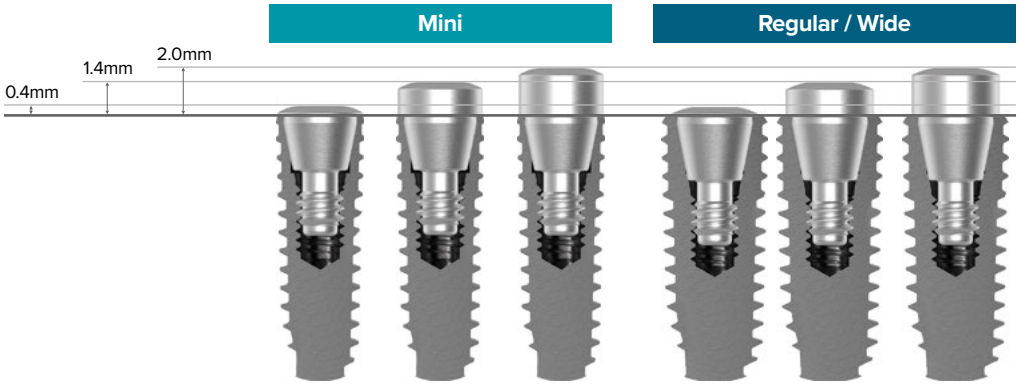
Cover Screw

Select appropriate Cover Screw height upon depth of implant placement.

Select specification fits for fixture connection.

Tighten with 1.2 Hex Driver by hand.

Recommended tightening torque: 5~8Ncm



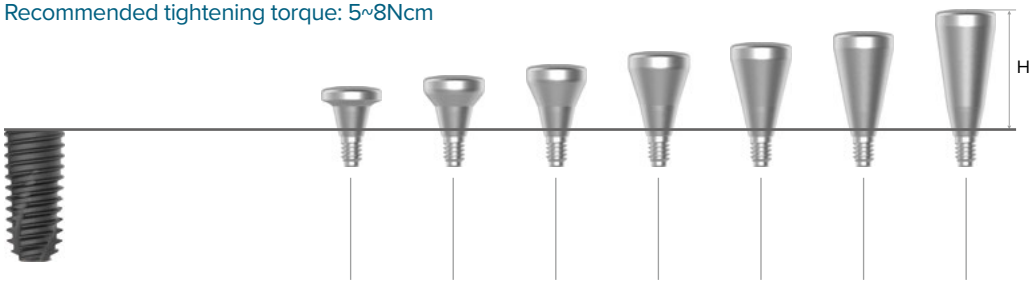
Healing Abutment

Use Healing Abutment fits for the diameter of abutment.

Use specification fits for fixture connection.

Tighten with 1.2 Hex Driver by hand.

Recommended tightening torque: 5~8Ncm



Healing Abutment	H	2.0	3.0	4.0	5.0	6.0	7.0	9.0
Abutment	G/H		1.0	2.0 or 3.0	2.0 or 3.0		Larger than 5.0	Larger than 5.0
Impression Coping	Type	Narrow	Narrow	Narrow	M / R / W	M / R / W	M / R / W	M / R / W

ZENEX System Overview

Single / Bridge Case

		Cemented Abutment	Angled Abutment	Multi Straight Abutment	Multi Angled Abutment
					
		2-Piece		3-Piece	
Prosthetic Type	Screw	✔	✔	x	x
	Cement	✔	✔	✔	✔
	Combination	✔	✔	✔	✔
Impression Type	Abutment Level	x	x	✔	✔
	Fixture Level	✔	✔	x	x

Single / Bridge Case

2 piece

Screw or cement or combination type rosthesis is possible with fixture level

Cemented / Angled Abutment

Screw or cement or combination type prosthesis is possible with fixture level impression, can be customized depending on oral environment and prosthesis type

3 piece

Multi Straight / Multi Angled Abutment

Cement or combination type prosthesis is possible with abutment level mpression and effective in bridge case with unfavorable path

* Contents above are general guideline from the company and products must be selected in consideration of oral environment, habits, fixture placement condition, clinical experience and aftermath.

Overdenture Case

		Ball Abutment	Multi Straight Abutment	Multi Angled Abutment
				
Prosthetic Type	Retentive Anchor	✔	✔	✔
	Bar Frame	✔	✔	✔
Impression Type	Abutment Level	✔	✔	✔
	Fixture Level	x	x	x

Overdenture Case

3 piece

Multi Straight / Multi Angled Abutment

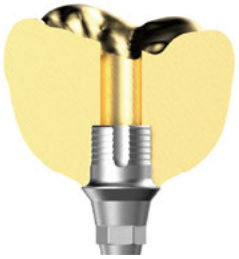
Effective in the fabrication of overdenture using bar frame in abutment level impression

* Contents above are general guideline from the company and products must be selected in consideration of oral environment, habits, fixture placement condition, clinical experience and aftermath.

Prosthetic Type

Screw

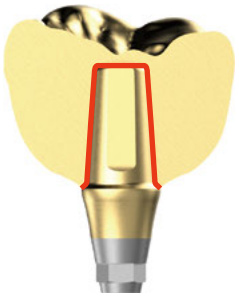
Combined with abutment through casting and firing in fabrication process



- Screw hole is exposed above occlusal surface, therefore esthetics and occlusion have to be considered
- Prosthesis can easily be removed with screw, therefore there is no side effects from cement
- Errors can occur in bridge fabrication in casting or firing process
- Setting is affected severely by the fixture angle and adjacent teeth

Cement

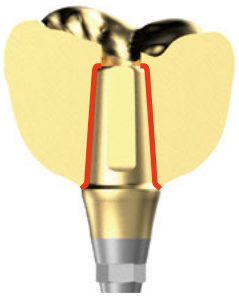
Casted or fired separately from abutment in the fabrication process, and combined by cement



- There is no screw hole, therefore esthetic surface can be created
- Difficult to remove prosthesis
- Cement is difficult to remove and has chances for inflammation
- Passive fit in bridge is easy
- Relatively easy setting, only affected by adjacent teeth

Combination

- Casted or fired separately from abutment in the fabrication process, and combined by cement (same as cement type)

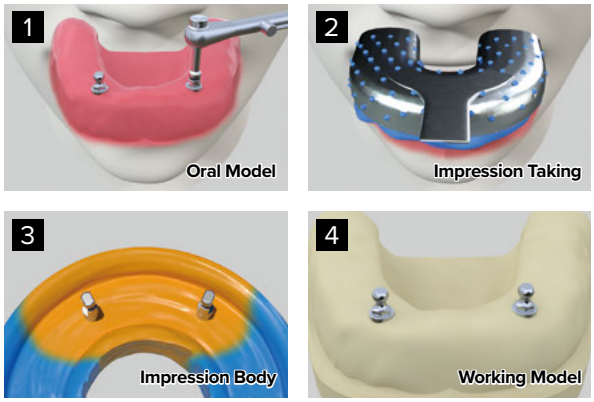


- Screw hole is exposed above occlusal surface, therefore esthetics and occlusion have to be considered
- Maintenance is easy because prosthesis can easily be removed with screw
- After connecting prosthesis with cement, cement can be removed completely outside the mouth, so there is no side effect from cement
- Passive fit in bridge is easy
- Setting is affected by the fixture angle and adjacent teeth but relatively easy compared to screw type

Impression Type

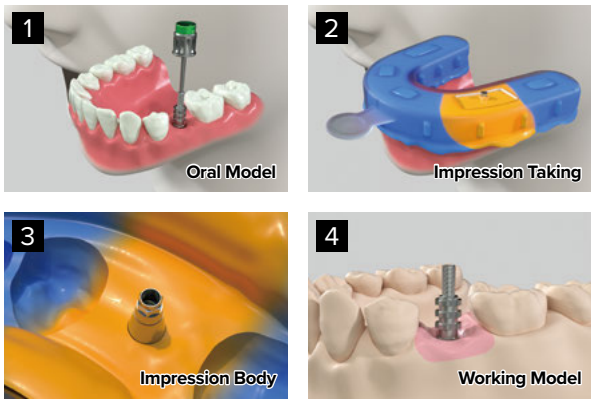
Abutment Level Impression

- Similar impression taking as natural teeth
- Bring abutment shape/position to working model (Impression taking is based on abutment information)
- Prosthetic process is relatively easy and convenient
- Close tray (ready made / stock tray) used
- Exclusive impression coping for each abutment is recommended



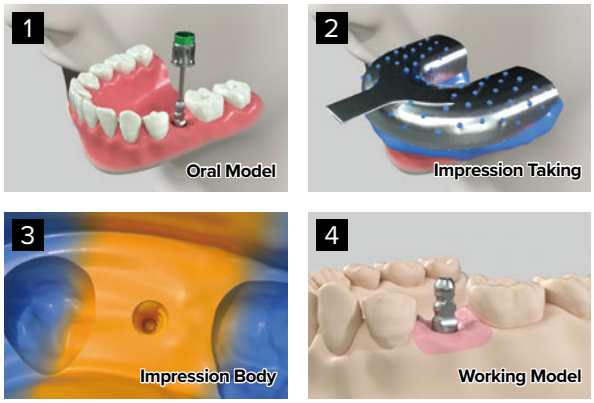
Fixture Leve Impression Pick-up Type

- Bring fixture's connection/position to working model (impression taking is based on fixture information)
- Impression taking is relatively complicated but accuracy is better than transfer type
- Impression coping moves as one body with impression body
- Open tray (custom / individual tray) used



Fixture Level Impression Transfer Type

- Bring fixture's connection/position to working model (impression taking is based on fixture information)
- Convenient in posterior area with limited mouth opening
- Impression coping moves separately from impression body
- Close tray (ready made / stock tray) used



Tightening Torque

Recommended to use the tightening torque below

(Need regular maintenance for the abrasion, damage and functionality of components such as driver, torque wrench etc)

5 ~ 8Ncm

Cover Screw

Healing Abutment

Pick-Up Impression Coping

D432520

Transfer Impression Coping

D432520

Multi Pick-Up Impression Coping

D432520

Multi Transfer Impression Coping

D432520

Multi Healing Cap

D432520

20Ncm

Temporary Abutment

Multi Temporary Cylinder

Multi CCM Cast Cylinder

Multi Plastic Cast Cylinder

D432520

Multi Ti Link Cylinder

30Ncm

Cemented Abutment

Angled Abutment

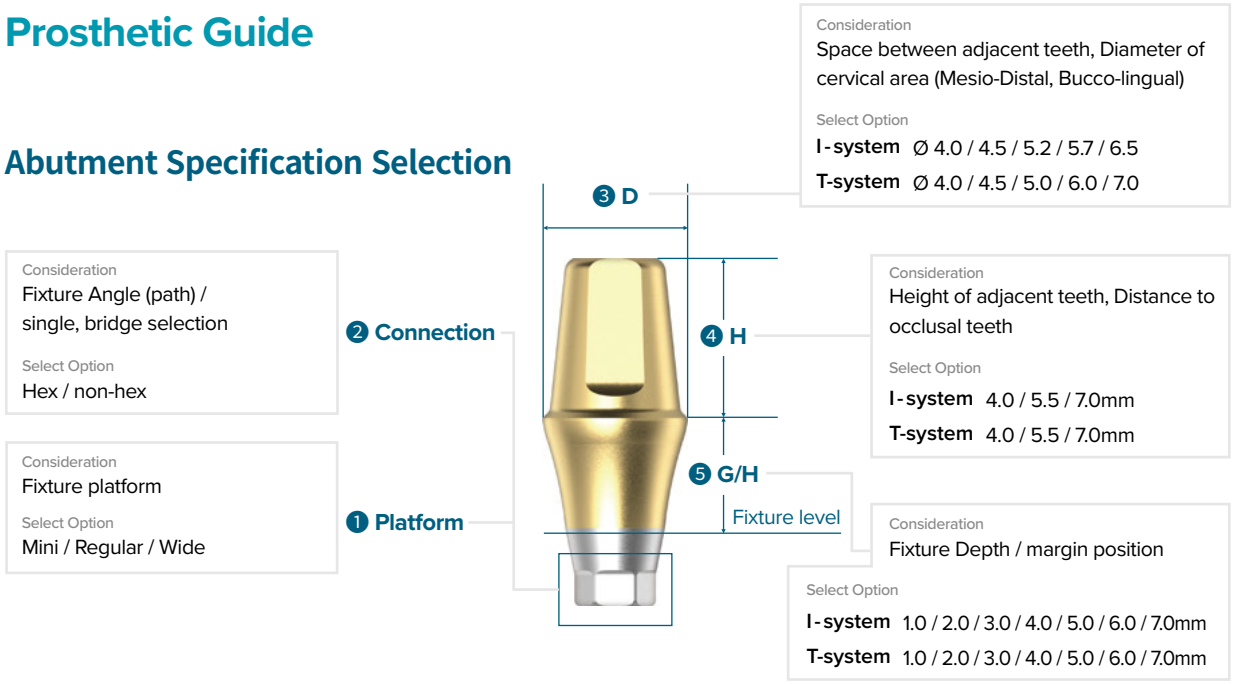
Multi Straight Abutment

Multi Angled Abutment

Ball Abutment

Prosthetic Guide

Abutment Specification Selection



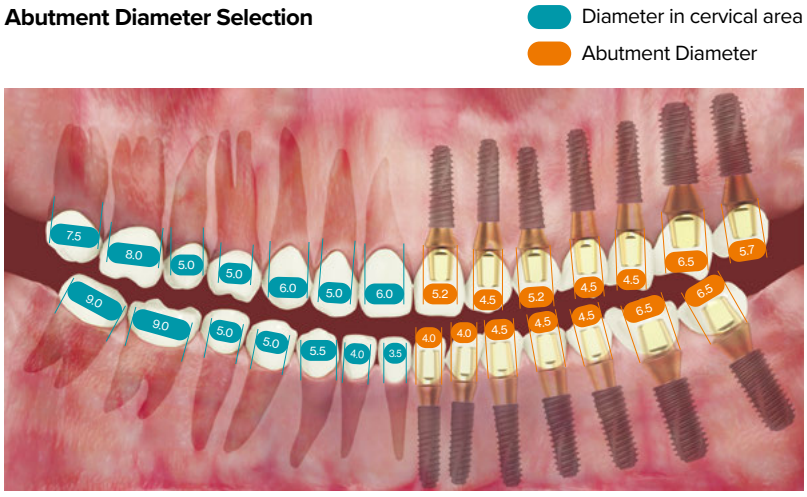
Guide Tip.

Emergence Profile Formation Tip

· Pre surgery planning is important since fixture depth decides abutment's G/H and H

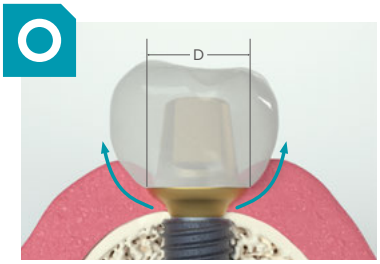
· It is important to select abutment diameter similar to natural tooth's cervical area

Abutment Diameter Selection



※ Natural teeth cervical area mesial-distal / buccal-lingual:
Based on smaller specification among standard specification

· When appropriate abutment specification for restoration was not selected Impossible to create natural prosthesis contour like beside

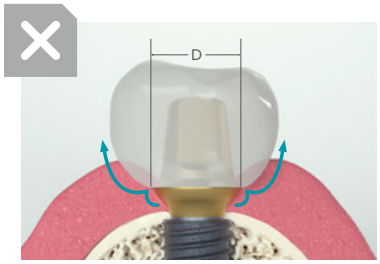


ZENEX System Fixture

D Ø 4.5 / L 11.5mm

Cemented Abutment

D Ø 6.5 / P/H 5.5mm / G/H 2.0mm



ZENEX System Fixture

D Ø 4.5 / L 11.5mm

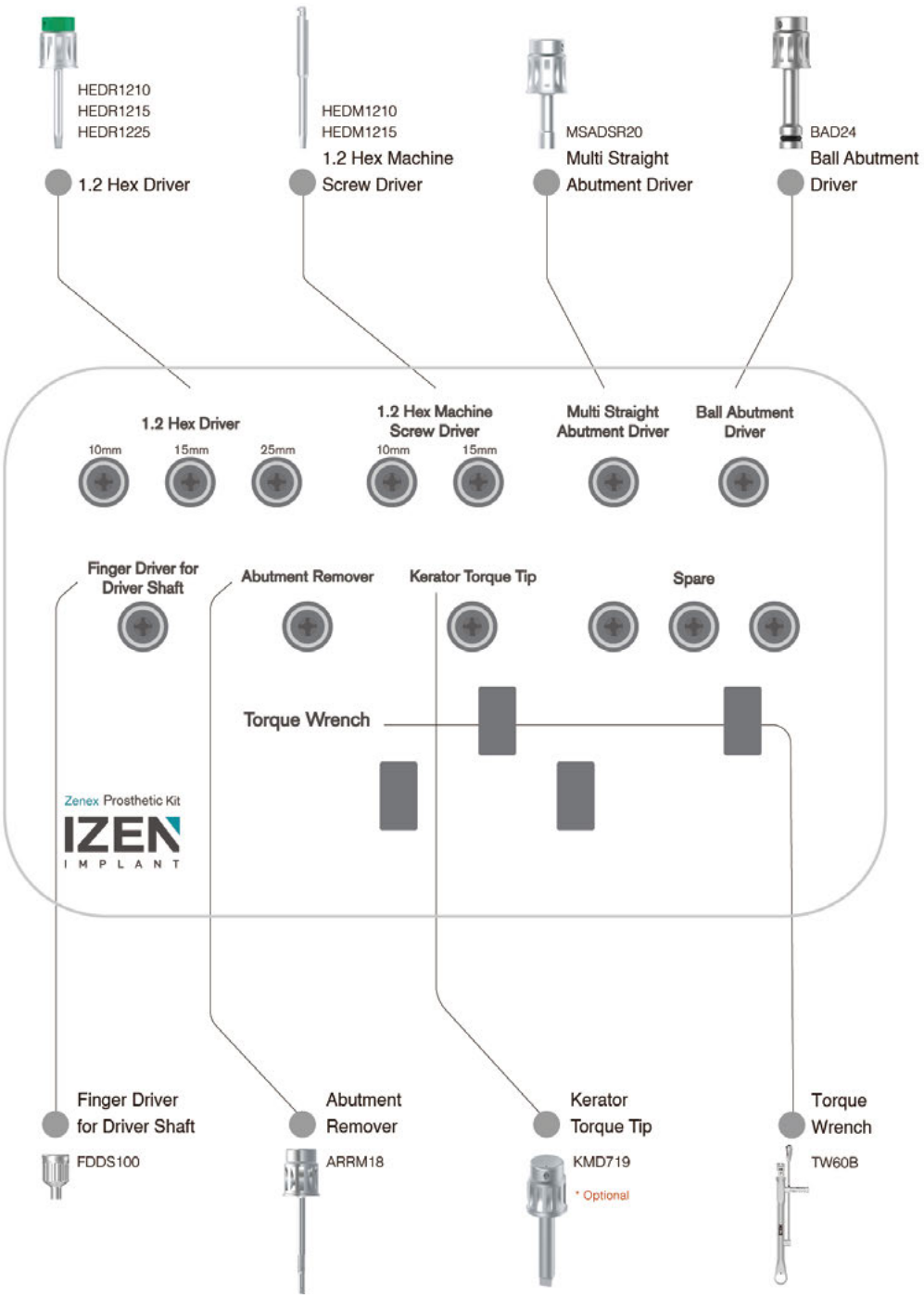
Cemented Abutment

D Ø 5.7 / P/H 5.5mm / G/H 2.0mm

Listing Number D432520

Component & Instrument

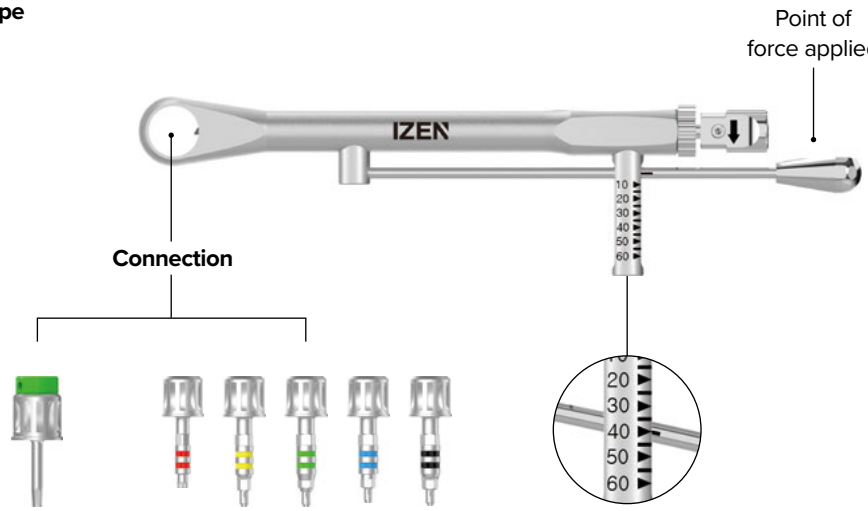
Prosthetic KIT (PDK)



Torque Wrench

Listing Number D432520

Bar Type



1.2 Hex Driver | Fixture Driver Wrench | 40Ncm

Driver

Listing Number D432520

1.2 Hex Driver	1.2 Hex Machine Screw Driver	Ball Abutment Driver	Multi Straight Abutment Driver
			
Driver for connecting with Torque Wrench	Driver for implant motor	Torque driver for Ball Abutment	Torque driver for Multi Straight Abutment

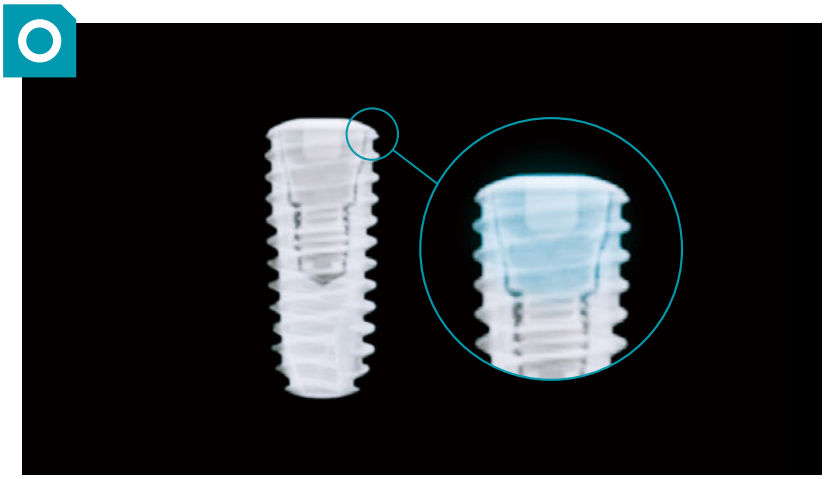
※ Normally, perform rough connection by hand first and tighten in final torque with torque wrench

Right Connection Checking Guide

Cover Screw

· Misconnection happens by the bone near fixture or adjacent tissue and foreign substance

· Check right connection after removing interfering area with bone profiler



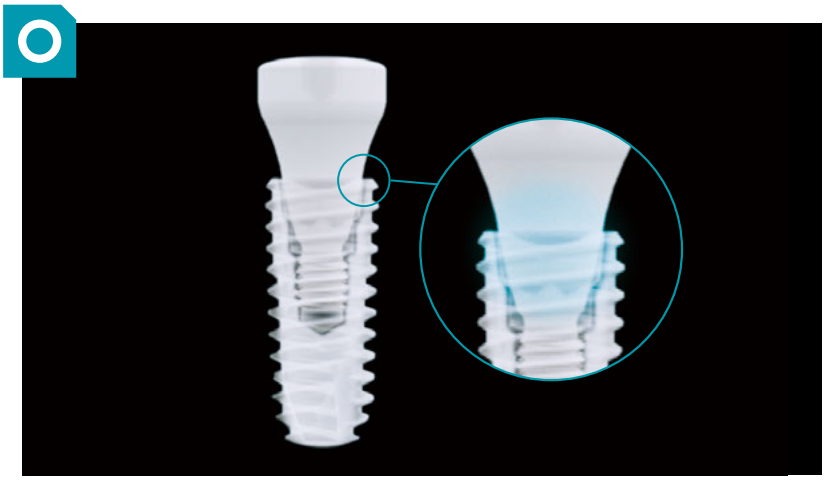
Healing Abutment

· If healing abutment and fixture has right connection, there is sealing on the top of taper area inside

· Misconnection happens by the bone near fixture or adjacent tissue and foreign substance

· Fixture failure can happen with plague and bacteria proliferation in gap

· Check right connection after removing interfering area with bone profiler

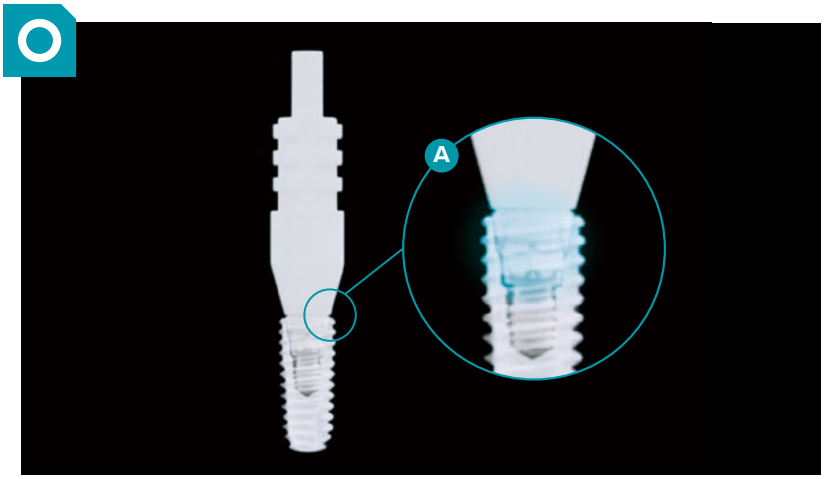


Impression Coping

Pick-up Impression Coping

· Misconnection occurs when fixture and hex do not connect accurately, or with interference from bone and tissue around fixture

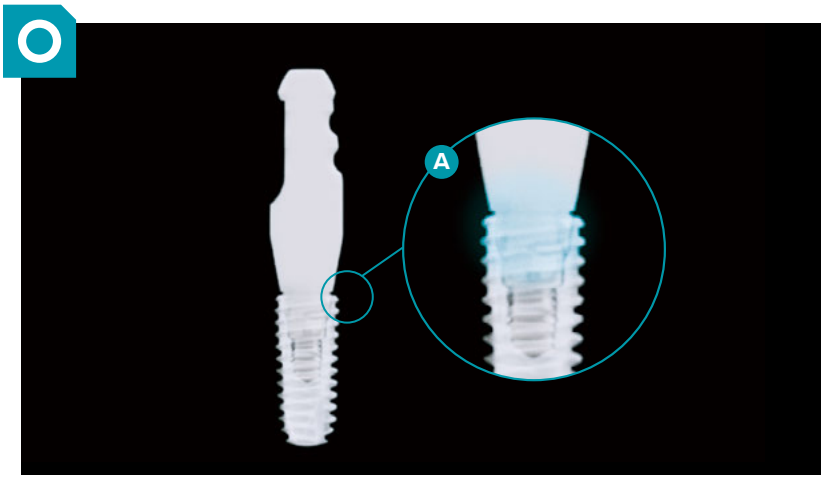
· Check right connection by checking if coping body notch(A) matches with top of fixture or if there is gap inside the 11° taper area



Transfer Impression Coping

· Check right connection by checking if coping body notch(A) matches with top of fixture or if there is gap inside the 11° taper area

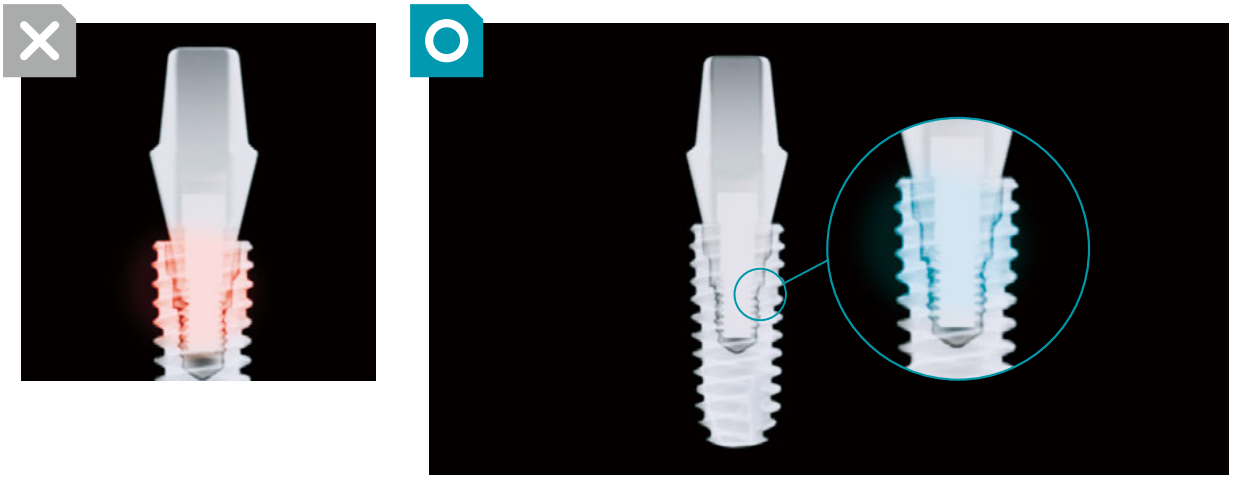
※ Transfer impression coping :
Guide pin will not be connected without accurately setting the hex, therefore reduce errors from users



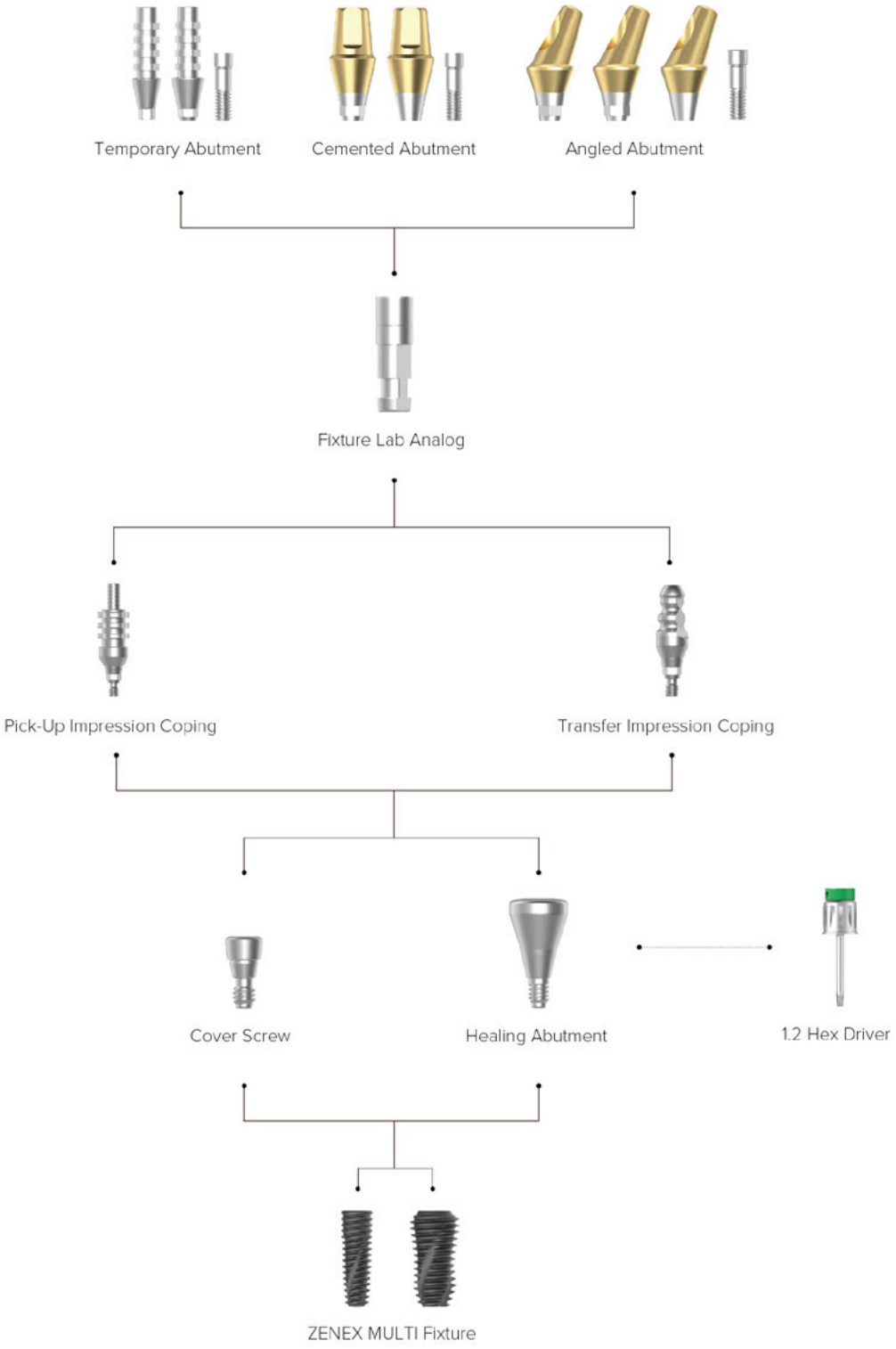
Abutment

· Misconnection occurs when fixture and hex do not connect accurately, or with interference from bone and tissue around fixture

· Modify wrong hex setting with x-ray or use Bone profiler to remove interfering area and check right connection

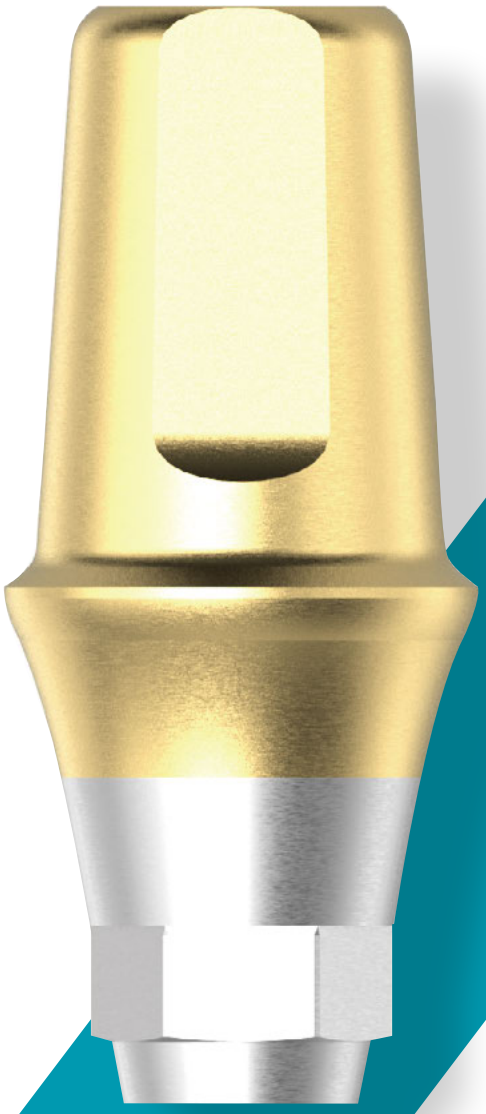


Prosthetic Flow Chart



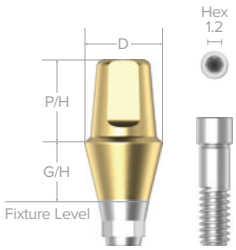
01

CEMENTED ABUTMENT



Prosthetic Process

Cemented Abutment



Mini, Regular & Wide

Abutment Features

The top part of the post is rounded, making it easy to fasten the zirconia crown.

Abutment for manufacturing Cement/Combination-retained type prosthesis

Select specification fits for fixture connection.

Customized by grinding

Fixture Level Impression

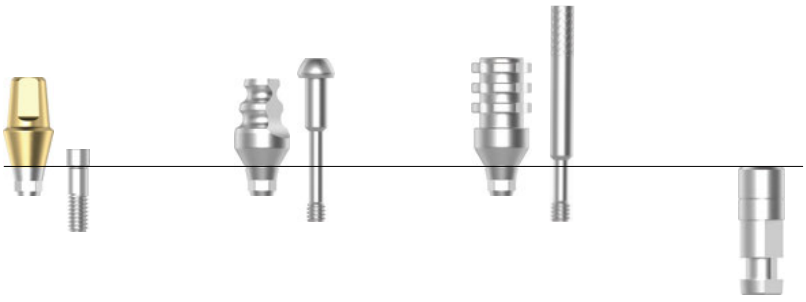
Tighten with 1.2 Hex Driver

Recommended tightening torque
Mini, Regular, Wide: 30Ncm

Abutment Diameter Selection

- Ø 4.0
- Ø 4.5
- Ø 5.2
- Ø 5.7
- Ø 6.5

Fixture Level Impression



Step 1

Separation of Cover Screw or Healing Abutment

Remove Cover Screw or Healing Abutment with 1.2 Hex Driver. At this time, connect dental floss to the spinner in the handle part of the Driver so that the Driver does not pass to the patient's neck. And prepare Impression Coping for the connection of the Fixture.

Healing Abutment

Cover Screw

Chair Side Step 1

Removal of Cover Screw or Healing Abutment

NOTE: Connect dental floss to the spinner in the handle part of the Driver so that the Driver does not pass to the patient's neck.

Step 2

Connect the Impression Coping

1.2 Hex Driver

Transfer Impression Coping

Transfer Impression Coping

Using 1.2 Hex Driver, connect the Transfer Impression Coping that matches the Fixture with the inside of the Fixture, and connect the Guide Pin.

Check the exact contact between the Impression Coping and the Fixture with X-ray.

1.2 Hex Driver

Pick-up Impression Coping

Pick-up Impression Coping

Using 1.2 Hex Driver, connect Pick-up Impression Coping that matches the Fixture with the inside of the Fixture and connect the Guide Pin.

Check the exact contact between the Impression Coping and the Fixture with X-ray.

Chair Side Step 2

Connect the Impression Coping

- Select the appropriate type of Impression Coping that matched the Fixture with the inside of the Fixture
- Using 1.2 Hex Driver, connect the Impression Coping and connect the Guide Pin
- Check the exact contact between the Impression Coping and the Fixture with X-ray.

Step 3

Impression Taking & Connect the Lab Analog

Transfer Impression Coping

Lab Analog

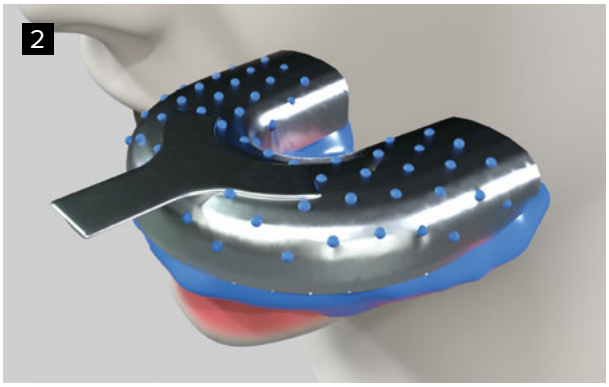
Transfer Impression Coping

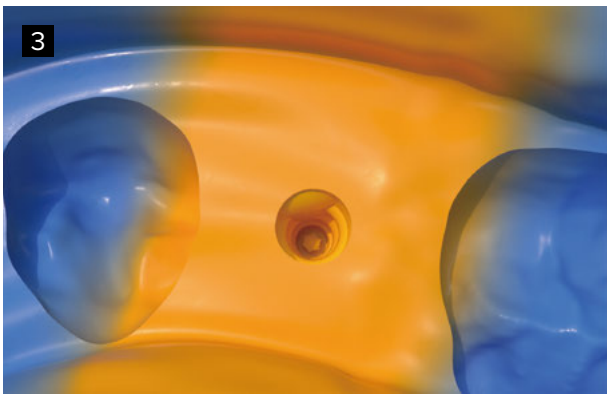
After injecting the impression material using an Injection syringe around the Coping, the tray filled with the impression material is placed in the oral cavity to obtain an accurate impression.

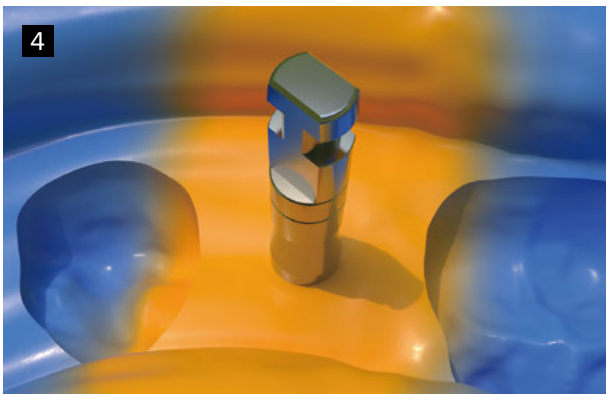
After removing blood marks and other residues deposited in the impression body, separate the intraoral Transfer Impression Coping and connect it to the Lab Analog.

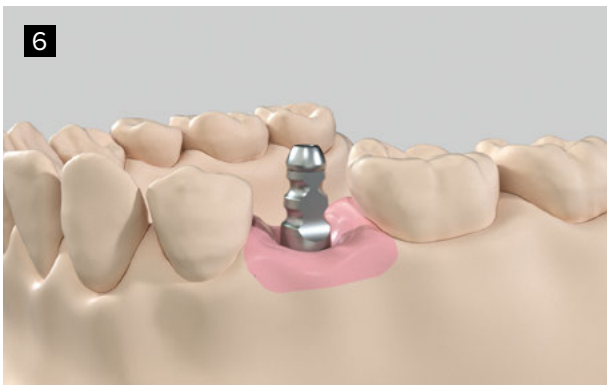
After contacting the connected Coping and Analog with the Transfer Impression Coping in the impression body, confirm the cross section accurately and deliver it to the Lab.

Impression material Injection — **Impression** — **Coping and Lab Analog connection** — **Coping and Lab Analog connected to the impression body**









Pick-up Impression Coping

Lab Analog

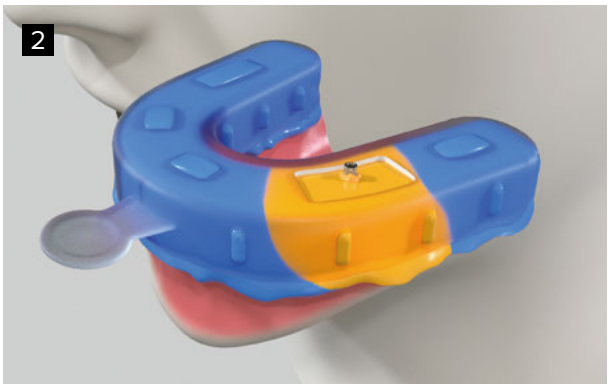
Pick-up Impression Coping

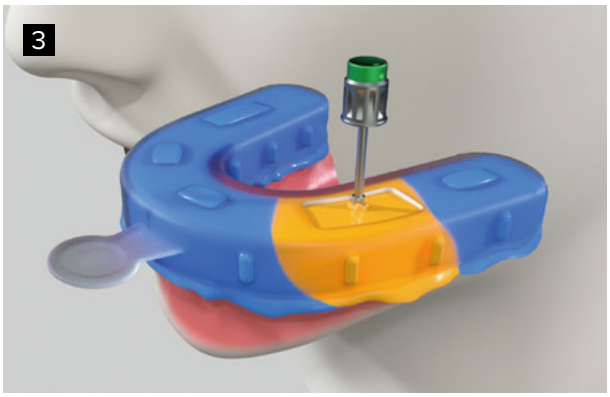
After forming a suitable hole so that the head of the Guide Pin can be exposed outside the prepared individual tray, try the tray first to see if the head of the Guide Pin is visible through the hole.

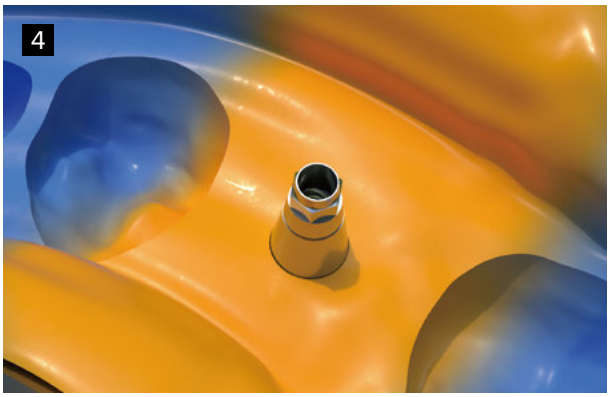
Rubber impression material is injected without gap around Pick-up Impression Coping, and impression is obtained by accurately positioning the tray coated with the impression material.

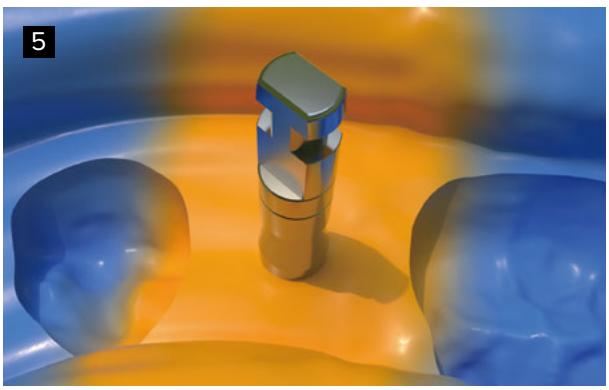
After the impression material is hardened, unfasten the Guide Pin to remove the tray from the oral cavity, check for abnormalities in the impression body, remove bloodstains and other residues, and then deliver it to the lab.

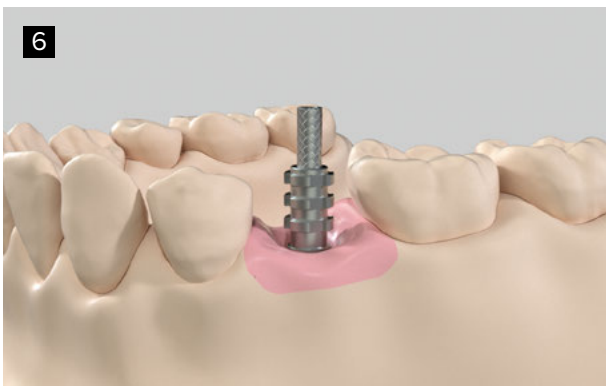
Check the Guide Pin — **Separate the Impression Guide Pin** — **Completion of impression taking**











Lab Side

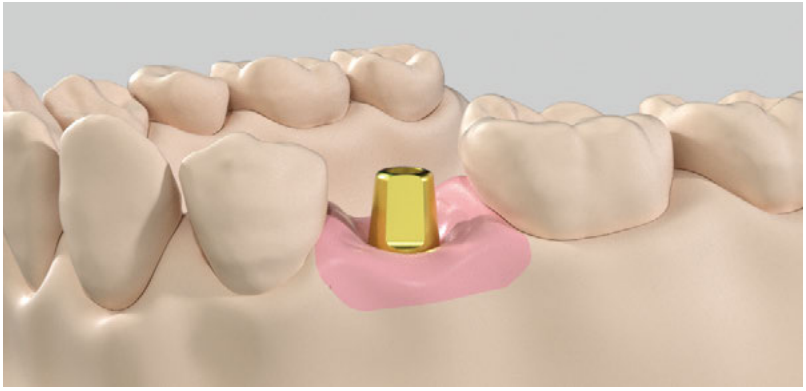
Step 4

Working Model Production

After passing the body making impressions in the doctor's office after checking the correct fastening of the Lab Analog form an Artificial Gum around Analog, and injecting the anhydrite is produced by the Working Model.

Accurately fasten the Cemented Abutment that matches the Analog on the work model.

Cemented Abutment



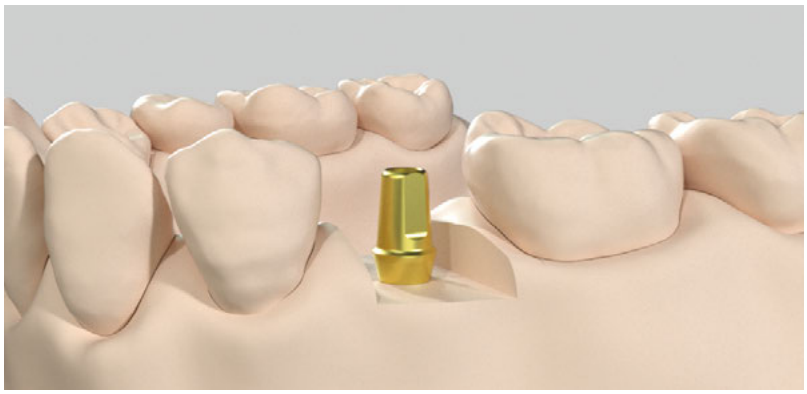
Lab Side

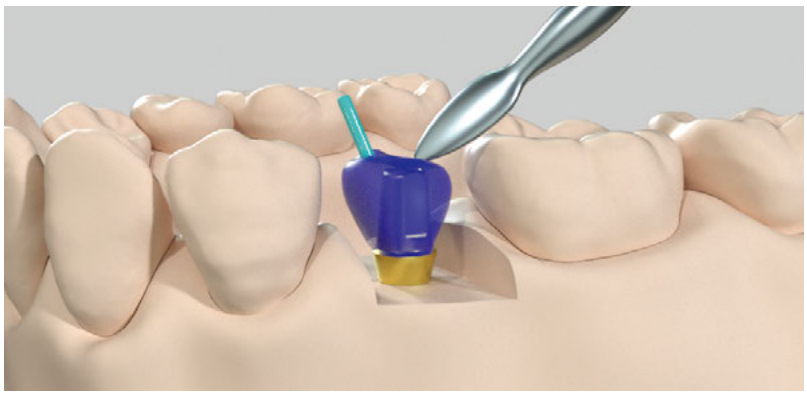
Step 5

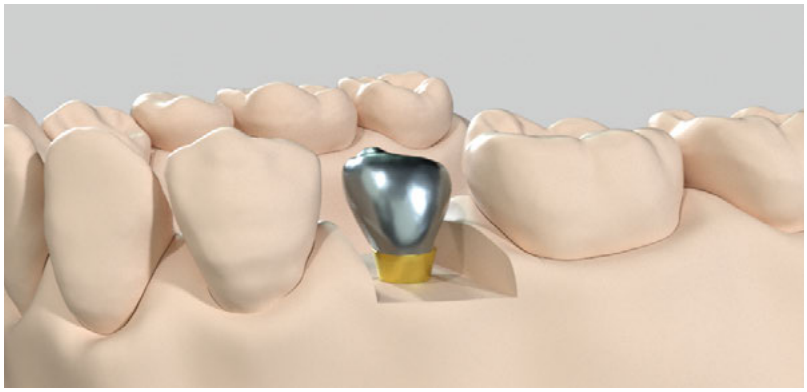
Wax-Up, Casting & Porcelain Build-Up

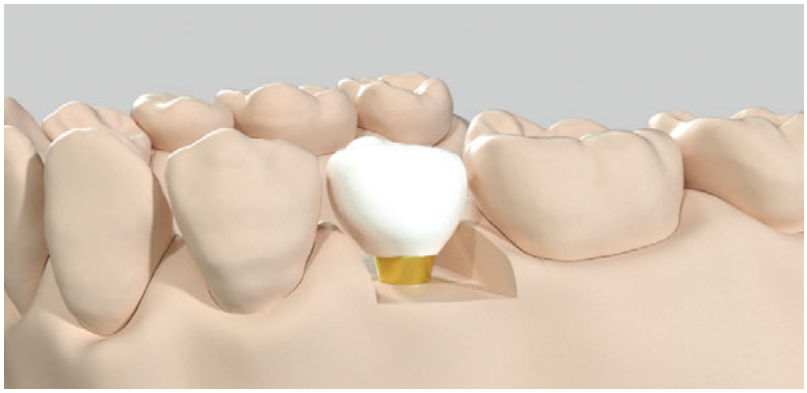
Use Pattern Resin to make Resin Cap, and after Wax-Up, make PFM prosthesis in the usual way.

Resin Cap production — **Wax-Up** — **Cut-Back** — **The finished Castings** — **Firing after Build-Up** — **Prosthesis completion**









Lab Side

Step 6 (optional)

Transfer Jig Production

Remove Artificial Gum from the working model and connect the Abutment accurately using 1.2 Hex Driver. Next, build the Pattern Resin to make the Transfer Jig.

When making a prosthesis by directly fastening the Abutment on the model, it is necessary to make a Transfer Jig to reproduce the position of the Abutment on the model as it is in the oral cavity.

In particular, in the case of using a non-hex type Abutment, there is no repositioning function, so it is necessary to make an accurate Transfer Jig using pattern resin when receiving regardless of single/bridge.

Step 7

Fastening of intraoral Abutment & installation of prosthesis

Using a Transfer Jig, place the Abutment into the oral cavity accurately and fasten the Abutment with a 1.2 Hex Driver.

The correct connection between the Abutment and the Fixture is confirmed by X-ray.

The final tightening is to 30Ncm (to be tightened according to the recommended tightening torque value guided by Abutment) using a 1.2 Hex Driver and a Torque Wrench.

After checking the passive fit of the prosthesis margin, proper contact with the adjacent teeth, and occlusion with the antagonist teeth, block-out the screw hole and cement the final prosthesis on the Abutment.

Abutment connection in the oral cavity → **Tighten with recommended tightening torque value** → **Cementation** → **Final prosthesis fastening**

1.2 Hex Driver

Torque Wrench

Cemented Abutment

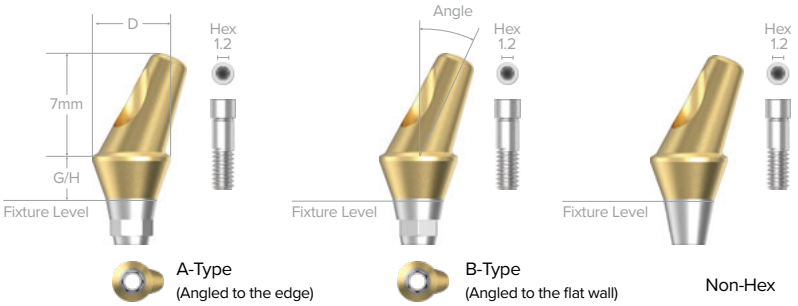
02

ANGLED ABUTMENT

Prosthetic Process

Angled Abutment

Mini, Regular & Wide



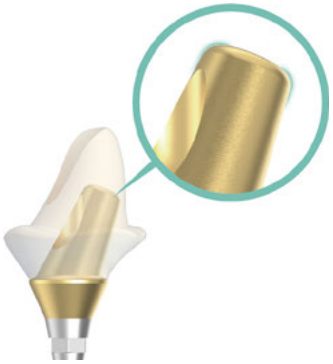
A-Type
(Angled to the edge)

B-Type
(Angled to the flat wall)

Non-Hex

Abutment Features

The top part of the post is rounded, making it easy to fasten the zirconia crown.



Abutment for manufacturing Cement/Combination-retained type prosthesis

Various types of Angle
• 15° & 25° for Mini, Regular and Wide Fixture [Ø 3.5 ~ Ø 7.0]

Select specification fits for fixture connection.

Fixture Level Impression

Can be positioned in 12 directions by selecting A or B type

Tighten with 1.2 Hex Driver

Recommended tightening torque
Mini, Regular, Wide: 30Ncm

Step 1

Separation of Cover Screw or Healing Abutment

Remove Cover Screw or Healing Abutment with 1.2 Hex Driver. At this time, connect dental floss to the spinner in the handle part of the Driver so that the Driver does not pass to the patient's neck. And prepare Impression Coping for the connection of the Fixture.

Healing Abutment

Cover Screw

Step 2

Connect the Impression Coping

1.2 Hex Driver

Transfer Impression Coping

Transfer Impression Coping

Using 1.2 Hex Driver, connect the Transfer Impression Coping that matches the Fixture with the inside of the Fixture, and connect the Guide Pin.

Check the exact contact between the impression Coping and the Fixture with X-ray.

Step 3

Impression Taking & Connect the Lab Analog

Lab Analog

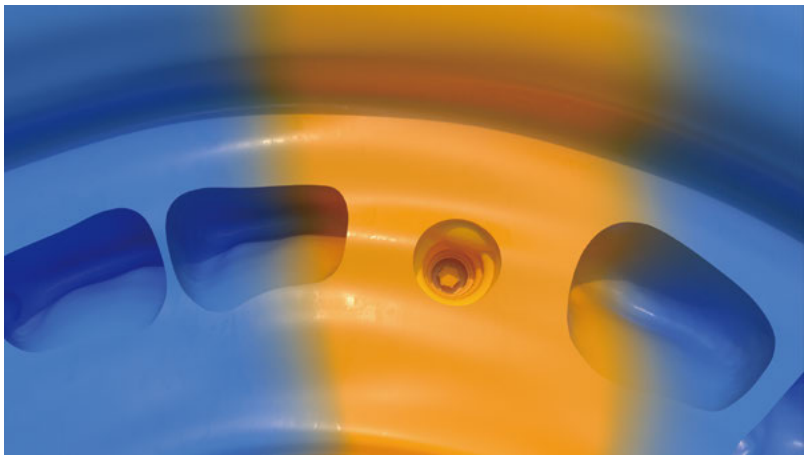
Transfer Impression Coping

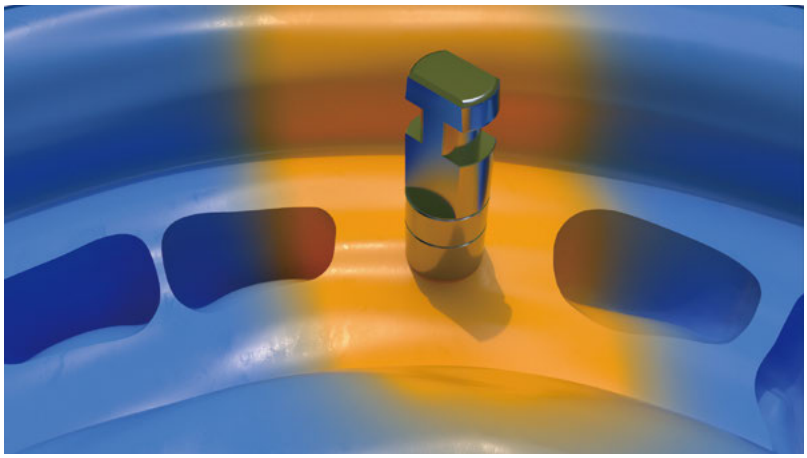
After injecting the impression material using an Injection syringe around the Coping, the tray filled with the impression material is placed in the oral cavity to obtain an accurate impression.

After removing blood marks and other residues deposited in the impression body, separate the intraoral Transfer Impression Coping and connect it to the Lab Analog.

After contacting the connected Coping and Analog with the Transfer Impression Coping in the impression body, confirm the cross section accurately and deliver it to the Lab.

Impression material Injection — **Impression** — **Coping and Lab Analog connection** — **Coping and Lab Analog connected to the impression body**





Lab Side

Step 4

Working Model Production

After passing the body making impressions in the doctor's office after checking the correct fastening of the Lab Analog form an Artificial Gum around Analog, and injecting the anhydrite is produced by the Working Model.

Accurately fasten the Angled Abutment that matches the Analog on the work model.

Angled Abutment

Lab Side

Step 5

Wax-Up, Casting & Porcelain Build-Up

Use Pattern Resin to make Resin Cap, and after Wax-Up, make PFM prosthesis in the usual way.

Resin Cap production — **Wax-Up** — **Cut-Back** — **The finished Castings** — **Firing after Build-Up** — **Prosthesis completion**

Lab Side

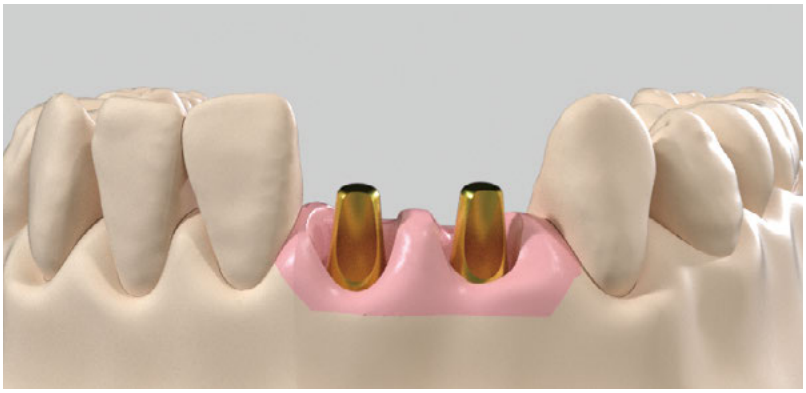
Step 6 (optional)

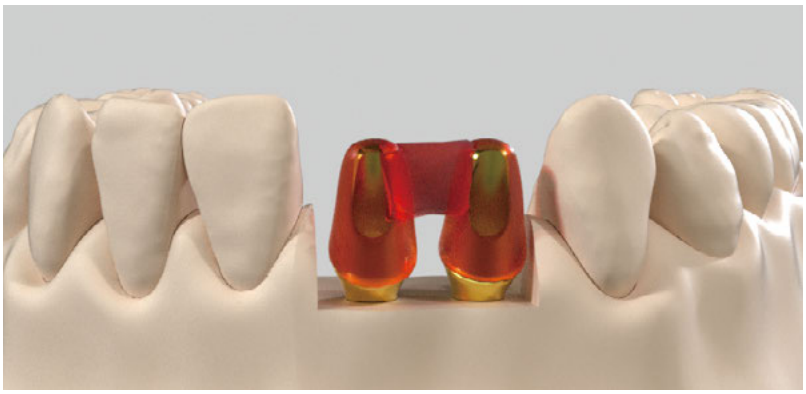
Transfer Jig Production

Remove Artificial Gum from the working model and connect the Abutment accurately using 1.2 Hex Driver. Next, build the Pattern Resin to make the Transfer Jig.

When making a prosthesis by directly fastening the Abutment on the model, it is necessary to make a Transfer Jig to reproduce the position of the Abutment on the model as it is in the oral cavity.

In particular, in the case of using a non-hex type Abutment, there is no repositioning function, so it is necessary to make an accurate Transfer Jig using pattern resin when receiving regardless of single/bridge.





Step 7

Fastening of Abutment in oral cavity & installation of prosthesis

Using a Transfer Jig, place the Abutment into the oral cavity accurately and fasten the Abutment with a 1.2 Hex Driver.

The correct connection between the Abutment and the Fixture is confirmed by X-ray.

The final tightening is tightened to 30Ncm (to be tightened according to the recommended tightening torque value guided by Abutment) using a 1.2 Hex Driver and a Torque Wrench.

After checking the passive fit of the prosthesis margin, proper contact with the adjacent teeth, and occlusion with the antagonist teeth, block-out the screw hole and cement the final prosthesis on the Abutment.

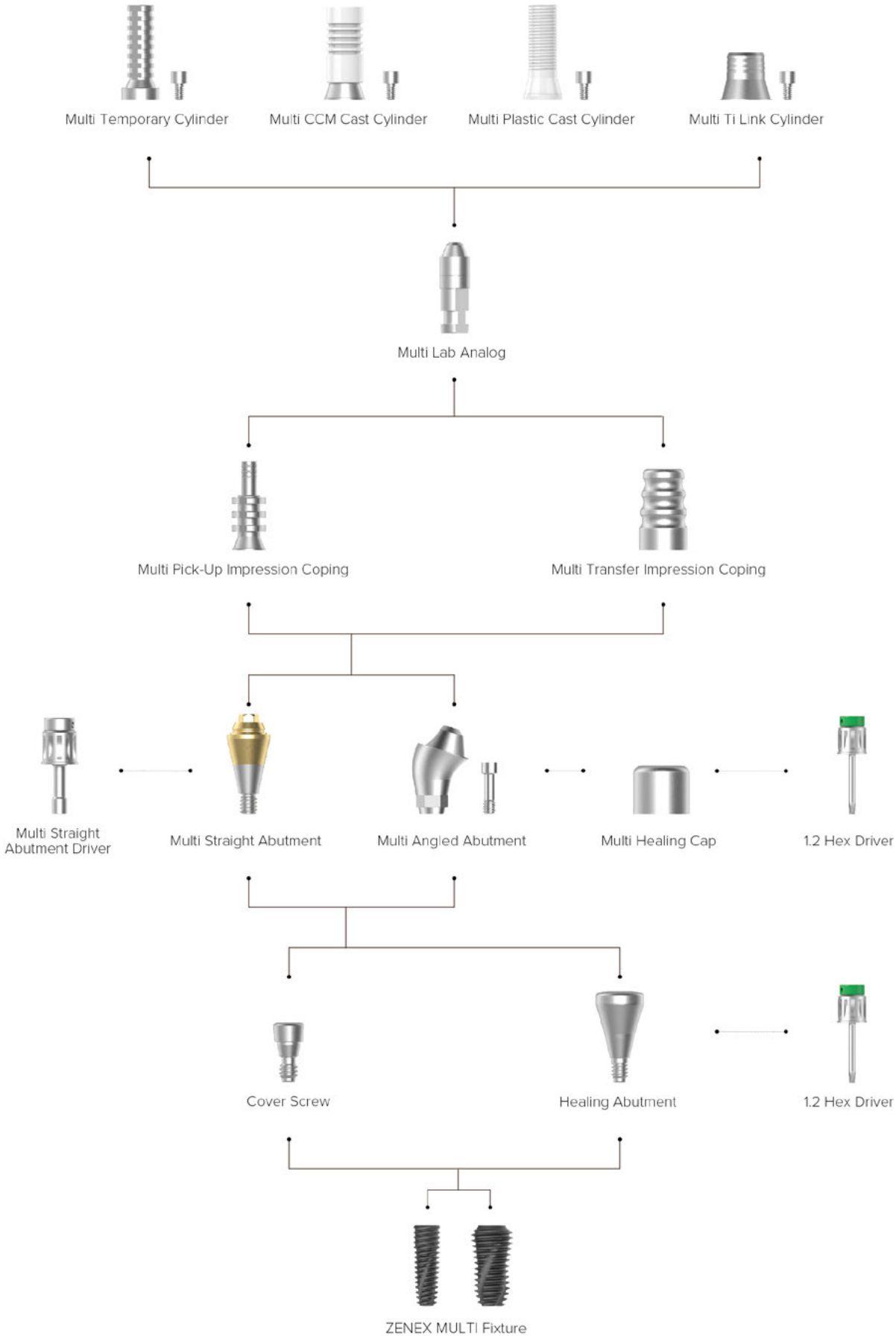
Abutment connection in the oral cavity — **Tighten with recommended tightening torque value** — **Cementation** — **Final prosthesis fastening**

1.2 Hex Driver

Torque Wrench

Angled Abutment

Prosthetic Flow Chart

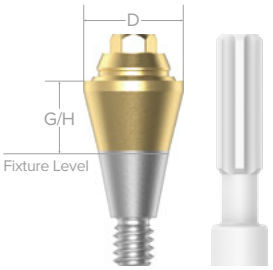


03

MULTI STRAIGHT & MULTI ANGLED ABUTMENT

Prosthetic Process

Multi Straight Abutment



Listing Number
D432520

Mini, Regular & Wide

Abutment for manufacturing screw-retained prosthesis in Multiple Case

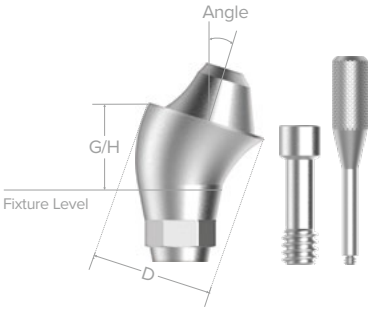
Same platform as Multi Angled Abutment

Move into internal oral part by using exclusive Abutment Carrier (Code: MSACR48)

Tighten with exclusive driver (Code: MSADSR20)

Recommended tightening torque: 30Ncm

Multi Angled Abutment



Listing Number
D432520

Mini, Regular & Wide

Abutment for manufacturing screw-retained prosthesis in Multiple Case

Abutment of various angles (17°, 30°) for various angled of implant insertion path

Same platform as Multi Straight Abutment

Connect by using exclusive Abutment Carrier (Code: MAACRMC)

Tighten with 1.2 Hex Driver

Recommended tightening torque: 30Ncm

Multi Angled Abutment Screw (MAASSR23 for Mini, Regular and Wide) included

Step 1

Separation of Cover Screw or Healing Abutment

Remove Cover Screw or Healing Abutment with 1.2 Hex Driver. At this time, connect dental floss to the spinner in the handle part of the Driver so that the Driver does not pass to the patient's neck. And prepare Impression Coping for the connection of the Fixture.

Healing Abutment

Cover Screw

Multi Straight

Multi Angled

Step 2

Connect the Multi Straight & Multi Angled Abutment in the oral cavity

After connecting the Multi Straight Abutment to the Fixture with the Multi Straight Abutment Driver, check the connection between the Abutment and the Fixture with X-ray, and tighten it with 30Ncm using a Torque Wrench.

Multi Straight

After connecting the Multi Angled Abutment to the Fixture with a 1.2 Hex Driver, check the connection between the Abutment and the Fixture with X-ray, and tighten the screw with 30Ncm using a Torque Wrench.

Multi Angled

Step 3

Connect the Impression Coping

Multi Transfer Impression Coping

Multi Transfer Impression Coping

Using 1.2 Hex Driver, connect Multi Transfer Impression Coping to Abutment.

Multi Straight

Multi Angled

Check the exact contact between the impression Coping and the Abutment with X-ray.

Step 4

Impression Taking

(Abutment level Impression taking)

Multi Lab Analog

Multi Transfer Impression Coping

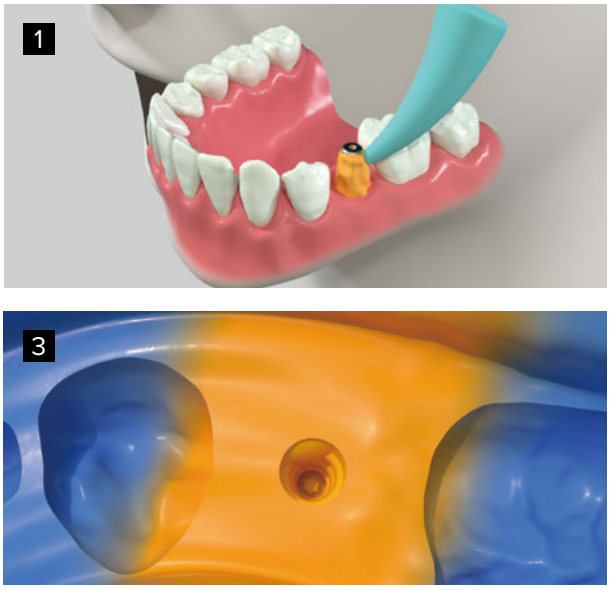
After injecting the impression material using an Injection syringe around the Coping, the tray filled with the impression material is placed in the oral cavity to obtain an accurate impression.

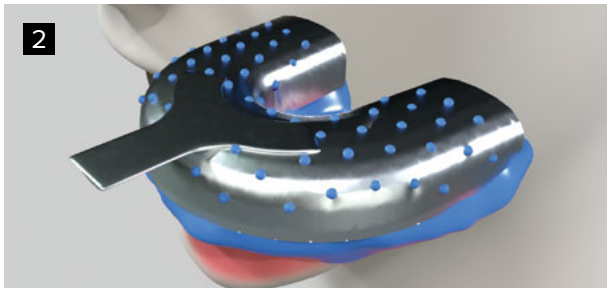
After removing blood marks and other residues deposited in the impression body, separate the intraoral Multi Transfer Impression Coping and connect it to the Multi Lab Analog.

After contacting the connected Coping and Analog with the Transfer Impression Coping in the impression body, confirm the cross section accurately and deliver it to the Lab.

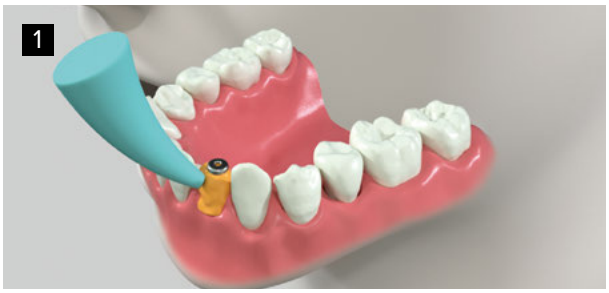
Impression material Injection — **Impression** — **Coping and Lab Analog connection** — **Coping and Lab Analog connected to the impression body**

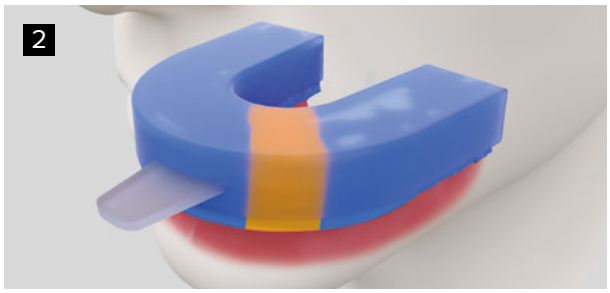
Multi Straight

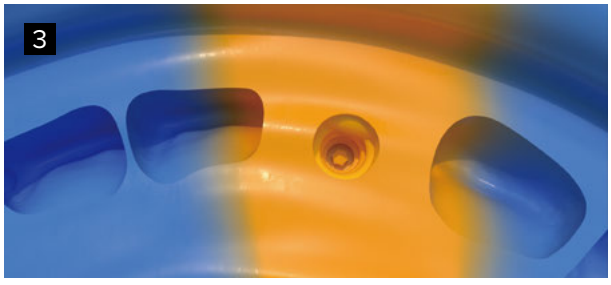


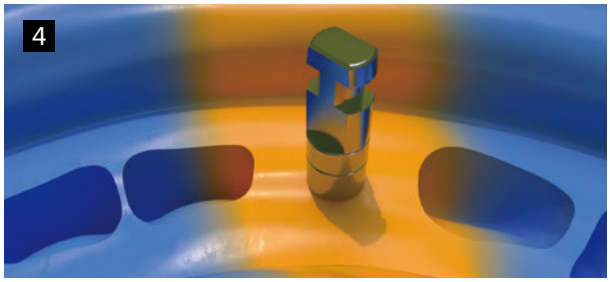


Multi Angled









Lab Side

Step 5

Working Model Production

Tighten the Multi Healing Cap to protect the Abutment until the prosthesis is installed.

Checking whether the Coping is well located in Multi Lab Analog.

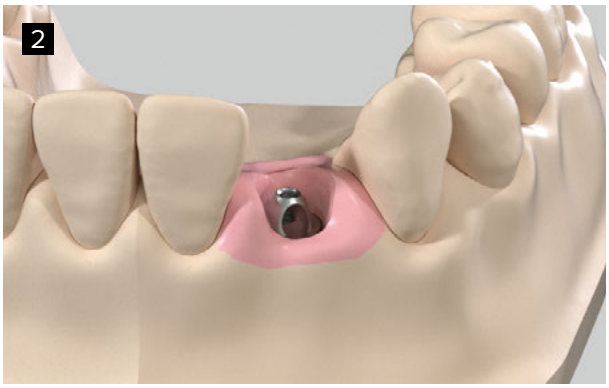
After injecting artificial gum around the Analog, when it is hardened, pour stone to make a working model.

Multi Healing Cap

Connect the Impression Coping and Multi Lab Analog → **Multi Lab Analog located on the impression body** → **Artificial Gum Formation** → **Plaster Injection after boxing** → **Complete the work model**

Multi Straight

Multi Angled



Lab Side

Step 6

Wax-Up

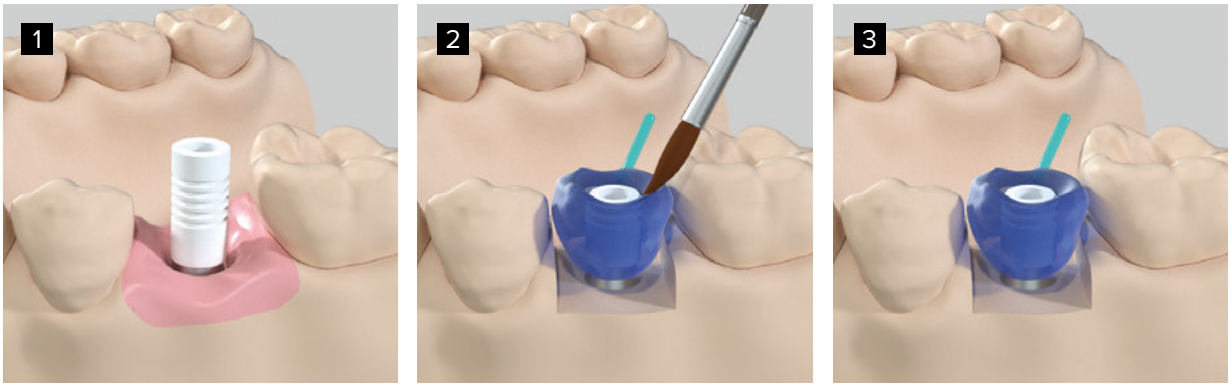
Place the Multi CCM Cast Cylinder above the Abutment and fasten the cylinder screw with 20Ncm using a 1.2 Hex Driver.

After adjusting the plastic sleeve to the appropriate height, perform wax-up for the metal structure of the prosthesis.

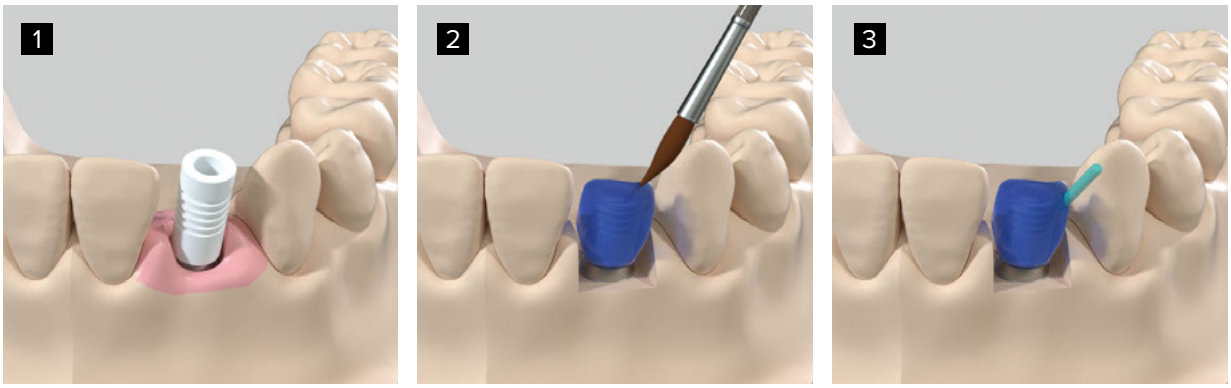
Multi CCM Cast Cylinder

Working Model → **Position the Multi CCM Cast Cylinder** → **Milling Working** → **Completed custom Abutment Production**

Multi Straight



Multi Angled



Lab Side

Step 7

Casting

The sprue is mounted on the margin, when forming a sprue for casting,

The Abutment metal part and the adjacent connection part are compensated with wax as much as possible.

It is recommended to use Ni-Cr alloy for casting metal.

Prohibition of use of Co-Cr alloy (excessive oxide film formation and casting shrinkage)

CCM Cast Abutment has different casting characteristics compared to Gold UCLA Abutment, so an oxide film is generated on the metal part after casting.

Multi Straight

Multi Angled

Lab Side

Step 8

Porcelain build up

Porcelain building up and firing on the casting

Polishing and polishing working in general

Checking if there is anything wrong with the working model

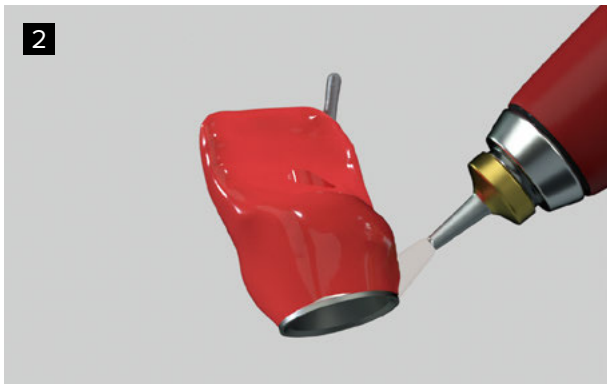
Removal of oxide film generated during casting and porcelain firing

① Block out with utility wax, etc., except for the metal part where the oxide film is generated.

② Primary removal of oxide film by blasting with a glass bead (4~6 bar) :
Do not use rubber wheel / point (damage to the connection part)

Multi Straight

Multi Angled



Lab Side

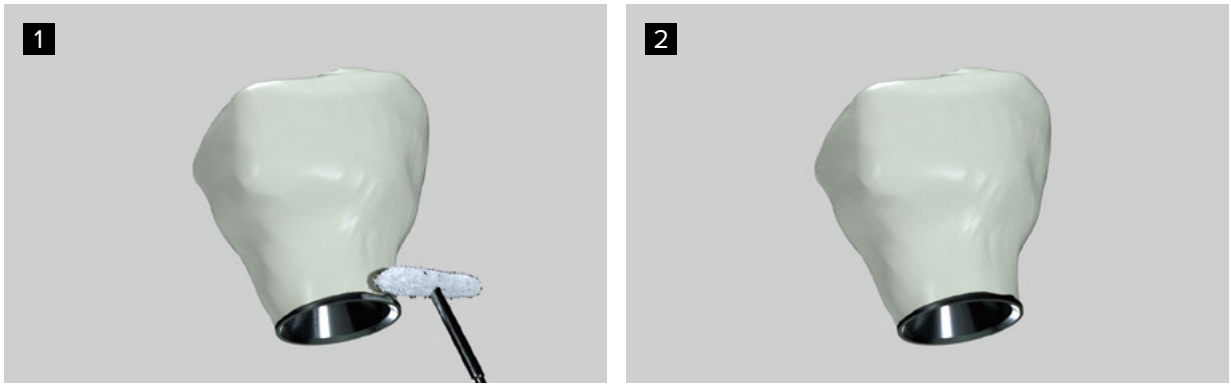
Step 9

Oxide film removal

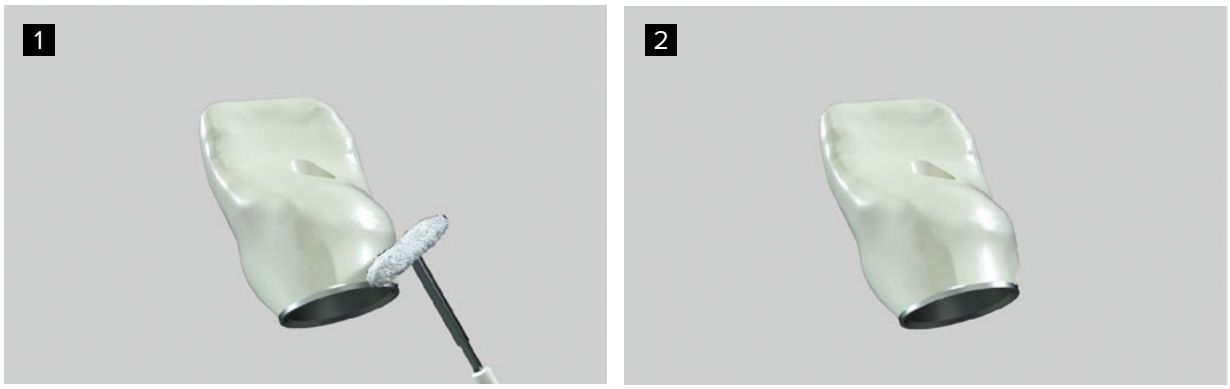
① Remove the blocked out part : Final removal of oxide film by high polishing with rouge applied to cotton

② After high polishing, Ultrasonic or steam cleaning.

Multi Straight



Multi Angled



Lab Side

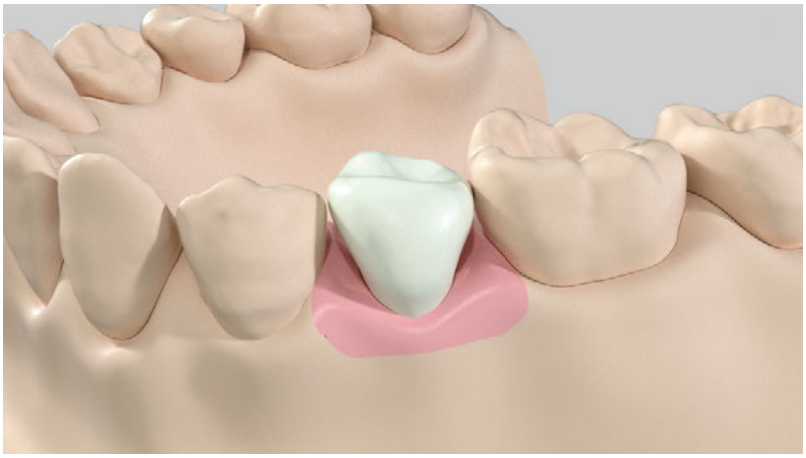
Step 10

Ceramic Crown Production

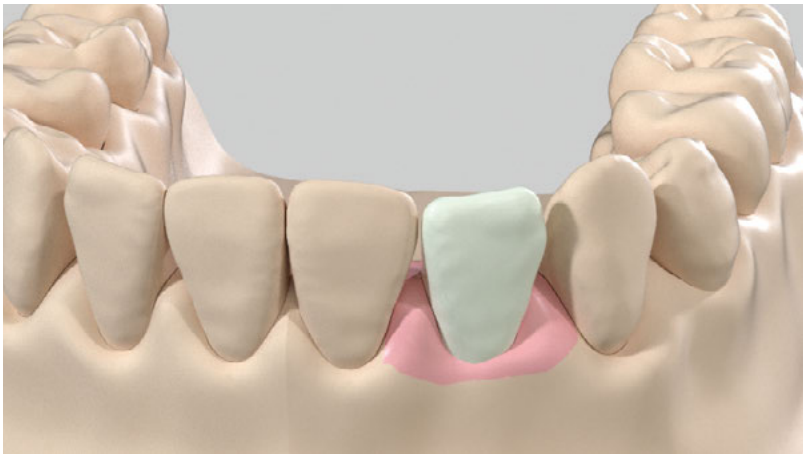
The planned ceramic prosthesis is fabricated in the usual way.

Spruing — Investing — Casting body — Attach the casting body to the Abutment — Porcelain Build up — Contouring — Polishing after Countering — Final prosthesis

Multi Straight



Multi Angled



Step 11

Delivering & Screwing

After checking the margin passive fit of the final prosthesis and checking occlusion and esthetics, first fasten with a 1.2 Hex Driver and a torque wrench with a 1.2 Hex Driver to completely fasten the prosthesis with 20Ncm.

After covering the protective material over the screw head, the access hole finishes the occlusal surface with resin in the oral cavity.

Screwing → **Connect the 1.2 Hex Driver to the Torque Wrench to fasten the prosthesis** → **Covering the protective material over the screw head** → **Access hole resin filling**

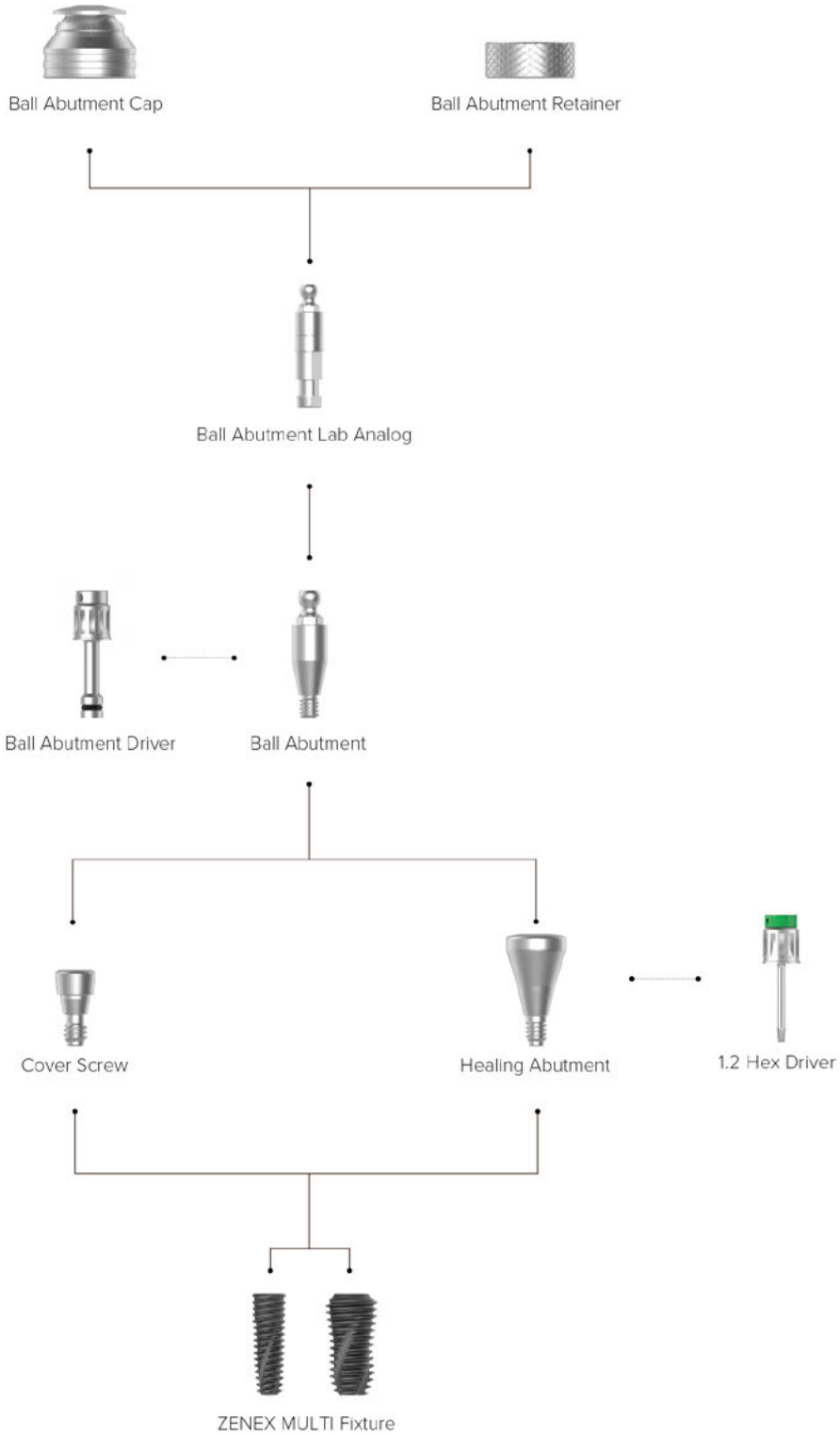
1.2 Hex Driver

Torque Wrench

Multi Straight

Multi Angled

Prosthetic Flow Chart

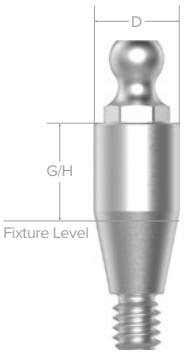


06

BALL ABUTMENT

Prosthetic Process

Ball Abutment



Mini, Regular & Wide

Abutment for overdenture using O-ring attachment

Compensation of mounting angle up to 20°

Tighten with exclusive Ball Abutment Driver (Code: BAD24)

Recommended tightening torque: 30Ncm

Step 1

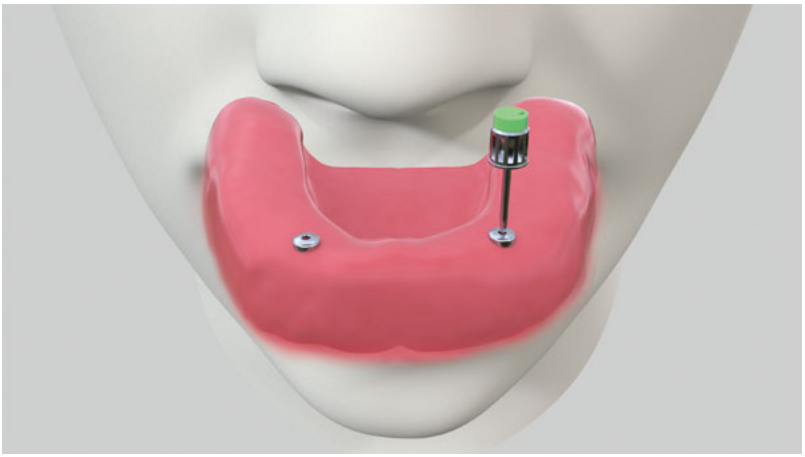
Separation of Cover Screw or Healing Abutment

Healing Abutment

Cover Screw

1.2 Hex Driver

Remove Cover Screw or Healing Abutment with 1.2 Hex Driver. At this time, connect dental floss to the spinner in the handle part of the Driver so that the Driver does not pass to the patient's neck. And prepare Impression Coping for the connection of the Fixture.



Step 2

Connect the Ball Abutment in the oral cavity

Determine the proper height of the Ball Abutment by measuring the depth of the gingival tissue on the Fixture.

The shoulder of the Abutment should be positioned above the tissue (about 1.5-2mm).

Connect the Ball Abutment to the Fixture with the Driver for Ball Abutment.

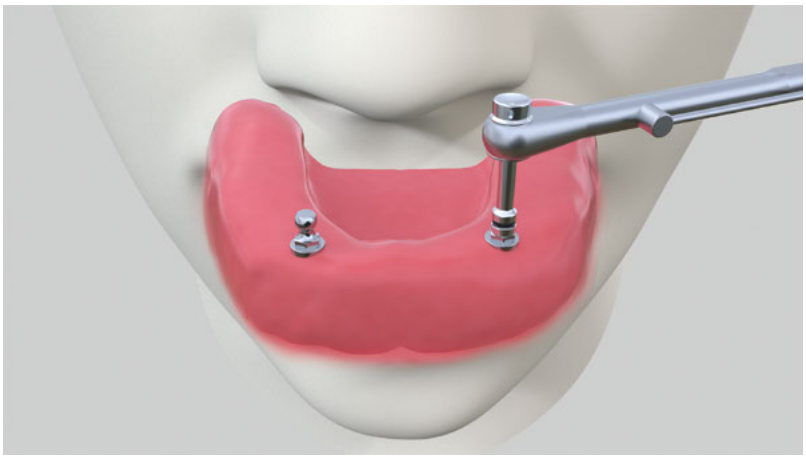
After confirming by X-ray, connect the Torque Wrench to the Ball Abutment Driver and tighten it to 30Ncm. (※ When re-fastening the Healing Abutment after taking an impression, fasten it only with finger pressure.)

Connect the Driver to Ball Abutment — **Connect the Ball Abutment to Fixture** — **Tighten with recommended tightening torque value** — **Abutment tightening completion**

Ball Abutment

Ball Abutment Driver

Torque Wrench



Step 3

Impression Taking

The rubber impression material is first injected in detail around the Ball Abutment, and then the impression material is filled in the prepared individual tray and placed in the oral cavity to obtain an impression.

After checking for abnormalities in the impression body, send it to the lab.

If there is a denture currently installed, it can be used as a Temporary denture by modifying the part where the Ball Abutment is fastened.

Fine Injection of impression material around the Ball Abutment

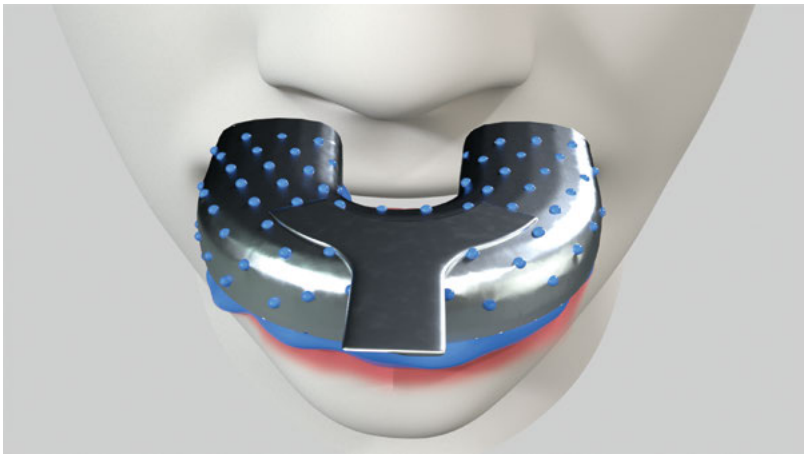
Impression

The impression body that has been collected

Preliminary procedure: Before installing the Ball Abutment, take an impression of the edentulous extension with alginate impression material and send it to the workshop to make a personal tray (※ 2mm more relief than the height of the Abutment).

Scratch is formed on the border so that the impression material can be attached well.

Ball Abutment Lab Analog



Lab Side

Step 4

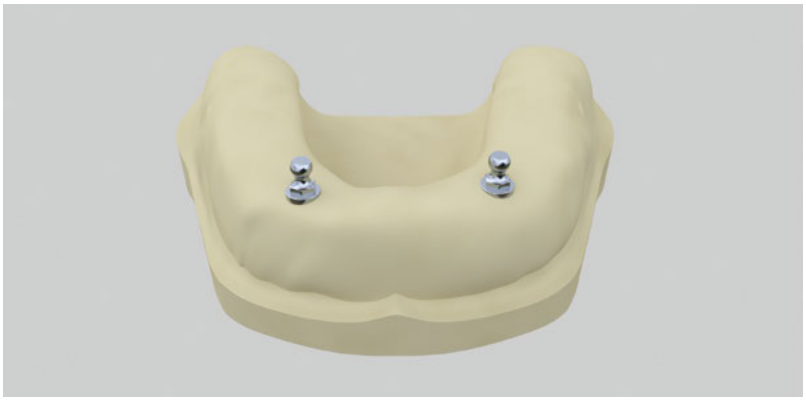
Working Model Production

When the impression body is delivered for the pore process, the lab Analog is pushed into the inner surface of the impression body until it is completely inserted into the Ball portion.

Make a working model by carefully pouring stone so that the Analog position does not move.

Base plate and wax occlusal rim for occlusal acquisition are made and sent to the clinic with the model.

Connect the Lab Analog — **Complete the work model** — **Wax rim production**



Lab Side

Step 5

Wax Denture Production

The occlusal rim is placed in the oral cavity to obtain an intermaxillary occlusion and sent back to the studio.

In the workshop, denture teeth are arranged on the wax rim according to the occlusal record sent.

It is sent back to the doctor's office to check the occlusion of the arranged teeth and check the functionality and aesthetics of the denture.

(※ If corrections are made, set up a new occlusal record and retry until fit is achieved.)

Puts Wax-rim in the oral cavity — **Artificial tooth arrangement** — **Check the aesthetics of the wax denture in the oral cavity**

Lab Side

Step 6

Resin denture Production

When the oral fit for the wax denture is completed, the final resin denture is fabricated.

Check the black Lab O-ring in the Ball Abutment Retainer or Ball Abutment Cap (※ Make the smaller of the Ball Abutment Retainer openings be the occlusal side) and place it on the Lab Analog.

Block-out the lower part of the retainer with a putty to prevent the acrylic resin from flowing under the Ball Abutment Retainer, and make it about 2mm higher than the retainer to give mobility on the denture base.

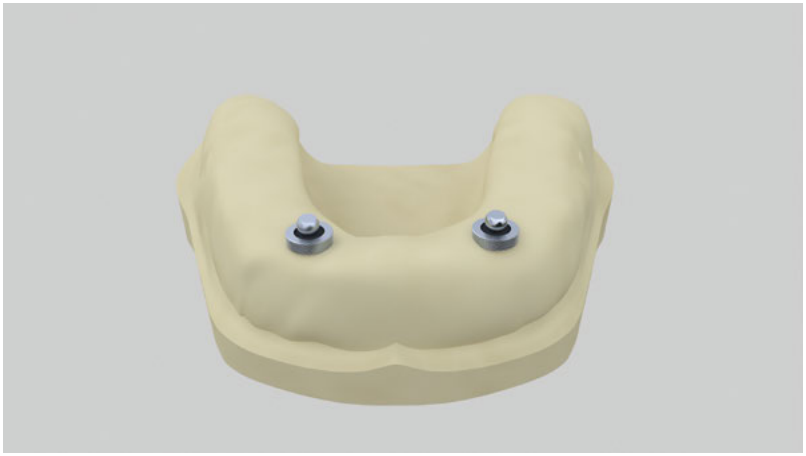
Check the Lab O-ring in the Ball Abutment Retainer or Ball Abutment Cap

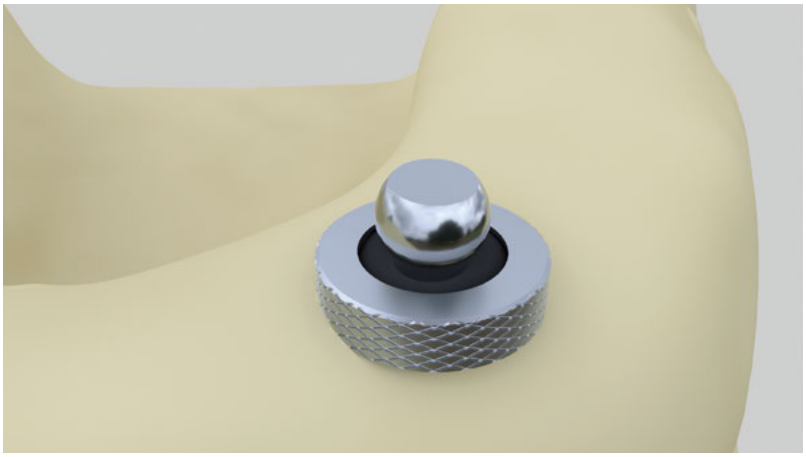
Position the Ball Abutment Retainer or Cap Assembly

Block-out with Putty

O-ring Set

Cap Retainer





The dentures are buried together with the Ball Abutment Retainer Assembly in place, and flasking, curing, and finishing are performed as usual to complete the fabrication.

Flasking

Denture with Resin curing

Ball Abutment Retainer located in Denture

Step 7

Delivering

Replace the Black Lab O-ring inside the Ball Abutment Retainer with the orange O-ring for final.

Adjust occlusal and tissue contact areas as needed.

While attaching attachments, inform the patient about oral hygiene and cautions when attaching and detaching dentures.

Replace O-rings when fatigue accumulates and cannot function.

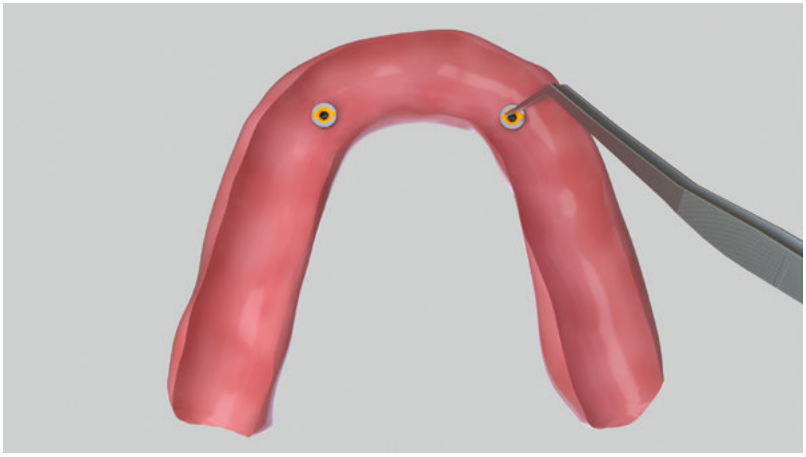
It is replaced approximately once a year.

Replaced with Orange O-ring for Final

Replacement Complete

Installation in the oral cavity

O-ring



IZ-PMA-02 REV.00 (JUN.22)

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