



SuperLine & Implantium

Surgical / Prosthesis Manual

SuperLine & Implantium

A New Choice

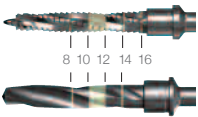
For the Customer



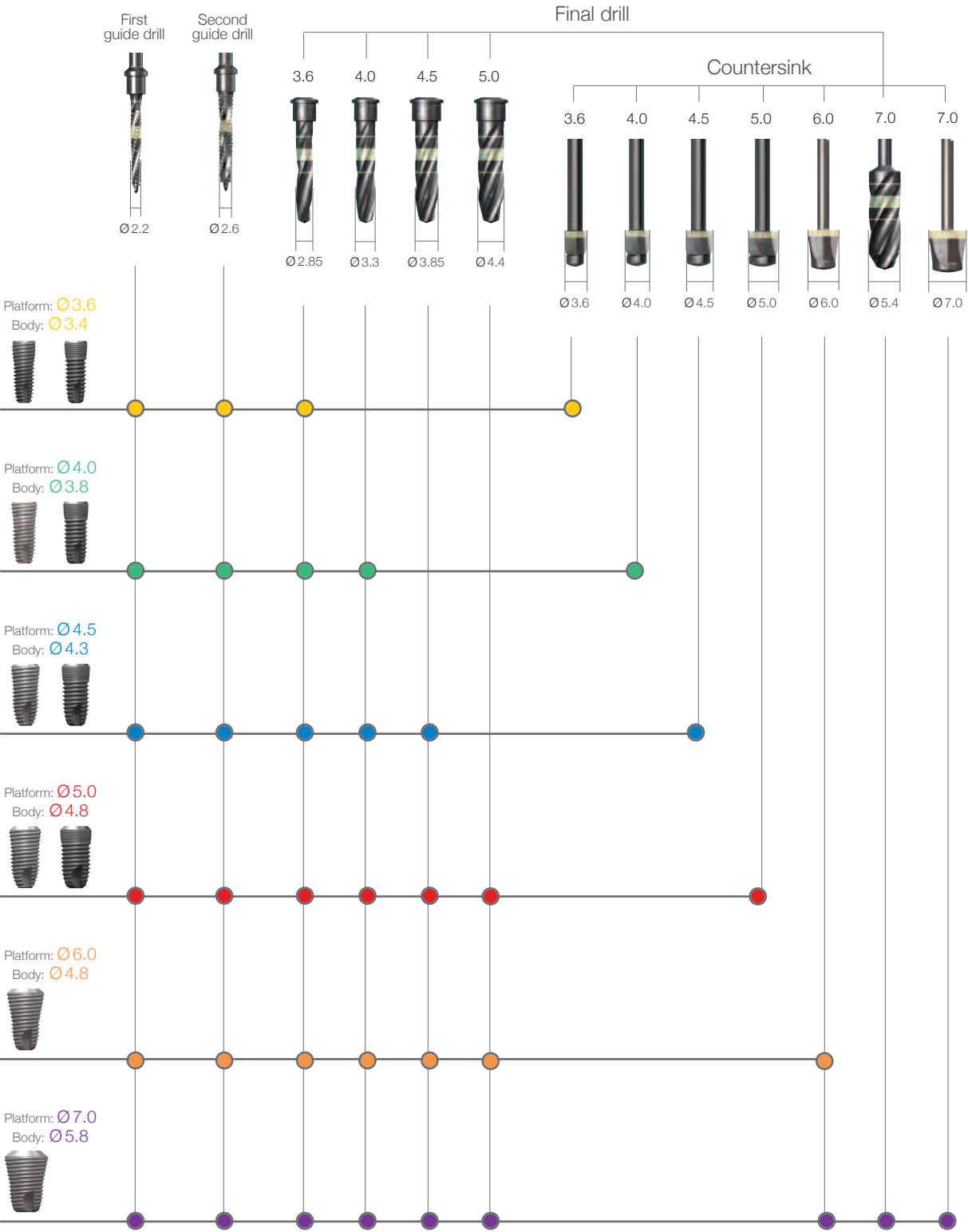
SURGICAL MANUAL

Surgical Drill Sequence I	04
Surgical Drill Sequence II	06
Drilling Depth Guide	08
Fixture Connection	10
Installation Procedure & Warnings	11
Surgical Kit Maintenance	12

Surgical Drill Sequence I



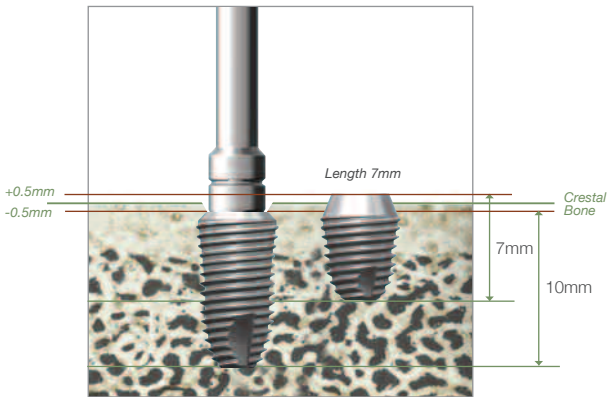
Drilling Sequence Guide (Final drill)



During Fixture Insertion, 30 ~ 45N·cm Torque at 20rpm is Recommended.

- Countersink drill is used in cases with dense cortical bone.
- If the bone density is D1~D3, it is recommended to countersink after final drill.
- The actual diameter of the Countersink drill is 0.1mm larger than the fixture platform.

Determination of Fixture Top Level



Top level of fixture needs to be located 0.5mm below the marginal crestal bone level to minimize bone loss after implantation. However, only for the fixture of 7mm length, top level of fixture should be located 0.5mm above the marginal crestal bone level.

Depth Indication

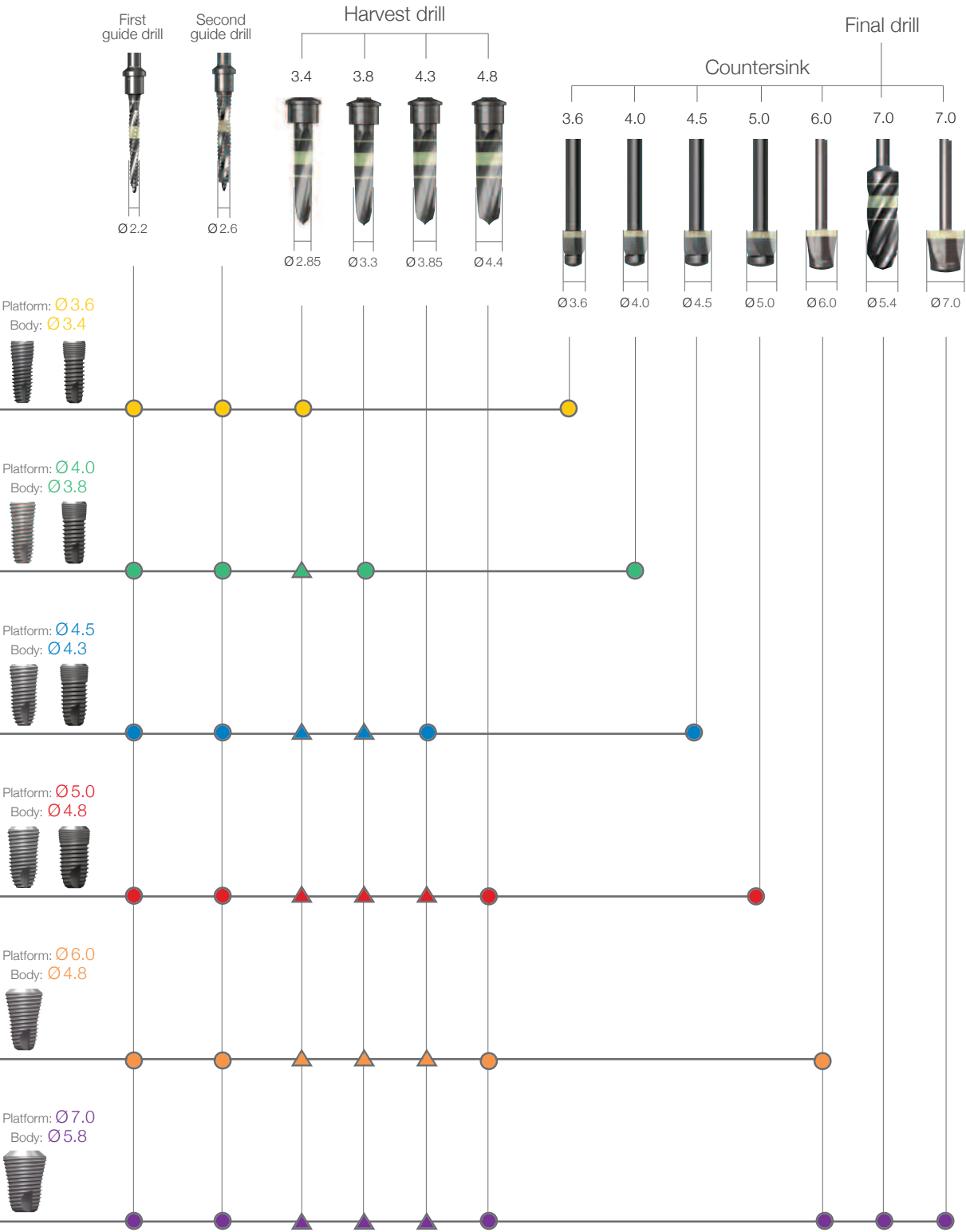


- Use the depth gauge after first drill / First guide drill to check depth of drilling
- Place the depth gauge against the wall of the osteotomy

Surgical Drill Sequence II



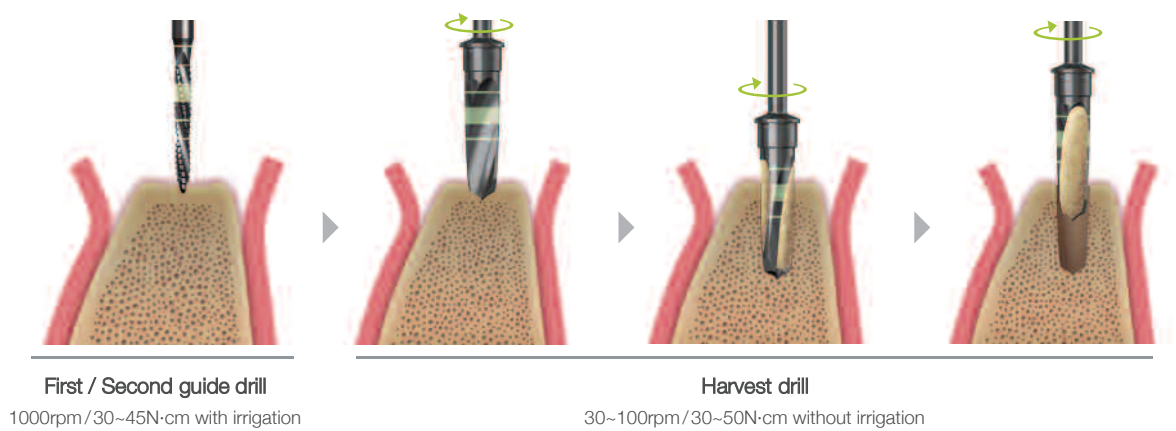
Drilling Sequence Guide (Havrest drill)



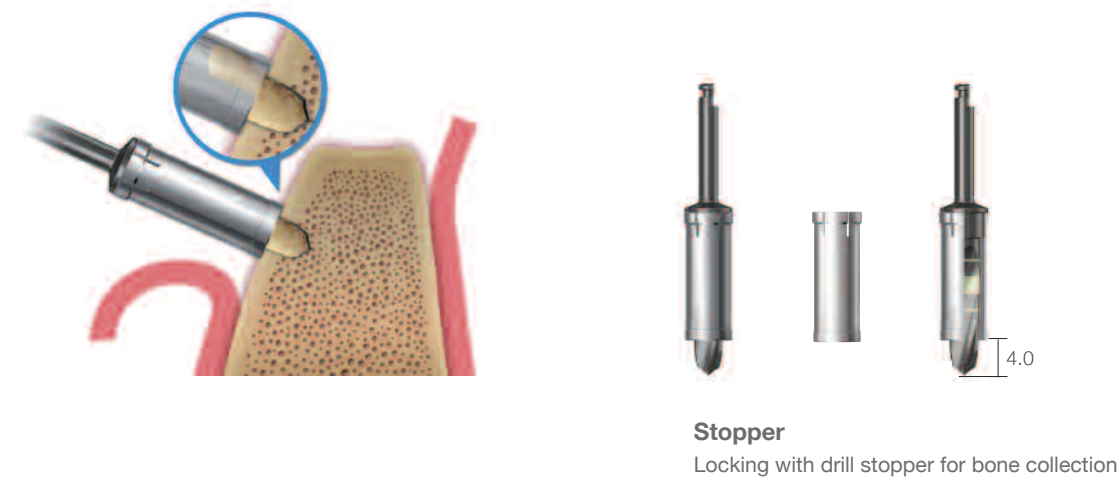
Harvest Drill

Simultaneous and effective autogenous bone collection during the final drilling procedure using a specially designed drill.

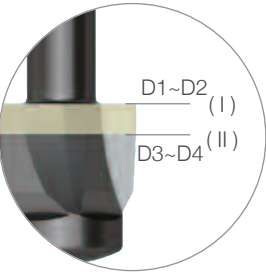
- Sharp pointed tip design of the drill prevents drill chatter and helps guide the drill path.
- Available drill stopper helps control drill depth for safe and efficient bone collection, especially in the buccal side of ridge.
- Recommended drill speed of less than 100rpm/50N·cm helps preserve the vital autogenous bone.
- Excellent clinical results may be achieved when harvested autogenous bone is combined with OSTEON™ II.



Bone collection in the buccal side of ridge: 50~200rpm / 30~50N·cm



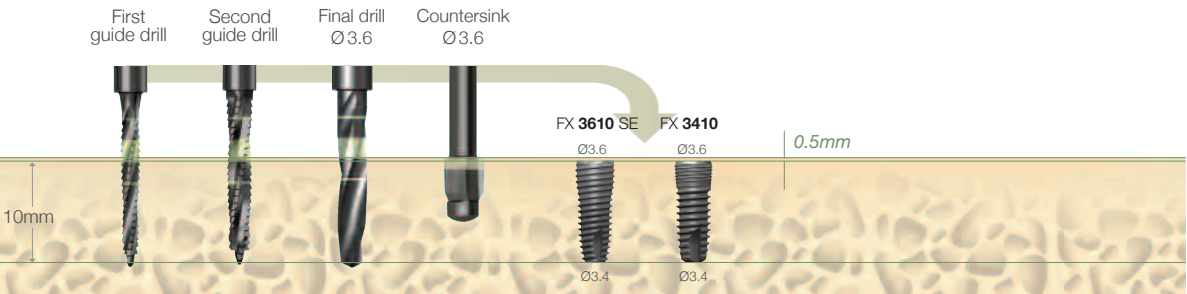
Drilling Depth Guide



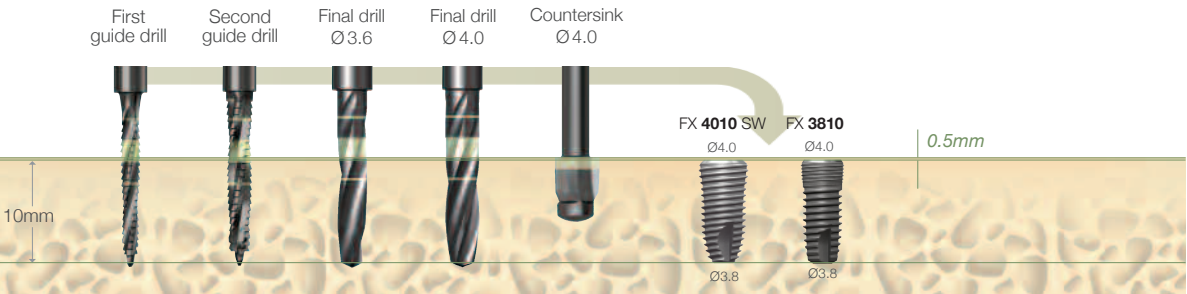
Countersink Depth Guide

- Drilling depth of the countersink depends on the patient's bone quality.
- If the bone density is D1~D2, it is recommended to drill up to the top line (I) of laser mark on the countersink.
- If the bone density is D3~D4, it is recommended to drill up to the bottom line (II) of laser mark on the countersink.

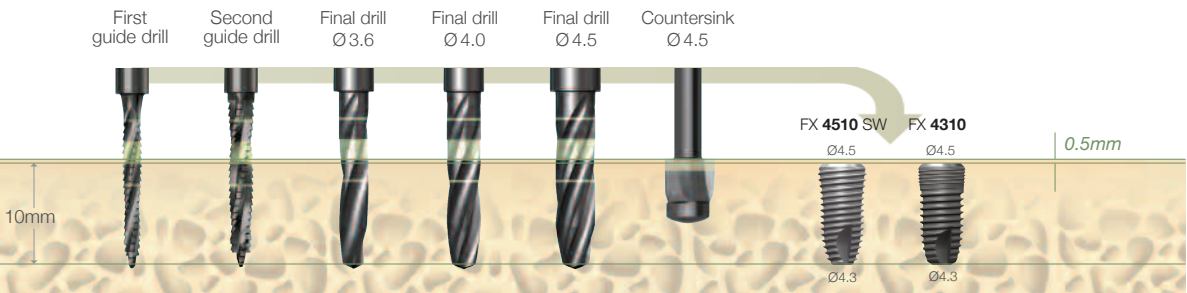
Platform: Ø 3.6 / Body: Ø 3.4 (1000rpm / 30~45N·cm)



Platform: Ø 4.0 / Body: Ø 3.8 (1000rpm / 30~45N·cm)

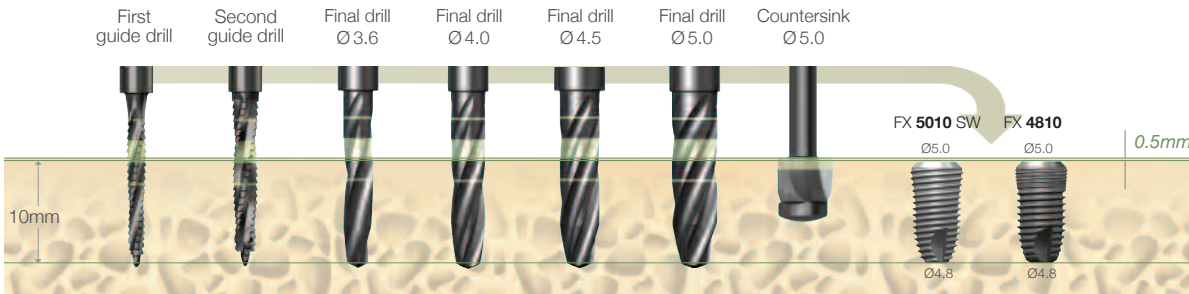


Platform: Ø 4.5 / Body: Ø 4.3 (1000rpm / 30~45N·cm)



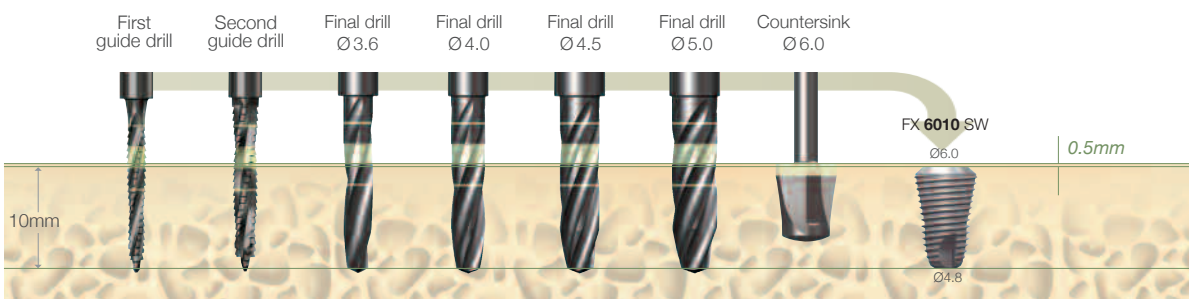
Platform: Ø 5.0 / Body: Ø 4.8

(1000rpm / 30~45N-cm)



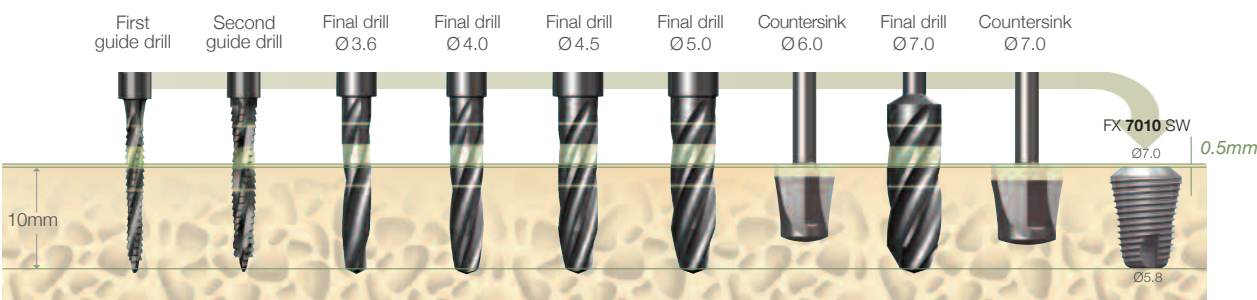
Platform: Ø 6.0 / Body: Ø 4.8

(1000rpm / 30~45N-cm)

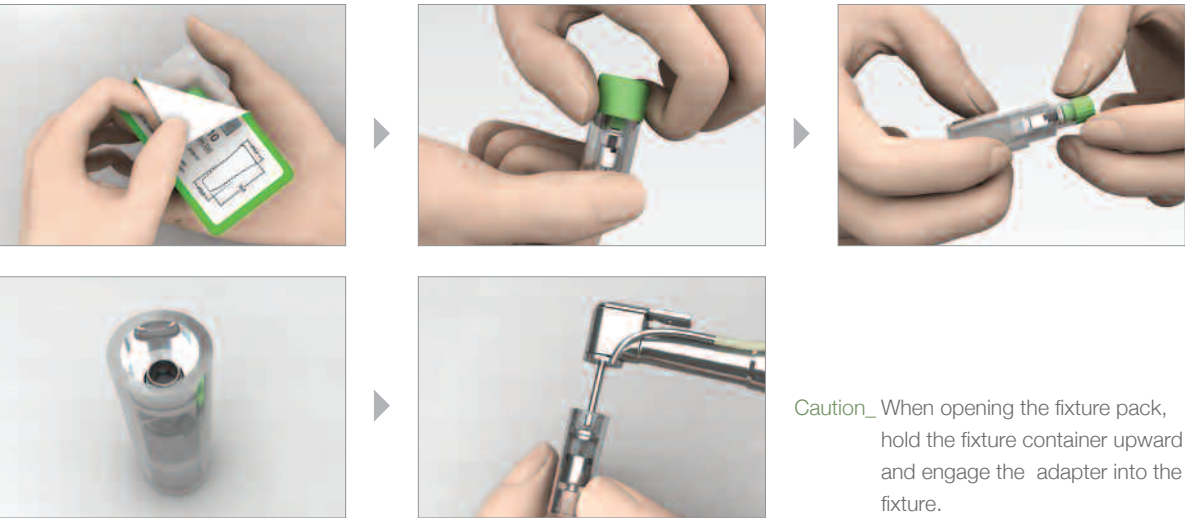


Platform: Ø 7.0 / Body: Ø 5.8

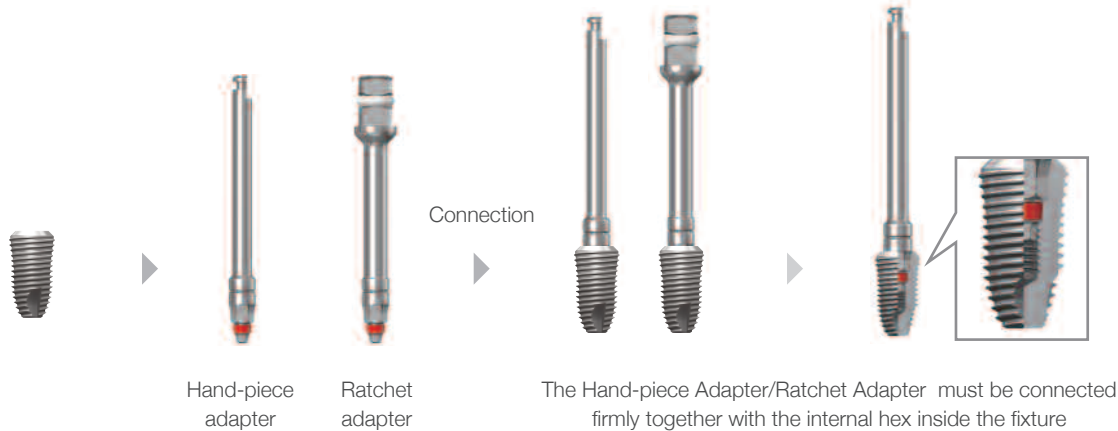
(1000rpm / 30~45N-cm)



Fixture Connection

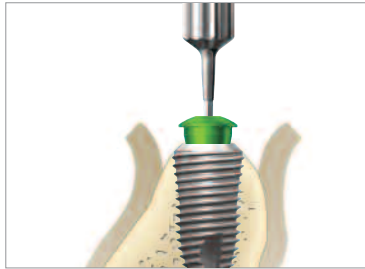


Directions Using the Hand-piece / Ratchet Adapter



Installation Procedure & Warnings

Cover Screw

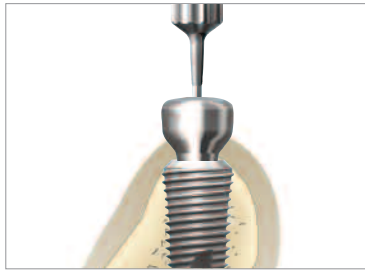


By hex driver

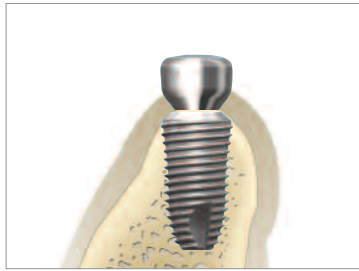


Cover screw (CS36)
connection

Healing Abutment



By hex driver



Healing abutment connection



Healing abutment (HAB402020L)
connection in thin gingiva

Warnings

Dental Implant surgery and restoration involve complex dental procedures. Appropriate and adequate training in proper technique is strongly recommended prior to use.

- Improper medical examination and/or treatment plan can result in implant failure and/or loss of supportive bone.
- Improper initial stability and/or excessive occlusal forces during healing period may lead to Osseointegration failure.
- Excessive insertion torque may lead to mechanical failure or implant biologic failure due to bone compression and necrosis.
- When forces or loads are greater than its design, implant or abutment fracture could happen. Therefore clinicians should make careful decisions with regards to clinical treatment planning to minimize the risk of fracture. Appropriate implant quantity, occlusal interface and a nightguard are essential. Potential excessive loading conditions may include the following:
 - 01 Inadequate number of implants are placed
 - 02 Implant width and/or length are inappropriate for a treatment site
 - 03 Prosthesis which has excessive cantilever length due to inadequate biomechanical design
 - 04 Continuous occlusal force are generated by incomplete connection between implant and abutment and/or abutment screw loosening
 - 05 Direct casting abutment angles are greater than 30° from the vertical axis of the implant.
Direct abutments are not for angulation.
 - 06 Occlusal interferences causing excessive lateral forces
 - 07 Patient parafunctions such as bruxism
 - 08 Inadequate dental laboratory casting procedures
 - 09 Improper prosthesis fit
 - 10 Trauma from patient habits or accidents
 - 11 Excessive marginal bone loss caused by inadequate bone width and/or advanced periimplantitis

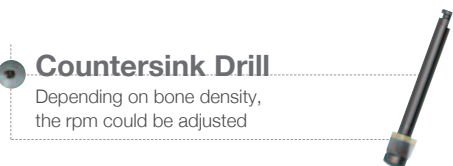
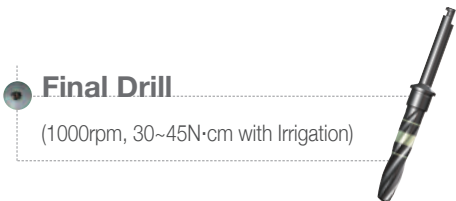
Surgical Kit Maintenance

Sterilization and Instrument Care Procedures

- Please follow legal regulations, as well as hygienic guidelines to prevent contamination and infection through prevention.
 - Please remember that you are responsible for the maintenance and sterility of your medical / dental products / device. It is important to use and follow proper cleaning, disinfection and sterilization procedures.
 - It is also important to follow the manufactures recommendation on the usage of drills.
Please keep a log as to how many times the drills are used.
 - Drills are used per implant placed not per patient. Bone density determines the life of the drills.
 - Replace white and red o-rings on adapters and hex drivers, if worn and dried out.
 - Drills should be considered for replacement around 20 uses based on bone density.
-
- 01 All instruments immediately after use must be pre-soaked for a few minutes in a germicidal bath to loosen and prevent debris from attaching to instruments. Do not soak over-night.
 - 02 Scrub with a soft brush to remove any debris.
 - 03 For internal irrigation drills use a reamer or small gauge needle to cleanout drill internally.
 - 04 If using an ultrasonic cleaner, wrap drills in a 2 × 2 to prevent rubbing against each other.
 - 05 Rinse thoroughly under warm water.
 - 06 Clean all instrument trays with a germicidal cleaner prior to replacing instruments in kit.
 - 07 Dry completely and place back into kit.
 - 08 Always check for damage or corrosion after rinsing and drying.
 - 09 Seal the tray in a sterilization pouch.
 - 10 Sterilize using a steam autoclave at 121°C / 250F for 30 minutes or refer to manufacture’s recommendations.
 - 11 Store in a dry area at room temperature.

Maintenance Period for Surgical Drills

All surgical drills shall be replaced after approximately 40 uses based on bone density



PROSTHESIS MANUAL

Prosthetic Introduction

Understanding the Implant and Prosthesis	14
Types of Abutment	15
Dual Abutment	16
Combi Abutment	17
Dual Milling / Anged / Temporary / Direct-Casting / Metal-Casting Abutment	18
Screw Abutment / Angled Screw Abutment	20
Points to Consider in Abutment Selection	21
Minimum Height Requirement for SuperLine Prosthetic Abutment	22

Prosthetic Procedure 1

Abutment Level- Dual Abutment	24
Abutment Level- Combi Abutment	27

Prosthetic Procedure 2

Fixture Level [Pick-up Type]- Dual Abutment	30
Fixture Level [Transfer Type]- Dual Abutment	33
Fixture Level [Transfer Type]- Dual Milling Abutment	36
Fixture Level [Pick-up Type]- Angled Abutment	38
Fixture Level- Direct-Casting Abutment	40
Fixture Level- Metal-Casting Abutment	41
Fixture Level [Pick-up Type]- Temporary Abutment	42

Prosthetic Procedure 3

Abutment Level [Transfer Type]- Screw Abutment	44
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Cementation Repair Method (SCRIP)

Prosthetic Procedure 4

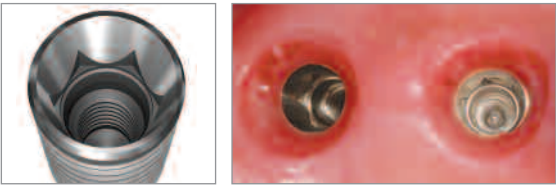
Positioner	50
Ball Attachment	52
Magnetic Attachment	54

Understanding the Implant and Prosthesis



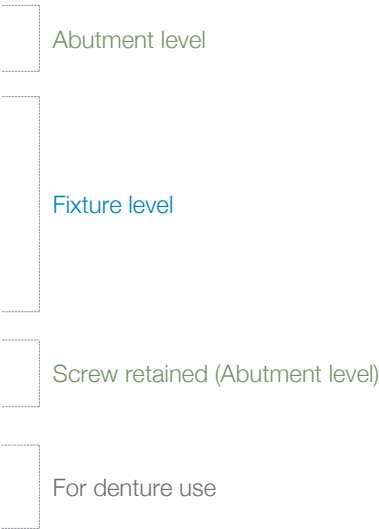
Biological Connection

- The tapered conical hex connection between implant and abutment interface provides hermetic sealing.
- The biological connection distributes the load to the fixture evenly. Therefore it may minimize bone loss.
- All implant diameters share the same internal connection. One abutment screw fits all abutments and fixtures.



Types of Abutment (Abutments are available in various diameters & gingival heights)

- Dual Abutment
- Combi Abutment
- Dual Abutment
- Dual Milling Abutment
- Angled Abutment (15° / 25°)
- Direct-Casting Abutment
- Metal-Casting Abutment
- Temporary Abutment (Plastic & Titanium)
- Screw Abutment
- Angled Screw Abutment (15° / 30°)
- Positioner Attachment
- Ball Attachment
- Magnetic Attachment



Types of Abutment

One-Piece



Combi Abutment



Screw Abutment



Cylinder

Abutment Level

Two-Pieces



Dual Abutment




Dual Milling Abutment



Angled Abutment



Direct-Casting Abutment



Metal-Casting Abutment



Temporary Abutment

Fixture Level

- Straight abutments are Dual and Combi.
- Depending on the insertion angle and position of the fixture, the Angled or Direct / Metal casting abutment may be used.
- The Screw abutment can be used when prosthesis retrieval is anticipated.

Selection Guideline

Ideal emergence profile for each tooth

Dual Abutment



Dual Abutment

- It is possible to take an impression at both fixture level and abutment level.
(A dual abutment may be interchanged with a combi abutment.)
- For abutment level impressions, the same prosthetic procedures apply to both dual and combi abutments.
- For fixture level impressions, the abutment selection takes place on the master model.
- For fixture level impressions, a precise positioning jig for abutment may be required.
- Either hex or non-hex abutments may be used, according to operator's preference.

* If a cement retained restoration requires retrieval, cutting a hole in the occlusal surface would allow access to the screw to permit removal.

Hex / Non-hex

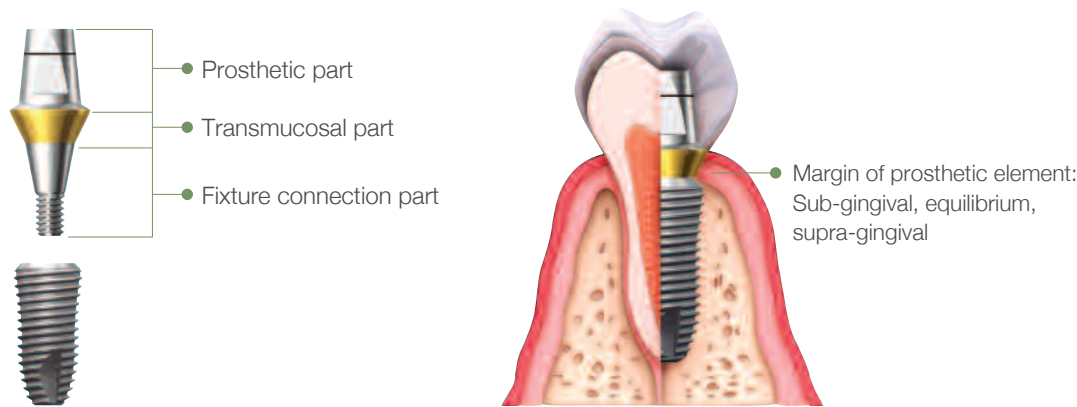
	Hex	Non-hex
Positioning Jig	Unnecessary	Required
Radiograph	Required	Unnecessary

Dual Abutment (Hex / Non-hex)

Diameter	G/H	Verticle Angle
Ø4.5	1.0mm, 1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	5°
Ø5.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	6°
Ø6.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	7°



Combi Abutment



- The Combi abutment is used when the implant position is optimal.
 - If the abutment selection is made in the mouth, gauge the thickness of mucosa with the depth gauge to measure the gingival height thus allowing the appropriate abutment height.
 - The Impression is taken with the snap cap
 - When using the Combi abutment, it remains in the mouth after the impression is taken. (DO NOT REMOVE OR CHANGE ITS POSITION).
 - Tighten abutment screw to 25 - 35 Ncm (retighten again before seating final prosthesis).
- * If the Combi abutment is too long it can be adjusted 1.5mm to the bottom of the laser mark on the vertical stack of the abutment. The Combi abutment has a short analog for the 1.5mm adjustment.
- * A resin jig can be made to record the reduction if reduced more than 1.5mm.

Combi Abutment Line Up

Diameter	G/H	Vertical Angle
Ø4.5	1.0mm, 1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	5°
Ø5.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	6°
Ø6.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	7°



Dual Milling / Angled / Temporary / Direct-Casting Abutment / Metal-Casting Abutment



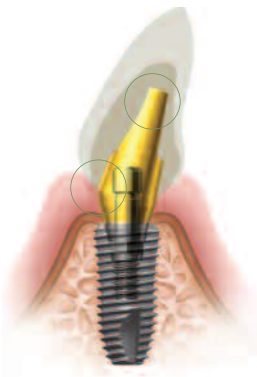
Dual Milling Abutment

- Impression is taken at fixture level.
- When using a non-hex abutment a precise seating jig should be used.
- Either hex or non-hex abutments may be used, according to operators preference.

* if a cement retained restoration requires retrieval, cutting a hole in the occlusal surface would allow access to the screw for removal.

Angled Abutment

- The Angled Abutment is recommended when the restoration path of insertion is unfavorable in either anterior or posterior sites.
- Retention force can be increased through milling process.



Direct-Casting Abutment

- Excellent for either single or for bridgework.
- Used as an esthetic custom made abutment.
- Used when angulation is not ideal and a standard abutment cannot be used.
- Used when there is inadequate inter-arch distance and a standard abutment cannot be used.
- A fixture level impression is taken, and the soft tissue contours can be supported.

Dual Milling / Angled / Temporary / Direct-Casting Abutment / Metal-Casting Abutment

Metal-Casting Abutment

- Equivalent results for a fraction of the price!
- Our highly affordable metal alloy replaces expensive gold to alleviate financial burden to all.

Temporary Abutment

- Temporary abutments are available in titanium or plastic.
- The titanium abutment comes in hex and non-hex both with a gingival height of 1.0mm.
- The plastic abutment comes in diameters (Ø4.5, 5.5, 6.5) with a gingival height of 2.0mm.

Fixture Level Abutment (Hex / Non-hex)

Abutment	Diameter	G/H	Angle
Dual Milling  Hex Non-hex	Ø4.0	1.0mm	X
	Ø4.5	1.5mm	
	Ø5.5	1.5 / 2.5mm	
	Ø6.5	1.5 / 2.5 / 3.5mm	
	Ø7.5	2.5 / 3.5mm	
Angled  Hex Non-hex Hex Non-hex	Ø4.5	1.5mm 2.5mm 3.5mm	15° / 25°
	Ø5.5	1.5mm 2.5mm 3.5mm	15° / 25°
Direct-Casting Abutment  Hex Non-hex	Ø4.5	1.0mm	X
Metal-Casting Abutment  Hex Non-hex	Ø4.5	1.0mm	X
Ti-Temporary  Hex Non-hex	Ø4.5	1.0mm	X
Plastic Temporary  Hex Non-hex	Ø4.5 Ø5.5 Ø6.5	2.0mm	X

Screw Abutment



Screw Abutment Angled Screw Abutment

If prosthesis repair is anticipated, use of a screw abutment retained prosthesis enables easy retrieval.

- Useful for connecting multiple units or if there is a preference for a screw retained prosthesis.
- Useful when respective long axes of implants differ. Each side tapers by 30° and this permits up to 60° divergence between two abutments.
- Useful if the prognosis of an adjacent restoration is not ideal thus permitting easy retrieval and modification of the restoration.

Ti-Retaining Screw (1.8mm - body diameter)

- Can minimize screw loosening due to increased approximal space.
- Can endure various kinds of masticatory force.



Screw Abutment

Diameter	G/H
Ø4.5	1.0mm, 1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm
Ø5.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm

Angled Screw Abutment

Diameter	G/H
Ø4.5	1.0mm
Ø5.5	1.5mm



Points to Consider in Abutment Selection

Considerations in Selecting an Abutment

- Esthetic requirement
- Implant angulation
- Implant location
- Fixture installation depth (Gingival height)
- Interarch distance
- Prosthesis type
- Dentist & Dental technician's preference

Impression of Implant

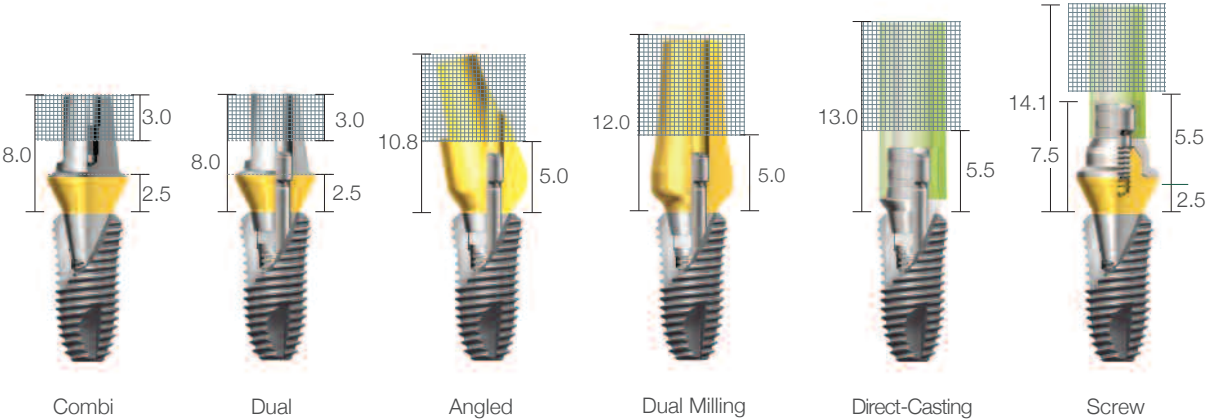
According to the case the impression can be taken at abutment or fixture level.

Fixture Level	Abutment Level
1. Dual Abutment	1. Dual Abutment
2. Dual Milling Abutment	2. Combi Abutment
3. Angled Abutment (15° / 25°)	3. Screw Abutment
4. Direct-Casting Aabutment	4. Angled Screw Abutment (15° / 30°)
5. Metal-Casting Abutment	
6. Temporary Abutment (Plastic & Titanium)	

Abutment Impression Recommendation

Dual	Cementation type, screw-cementation type	Fixture level impression or abutment level impression
Combi	Cementation type	Abutment level impression
Angled	Cementation type, screw-cementation type	Fixture level impression
Screw	Screw retained type	Abutment level impression
Direct-Casting	Cementation type, screw-cementation type	Fixture level impression
Metal-Casting	Cementation type, screw-cementation type	Fixture level impression
Dual Milling	Cementation type, screw-cementation type	Fixture level impression

Minimum Height Requirement for SuperLine Prosthetic Abutment



? Diagram above indicates the minimum height required for SuperLine / IMPLANTIUM prosthetic abutment

Maxium Amount of Reduction Allotted for SuperLine

Combi Abutment

- Eliminate 3.0mm from the top level Combi abutment (laser marking:1.5mm)
Caution _ Damage may be caused to the screw if the abutment is reduced to less than 2.5mm above the gingival height.

Dual Abutment

- Preparation of the abutment top is possible as follows.

Gingival Height	Preparable Amount
1.5mm	2.0
2.5mm	3.0
3.5mm	4.0
4.5mm	5.0
5.5mm	6.0

Angled Abutment & Dual Milling Abutment

- Required minimum abutment height: at least 5.0mm above the Fixture top.

Direct-Casting Abutment & Metal-Casting Abutment

- Required minimum abutment height: at least 5.5mm above the Fixture top.

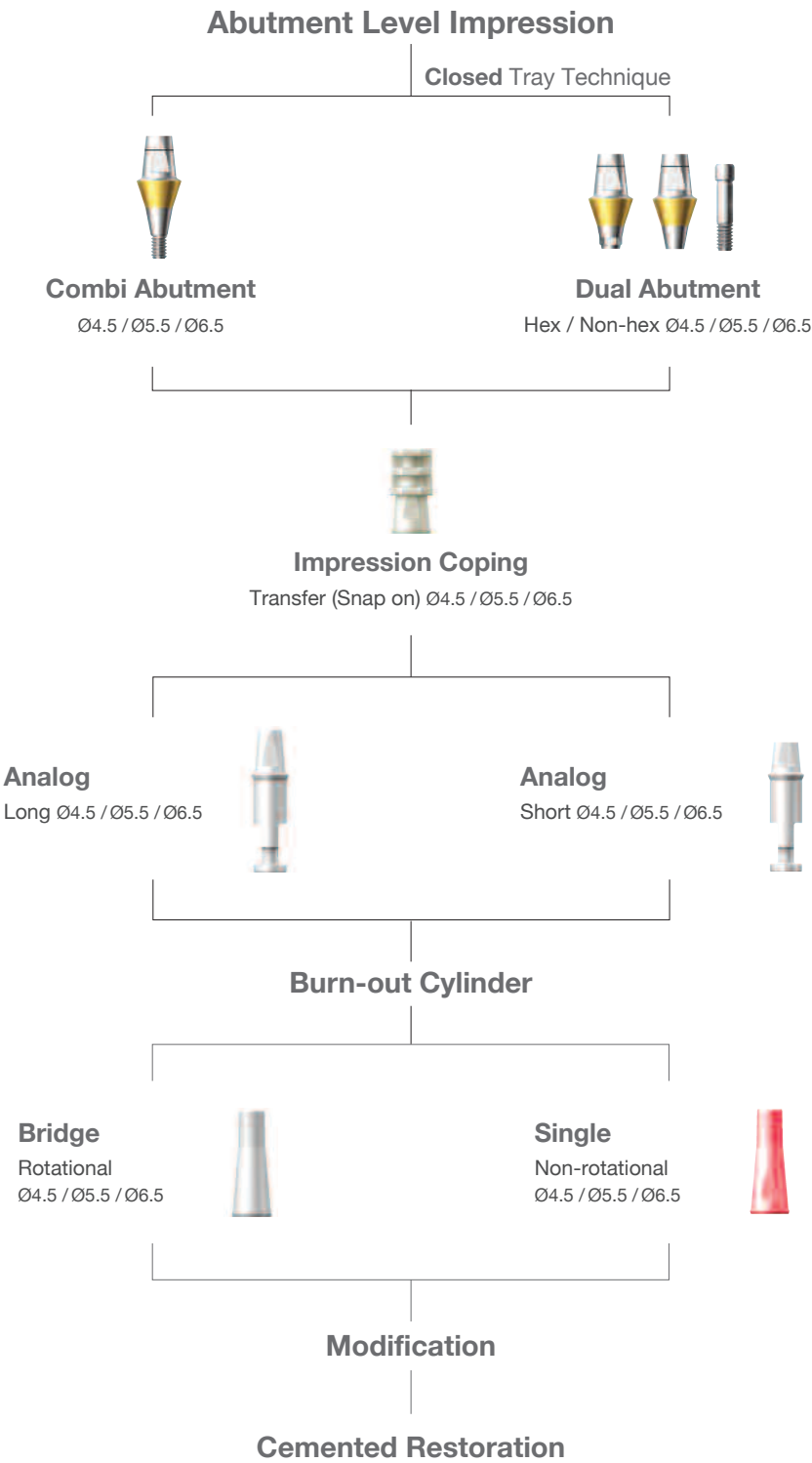
Screw Abutment

- The Screw abutment cannot be modified, however the casting abutment can be modified for interarch distance, taking reduction into consideration of the height of the retaining screw.

Prosthetic Procedure 1

Impression Technique and Restoration Selection

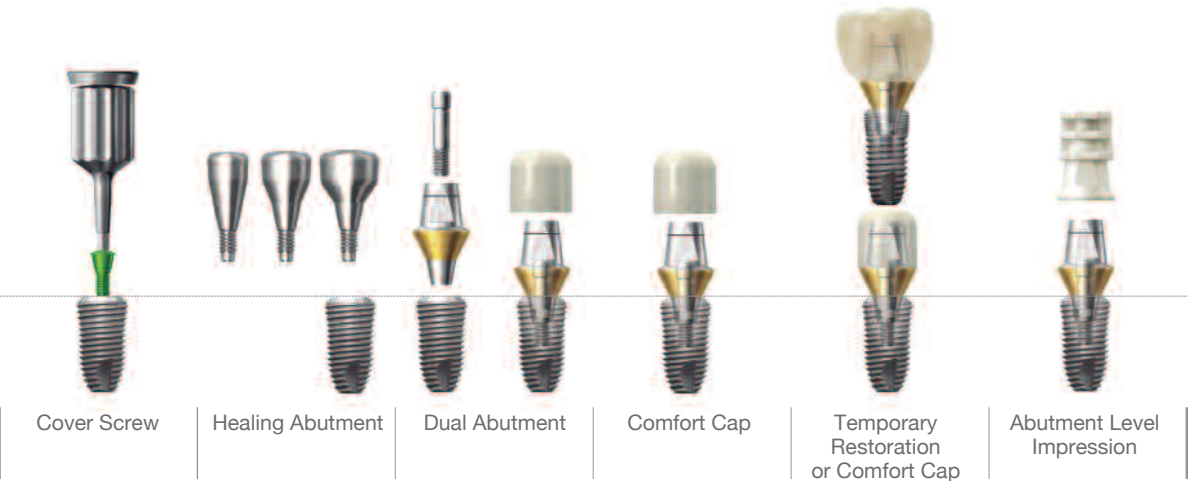
Dual / Combi Abutment



Abutment Level- Dual Abutment

[Multiple Units]

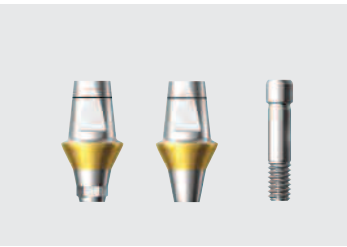
Clinical Procedure



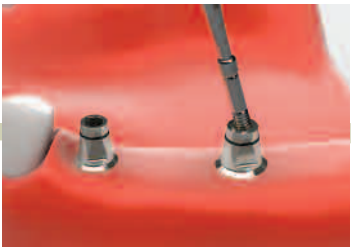
Chairside



Remove the healing abutment after formation of soft tissue.



Dual Abutment (Hex / Non-hex)



Select the Dual Abutment by diameter and gingival height.



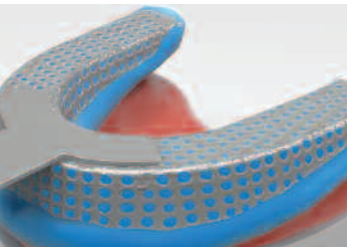
Retighten after 15 minutes
Tighten it to 25~30N·cm.



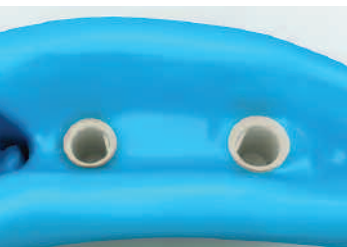
Seat the plastic cap over the
abutment.



Injection of impression material.



Impression taking.



Cap comes off into the impression
Insert analog into the impression.

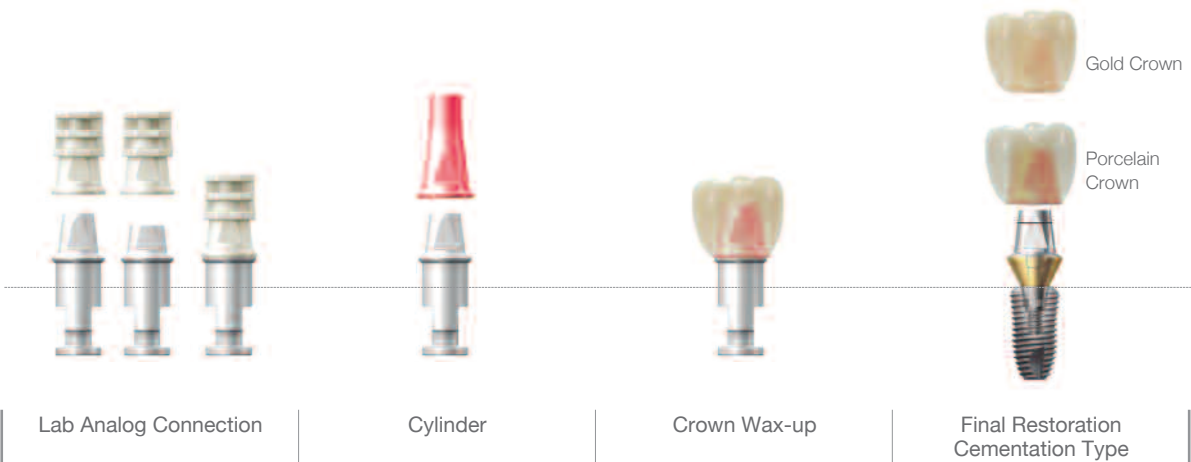


Fabrication of provisional restoration.
or insertion of comfort cap.

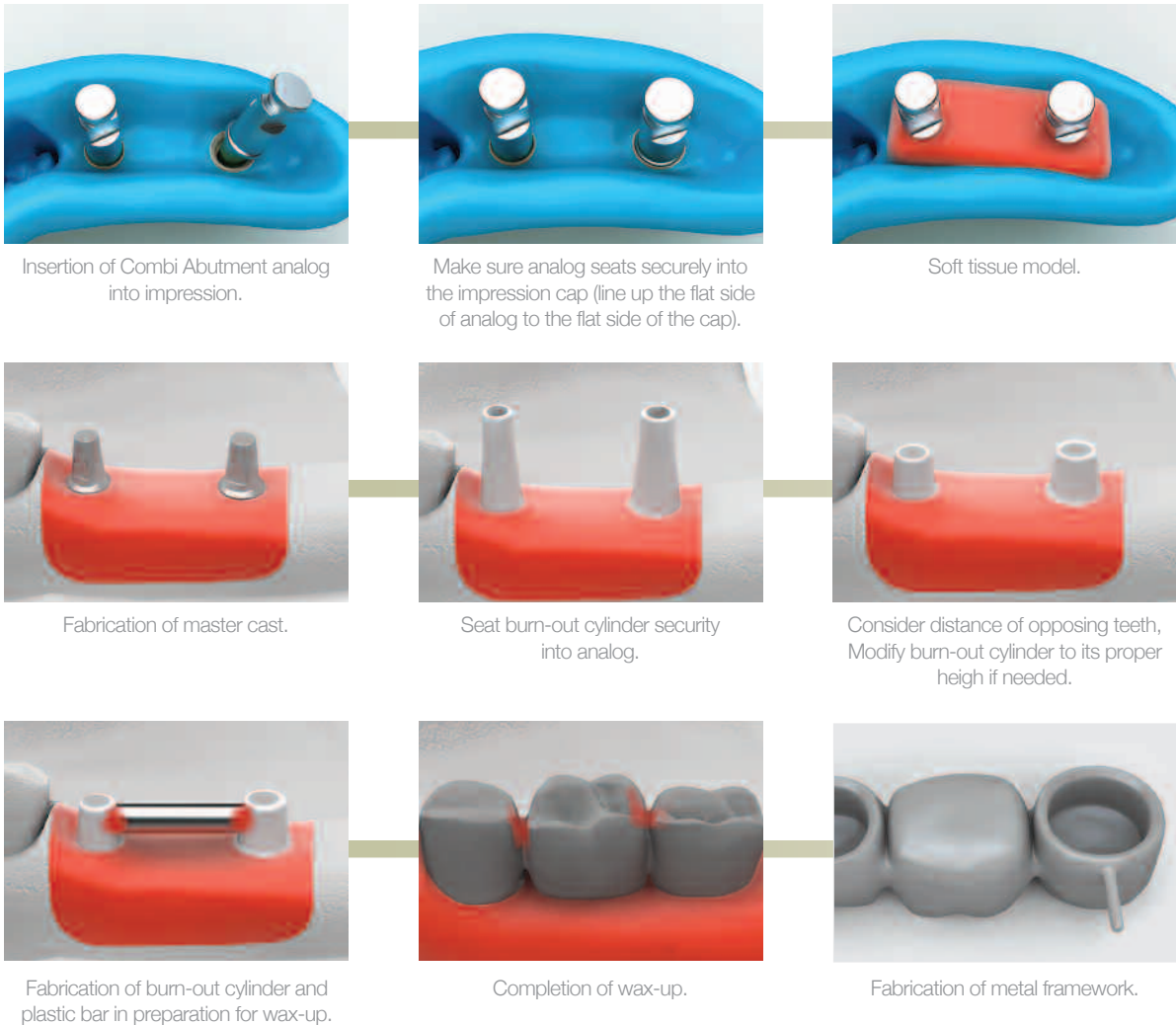
Abutment Level- Dual Abutment

[Multiple Units]

Laboratory Procedure



Lab Side

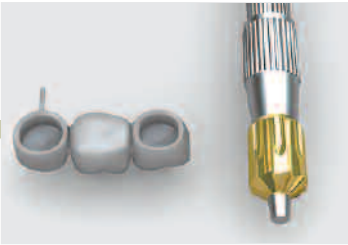


Abutment Level- Dual Abutment

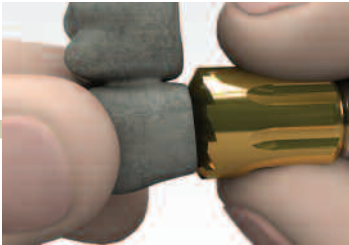
[Multiple Units]



Trimming of the extended margin by using the rubber wheel.



Metal framework and reamer.



Reamer is used to eliminate "Lip" caused by 'snap-on' mechanism.



Metal Framework after removal of "Lip".



Metal framework.



Porcelain build-up.

SCRIP: Once an access hole has been created, it can be converted to a SCRIP (Screw & Cemented Retained Prosthesis).



Final prosthesis.



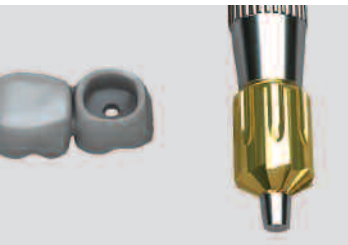
Access hole is made when burn-out cylinder is used to do the wax-up.



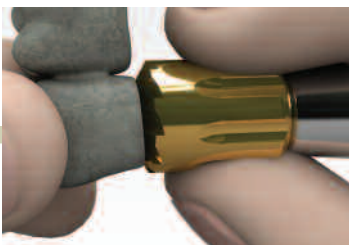
Extended margin around the metal framework due to 'snap-on' mechanism.



Trim extended margin by rubber wheel.



Metal framework and reamer.



Eliminate the lip remnant caused by 'Snap-on' mechanism by reamer.



Metal framework after removal of "Lip".



Metal framework.

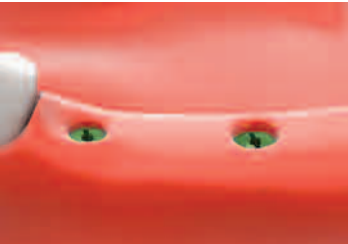


Final prosthesis.

Abutment Level- Combi Abutment

[Multiple Units]

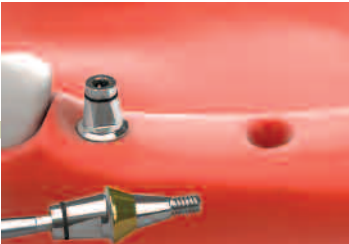
Chairside



Second stage surgery (uncovering).



Following the 2nd stage surgery, soft tissue is healed around the healing abutment. healing abutment should be selected according to the size of abutment.



Choose abutment with gingival height then tighten it to 25~30N·cm. Re-tighten after 15 minutes.



Image of combi Impression coping and Abutment assembly.



Snap-on the plastic impression coping with the same sized diameter abutment.



Impression taking. Injection of impression material.



Impression taking.



Inner-surface of impression.

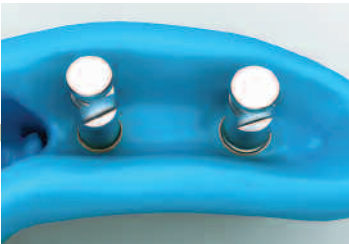


Fabrication of provisional restoration or insertion of comfort cap.

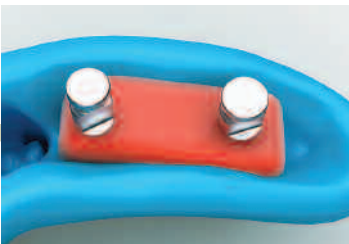
Lab Side



Seating of Lab analog.



Confirm analog is secured in snap cap.



Soft tissue model.



Fabrication of master cast.



Placement of burn-out cylinder.



Consider the distance of opposing teeth, modify burn-out cylinders to its proper height.

Abutment Level- Combi Abutment

[Multiple Units]



Connect the plastic bar in the middle of the trimmed burn-out cylinders to help support the resin pattern. Resin pattern may have shrinkage.



Wax-up.



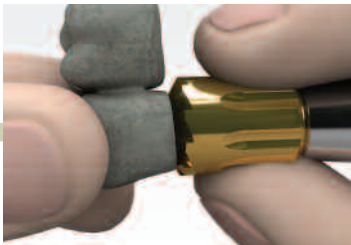
Completed framework.



Trimming the extended margin with a rubber wheel.



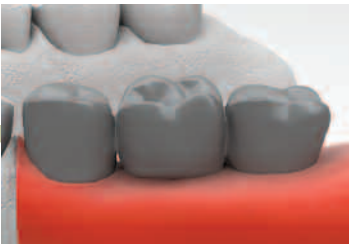
Metal framework and reamer.



Removal of lip remnant with reamer caused by 'snap-on' mechanism.



Metal Framework after removal of "Lip".



Metal coping adaptation (Completed framework).



Porcelain build-up final prosthesis.

Chairside



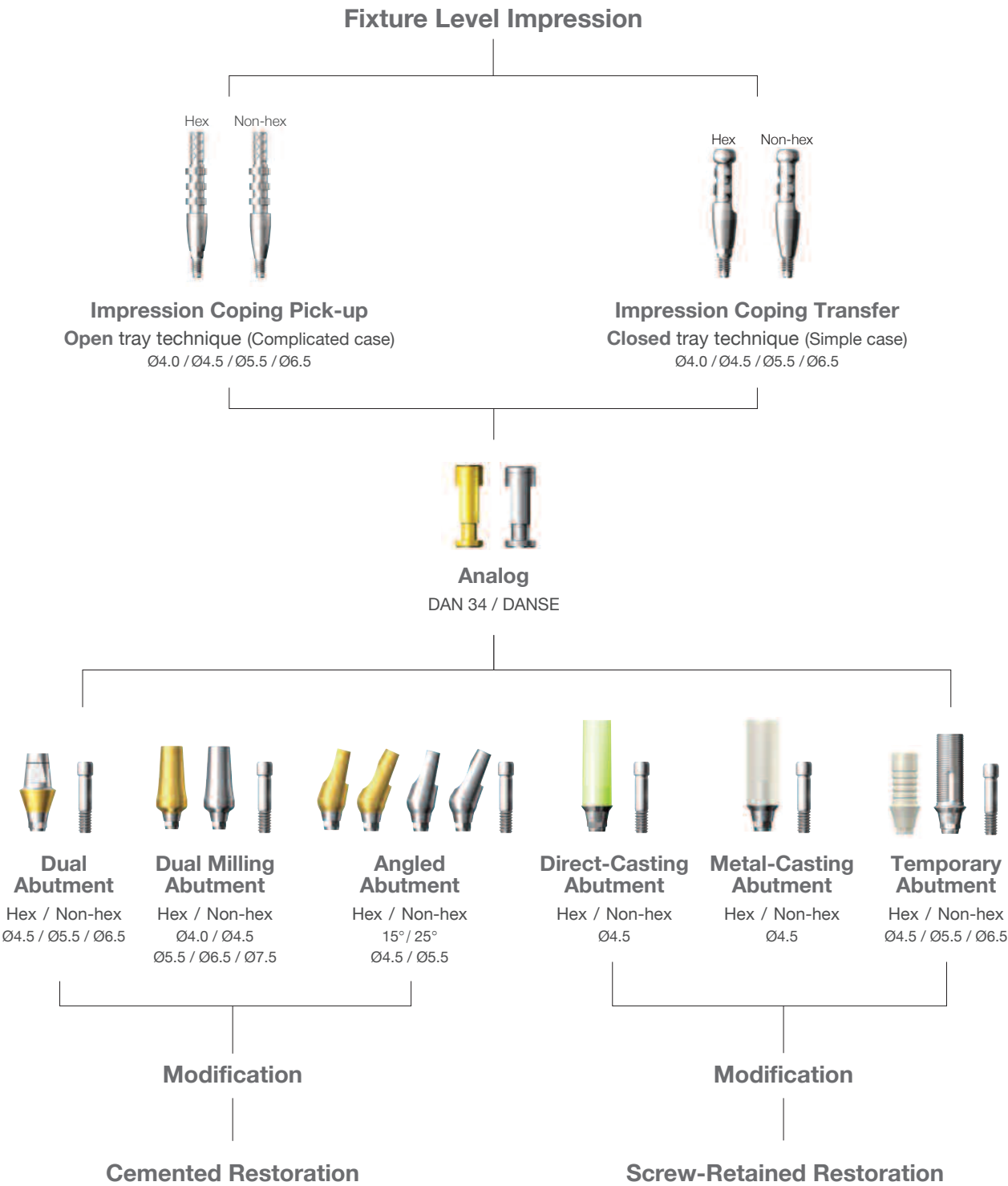
* If the combi analog is trimmed due to limited inter-occlusal space in the lab, make a reduction jig. Then a slight modify of the abutment in the oral cavity may be necessary to the height of the jig.

Insertion of final prosthesis and occlusal adjustment.

Prosthetic Procedure 2

Impression Technique and Restoration Selection

Dual / Milling / Angled / Direct-Casting / Metal-Casting /
Temporary (Plastic & Ti) Abutment



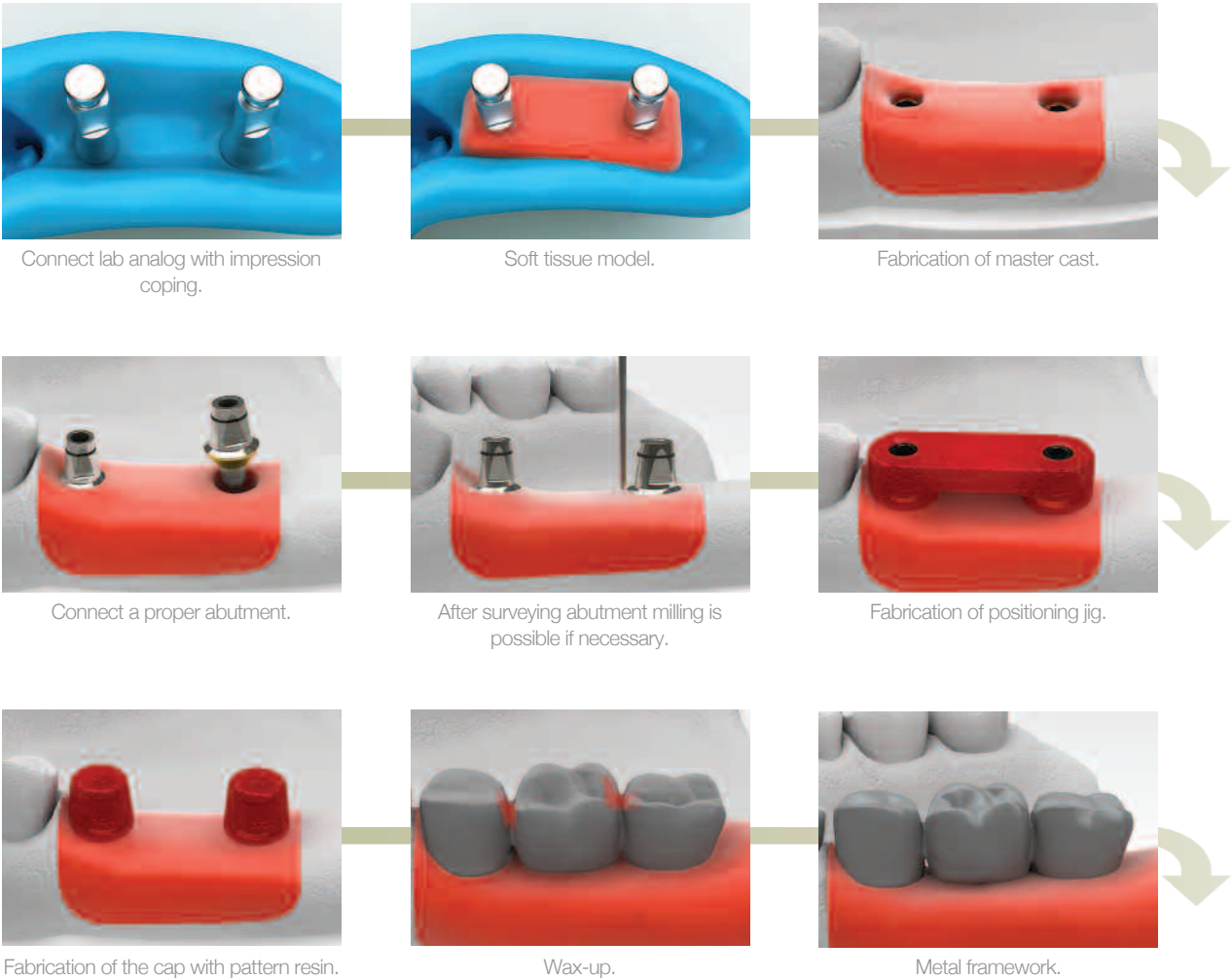
Fixture Level [Pick-up Type]- Dual Abutment

[Multiple Units]

Laboratory Procedure



Lab Side



Fixture Level [Pick-up Type]- Dual Abutment

[Multiple Units]

Chairside



Final prosthesis.



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 25~30N·cm.
Re-tighten after 15 minutes.



Insertion of the final prosthesis and occlusal adjustment.

* In the process of seating the prosthesis, the prosthesis can be rebounded by gingival tissue.
In this case it is advised to apply occlusal load on the prosthesis for 10~15 minutes.

SCR- Lab Side



Formation of access hole with long transfer coping screw.



Wax-up.



Metal framework.



Final prosthesis.



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 25~30N·cm.
Re-tighten after 15 minutes.



Insertion of final prosthesis and adjustment of occlusion.

* In the process of seating the prosthesis, the prosthesis can be rebounded by gingival tissue.
In this case it is advised to apply occlusal load on the prosthesis for 10~15 minutes.

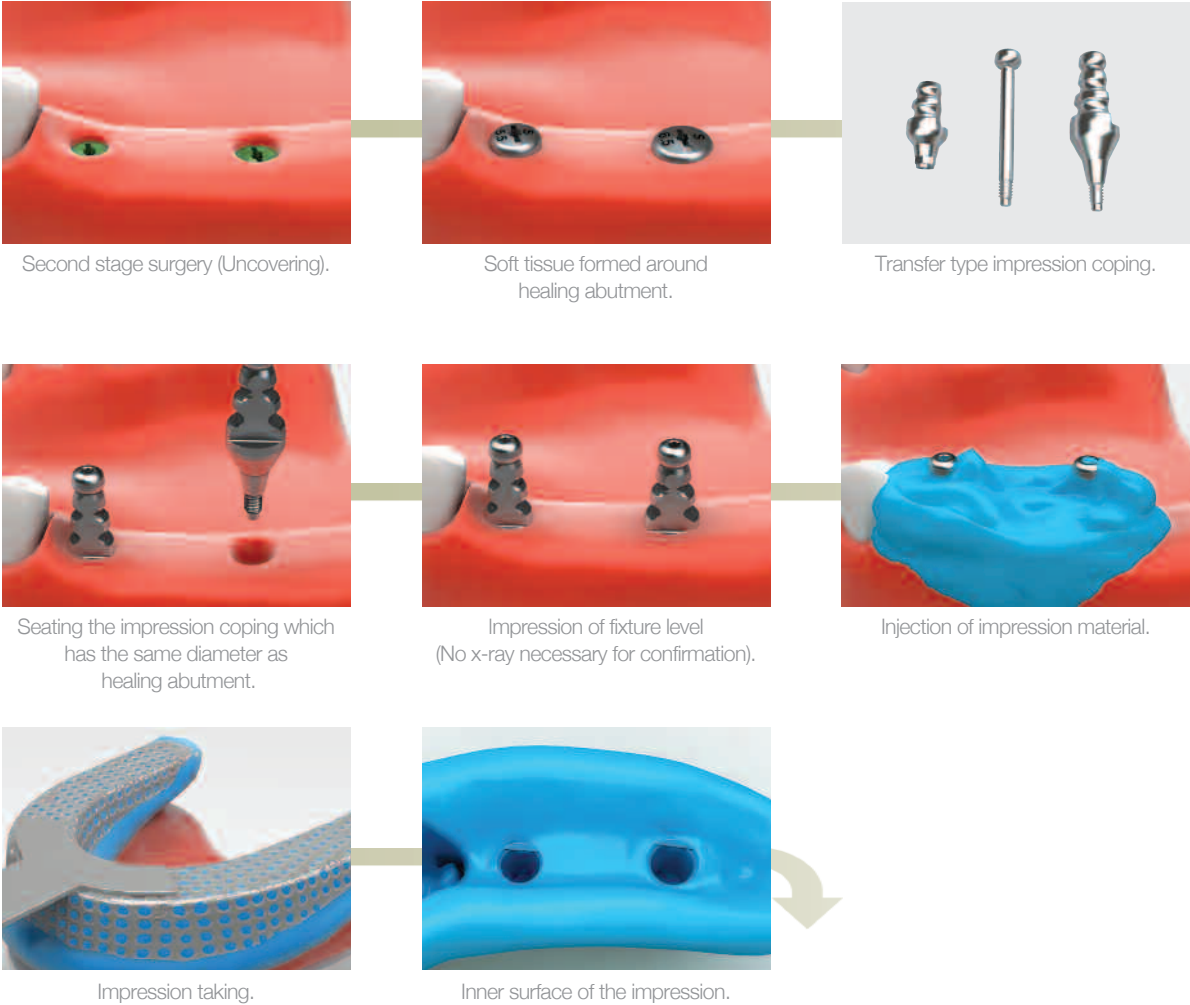
Fixture Level [Transfer Type]- Dual Abutment

[Multiple Units]

Clinical Procedure



Chairside



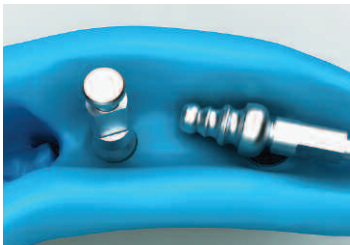
Fixture Level [Transfer Type]- Dual Abutment

[Multiple Units]

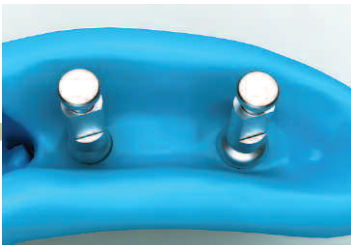
Laboratory Procedure



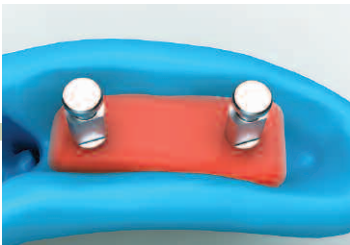
Lab Side



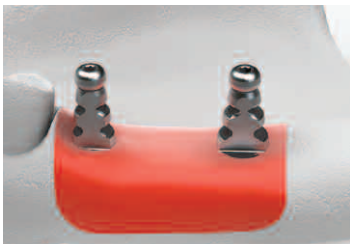
Insert the analog into the impression.



Make sure the impression coping is fully seated into the impression.



Soft tissue model.



Fabrication of master cast.



Soft tissue condition after the of impression coping.



Measuring gingival height with depth gauge.



Selection of dual abutment of proper diameter and gingival height.



Verify by surveying the selected abutment (preparation is possible if necessary).



Fabrication of positioning jig.

Fixture Level [Transfer Type]- Dual Abutment

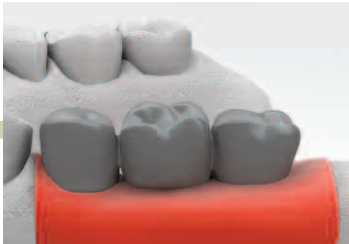
[Multiple Units]



Seat the cap with pattern resin.



Completion of wax-up.



Completion of metal framework.

Chairside



Final prosthesis built up on the framework with porcelain.



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 25~30N·cm.
Re-tighten after 15 minutes.



Insertion of final prosthesis, adjust occlusion place lab wax into opening of abutment to protect screw head then cement.

SCR- Lab Side



Make an access hole in the resin cap by using the long open tray transfer screw.



Completed wax-up.



Metal framework.

SCR- Chairside



Final prosthesis.



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 25~30N·cm.
Re-tighten after 15 minutes.



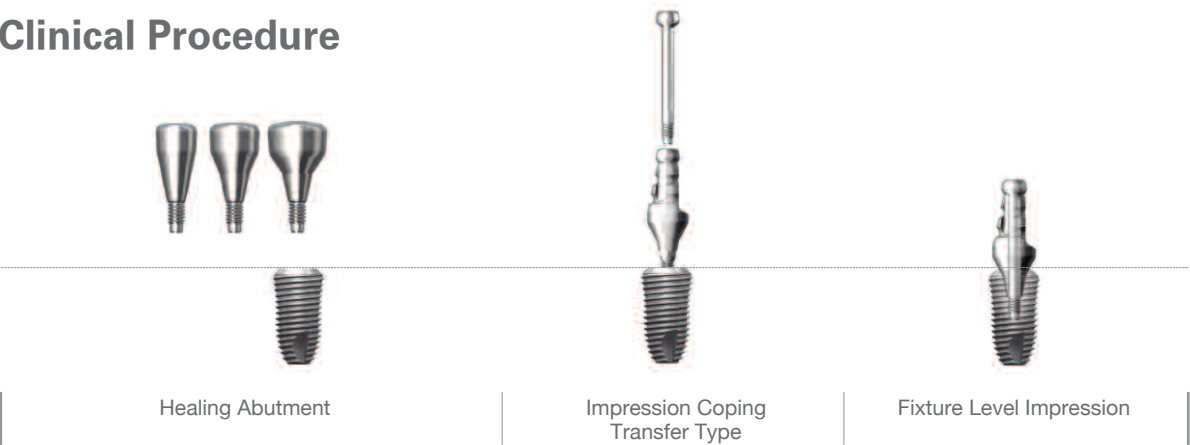
Insertion of final prosthesis and occlusal adjustment. Place wax into opening of the abutment prior to sealing with composite.

* In the process of seating the prosthesis, the prosthesis can be rebounded by gingival tissue. In this case it is advised to apply occlusal load on the prosthesis for 10~15 minutes.

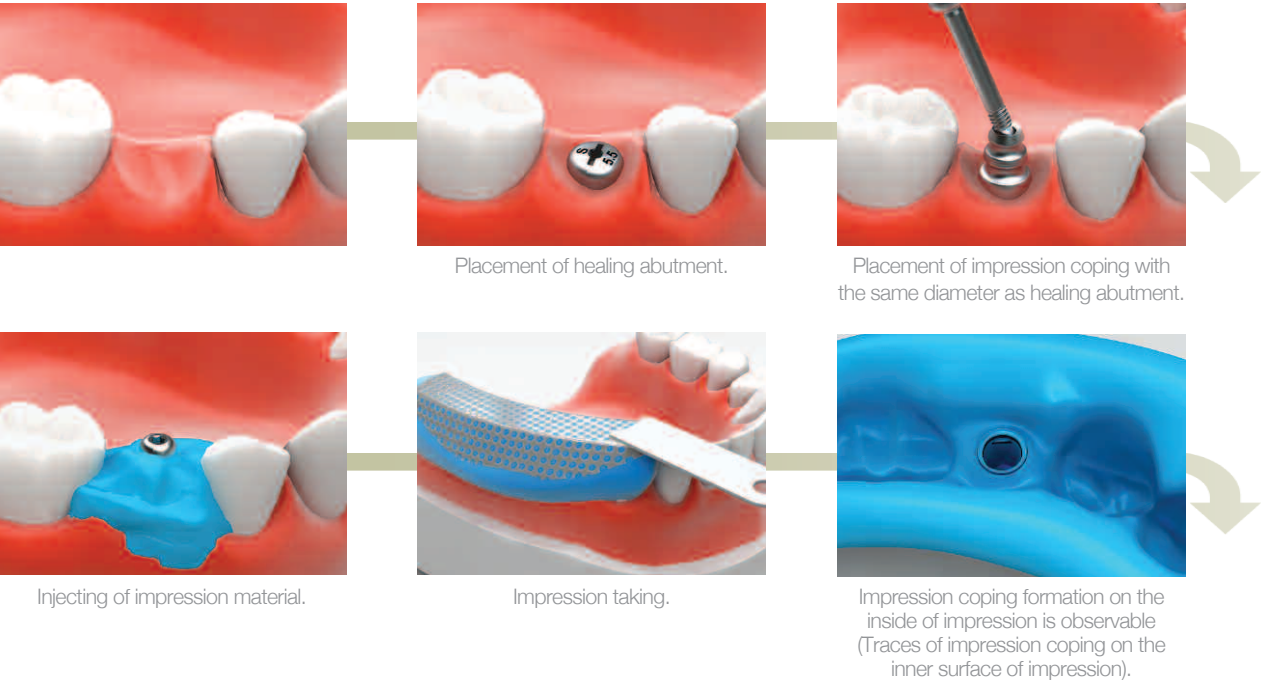
Fixture Level [Transfer Type]- Dual Milling Abutment

[Single Units]

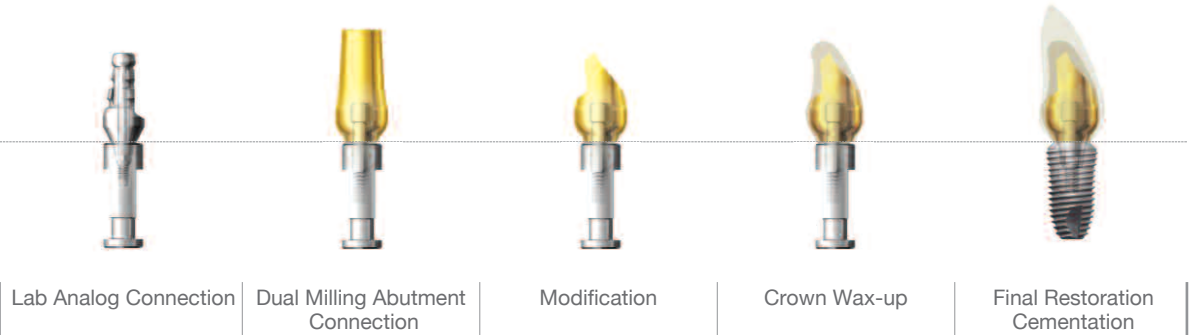
Clinical Procedure



Chairside



Laboratory Procedure



Fixture Level [Transfer Type]- Dual Milling Abutment

[Single Units]

Lab Side



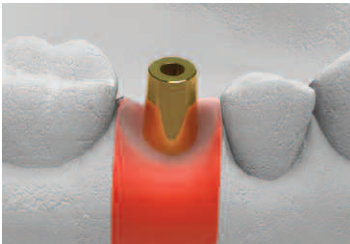
Impression coping and analog connection.



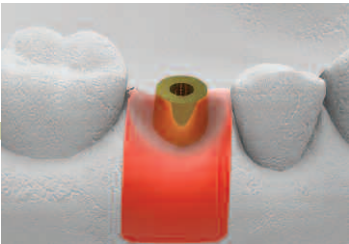
Soft tissue model.



Master cast.



Selection of appropriate dual milling abutment.



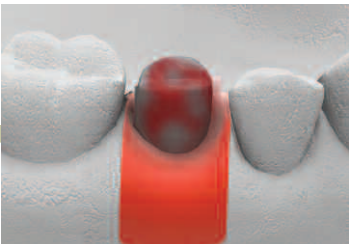
Abutment after milling process.



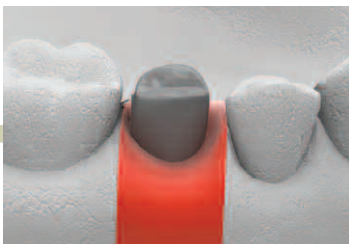
Fabrication of positioning jig.



Fabrication of pattern resin cap.



Completion of wax-up.



Metal framework.



Final prosthesis.



Use positioning jig to transfer the abutment in model to oral cavity then tighten it to 25~30N·cm.
Re-tighten after 15 minutes.



Insertion of final prosthesis and occlusal adjustment.

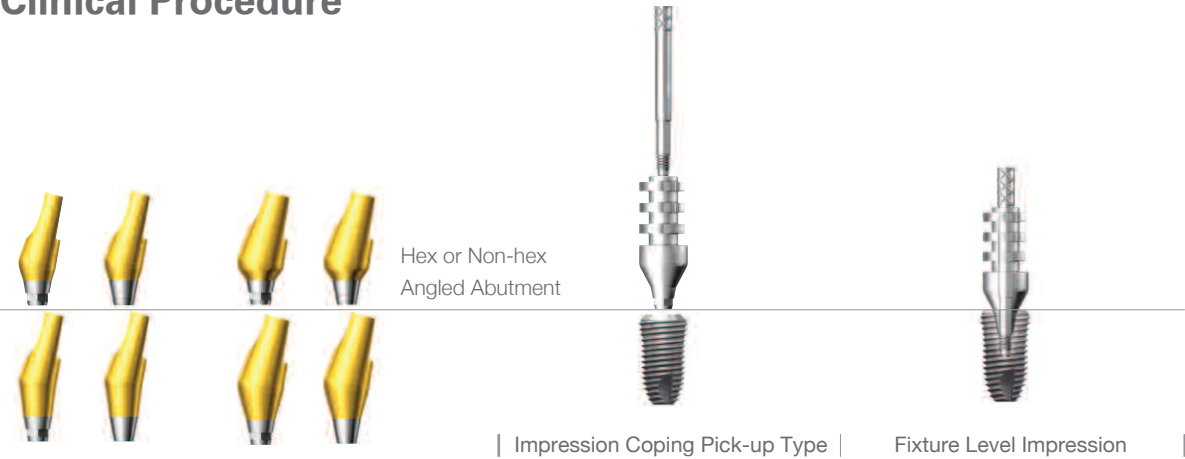
Chairside

* In the process of seating the prosthesis, the prosthesis can be rebounded by gingival tissue. In this case it is advised to apply acclusal load on the prosthesis for 10~15 minutes.

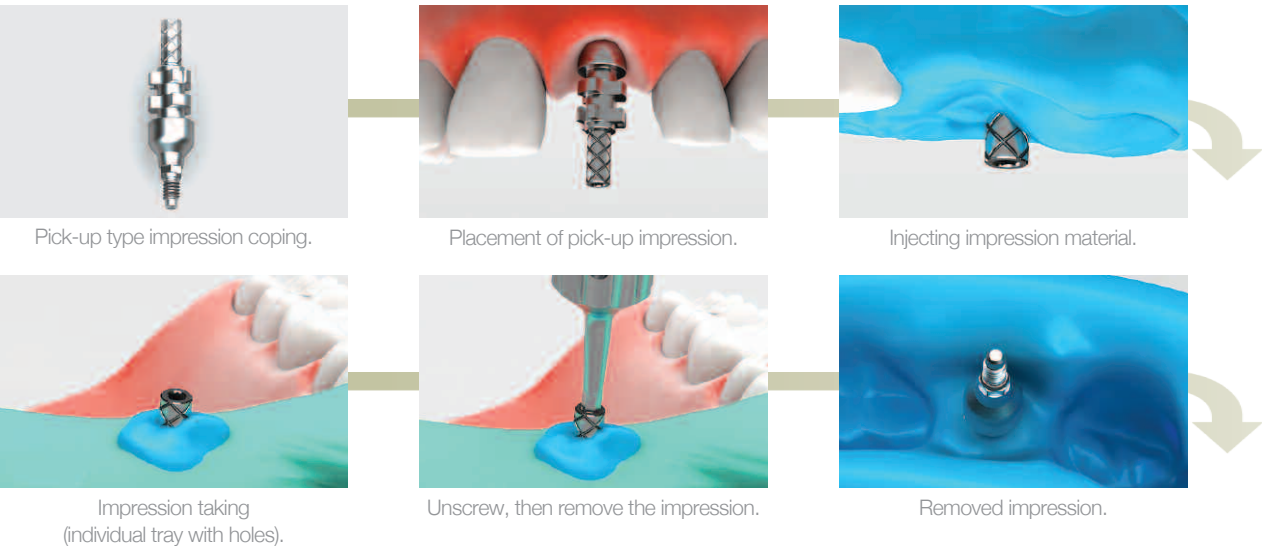
Fixture Level [Pick-up Type]- Angled Abutment

[Single Units]

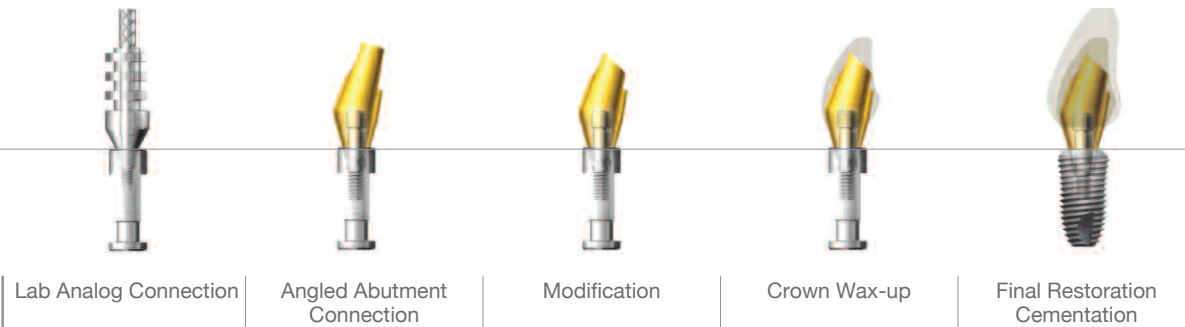
Clinical Procedure



Chairside



Laboratory Procedure



Fixture Level [Pick-up Type]- Angled Abutment

[Single Units]

Lab Side



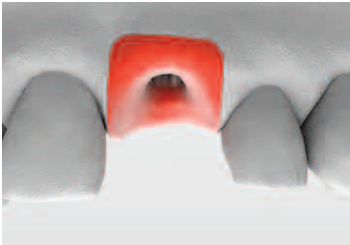
Placement of impression and analog.



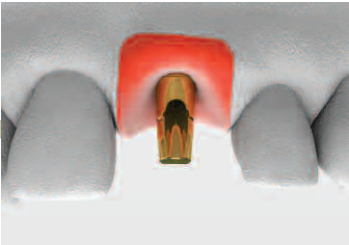
Soft tissue model.



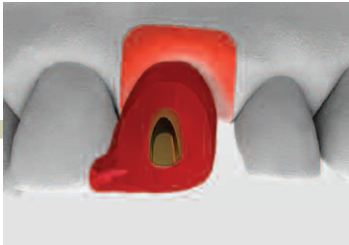
Unscrew then separate impression from the model.



Master cast.



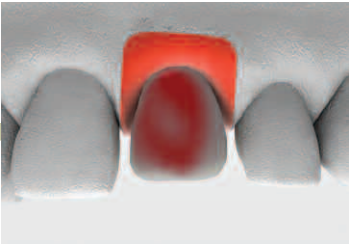
Select an angled abutment.



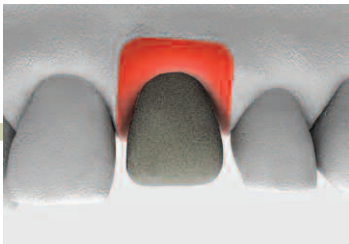
Modification of angled abutment & fabrication of positioning jig.



Fabrication of pattern resin cap.

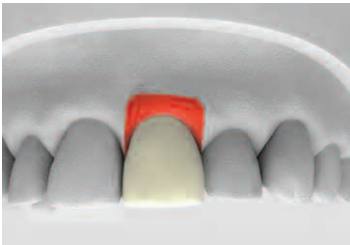


Wax-up.

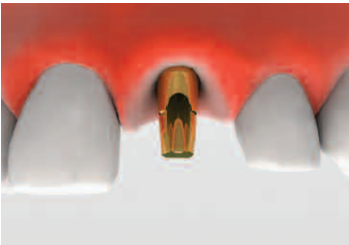


Metal framework.

Chairside



Final prosthesis.



Insertion of the angled abutment using positioning jig.



Insertion of final prosthesis and occlusal adjustment.

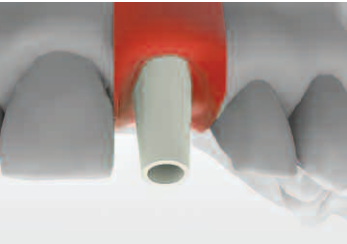
Fixture Level- Direct-Casting Abutment

[Single Units]

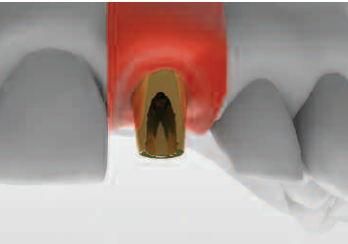
Laboratory Procedure



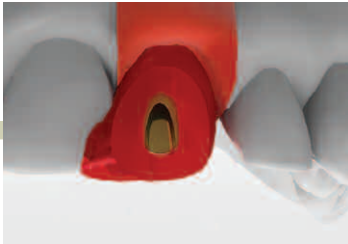
Lab Side



Placement of Direct-casting abutment.



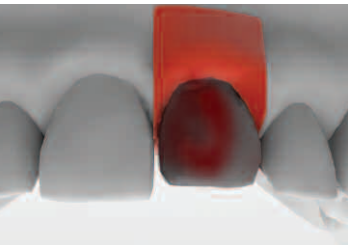
Completed custom abutment.



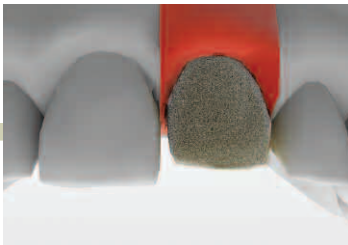
Fabrication of positioning jig.



Fabrication of pattern resin cap.



Wax-up.



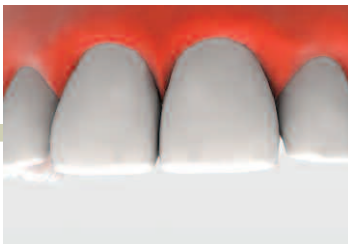
Metal framework.



Final prosthesis.



Insertion of custom abutment using positioning jig.



Insertion of final prosthesis and occlusal adjustment.

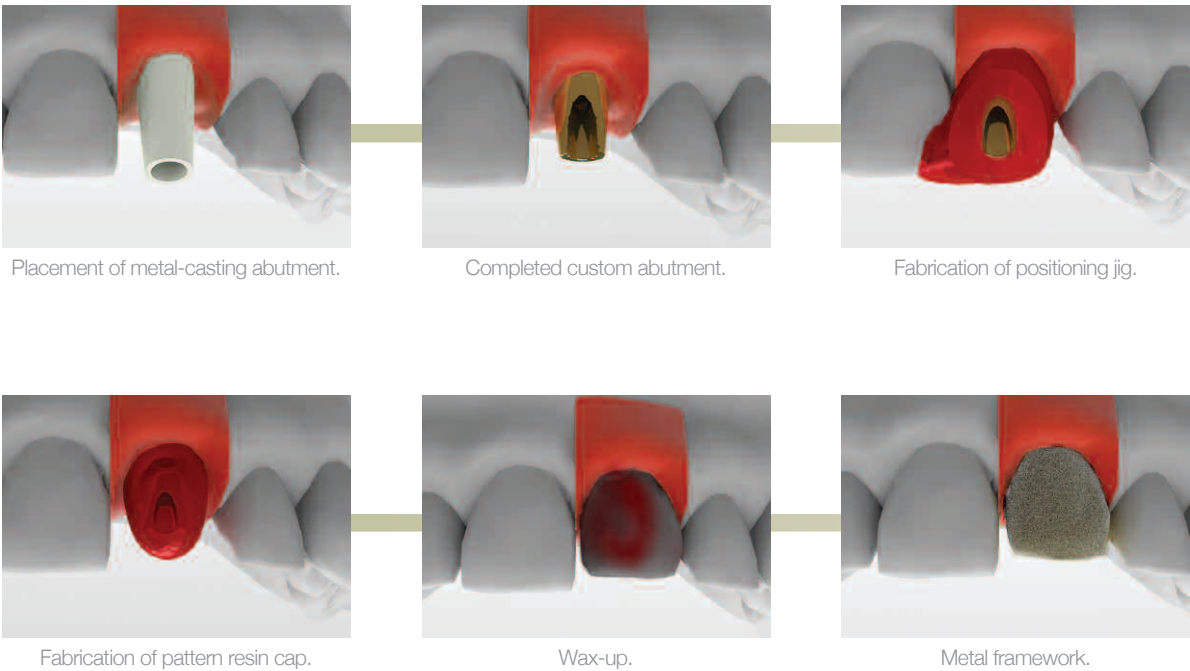
Fixture Level- Metal-Casting Abutment

[Single Units]

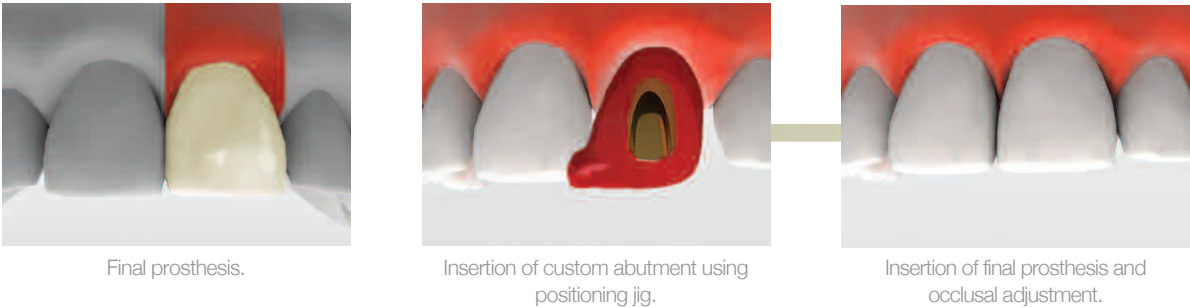
Laboratory Procedure



Lab Side



Chairside



Fixture Level [Pick-up Type]- Temporary Abutment

[Single Units]



Ti-Temporary Abutment



Plastic Temporary Abutment

<Using Ti Abutment>



Considering the opposing teeth before seating the temporary abutment, trim off the abutment as needed and complete the temporary abutment prosthesis with direct resin.

<Using Plastic Abutment>



Prosthetic Procedure 3

Impression Technique and Restoration Selection

Screw Abutment

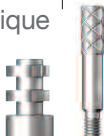
Abutment Level Impression



Screw Abutment

Ø4.5 / Ø5.5

Open Tray Technique



Impression Coping Pick-up

Bridge / Single Ø4.5 / Ø5.5

Closed Tray Technique



Impression Coping Transfer

Bridge / Single Ø4.5 / Ø5.5

Analog

Ø4.5 / Ø5.5



Burn-out Cylinder

Ø4.5 / Ø5.5



Gold Cylinder

Ø4.5 / Ø5.5



Metal Cylinder

Ø4.5 / Ø5.5



Titanium Cylinder

Ø4.5 / Ø5.5



Bridge
(Non-hex)

Single
(Hex)

Bridge
(Non-hex)

Single
(Hex)

Bridge
(Non-hex)

Single
(Hex)

Bridge
(Non-hex)

Single
(Hex)

Polishing Protector

Ø4.5 / Ø5.5



Temporary Restoration



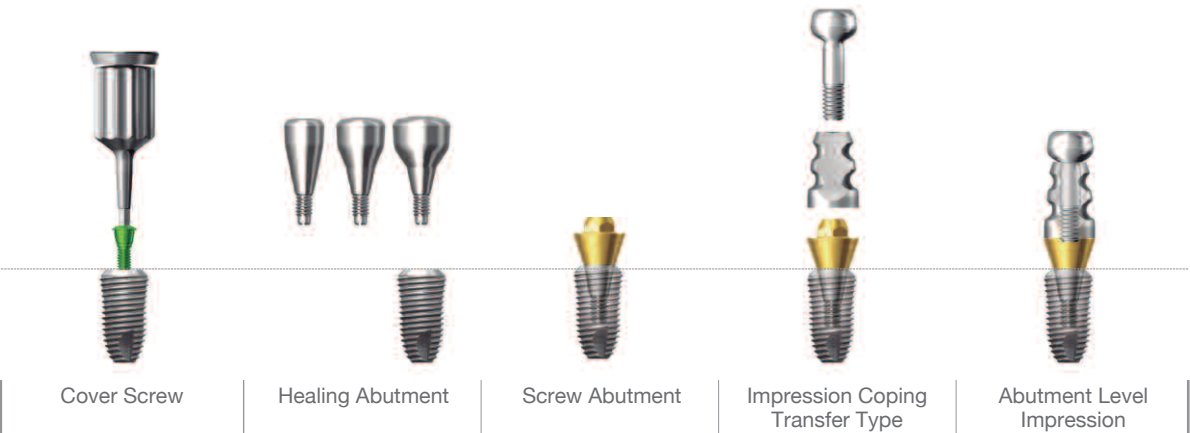
Ti-Retaining Screw

Screw-Retained Restoration

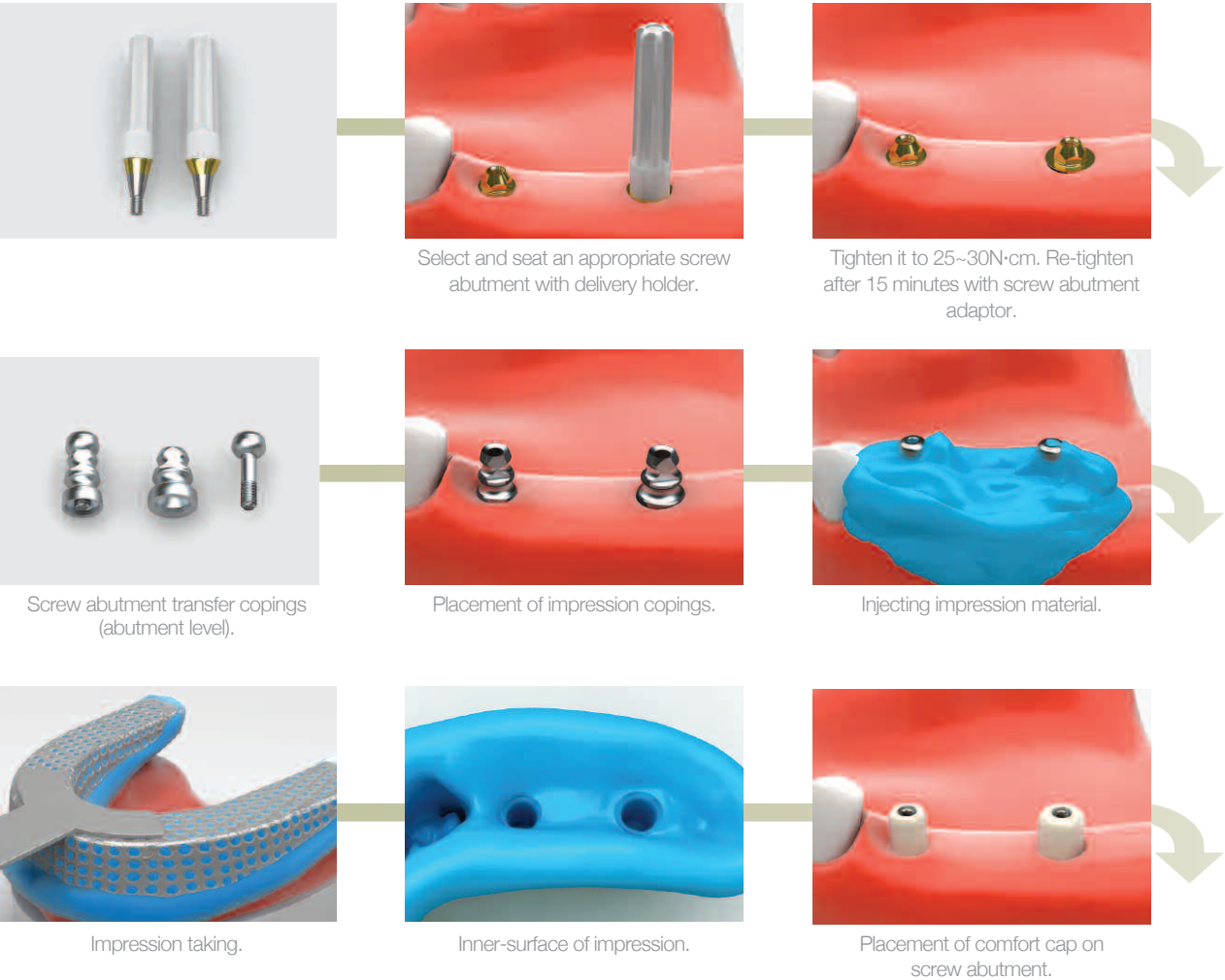
Abutment Level [Transfer Type]- Screw Abutment

[Multiple Units]

Clinical Procedure



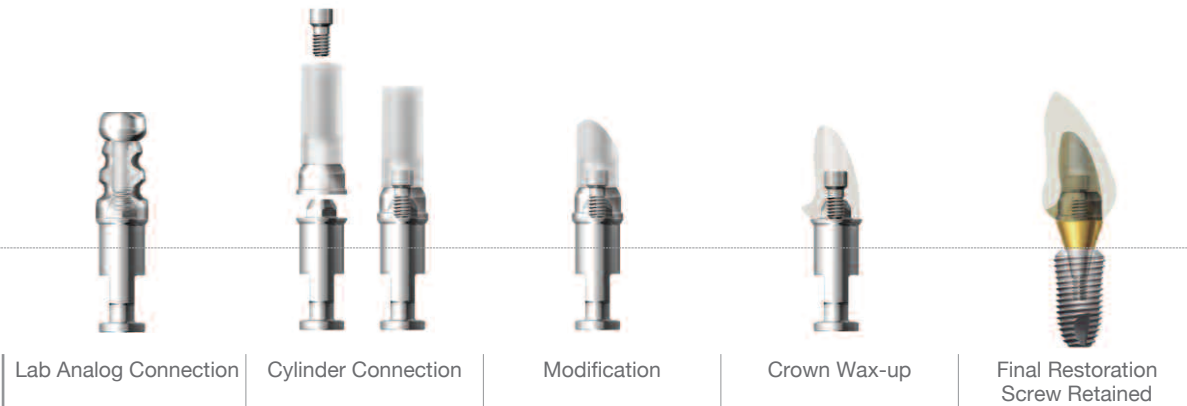
Chairside



Abutment Level [Transfer Type]- Screw Abutment

[Multiple Units]

Laboratory Procedure



Lab Side



Connecting impression coping with screw abutment analog.

Position impression coping and analog assembly in the exact location of the impression.

Soft tissue model.



Fabrication of master cast.

Removal of impression coping.

Connect the screw abutment cylinder then tighten it with Ti-retaining screw.



Consider the distance with opposing teeth, then trim cylinder to its appropriate height.

Connect the plastic bar in the middle of trimmed burn-out cylinders to help support the resin pattern. Resin pattern may have shrinkage.

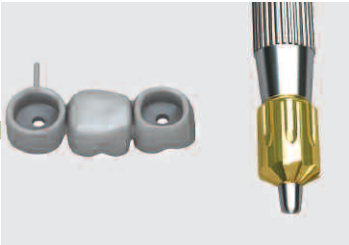
Wax-up.

Abutment Level [Transfer Type]- Screw Abutment

[Multiple Units]



Metal framework.



Removal of lip remnant in the interior of metal framework by using reamer.



Completion of metal framework.



Completion of porcelain.



Insertion of final prosthesis and occlusal adjustment. Tighten with Ti-retaining screw (10N·cm).

Cementation Repair Method (SCRIP)

[Screw & Cement Retained Prosthesis]

In light of Implant Prosthesis:

- A screw type restoration helps to simplify prosthesis repair, including insertion and removal of the prosthesis if necessary.
- Cement type restoration tend to have a stable occlusion and may enhance the adaptability.
However the weak point is that it cannot be removed after permanent cementation.
- A dual abutment can be cemented or screw retained.
- Combi abutments are cement retained and no occlusal hole is necessary.

In case of screw loosening or if prosthesis repair is needed



In case of the following:
screw loosening Prosthesis repair.



In order to unscrew, form access hole
on the occlusal surface with bur.



Unscrew, then remove the prosthesis
from the oral cavity.



Both cemented prosthesis and
abutment are removed.



Finish the repair then seat it inside the
oral cavity.



Tighten the prosthesis with
25~30N·cm by a screw driver
* In case of screw abutment connection,
Ti-retain screw has to be tighten to 10N·cm.



First, fill the access hole with cotton.



Finally fill the access hole with resin.



Final prosthesis.

Cementation Repair Method (SCRIP)

[Screw & Cement Retained Prosthesis]

Prosthesis separation from abutment due to cement loss

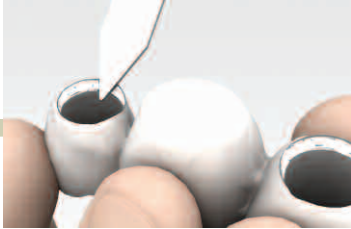


Insert the separated prosthesis material and abutment in the oral cavity.



Completely remove the screw using 25~30N-cm and remove prosthesis from the oral cavity.

* In case of screw abutment separation, Ti-Retain screw has to be tighten to 10N-cm.



Apply the cement.



Cement the prosthesis and clean out cement excess, then fill the access hole with resin and cotton.

Adding to the interproximal contact surface due to prosthesis loosening



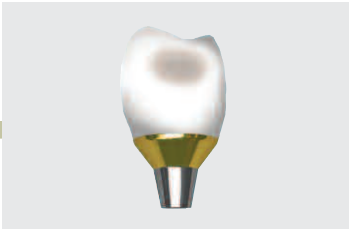
For instance of getting additional contact due to contact loosening.



Form access hole using bur and unscrew.



Unscrew, then remove the cemented prosthesis with abutment in the oral cavity.



Contact adding with resin on the prepared under space.



Insert the prosthesis in the oral cavity and screw it in. Afterwards, perform light curing, then polish the contact area.



Position the prosthesis in the mouth and tighten the screw with 25~30N-cm, then fill up the access hole.

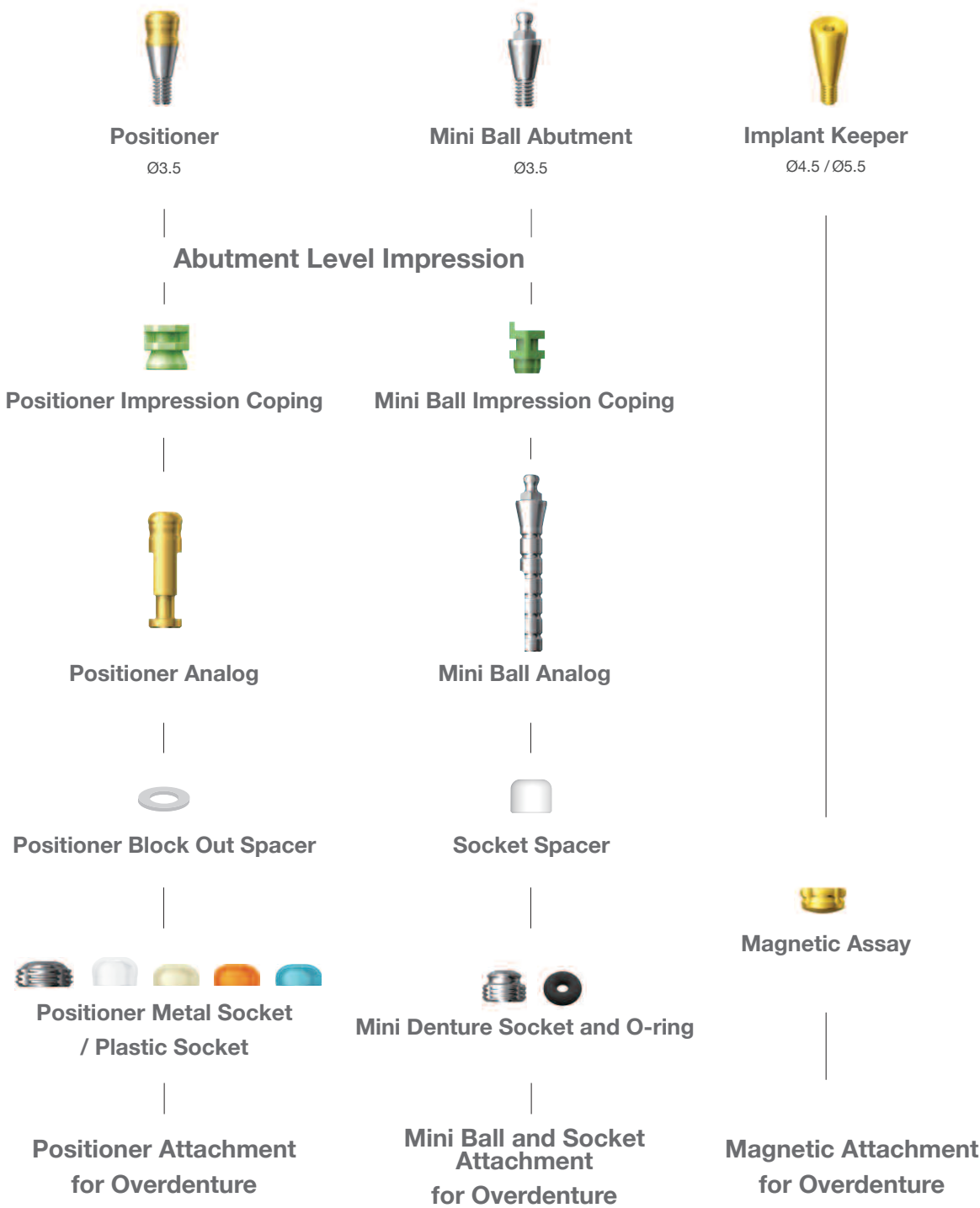


Prosthetic Procedure 4

Impression Technique and Restoration Type

Overdenture Procedure

Positoner / Ball / Magnetic Attachment

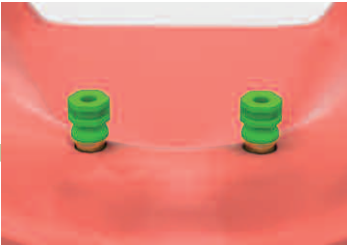


Positioner

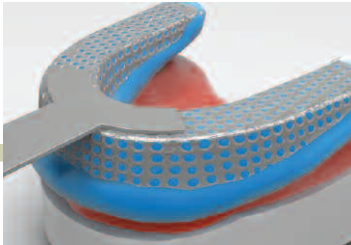
Chairside



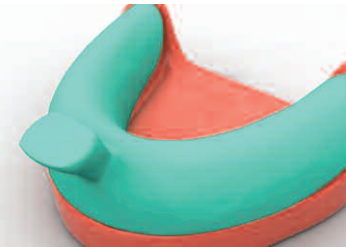
Connect the positioner abutment onto the fixture.



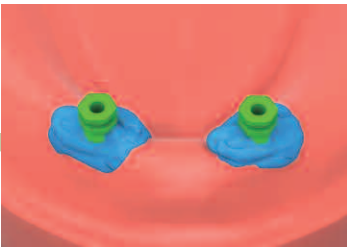
Affix the impression coping on the positioner abutment.



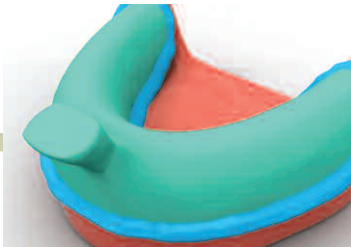
Take Impression for the production of individual tray.



Produce the individual tray for denture impression.



After connecting the positioner abutment and the impression coping together, apply the impression material.



Take the final impression with the prepared individual tray.



After the impression material is set, discard the individual tray.

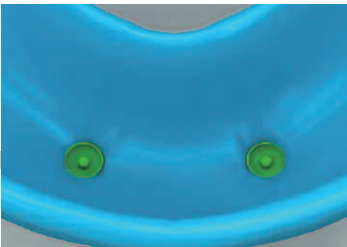
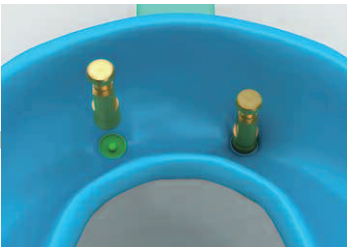


Image of the set final impression (with impression coping).

Lab Side



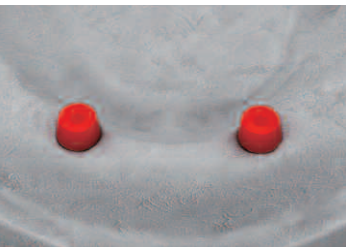
Positioner analog.



Insert the positioner analog into the embedded impression coping.



Create the master model.



“Block out” procedure to achieve the space required for the metal socket.



Fabrication fo denture with conventional method.

Positioner

Case 1



Secure spaces for the female sockets.



Apply a small amount of resin into the space created for the metal socket.



Remove the denture after the resin is fully set. Image of the denture with the metal socket.

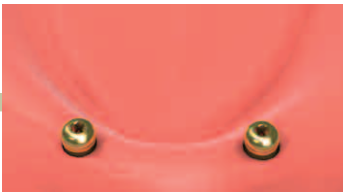
Chairside



Place the "block out spacer" on the positioner abutment in the patient's mouth.



Position the denture in the mouth and wait until the resin is completely set.



Remove the block out spacer from the patient's mouth.



Connect the metal socket onto the positioner abutment.



Remove the white plastic socket (100gf) using the positioner tool and assemble with the regular plastic socket giving the desired retention force (300, 500 or 1000gf).

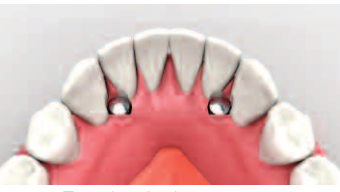


Polish and the overdenture is complete.

Case 2



Create holes for the placement of the metal sockets.



Examine the interference between inner surface of the holes and the female sockets.



Apply additional resin around the metal socket where there is a shortage of resin.

Chairside



Place the "block out spacer" on the Positioner Abutment in the intraoral.



Apply the resin into the holes and wait until it is completely set.



Apply resin around the metal socket.



Connect the metal socket onto the Positioner Abutment.



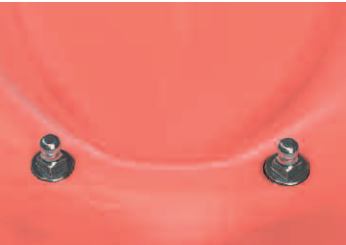
Remove the white plastic socket (100gf) using the Positioner tool and assemble with the regular plastic socket giving the desired retention force (300, 500 or 1000gf).



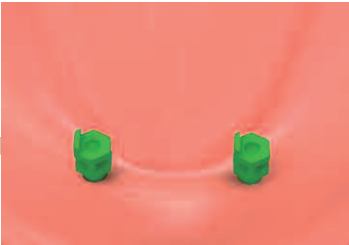
Polish and the overdenture is complete.

Ball Attachment

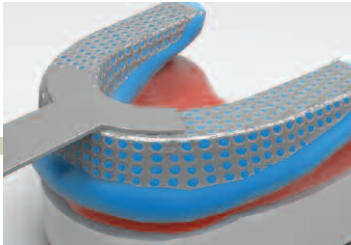
Chairside



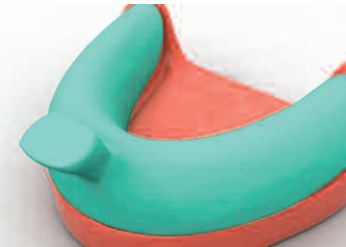
Connect the Ball Abutment onto the fixture.



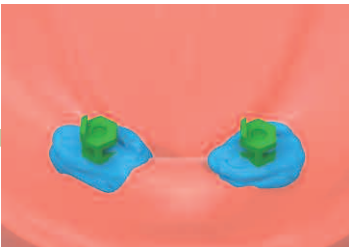
Affix the impression coping on the ball type fixture.



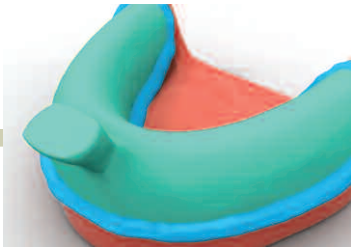
Take Impression for the production of individual tray.



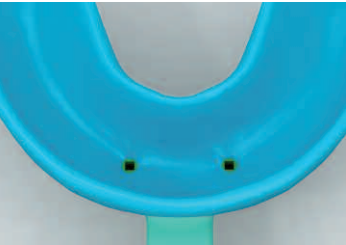
Produce the individual tray for denture impression.



Apply the impression material.



Take the final impression with the prepared individual tray.



After the impression material is set, discard the individual tray.

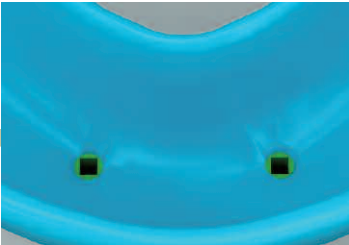
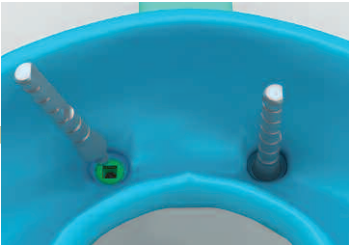


Image of the set final impression (with impression coping).

Lab Side



Ball Analog.



Insert analogs into the embedded impression coping.



Create the master model.



Socket spacer.



Fabrication of denture with conventional method.

Ball Attachment

Case 1



Secure spaces for the female sockets.

Chairside



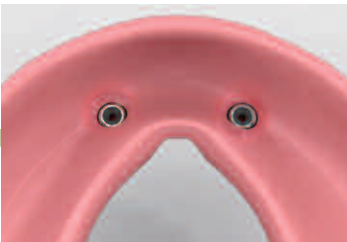
Connect the female sockets to the ball abutments in the intraoral.



Apply small amount of the resin into the secured area.



Position the denture in the mouth and wait until the resin is completely set.



Female sockets are placed in the denture.



Polish and the overdenture is complete.

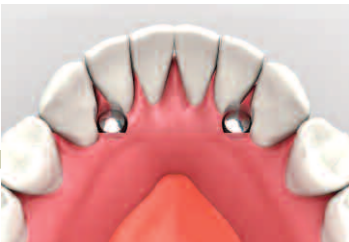
Case 2



Create holes for the placement of the female sockets.



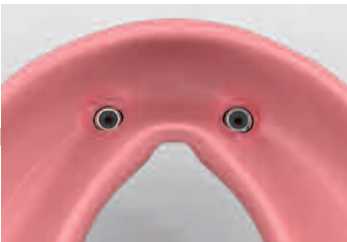
Connect the female sockets to the ball abutments in the intraoral.



Examine the interference between inner surface of the holes and the female sockets.



Apply the resin into the holes and wait until it is completely set.



Place the female sockets.



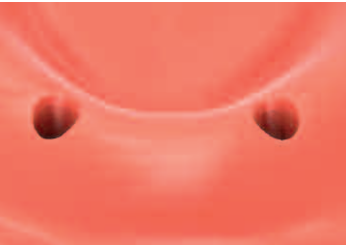
Apply resin around the female sockets.



Polish and the overdenture is complete.

Magnetic Attachment

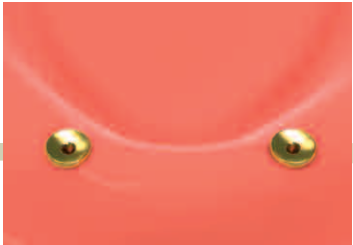
Chairside



After healing abutment removal.



Connect implant keeper with fixture and tighten it with 25~30N·cm.



Implant keepers connected with the fixtures.



Position the magnetic assay on the implant keeper.



Secure spaces for the magnetic assays.



Examine the interference between inner divet of the denture and the magnets.

Case 1



Apply resin on the divets of the denture's inner surface.



Position the denture into the mouth and wait until the resin is completely set.



Position the denture into the mouth and wait for initial setting.



Remove the denture and apply resin around the magnets.



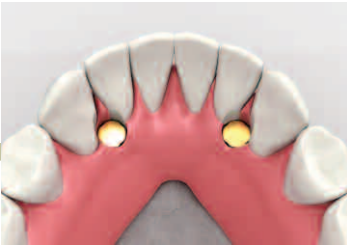
After the resin is completely set, remove excess. Polish and the overdenture is complete.

Magnetic Attachment

Case 2



Create holes for the placement of the magnets.



Examine the interference between inner surface of the holes and the magnets.



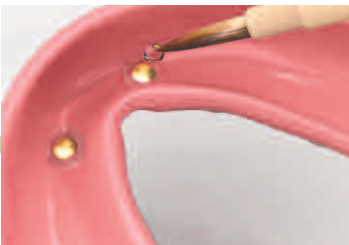
Apply small amount of resin into the hole.



Position the denture in the mouth and wait until the resin is completely set.



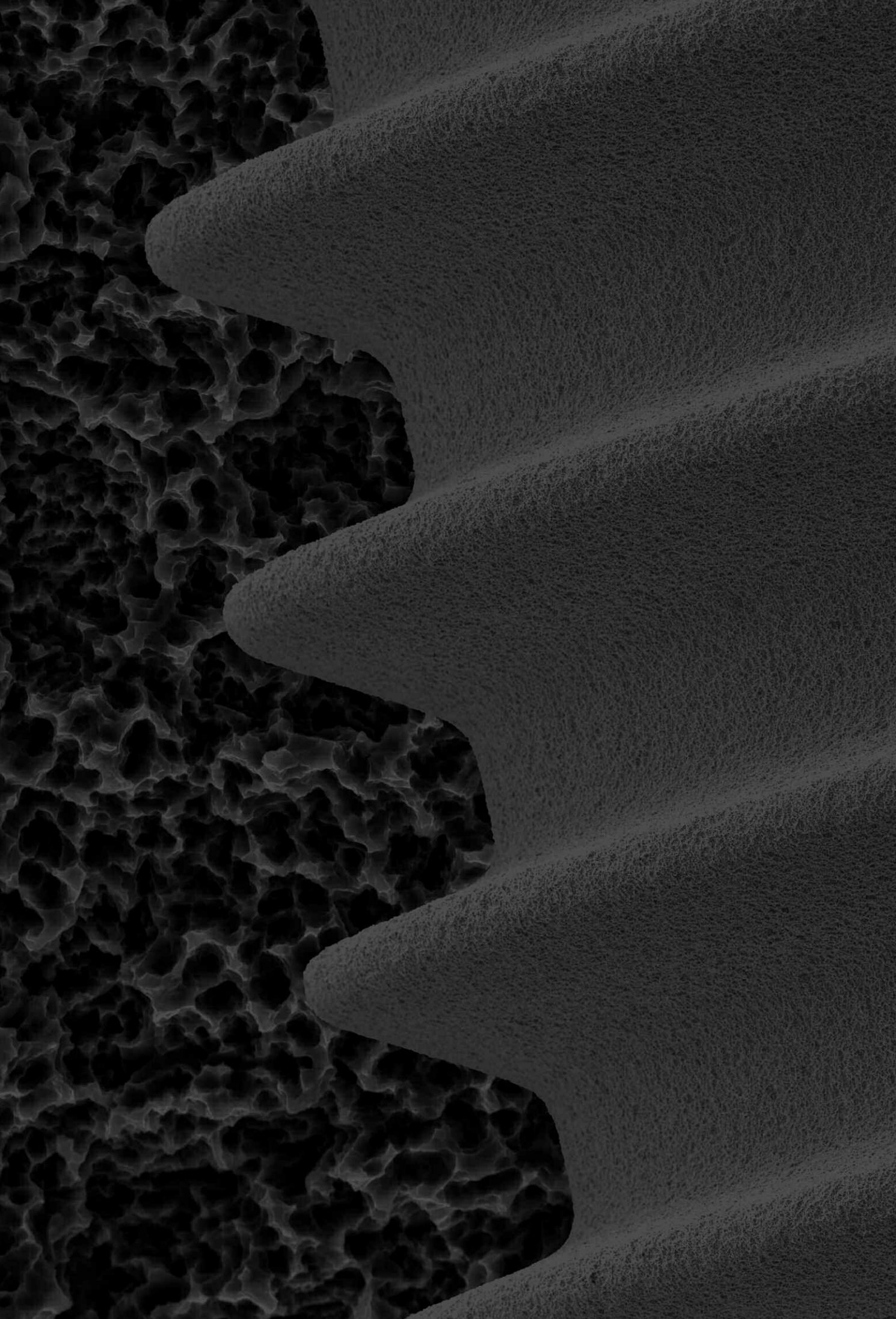
After initial setting, remove denture from mouth.



Add the resin around the magnets.



Polish and the overdenture is complete.



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Specifications are subject to change without prior notice.
Some products that are to be launched in the market after necessary approvals are also listed in this catalog.

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