

Dentium USA

SURGICAL & PROSTHETIC MANUAL

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DENTIUM USA SURGICAL & PROSTHETIC MANUAL (Rev. 1)



IMPLANTIUM®

SuperLine™

Dentium USA Specifications are subject to change without notice.

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Blasting & Acid Etching Surface



SURGICAL MANUAL

*Two implants with the same surgical solution
and one prosthetic platform*

IMPLANTIUM® & SuperLine™

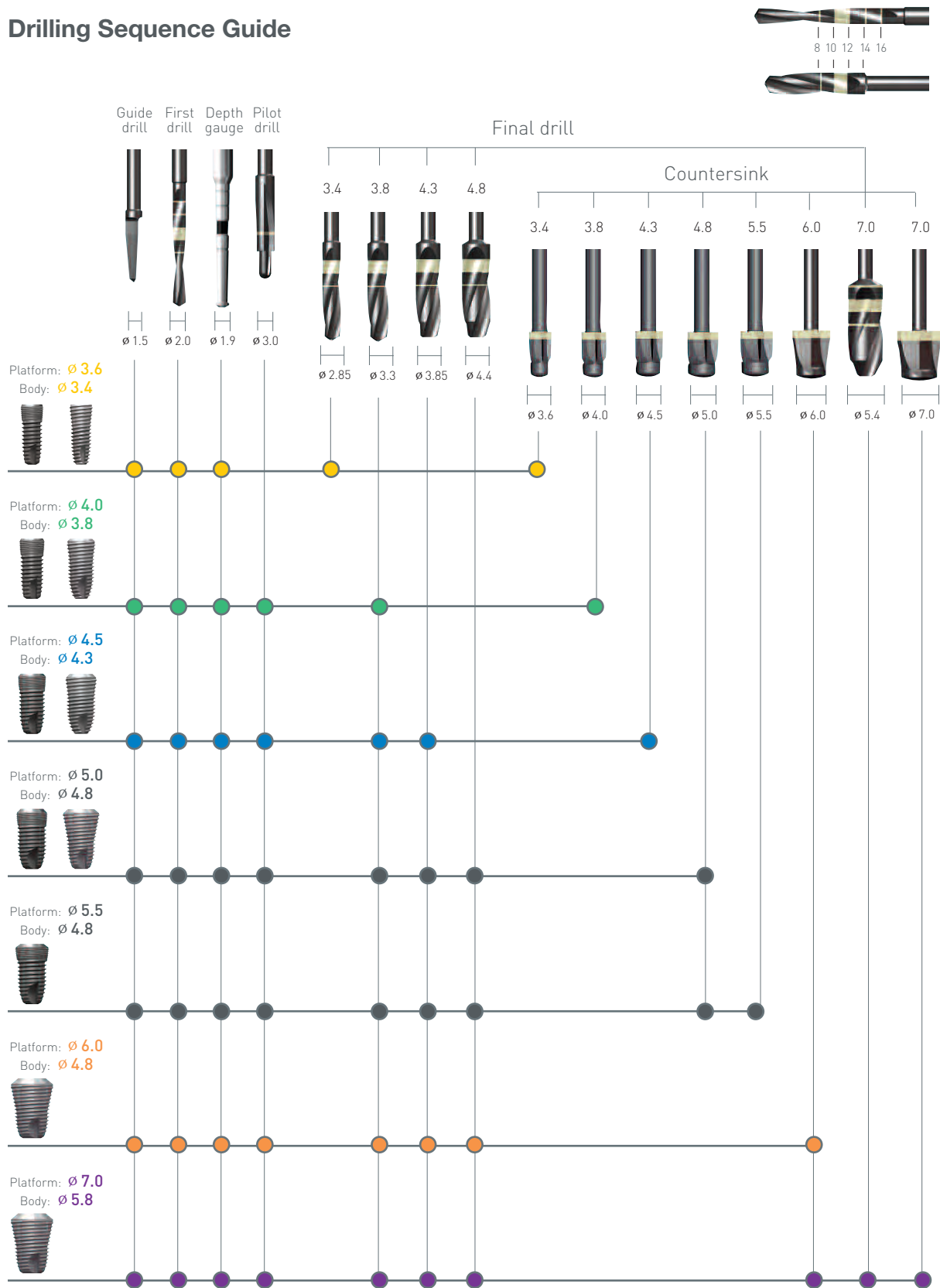
Developed by Clinicians for Clinicians

Surgical Drill Sequence (IMPLANTIUM® & SuperLine™).....	04
Drilling Depth Guide (IMPLANTIUM® & SuperLine™).....	06
Fixture Connection	08
Installation Procedure	09
Surgical Kit Maintenance	10



Surgical Drill Sequence (IMPLANTIUM® & SuperLine™)

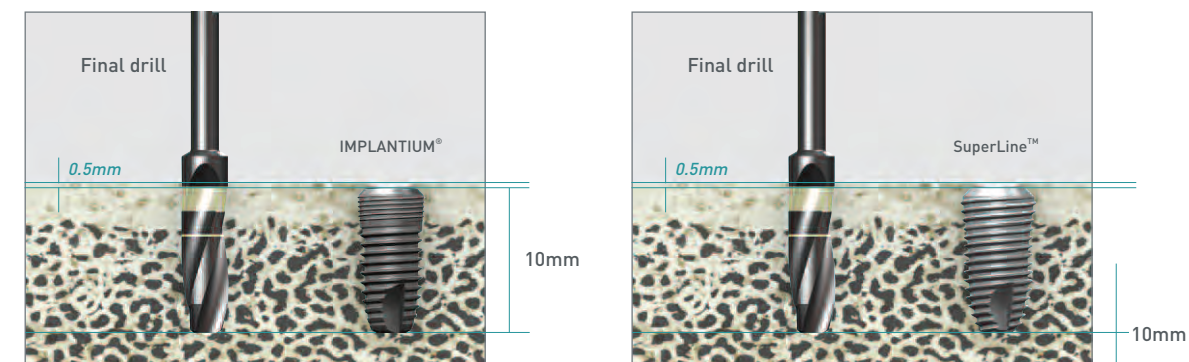
Drilling Sequence Guide



During fixture insertion, 30~45N·cm torque at 20rpm is recommended.

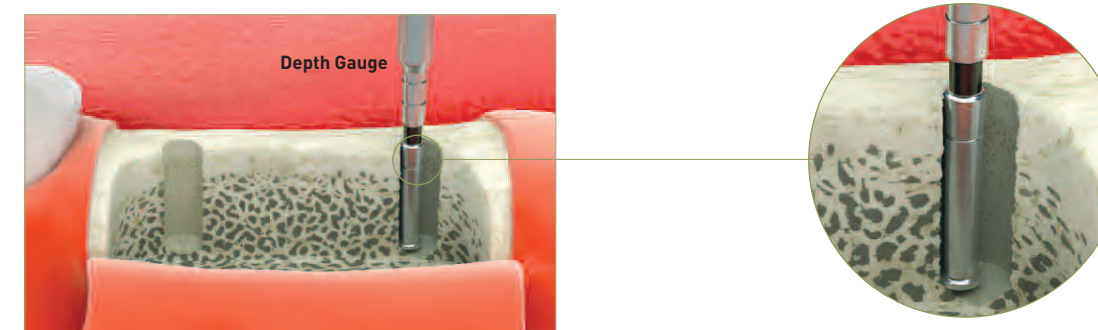
- Countersink drill is used in cases with dense cortical bone.
- If the bone density is D1~D3, it is recommended to countesink after final drill.
- During insertion, if the 4.8 fixture is not tight enough, replace it with a 4.8W fixture which has wider neck.
- The countersink drill's actual diameter is 0.1mm larger than the fixture platform.

Determination of Fixture Top Level



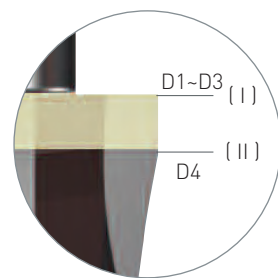
- It is recommended that the top level of the fixture be located 0.5mm below the crestal bone.

Depth Indication



- Use the Depth Gauge after first drill / Lindemann first drill to check depth of drilling
- Place the Depth gauge against the wall of the osteotomy

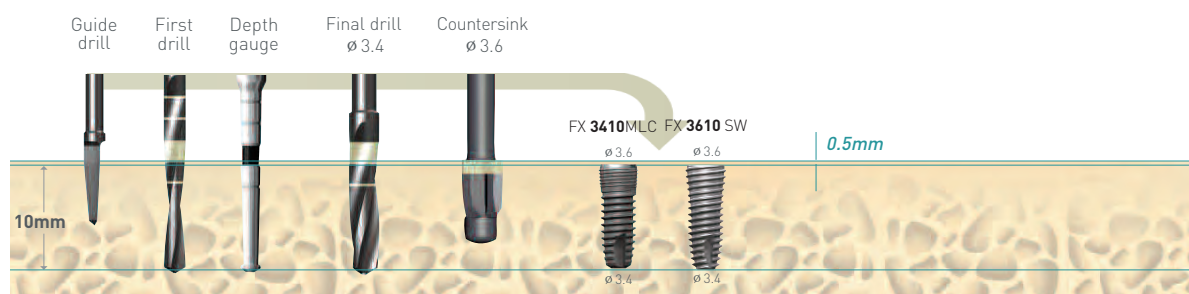
Drilling Depth Guide (IMPLANTIUM® & SuperLine™)



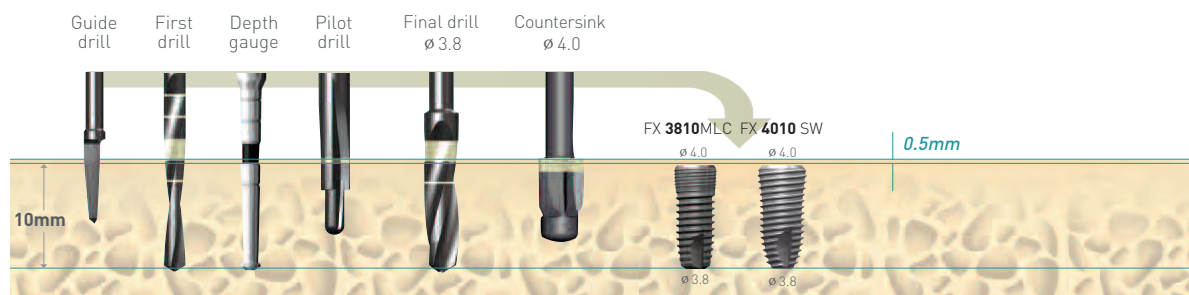
Countersink Depth Guide

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

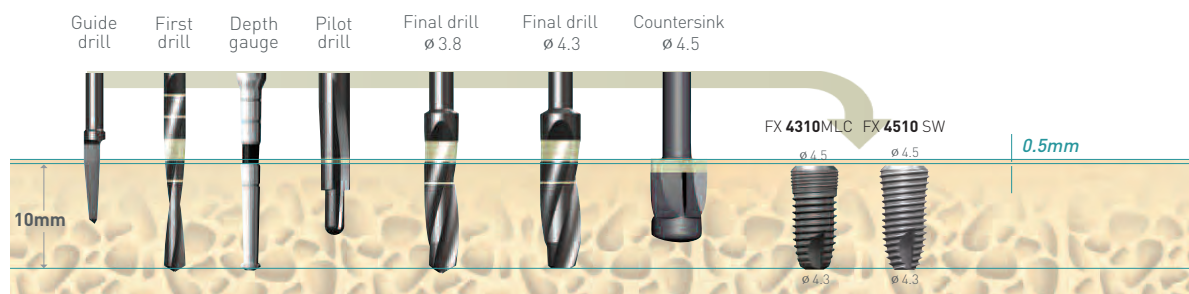
Platform: $\phi 3.6$ / Body: $\phi 3.4$ (1000rpm/30~45N·cm)



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

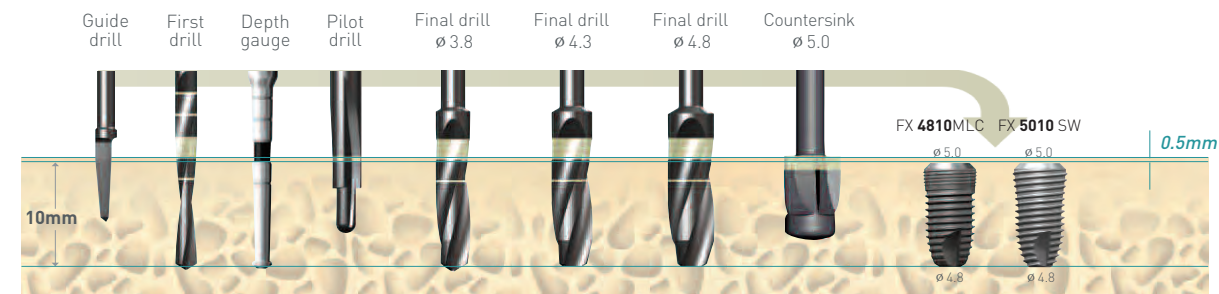


Platform: $\phi 4.5$ / Body: $\phi 4.3$ (1000rpm/30~45N·cm)

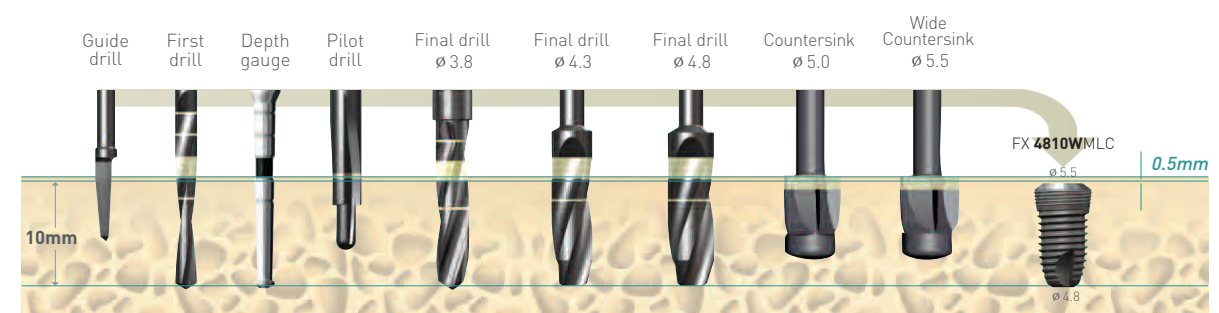


※ Note: 1) Instead of Guide drill, Lindemann guide drill may be used.
2) Instead of First & Pilot drill, Lindemann first drill may be used. In this case, check the depth after Lindemann first drill.

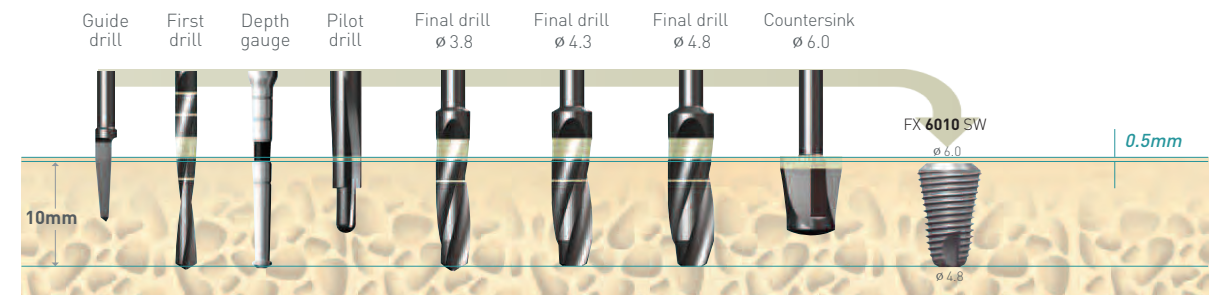
Platform: $\phi 5.0$ / Body: $\phi 4.8$ (1000rpm/30~45N·cm)



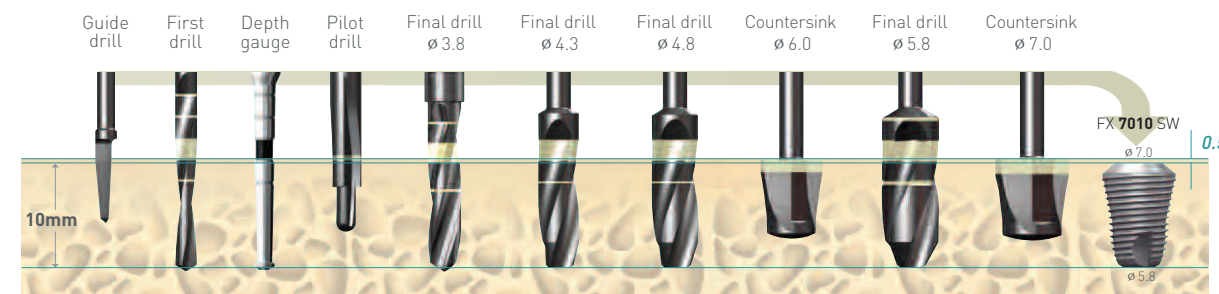
Platform: $\phi 5.5$ / Body: $\phi 4.8$ (1000rpm/30~45N·cm)



Platform: $\phi 6.0$ / Body: $\phi 4.8$ (1000rpm/30~45N·cm)

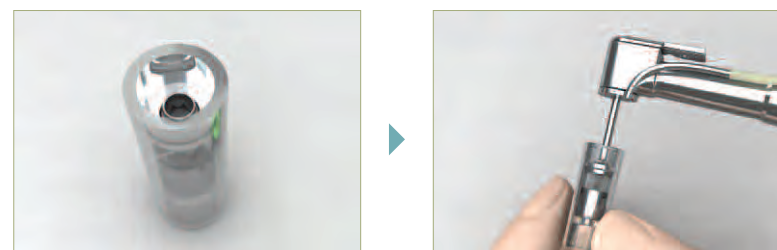


Platform: $\phi 7.0$ / Body: $\phi 5.8$ (1000rpm/30~45N·cm)



※ Note: 1) Instead of Guide drill, Lindemann guide drill may be used.
2) Instead of First & Pilot drill, Lindemann first drill may be used. In this case, check the depth after Lindemann first drill.

Fixture Connection



Caution_ When opening the fixture pack, hold the fixture container up-write and engage the Implant driver into the fixture.



By handpiece
20rpm/35N ·cm

By ratchet

Directions Using the Hand-piece / Ratchet Drivers



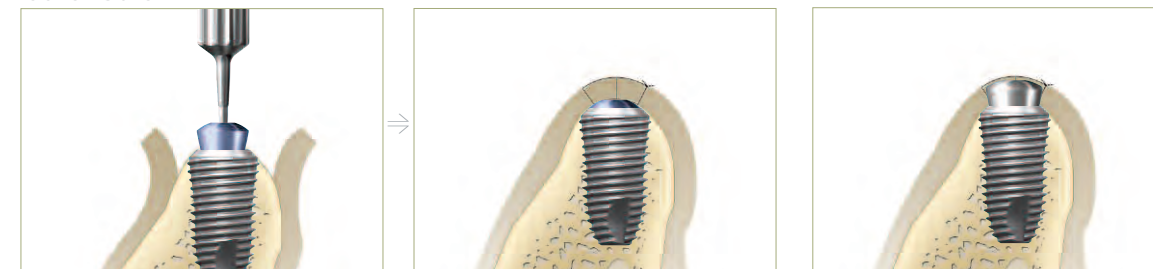
Hand-piece
Implant driver

Ratchet
Implant driver

The implant drivers and the internal connection to the fixture must be connected firmly together.

Installation Procedure

Cover Screw

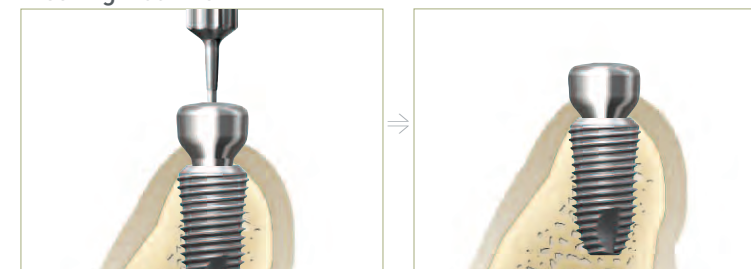


By hex driver

Cover screw [CS38]
connection

Cover screw [CS3820]
connection

Healing Abutment



By hex driver

Healing abutment connection

※ Note: Place inside product label in the patients chart for REF No. and LOT No. traceability.



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 green o-rings on adaptes 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 x 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 in 121°C/250F for 30 minutes or refer to manufactures recommendations.
- 11 Store in a dry area at room temperature.

Maintenance Period for Surgical Drills

All surgical drills shall be replaced after approximately 20 uses based on bone density

<p>Guide Drill (1000rpm, 30-45N · cm with Irrigation)</p> 	<p>Final Drill (1000rpm, 30-45N · cm with Irrigation)</p> 
<p>First Drill (1000rpm, 30-45N · cm with Irrigation)</p> 	<p>Countersink Drill Depending on bone density, the rpm could be adjusted</p> 
<p>Pilot Drill (1000rpm, 30-45N · cm with Irrigation)</p> 	<p>Lindemann Drill (Guide, First) (1000rpm, 30-45N · cm with Irrigation) <small>* Optional</small></p> 



PROSTHETIC MANUAL

Prosthetic Introduction

Understanding the Implant and Prosthesis	12
Abutments Selection.....	13
Combi Abutment	14
Dual Abutment	15
Dual Milling / Anged / Temporay / Direct-Casting Abutmentt	16
Screw Abutment	17
Points to consider in Abutment Selection	18
Minimum Height Requirement for SuperLine™ Prosthetic Abutment.....	19

Prosthetic Procedure

Combi Abutment (Abutment Level Impression-Multiple Units).....	20
Dual Abutment (Abutment Level Impression-Multiple Units).....	22
Dual Abutment (Fixture Level Impression-Transfer Type, Multiple Units).....	25
Dual Abutment (Fixture Level Impression -Pick Up Type, Multiple Units).....	28
Dual Milling Abutment (Fixture Level Impression-Transfer Type, Single Units)	31
Angled Abutment (Fixture Level Impression-Pick Up Type, Single Units)	33
Direct Casting Abutment (Fixture Level Impression-Single Units)	35
Temporary Abutment (Fixture Level Impression-Pick Up Type, Single Units)	36
Screw Abutment (Abutment Level Impression-Transfer Type, Multiple Units).....	38
Cementation Repair Method (SCRIP)	39
Ball Abutment	41

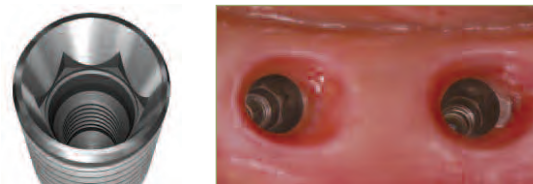


Understanding the Implant and Prosthesis



Biological Connection

- The conical hex connection between implant and abutment interface ensures hermetic sealing.
- The biological connection distributes the load to the fixture evenly. Therefore it helps minimize micro-movement and marginal bone loss.
- All implant diameters share the same internal hex.



Selection Guideline

Ideal emergence profile for each tooth



Abutment Selection

Combi Abutment	Dual Abutment	Dual Milling Abutment
Screw Abutment	Angled Abutment	Direct-Casting Abutment
Cylinder	Temporary Abutment	Ball Abutment

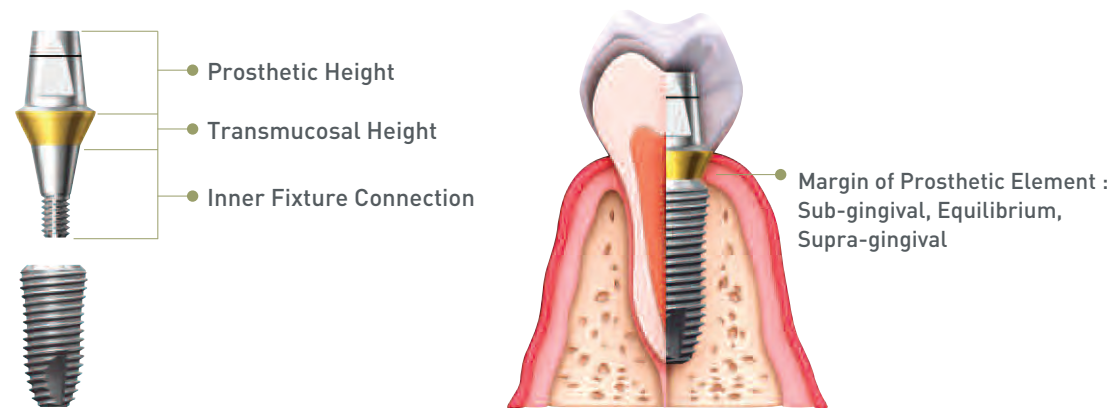
- Straight abutments are Dual and Combi.
- Depending on the insertion angle and position of the fixture, the Angled or Direct Casting abutment may be used.
- The Screw abutment can be used when prosthesis retrieval is anticipated.

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

- Dual Abutment
 - Combi Abutment
 - Dual Abutment
 - Dual Milling Abutment
 - Angled Abutment (15°)
 - Direct-Casting Abutment
 - Temporary Abutment (Plastic & Titanium)
 - Screw Abutment
 - Ball Abutment
- Abutment level
- Fixture level
- Screw retained (Abutment level)
- For denture use

* Note: The 3.6 platform/3.4 body fixture is not recommended for the screw and ball abutment.

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 plastic impression coping.
 - When using the Combi abutment, it remains in the mouth after impression. (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 the 1.5mm.

Combi Abutment Line Up

Diameter	G/H	Vertical angle
∅ 4.5	1.0mm, 1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	5°
∅ 5.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	6°
∅ 6.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	7°



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
∅ 4.5	1.0mm, 1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	5°
∅ 5.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	6°
∅ 6.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm	7°



Dual Milling / Angled / Temporary / Direct Casting Abutment

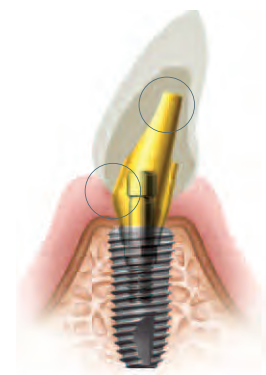


Dual Milling Abutment

- 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.



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 1mm.
- The plastic abutment comes in diameters (4.5, 5.5, 6.5) with a gingival height of 3mm.

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.

Fixture Level Abutment (Hex / Non-hex)

Abutment	Diameter	G/H	Angle
Dual Milling 	ø 4.0	1.5mm	×
	ø 4.5	2.0mm	
	ø 5.5	2.5mm	
	ø 6.5	3.0mm	
Angled 	ø 4.5	2.0mm 4.0mm	15°
	ø 5.5	2.0mm 4.0mm	15°
Plastic Temporary 	ø 4.5	3.0mm	×
	ø 5.5	3.0mm	
	ø 6.5	3.0mm	
Direct-Casting Abutment 	ø 4.5	1.0mm	×

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
ø 4.5	1.0mm, 1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm
ø 5.5	1.5mm, 2.5mm, 3.5mm, 4.5mm, 5.5mm

* Note: 10N.cm of torque is recommended for the Ti-Retaining Screw.

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 individual cases, impression can be taken at abutment level or fixture level.

Fixture Level

1. Dual abutment
2. Dual milling abutment
3. Angled abutment (15°)
4. Direct casting abutment
5. Temporary abutment (Plastic & Titanium)
6. Ball abutment

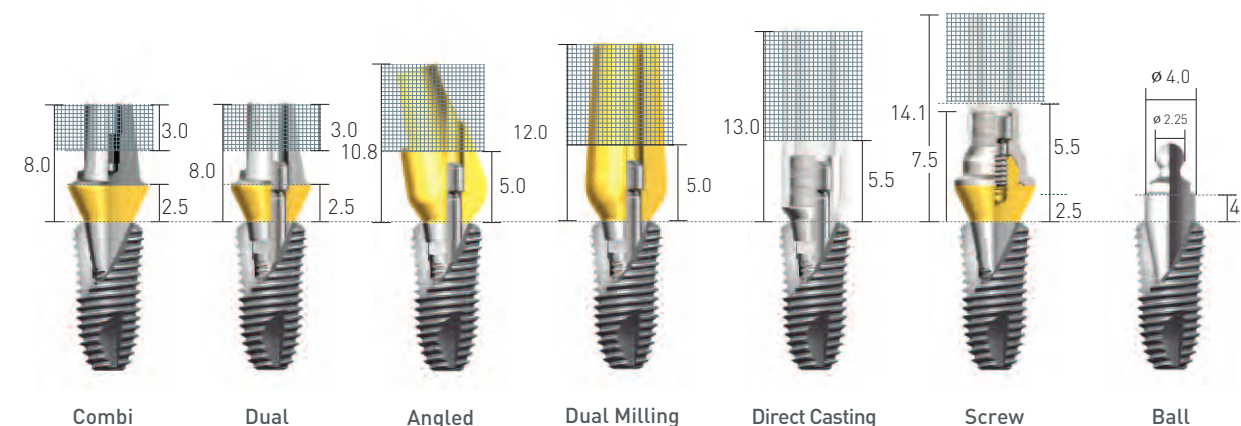
Abutment Level

1. Dual abutment
2. Combi abutment
3. Screw abutment
4. Ball abutment

Abutment impression recommendation

Abutment Type	Cementation type	Impression Level
Dual	Cementation type, or Screw-cementation type	Fixture level impression, or Abutment level impression
Combi	Cementation type	Abutment level impression
Angled	Cementation type, or Screw-cementation type	Fixture level impression
Screw	Screw retained type	Abutment level impression
Direct casting	Cementation type, or Screw-cementation type	Fixture level impression
Dual milling	Cementation type, or Screw-cementation type	Fixture level impression
Ball	Male / Female attachment	Fixture level impression, or Abutment level impression

Minimum Height Requirement for Prosthetic Abutment



※ Diagram above indicates the minimum height required for IMPLANTIUM®/SuperLine™ prosthetic abutment

Maximum amount of reduction allotted for adjustment

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

- 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.

Ball Abutment

- The Ball abutment cannot be modified.

※ Note: The 3.6 platform/3.4 body fixture is not recommended for the screw and ball abutment.

Combi Abutment

[Abutment Level Impression-Multiple Units]

Chairside



Remove Cover screw
[in case of second stage surgery]

Let soft tissue form around Healing
abutment

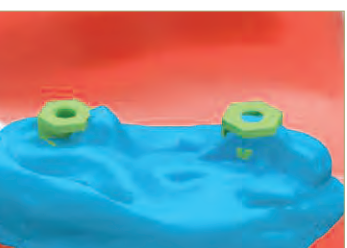
Select suitable Combi abutment,
then tighten it to 25-30N·cm.
Re-tighten after 15 minutes.



Select Impression
coping on Combi abutment.



Insert Impression coping over
Combi abutment firmly
[Snap-on Mechanism]



Inject impression material



Take impression



Impression coping comes off with
impression material

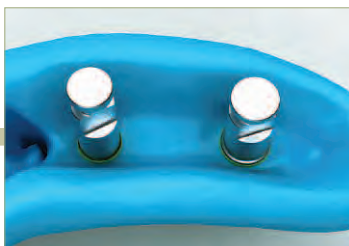


Fabricate provisional restoration, or
use Comport cap

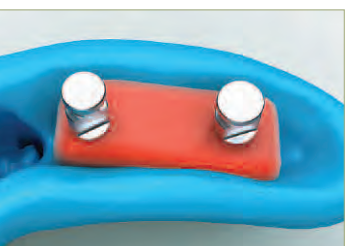
Lab Side



Insert Lab analog into impression coping



Make sure Lab analog seats securely



Fabricate soft tissue model



Fabricate master cast



Seat burn-out cylinder securely into
Lab analog



Consider distance of opposing teeth,
Modify burn-out cylinder to its
proper height if needed

Combi Abutment

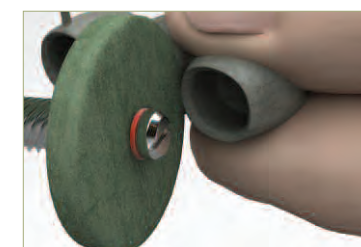
[Abutment Level Impression-Multiple Units]



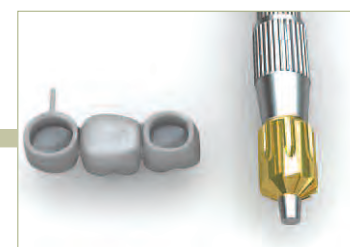
Fabricate burn-out cylinder and plastic
bar in preparation for wax-up

Wax up

Fabricate metal framework



Trim extended margin with rubber
wheel



Metal framework and reamer



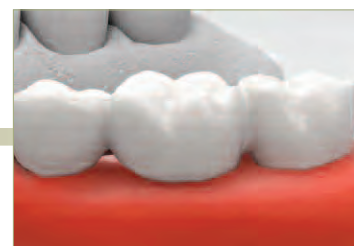
Eliminate the Lip remnant caused by
'snap-on' mechanism by reamer



Metal Framework after removal of
the Lip remnant



Metal framework



Final prosthesis

Chairside



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

Seat final prosthesis and
adjust occlusion

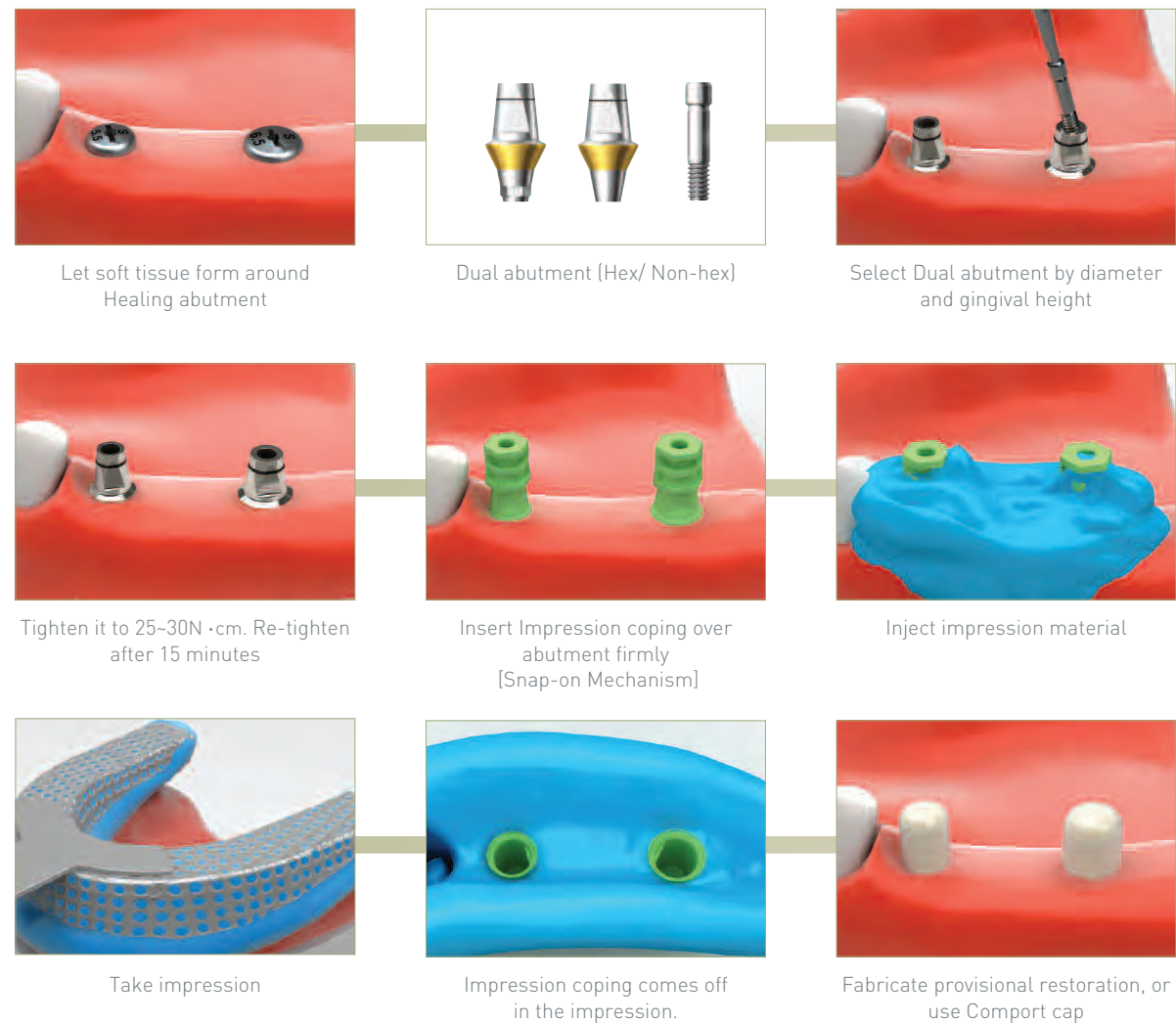
Dual Abutment

[Abutment Level Impression-Multiple Units]

Clinical Procedure



Chairside



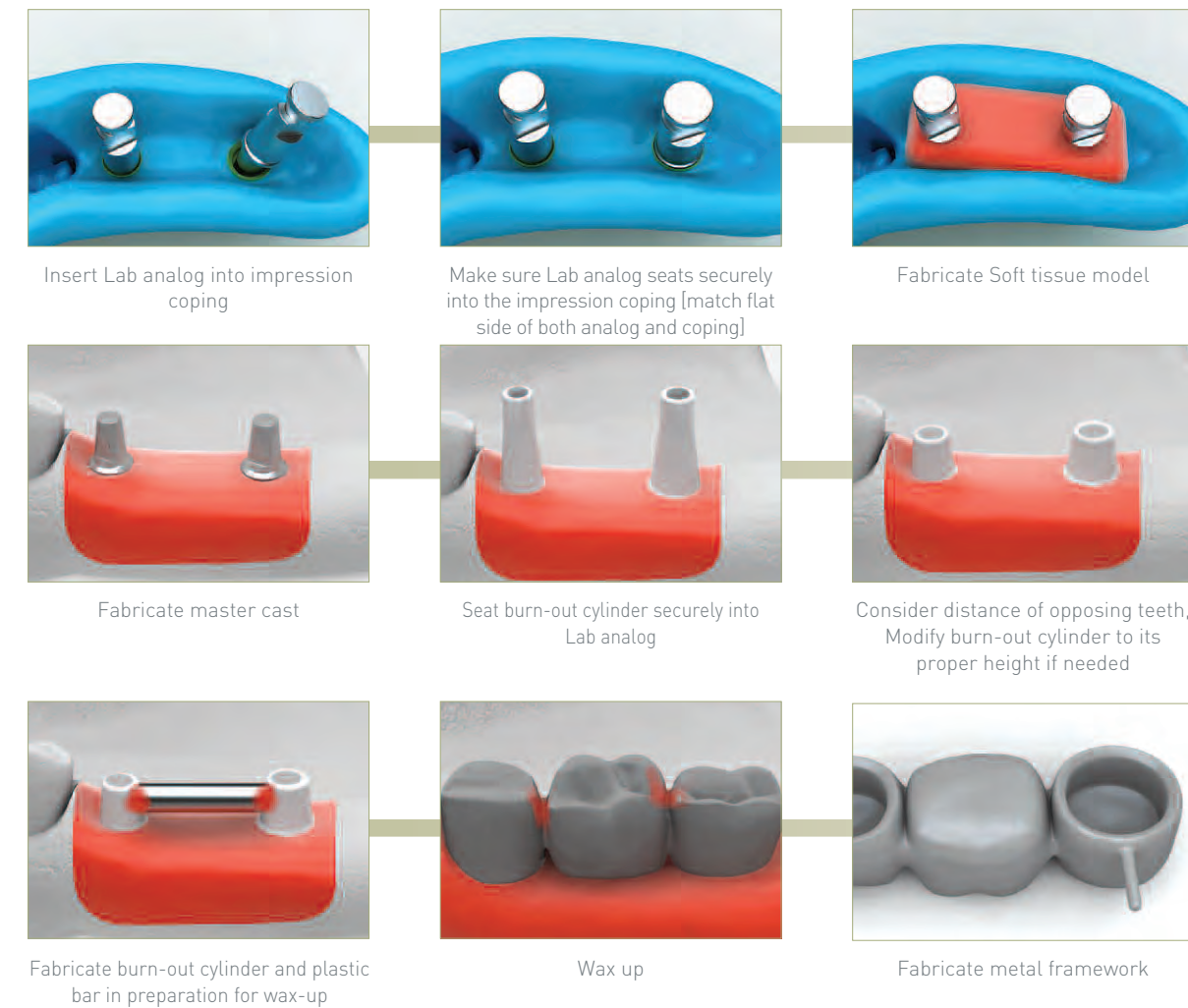
Dual Abutment

[Abutment Level Impression-Multiple Units]

Laboratory Procedure

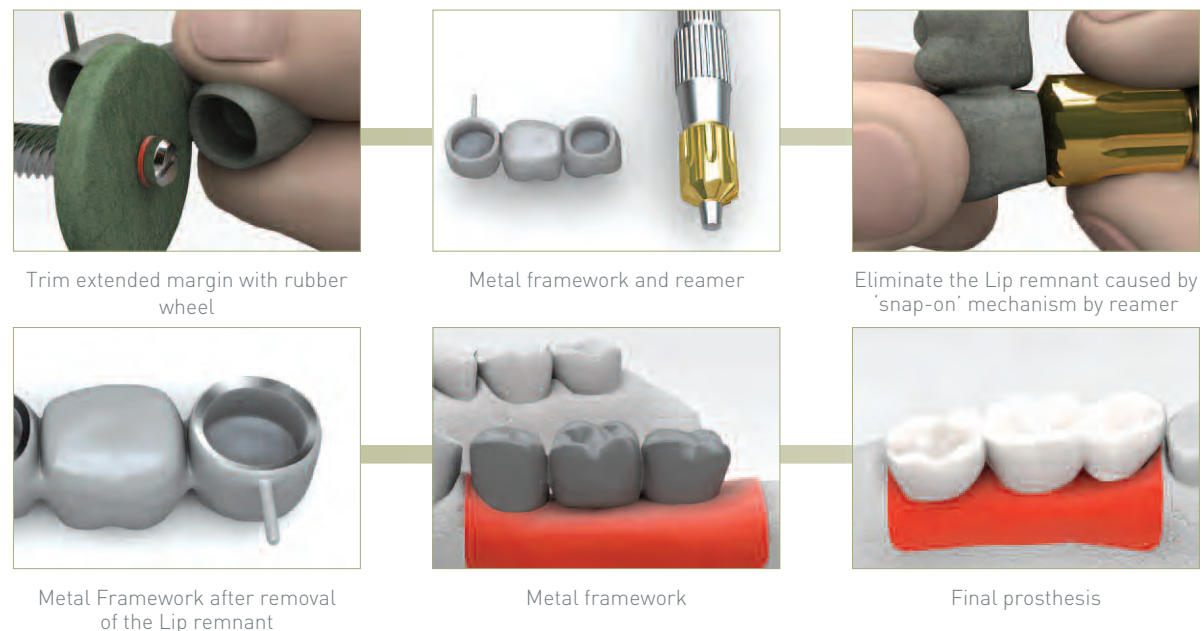


Lab Side

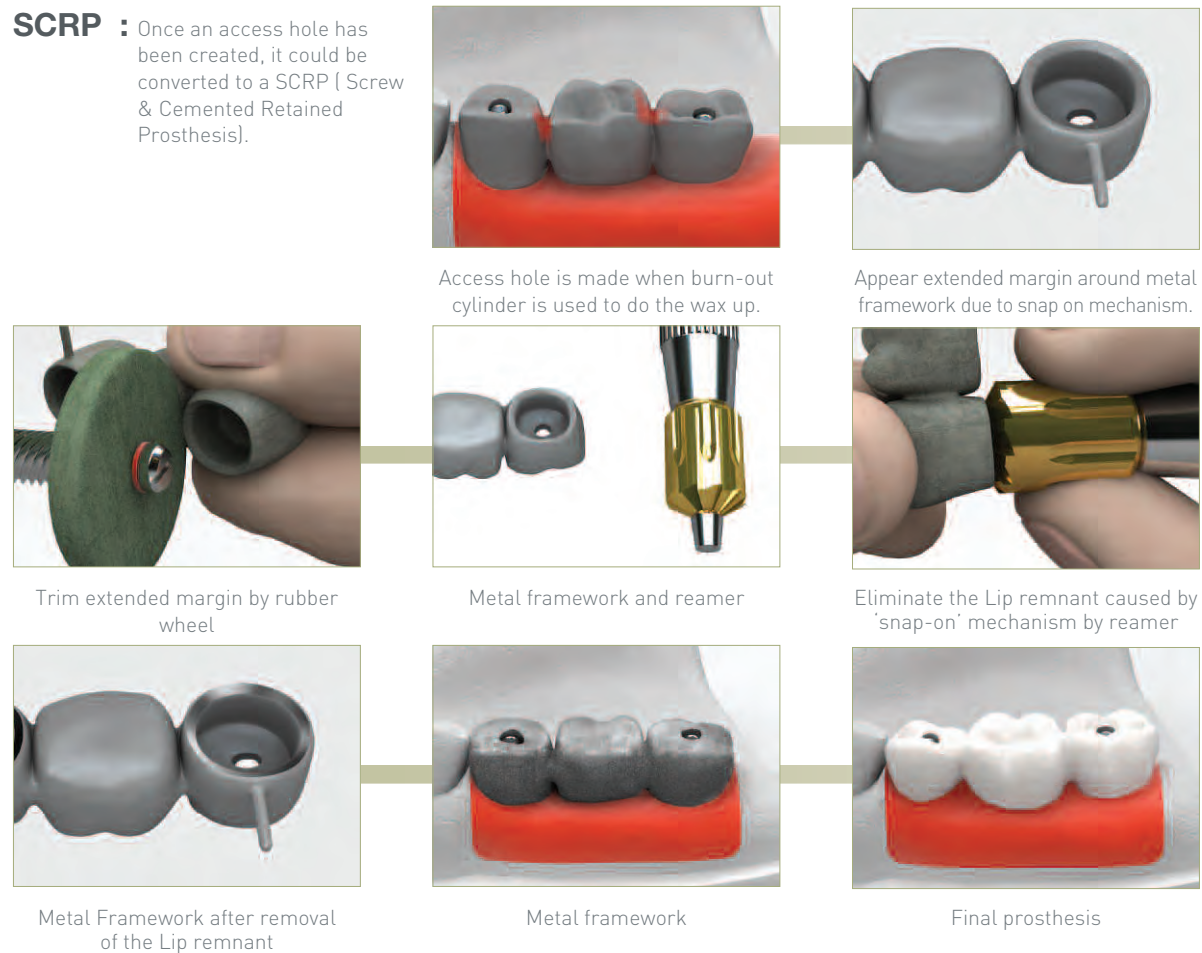


Dual Abutment

[Abutment Level Impression-Multiple Units]



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



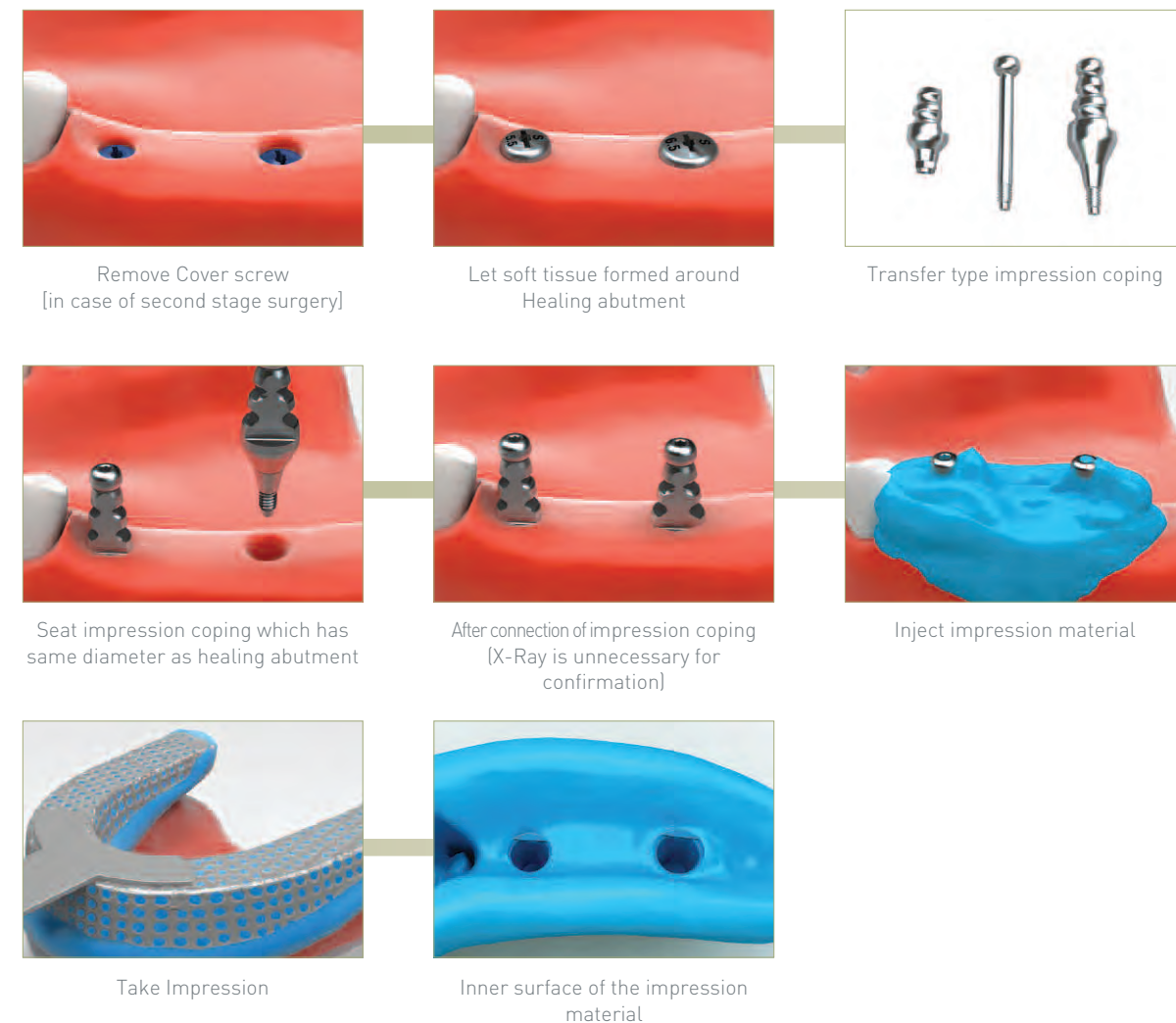
Dual Abutment

[Fixture Level Impression-Transfer Type, Multiple Units]

Clinical Procedure



Chairside



Dual Abutment

[Fixture Level Impression-Transfer Type, Multiple Units]

Laboratory Procedure



Lab Side

Remove the impression coping from oral cavity and connect it with analog firmly

Attach the impression coping to the Analog and insert into the impression firmly

Fabricate Soft tissue model

Fabricate master cast

Soft tissue condition after retrieval of impression coping

Measure gingival height with depth gauge

Select Dual abutment with proper diameter and gingival height

Verify the selected abutment by surveying [preparation is possible if necessary]

Fabricate positioning jig

Dual Abutment

[Fixture Level Impression-Transfer Type, Multiple Units]

Fabricate cap with pattern resin

Wax up

Metal framework

Final prosthesis

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

Seat the final prosthesis and adjust occlusion. Place lab wax into opening site of abutment to protect screw head and then cement

SCRP-Lab Side

Make access hole in the resin cap by using a long impression coping transfer screw

Wax up

Metal framework

SCRP-Chairside

Final prosthesis

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

Seat the final prosthesis and adjust occlusion. Place wax into opening site of the abutment prior to sealing with composite.

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

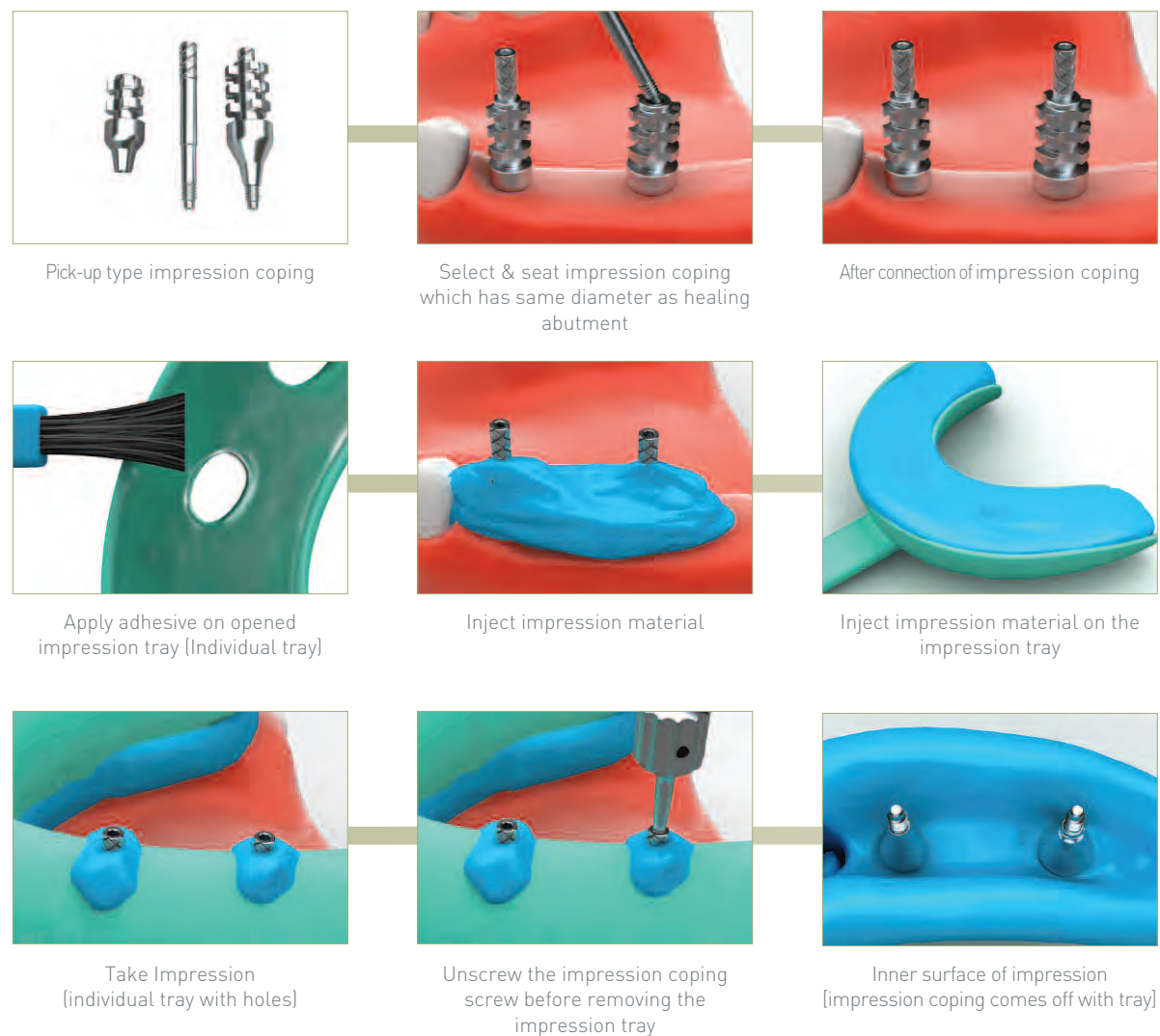
Dual Abutment

[Fixture Level Impression -Pick Up Type, Multiple Units]

Clinical Procedure



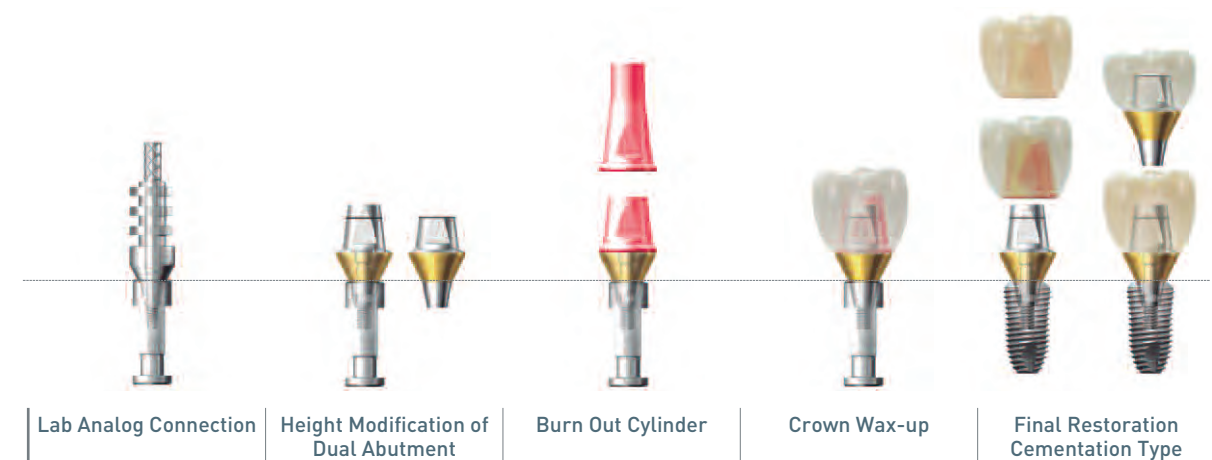
Chairside



Dual Abutment

[Fixture Level Impression -Pick Up Type, Multiple Units]

Laboratory Procedure



Lab Side



Dual Abutment

[Fixture Level Impression -Pick Up Type, 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.



Seat the final prosthesis and adjust occlusion

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

SCRP-Lab Side



Make access hole in the resin cap by using a long impression coping transfer screw



Wax up



Metal framework

SCRP-Chairside



Final prosthesis



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



Seat the final prosthesis and adjust occlusion

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

Dual Milling Abutment

[Fixture Level Impression-Transfer Type, Single Unit]

Clinical Procedure



Healing Abutment



Impression Coping Transfer Type



Fixture Level Impression

Chairside



Let soft tissue form around Healing abutment



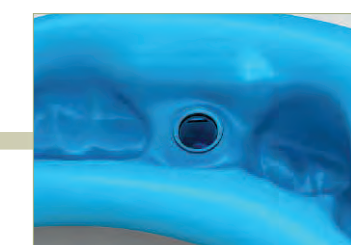
Seat impression coping which has same diameter as healing abutment



Inject impression material



Take impression



Inner surface of the impression material

Laboratory Procedure



Lab Analog Connection



Dual Milling Abutment Connection



Modification



Crown Wax-Up



Final Restoration Cementation

Dual Milling Abutment

[Fixture Level Impression-Transfer Type, Single Unit]

Lab Side



Remove the impression coping from oral cavity and connect it with Lab analog firmly

Fabricate soft tissue model

Fabricate master cast



Select Dual milling abutment which has proper diameter

Abutment after milling process.

Fabricate positioning jig



Fabricate cap with pattern resin

Wax-up

Metal framework

Chairside



Final prosthesis

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

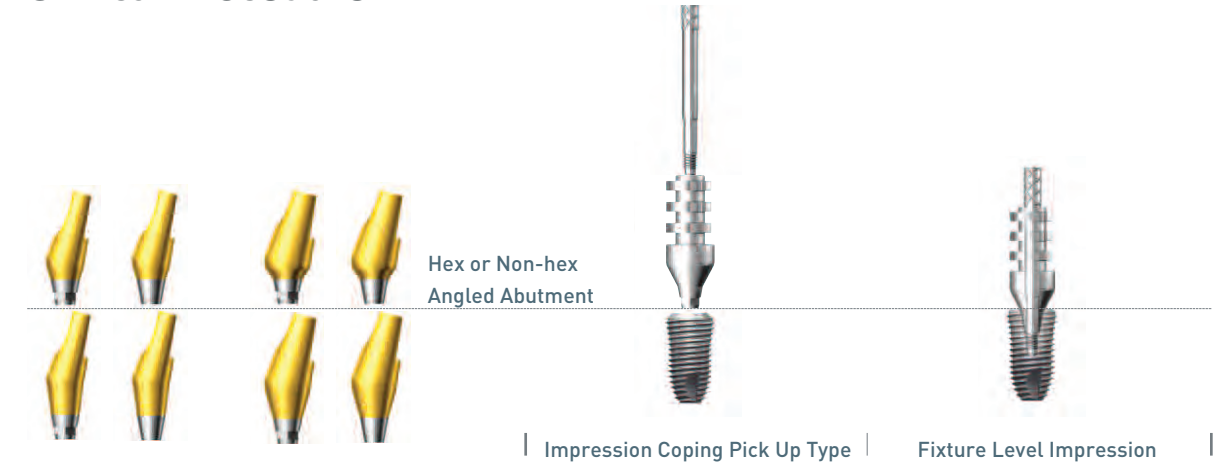
Seat final prosthesis and adjust occlusion

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

Angled Abutment

[Fixture Level Impression-Pick Up Type, Single units]

Clinical Procedure

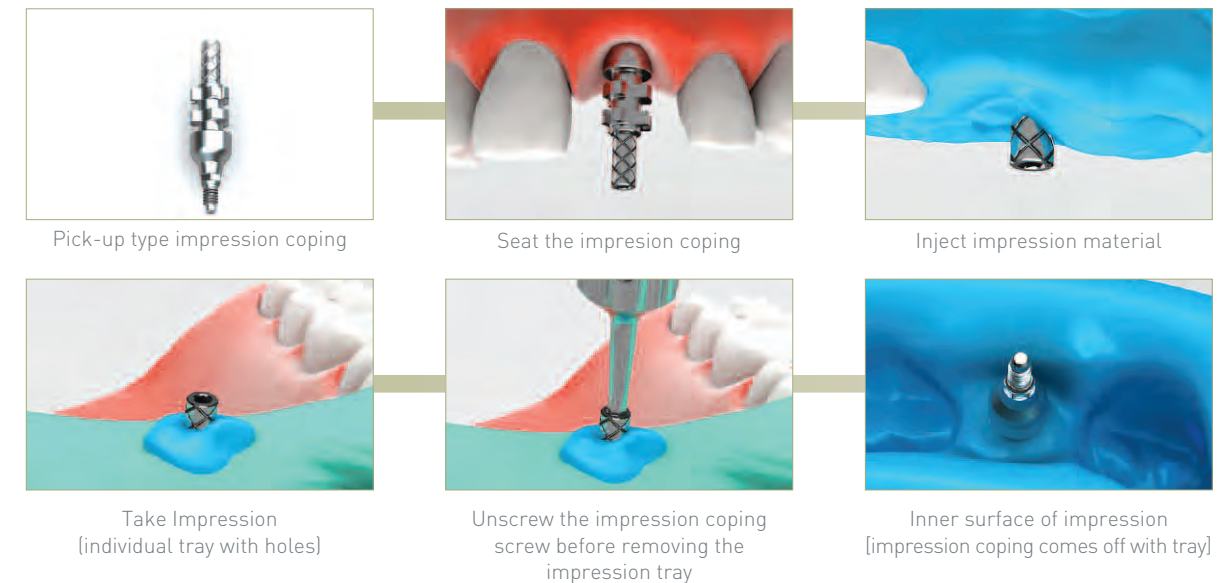


Hex or Non-hex Angled Abutment

Impression Coping Pick Up Type

Fixture Level Impression

Chairside



Pick-up type impression coping

Seat the impression coping

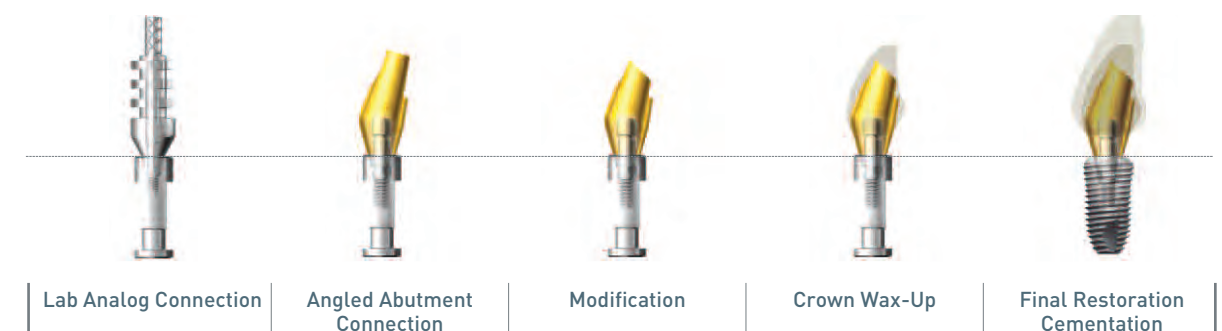
Inject impression material

Take Impression (individual tray with holes)

Unscrew the impression coping screw before removing the impression tray

Inner surface of impression (impression coping comes off with tray)

Laboratory Procedure



Lab Analog Connection

Angled Abutment Connection

Modification

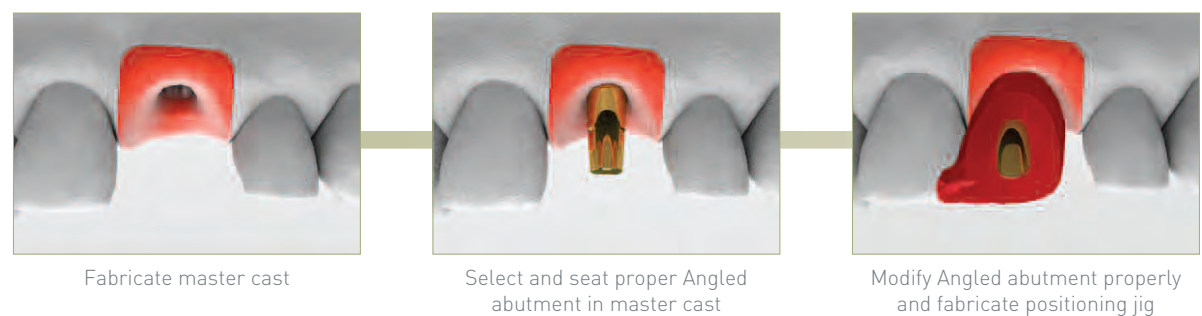
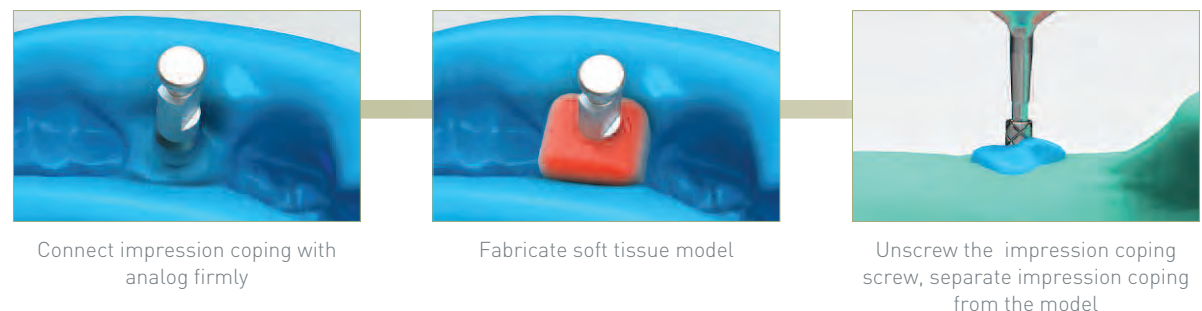
Crown Wax-Up

Final Restoration Cementation

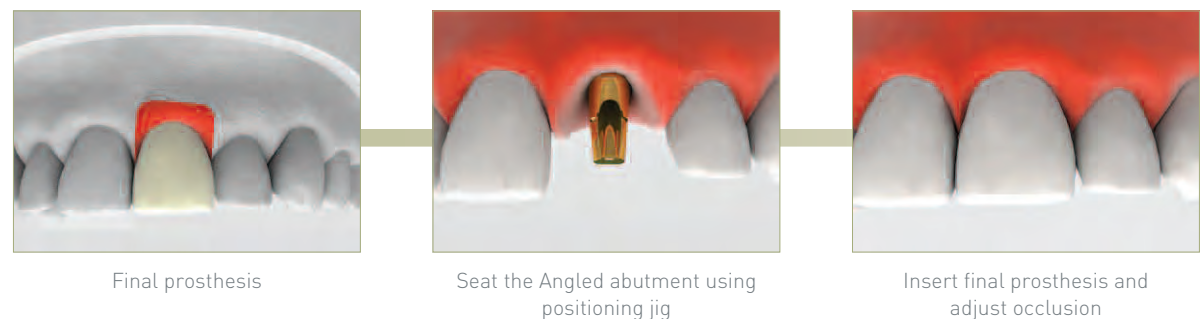
Angled Abutment

[Fixture Level Impression-Pick Up Type, Single units]

Lab Side



Chairside



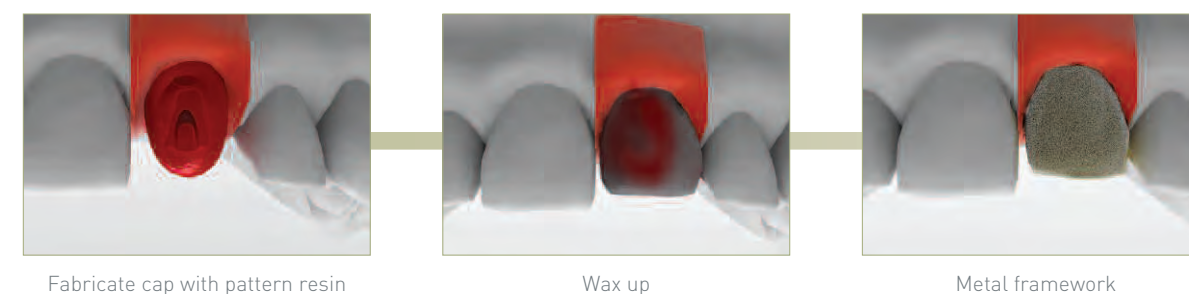
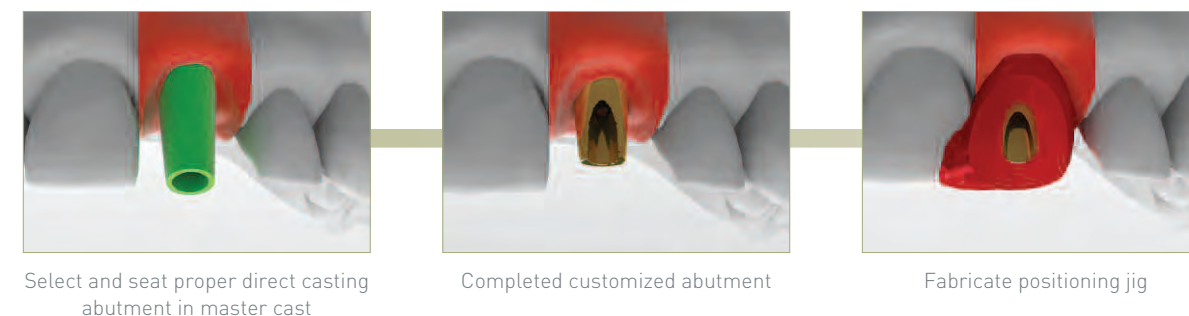
Direct Casting Abutment

[Fixture Level Impression-Single units]

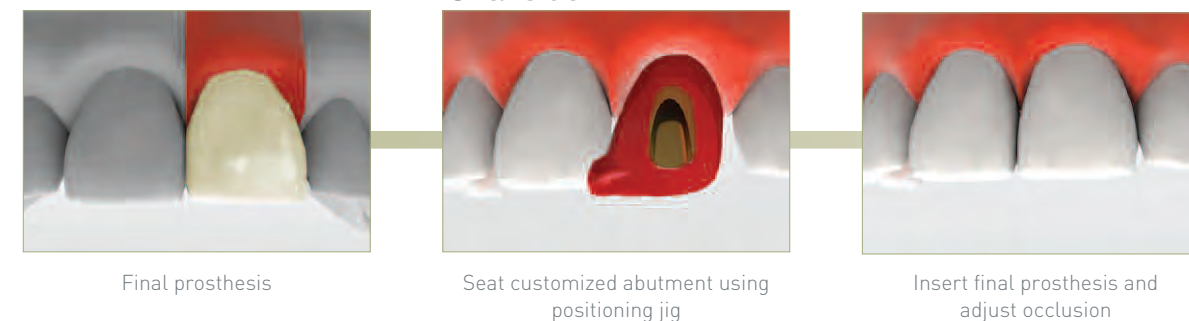
Laboratory Procedure



Lab Side




Chairside




Temporary Abutment

[Fixture Level Impression-Pick Up Type, Single units]




Ti-Temporary Abutment




Plastic Temporary Abutment

<Using Ti Cylinder>



<Using Plastic Cylinder>




Consider the opposing teeth height before seating the temporary abutment, Modify the abutment if needed and complete the temporary abutment prosthesis with direct resin

Screw Abutment

[Abutment Level Impression-Transfer Type, Multiple units]


Clinical Procedure




Cover Screw




Healing Abutment



Screw Abutment




Impression Coping Transfer Type




Abutment Level Impression


Chairside



Screw abutment with delivery holder



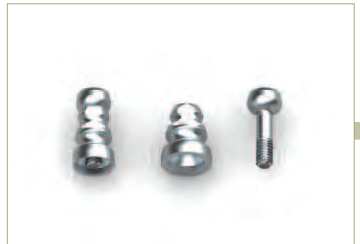
Select and seat appropriate screw abutment with delivery holder.




Tighten it to 25-30N·cm with S/B driver for screw abutment. Re-tighten after 15 minutes

Screw Abutment

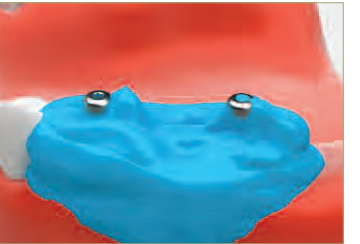
[Abutment Level Impression-Transfer Type, Multiple units]




Impression coping [transfer type] for Screw abutment



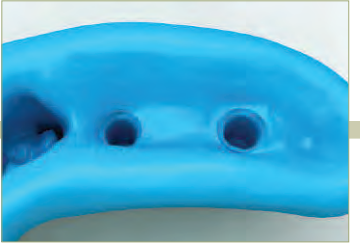
Seat impression coping on Screw abutment



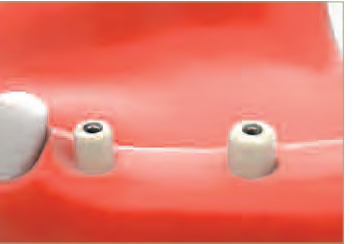
Inject impression material



Take Impression



Inner-surface of impression



Seat comfort cap on the Screw abutment

Laboratory Procedure



Lab Analog Connection



Cylinder Connection



Modification



Crown Wax-Up



Final Restoration Screw Retained

Lab Side



Remove the impression coping from oral cavity and connect it with analog firmly



Attach the impression coping to the Analog and insert into the impression



Fabricate soft tissue model

Screw Abutment

[Abutment Level Impression-Transfer Type, Multiple units]



Fabricate master cast

Remove impression coping

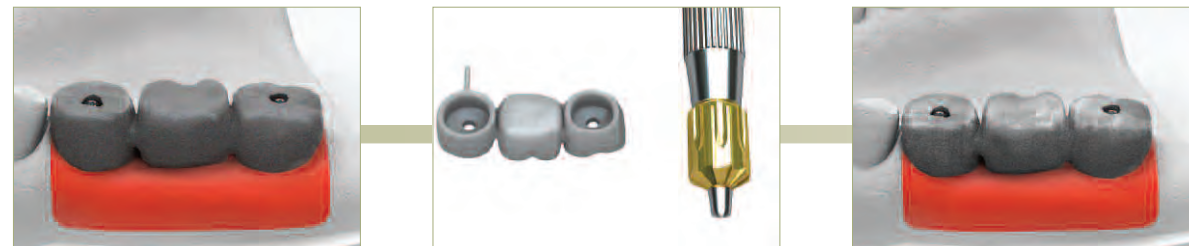
Connect the screw abutment cylinder then tighten it to 10N · cm with Ti-Retaining screw



Consider distance of opposing teeth, Modify cylinder to its proper height if needed

Fabricate burn-out cylinder and plastic bar in preparation for wax-up

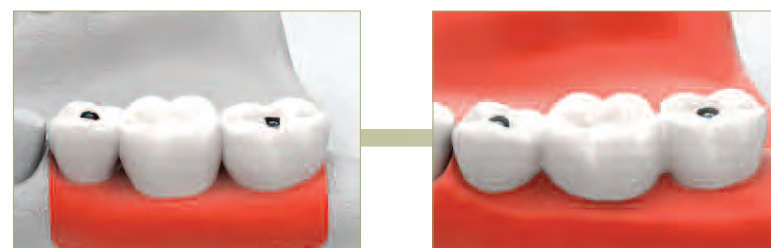
Wax up



Fabricate metal framework

Eliminate the Lip remnant by reamer caused by 'snap-on' mechanism

Metal Framework after removal of the Lip remnant



Complete porcelain build up

Seat final prosthesis and adjust occlusion. Tighten it to 10 N · cm with Ti-Retaining screw

Cementation Repair Method (SCRCP)

[Screw & Cement Retained Prosthesis]

In light of Implant Prosthesis:

- A screw type restoration helps simplify the prosthesis repair or insertion and removal of the prosthesis to any given situation.
- A dual abutment can be cement retained or screw retained.
- Combi abutment is only cement retained and occlusal hole is unnecessary.

In case of Screw Loosening or Prosthesis Repair is needed



In case of screw loosening and/or Prosthesis repair is needed

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

Unscrew, then remove the prosthesis from the oral cavity



Both cement retained prosthesis and abutment are removed

Finish the repair then re-seat into the oral cavity with new abutment screw

Tighten the prosthesis to 25-30N · cm with screw driver

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



Fill the access hole with cotton

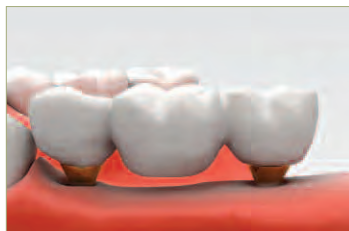
Then, fill the access hole with resin

Final prosthesis

Cementation Repair Method (SCRIP)

[Screw & Cement Retained Prosthesis]

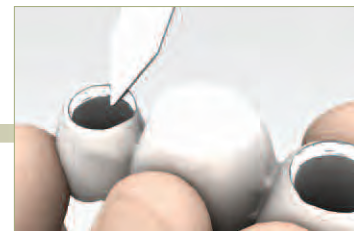
Prosthesis separation from Abutment due to Cement Loss



Restore the separated prosthesis to the abutment in the oral cavity.



Unscrew the abutment screw to 25-30N · cm and remove prosthesis from the oral cavity completely.
* In case of screw abutment separation, Ti-Retain screw should be unscrewed to 10N · cm.



Apply cement to the prosthesis



Adhere the prosthesis to abutment and clean out remnant cement, Fill the access hole with cotton and resin

In case of prosthesis loosening and adding to the interproximal surface is necessary



Adding to the inter proximal contact due to loosening



Make access hole using bur



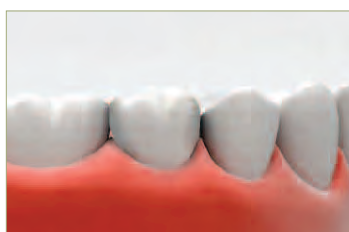
Unscrew then remove the cemented prosthesis with abutment in the oral cavity



Add resin to the contact if needed



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

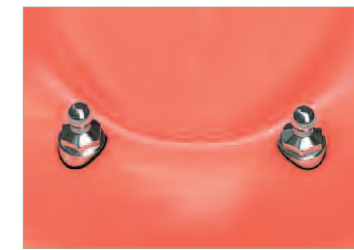


Replace the prosthesis into the oral cavity and tighten with a new abutment screw, fill access hole with cotton and resin.

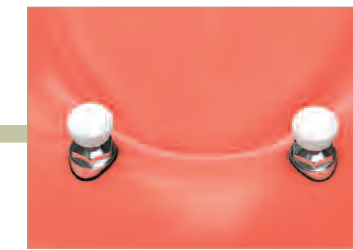


Final Prosthesis after repair

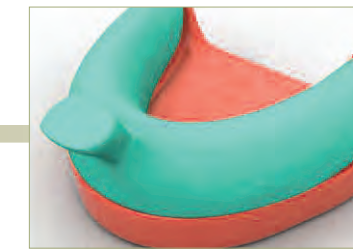
Ball Abutment



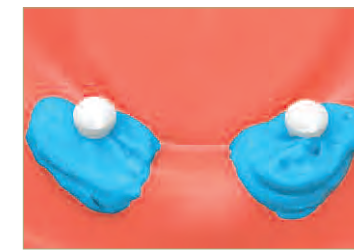
Connect Ball abutment with fixture



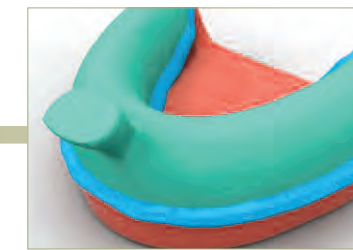
Seat impression coping into Ball abutment



Make individual tray for denture impression



Inject impression material



Take impression with individual tray



Remove the tray from the oral cavity



Inner surface of the impression material



Ball analog



Insert analog into the impression material securely



After analog insertion



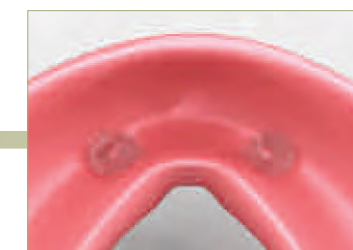
Fabricate master cast



Fabricate denture with common method



Connect female socket with analog



Reduce denture inner surface to place the female socket



Examine the interference between inner surface of ball analog and female socket

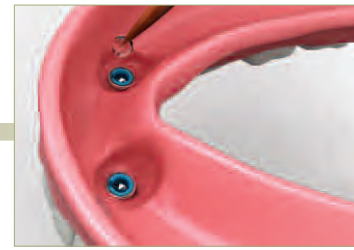
Ball Abutment



Apply the resin with brush into the hole



Remove the denture from the model after initial setting of resin



Add resin with brush around the female socket



After the resin sets, trim the remnant resin from the denture.

Dentium

Dentium developed by clinicians for clinicians