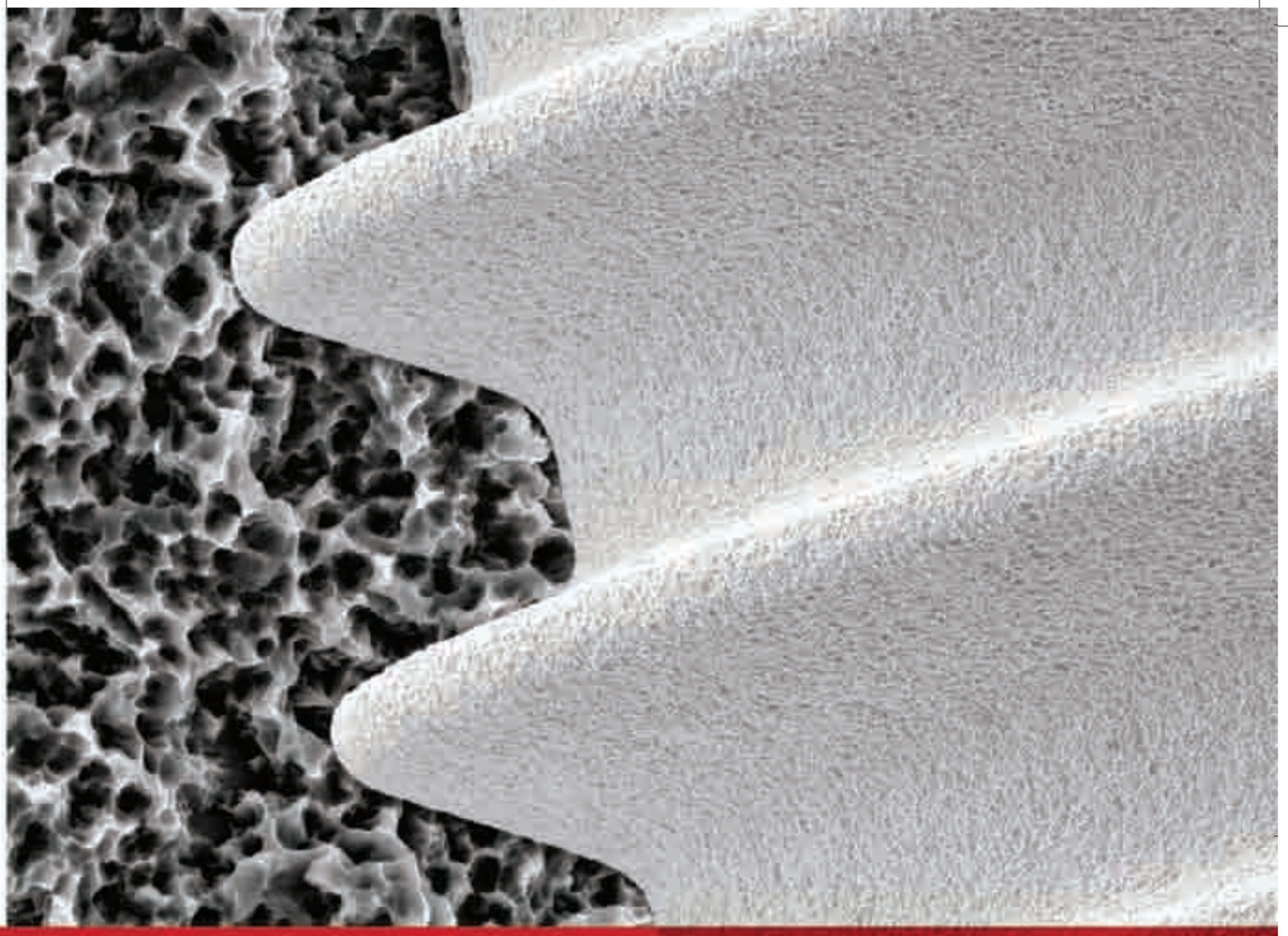


SuperLine & Implantium

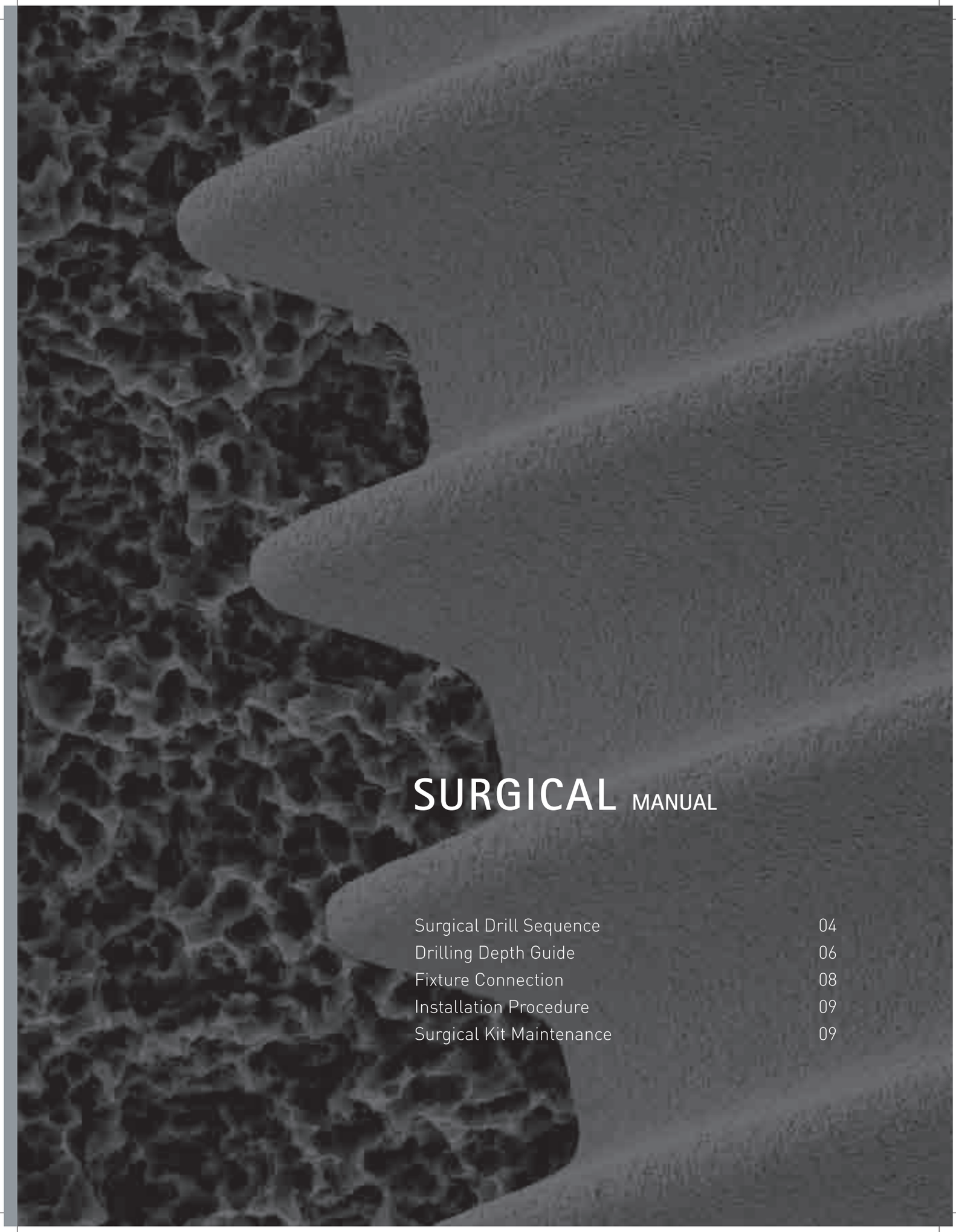
Surgical / Prosthetic Manual

DentiumUSA
Developed by Clinicians for Clinicians

SuperLine™ & IMPLANTIUM®

A New Choice

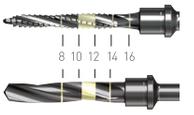
For the Customer

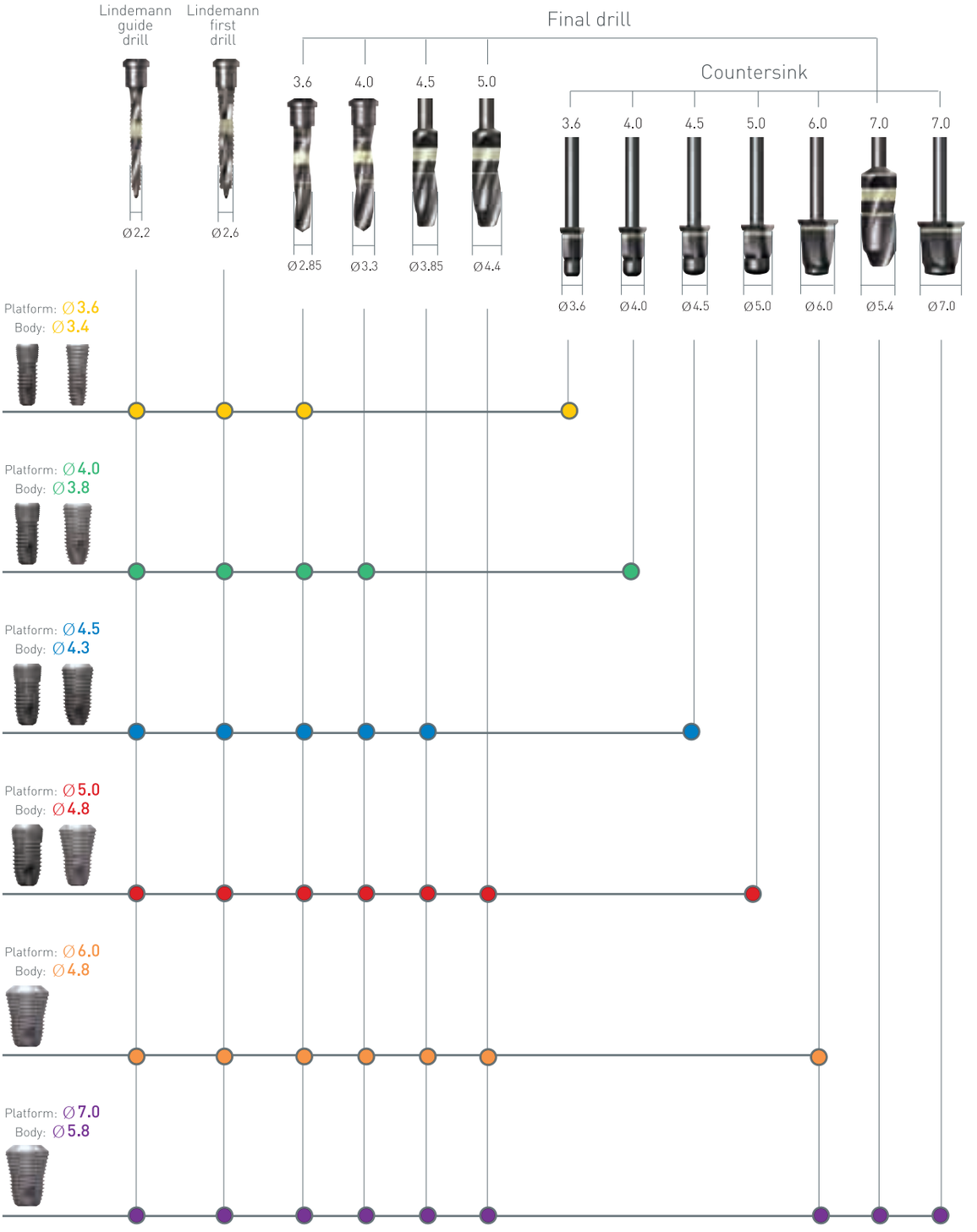


SURGICAL MANUAL

Surgical Drill Sequence

Drilling Sequence Guide

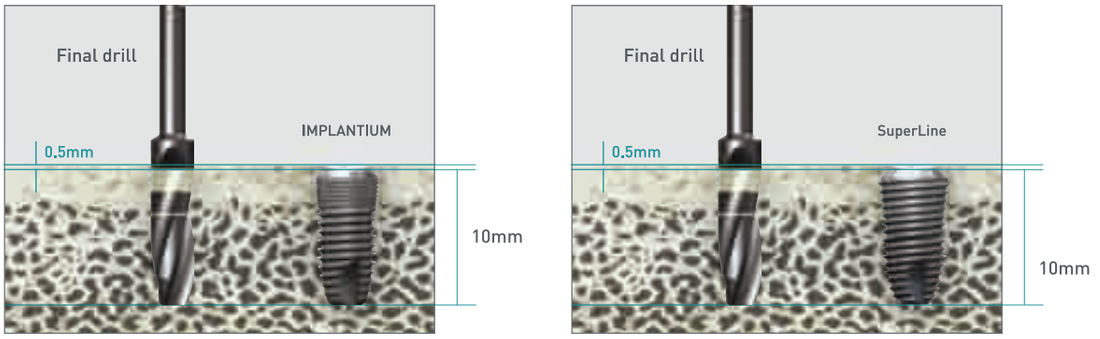




During fixture insertion, 30~45N·cm torque at 20rpm is recommended.

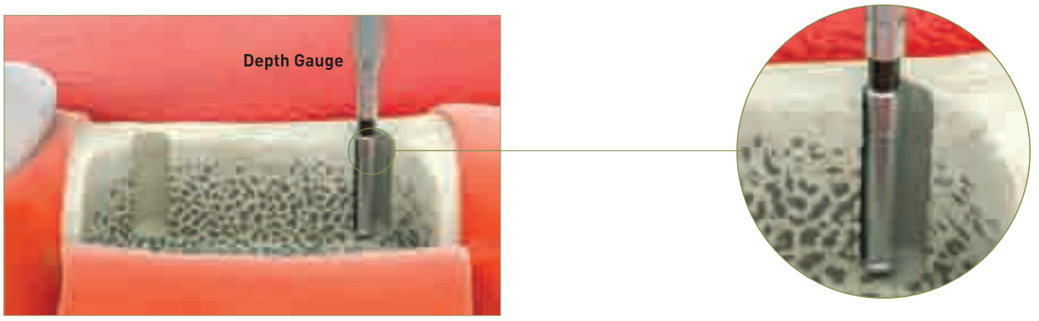
- Countersink drill is used in cases with dense cortical bone.
- The countersink drill's actual diameter is 0.1mm larger than the fixture platform.

Determination of Fixture Top Level



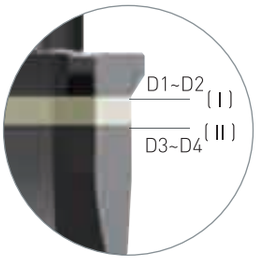
- It is recommended that the top level of the fixture be located 0.5mm below the crestal bone.

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

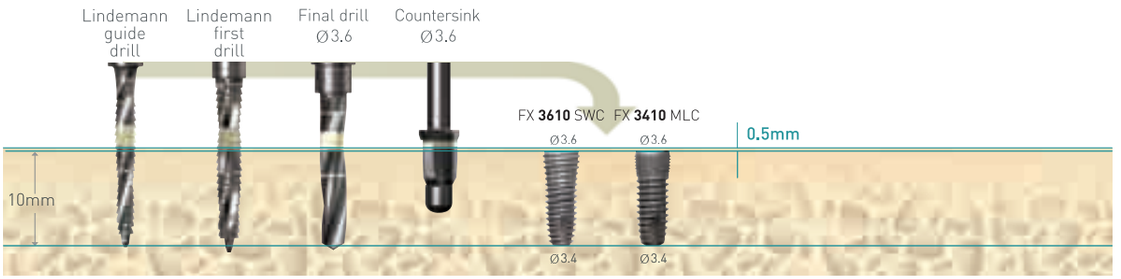
Drilling Depth Guide



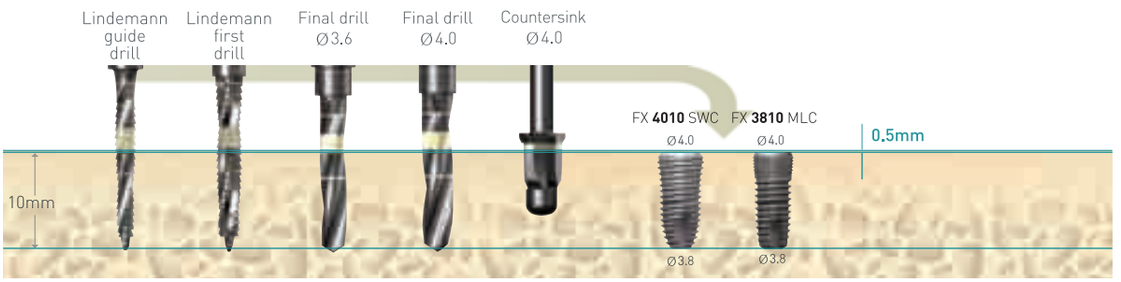
Countersink Depth Guide

- 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.

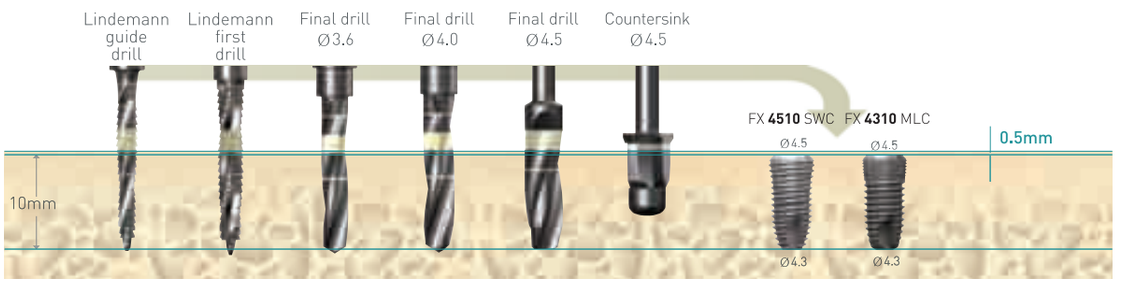
Platform: Ø3.6 / Body: Ø3.4 **(1000rpm/30~45N·cm)**



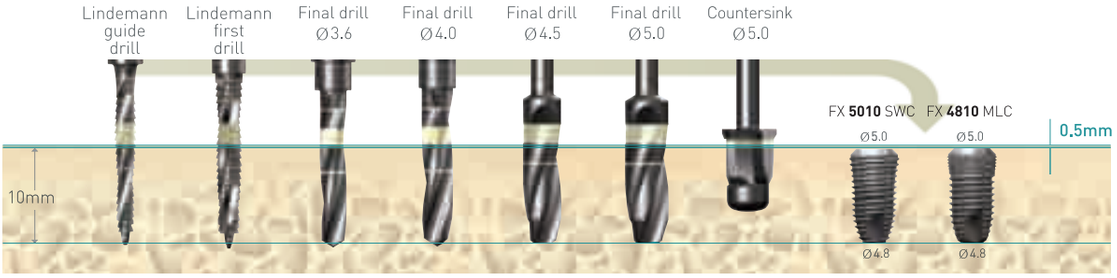
Platform: Ø4.0 / Body: Ø3.8 **(1000rpm/30~45N·cm)**



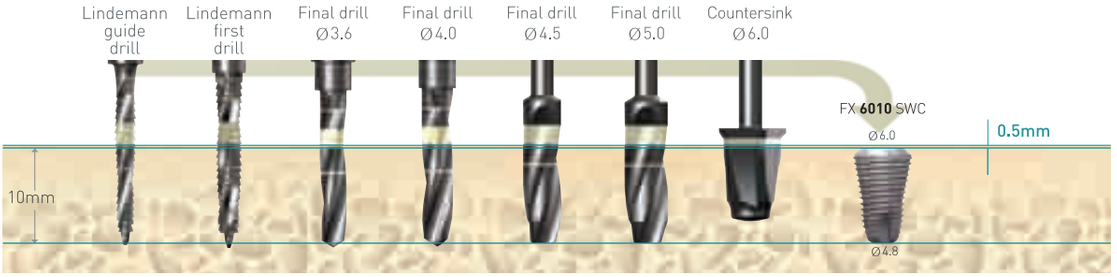
Platform: Ø4.5 / Body: Ø4.3 **(1000rpm/30~45N·cm)**



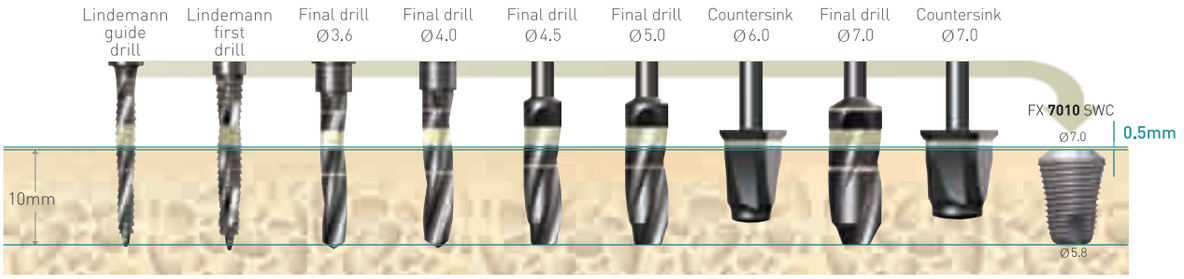
Platform: Ø5.0 / Body: Ø4.8 **(1000rpm/30~45N · cm)**



Platform: Ø6.0 / Body: Ø4.8 **(1000rpm/30~45N · cm)**



Platform: Ø7.0 / Body: Ø5.8 **(1000rpm/30~45N · cm)**



※Note : Instead of Lindemann guide drill, Guide drill may be used
Instead of Lindemann first drill, First & Pilot drill may be used.
* Do not use Pilot drill when placing 3.6 platform / 3.4 body fixture.

Fixture Connection

Caution_ When opening the fixture pack, hold the fixture container upward and engage the adapter into the fixture.

By handpiece
20rpm/35N ·cm

By ratchet

Directions Using the Hand-piece / Ratchet Adapter

Hand-piece adapter

Ratchet adapter

Connection

The adapters and the fixture interal hex must be connected firmly together.

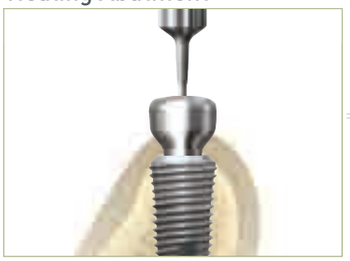
Installation Procedure

Cover Screw

By hex driver

Cover screw (CS38) connection

Healing Abutment



By hex driver

Healing abutment connection

Healing abutment (HAB402020L) connection in thin gingiva

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 o-rings on adaptes and hex drivers, if worn and dried out.
- Drills should be considered for replacement around 20~40 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.

Surgical Kit Maintenance

Maintenance Period for Surgical Drills

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

Guide Drill
(1000rpm, 30~45N · cm with Irrigation)

Final Drill
(1000rpm, 30~45N · cm with Irrigation)

First Drill
(1000rpm, 30~45N · cm with Irrigation)

Countersink Drill
Depending on bone density,
the rpm could be abjusted

Pilot Drill
(1000rpm, 30~45N · cm with Irrigation)

Lindemann Drill (Guide, First)
(1000rpm, 30~45N · cm with Irrigation)

Maintenance Period for DASK Drills

All DASK drills shall be replaced with new one after approximately 20 uses based on bone density

DASK Drill #1
(800~1,200rpm, 30~45N · cm with Internal Irrigation)

DASK Drill #1
(800~1,200rpm, 30~45N · cm with Internal Irrigation)

DASK Drill #2
(800~1,200rpm, 30~45N · cm with Internal Irrigation)

DASK Drill #2
(800~1,200rpm, 30~45N · cm with Internal Irrigation)

DASK Drill #3
(800~1,200rpm, 30~45N · cm with Internal Irrigation)

DASK Drill #3
(800~1,200rpm, 30~45N · cm with Internal Irrigation)

PROSTHETIC MANUAL

Prosthetic Introduction

Prosthetic Procedure

Understanding the Implant and Prosthesis

Biological Connection

- The tapered conical hex connection between implant and abutment interface ensures 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

Abutment level

- Dual Abutment
- Dual Milling Abutment
- Angled Abutment (15° / 25°)
- Direct-Casting Abutment
- Temporary Abutment (Plastic & Titanium)

Fixture level

- Screw Abutment

Scew retained (Abutment level)

- Ball Abutment

For denture use

Types of 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.

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.

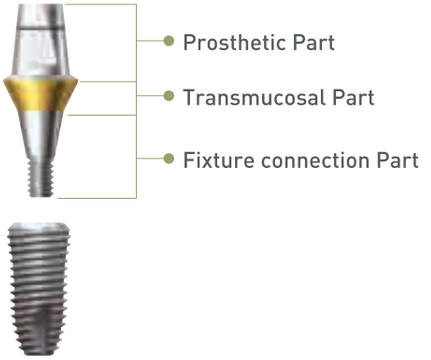
Hex / Non-hex

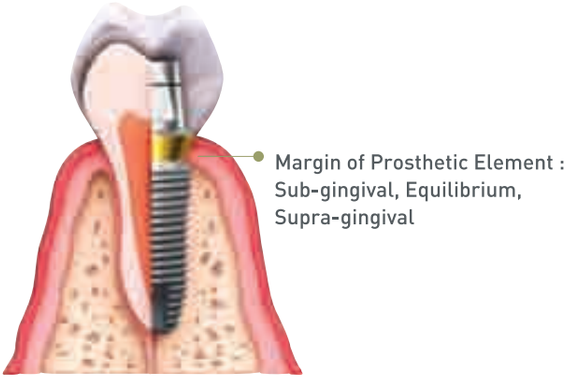
	Hex	Non-hex
Positioning Jig	Unnecessary	Required
Radiograph	Required	Unnecessary

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 impression. (DO NOT REMOVE OR CHANGE ITS POSITION).
- Tighten abutment screw to 25 - 30 N·cm (retighten again before seating final prosthesis).

* If the Combi abutment is to 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
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

Dual Milling abutment

Angled Abutment

Temporary Abutment

Direct-Casting Abutment

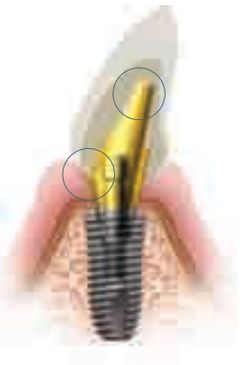
Dual Milling Abutment

- 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	 Hex  Non-hex	Ø4.0 Ø4.5 Ø5.5 Ø6.5	1.5mm 2.0mm 2.5mm 3.0mm	×
Angled	 Hex  Non-hex  Hex  Non-hex	Ø4.5	2.0mm 4.0mm	15°/ 25°
		Ø5.5	2.0mm 4.0mm	15°/ 25°
Plastic Temporary	 Non-hex	Ø4.5 Ø5.5 Ø6.5	3.0mm 3.0mm 3.0mm	×
Direct-Casting Abutment	 Hex  Non-hex	Ø4.5	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.

* 10N·cm of torque is recommended for the Ti-Retaining Screw

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

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.
Remove description an insert picture of transfer copings.

Fixture Level

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

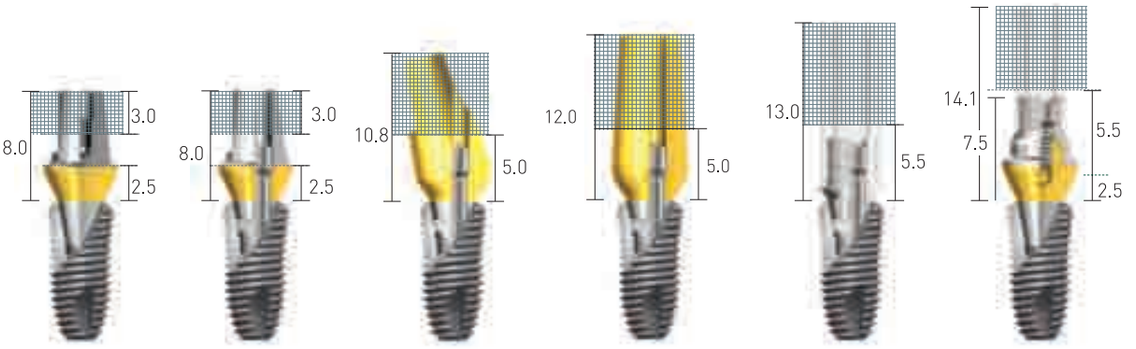
Abutment Level

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

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
Dual milling	Cementation type, screw-cementation type	Fixture level impression

Minimum Height Requirement for Prosthetic Abutment



Combi | Dual | Angled | Dual Milling | Direct Casting | Screw

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

Maxium 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.

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

Seat final prosthesis and adust occlusion

* 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

Dual Abutment

[Abutment Level Impression-Multiple Units]

Clinical Procedure

Cover Screw	Healing Abutment	Dual Abutment	Comfort Cap	Temporary Restoration or Comfort Cap	Abutment Level Impression

Chairside

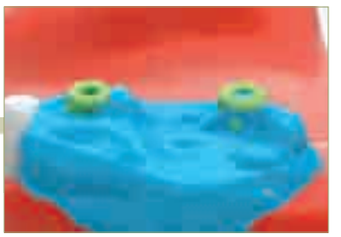
Let soft tissue form around Healing abutment

Dual abutment (Hex/ Non-hex)

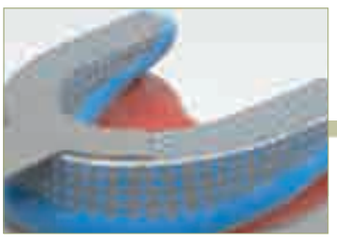
Select Dual abutment by diameter and gingival height

Tighten it to 25~30N ·cm. Re-tighten after 15 minutes

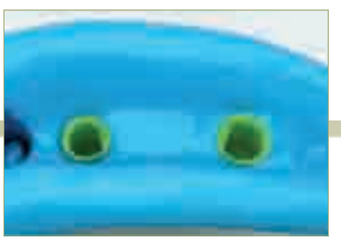
Insert Impression coping over abutment firmly [Snap-on Mechanism]



Inject impression material



Take impression



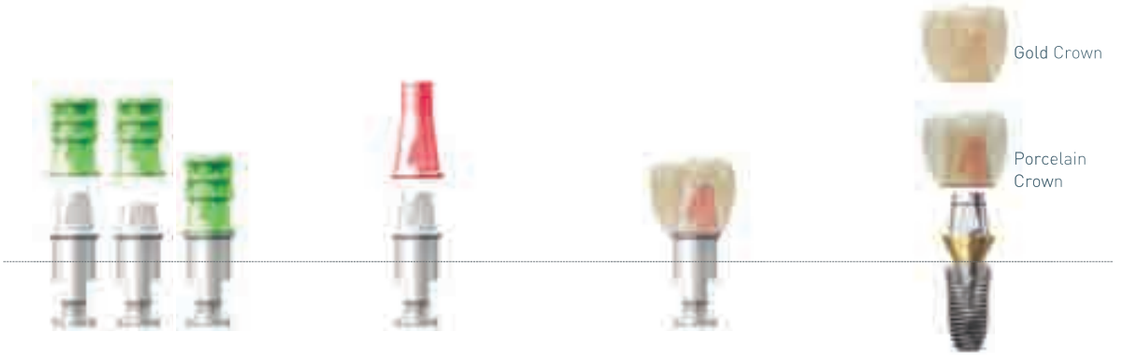
Impression coping comes off in the impression.

Fabricate provisional restoration, or use Comport cap

Dual Abutment

[Abutment Level Impression-Multiple Units]

Laboratory Procedure



Lab Analog Connection	Cylinder	Crown Wax-up	**Final Restoration** Cementation Type

Lab Side

Insert Lab analog into impression coping

Make sure Lab analog seats securely into the impression coping (match flat side of both analog and coping)

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

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

Wax up

Fabricate metal framework

Dual Abutment

[Abutment Level Impression-Multiple Units]

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

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

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

Appear extended margin around 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 the Lip remnant

Metal framework

Final prosthesis

Dual Abutment

[Fixture Level Impression-Transfer Type, Multiple Units]

Clinical Procedure

Healing Abutment | **Impression Coping Transfer Type** | **Fixture Level Impression** Closed Tray

Chairside

Remove Cover screw
[in case of second stage surgery]

Let soft tissue formed around Healing abutment

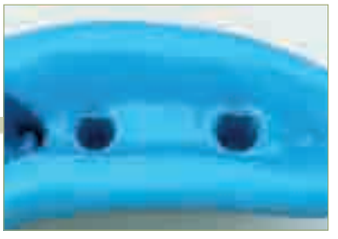
Transfer type impression coping

Seat impression coping which has same diameter as healing abutment

After connection of impression coping (X-Ray is unnecessary for confirmation)

Inject impression material

Take Impression



Inner surface of the impression material

Dual Abutment

[Fixture Level Impression-Transfer Type, Multiple Units]

Laboratory Procedure

Lab Analog Connection	Height Modification of Dual Abutment	Burn out Cylinder	Crown Wax-up	Final Restoration Cementation

Lab Side

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

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

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

Chairside

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 adust 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 tisue. 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

Healing Abutment	Impression Coping Pick Up Type	Fixture Level Impression Open Tray

Chairside

Pick-up type impression coping

Select & seat impression coping which has same diameter as healing abutment

After connection of impression coping

Apply adhesive on opened impression tray (Individual tray)

Inject impression material

Inject impression material on the impression tray

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]

Dual Abutment

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

Laboratory Procedure

Lab Analog Connection	Height Modification of Dual Abutment	Burn Out Cylinder	Crown Wax-up	Final Restoration Cementation Type

Lab Side

Connect impression coping with analog firmly

Fabricate soft tissue model

Fabricate master cast

Select abutment with proper diameter and gingival height

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

Fabricate positioning jig

Fabricate cap with pattern resin

Wax up

Metal framework

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 tisue. 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 tisue. 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

Febricate 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 tisue. 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 impresion 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

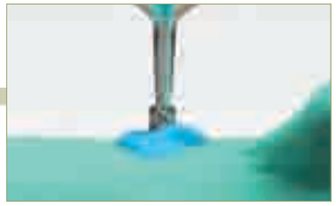
Angled Abutment

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

Lab Side

Connect impression coping with analog firmly

Fabricate soft tissue model



Unscrew the impression coping screw, separate impression coping from the model

Fabricate master cast

Select and seat proper Angled abutment in master cast

Modify Angled abutment properly and fabricate positioning jig

Fabricate cap with pattern resin

Wax up

Metal framework

Chairside

Final prosthesis

Seat the Angled abutment using positioning jig

Insert final prosthesis and adjust occlusion

Direct Casting Abutment

[Fixture Level Impression-Single units]

Laboratory Procedure

Lab Analog Connection | Direct Casting Abutment Connection | Modification | Abutment Wax-Up | Final Restoration Cementation

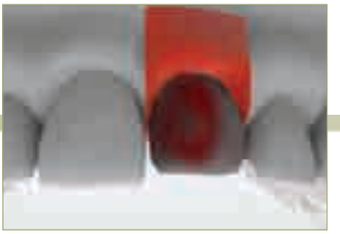
Lab Side

Select and seat proper direct casting abutment in master cast

Completed customized abutment

Fabricate positioning jig

Fabricate cap with pattern resin



Wax up

Metal framework

Chairside

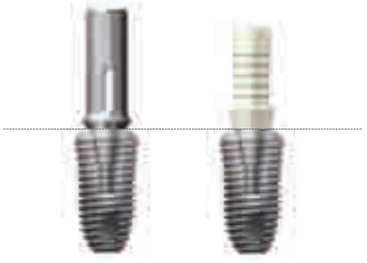
Final prosthesis

Seat customized abutment using positioning jig

Insert final prosthesis and adjust occlusion

Temporary Abutment

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



Ti-Temporary Abutment

Plastic Temporary Abutment

<Using Ti 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

<Using Plastic Cylinder>

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.

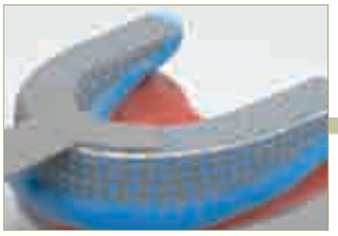
Tighten it to 25~30N · cm with S/B driver for screw abutment. Re-tighten after 15 minutes

Screw Abutment

Impression coping [transfer type] for Screw abutment

Seat impression coping on Screw abutment

Inject impression material

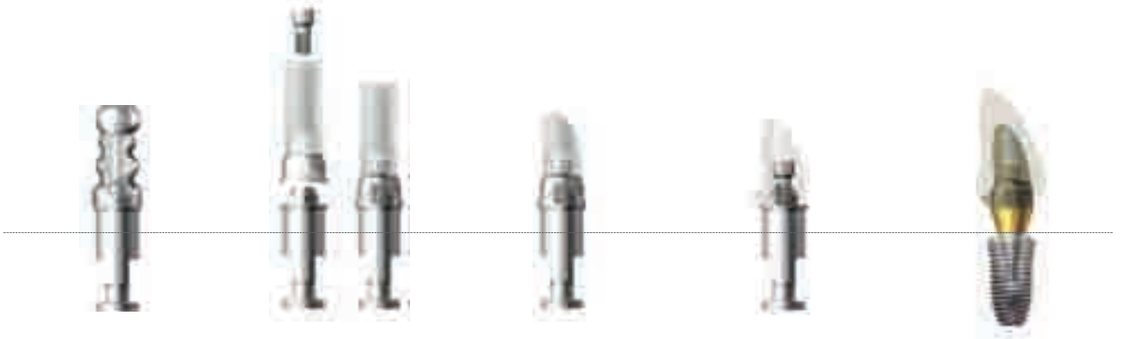


Take Impression

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 Alalog and insert into the impression

Fabricate soft tissue model

Screw Abutment

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 (SCRP)

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 Loosing or Prosthesis Repair is needed

In case of screw loosing 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 scerw should be tighten to 10N · cm.

Fill the access hole with cotton

Then, fill the access hole with resin

Final prosthesis

Cementation Repair Method (SCRP)

[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 completly.

* In case of screw abutment separation, Ti-Retain screw shoud be unscrewed to 10N · cm.

Apply cement to the prosthesis

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

In case of prosthesis loosing 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

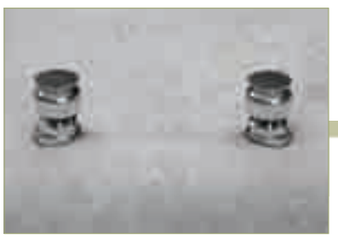
Ball analog

Insert analog into the impression material securely

After analog insertion

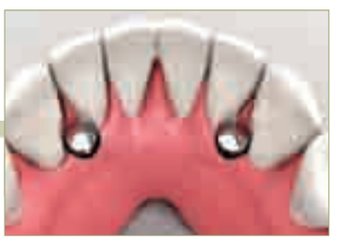
Fabricate master cast

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 Prosthetics Instruction For Use

Product Description

Dentium Prosthetics are devices made of titanium alloy intended for use as an aid in prosthetic rehabilitation. They consist of Angled Abutments, Ball Abutments, Combi Abutments, Direct-Casting Abutments, Dual Abutments, Dual Milling Abutments, Healing Abutments, Screw Abutments, Temporary Abutments and Abutment Screws. Most abutments are partially TiN coated. Abutments are supplied non-sterile and are intended to be sterilized prior to use (see **Sterilization**).

Indication for Use

Dentium Prosthetics are intended for use as an aid in prosthetic rehabilitation.

Contraindications

- Blood dyscrasia not under control
- Alcoholic, drug use
- Poor ossein patients unable to implant
- Other periodontal and surgical operation prohibited patients
- Metal allergy

Warnings

- Implant surgery and restoration involves complex dental procedures which require specialized training. Training is strongly recommended prior to prosthetic use.
- Improper technique and/or improper patient selection can result in implant failure and/or loss of bone around the implant site.

Precautions

Thorough screening of implant candidates is critical to the success of the implant process. Appropriate radiographic examination should be utilized to determine adequacy of bone, periodontal status, and the location of important anatomical landmarks. Post-implantation radiographs are also required to determine the progression of osseointegration.
Exposure to magnetic resonance imaging, radiation, and chemotherapy may impact the health of the implant. Dental implant patients should be instructed to consult with their physicians prior to undergoing such treatment options. The use of electrosurgical instruments or lasers around the titanium implants and their abutments is not recommended due to the risk of electrical shock and/or burns.

Sterilization

Dentium Prosthetics are supplied non-sterile. Open the pouch and take out the vial. Pull out the cap and remove product from the vial. Prior to use, sterilize by steam heat 121°C (250°F) for 30 minutes.

Instructions for Use (Prosthetic Procedure)

Dentium Prosthetics are part of Dentium's Dental Implant System and are only intended for use with Dentium Implants and Surgical Instruments.

Dentium Prosthetics Instruction For Use

Caution: Refer to the Surgical and Prosthetic Manual for detailed instructions regarding prosthetic procedures.
Warning: Evidence of osseointegration should be confirmed radiographically prior to loading a fixture to avoid movement of the fixture and possible loss of the implant.
Warning: Do not overload implants. Excessive force may cause fracture of the implant/abutment. Careful treatment planning is required to ensure a sufficient number of implants are used to create adequate contact surface and avoid overloading.

Adverse Effects

The implant surgery has known risks, including localized swelling, separation of sutured area, ulceration, bleeding, infection, and localized tenderness of short duration. In some cases, there can be numbness in the area of the surgery which is typically temporary but may be permanent if there is nerve damage. Most of these risks are managed by standard pre and post operative care prescribed by the dentist or surgeon. Patients should be instructed to seek the services of a trained dental professional if there are any signs of a problem with the implant (such as looseness, infection, or exudates around the implant, pain or other symptoms not expected).
Loss of the implant is possible due to a lack of osseointegration for the following reasons: quality or quantity of bone is insufficient, placement or alignment of the implant is not optimal, patient oral hygiene, health or habits are not optimal, or the implant is loaded prior to adequate osseointegration. As with all implant systems, there is the risk of bone loss around the implant over time which can result in revision or removal of the implant.

Cautions

- Federal law restricts this device to sale by or on the order of a dentist or physician.
- Do not use the product if the packaging is damaged or opened.
- Do not use beyond the stated expiration date.
- Product is designed for single use only and is not to be reused. Opened, unused product may not be returned to the company.

Delivery, Storage and Handling

- Prosthetic: NON-STERILE
- Store product at room temperature.

Dentium Implants Instruction For Use

Product Description

IMPLANTIUM® and SuperLine™ fixtures are titanium dental implants with Sandblasting with Large grit and Acid etching surface treatment designed to enhance osseointegration, a firm connection between the bone and the surface of the implant, to provide a stable support for prosthetic devices.

Indication for Use

IMPLANTIUM® and SuperLine™ fixtures are intended for use in dental implant surgery.
The fixtures are surgically placed in the upper or lower jawbone to provide support for dental prostheses including single tooth replacements, bridgework or complete dentures.

Contraindications

IMPLANTIUM® and SuperLine™ fixtures should not be used in patients with insufficient bone width or height. Implant failure can occur in patients with insufficient bone, poor bone quality, poor oral hygiene, habits such as heavy smoking, tobacco abuse, alcohol or drug abuse, or generalized disease such as blood disorders or diabetes. Fixtures should not be used in patients who are allergic to titanium or titanium alloys.

Warnings

Implant surgery and restoration involve complex dental procedures which require specialized training. Training is strongly recommended prior to implant use. Improper technique and/or improper patient selection can result in implant failure and/or loss of bone around the implant site.

Precautions

Thorough screening of implant candidates is critical to the success of the implant process. Appropriate radiographic examination should be utilized to determine adequacy of bone, periodontal status, and the location of important anatomical landmarks. Post-implantation radiographs are also required to determine the progression of osseointegration.
Exposure to magnetic resonance imaging, radiation, and chemotherapy may impact the health of the implant. Dental implant patients should be instructed to consult with their physicians prior to undergoing such treatment options. The use of electrosurgical instruments or lasers around the titanium implants and their abutments is not recommended due to the risk of electrical shock and/or burns.

Adverse Effects

The implant surgery has known risks, including localized swelling, separation of sutured area, ulceration, bleeding, infection, and localized tenderness of short duration. In some cases, there can be numbness in the area of the surgery which is typically temporary but may be permanent if there is nerve damage. Most of these risks are managed by standard pre and post operative care prescribed by the dentist or surgeon. Patients should be instructed to seek the services of a trained dental professional if there are any signs of a problem with the implant (such as looseness, infection, or exudates around the implant, pain or other symptoms not expected).
Loss of the implant is possible due to a lack of osseointegration for the following reasons: quality or quantity of bone is insufficient, placement or alignment of the implant is not optimal, patient oral hygiene, health or habits are not optimal, or the implant is loaded prior to adequate osseointegration. As with all implant systems, there is the risk of bone loss around the implant over time which can result in revision or removal of the implant.

Dentium Implant Instruction For Use

Cautions

- Federal law restricts this device to sale by or on the order of a dentist or physician.
- Open fixture vial with cap up to ensure the fixture remains in place to attach to the Implant Driver.
- Refer to the Surgical and Prosthetic Manual for detailed instructions regarding the surgical procedure.
- Product is gamma sterilized and will remain sterile as long as the packaging is unopened and undamaged. Do not use the product if the packaging is damaged or opened. Do not use beyond the stated expiration date. Product is designed for single use only and is not to be resterilized. Opened, unused product may not be returned to the company.

Delivery, Storage and Handling

- Outer Box: NON-STERILE
- Blister Packaging: NON-STERILE
- Outer Vial: STERILE-R
- Inner Vial: STERILE-R
- Implant: STERILE-R

Store product at room temperature. Open product using aseptic technique to avoid contamination after correct size has been determined prior to implantation. Handle the fixture carefully to avoid damaging the fixture surface.

Additional product labels containing the product LOT number and REF number are provided with the fixture. These labels are to be placed in the patient's chart and medical records to ensure complete traceability of the implant for future reference or questions.

To obtain additional information on IMPLANTIUM® and SuperLine™ products, please contact:

Dentium USA
Cypress, CA 90630
Tel: 1-877-304-6752
www.dentiumusa.com

DentiumUSA

Developed by Clinicians for Clinicians

SuperLine™ & IMPLANTIUM®

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

Dentium USA
6761 Katella Ave. Cypress, CA 90630 Tel. 1-877-304-6752 Fax. 714-226-0019
Website / E-mail
www.dentiumusa.com / info@dentiumusa.com

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