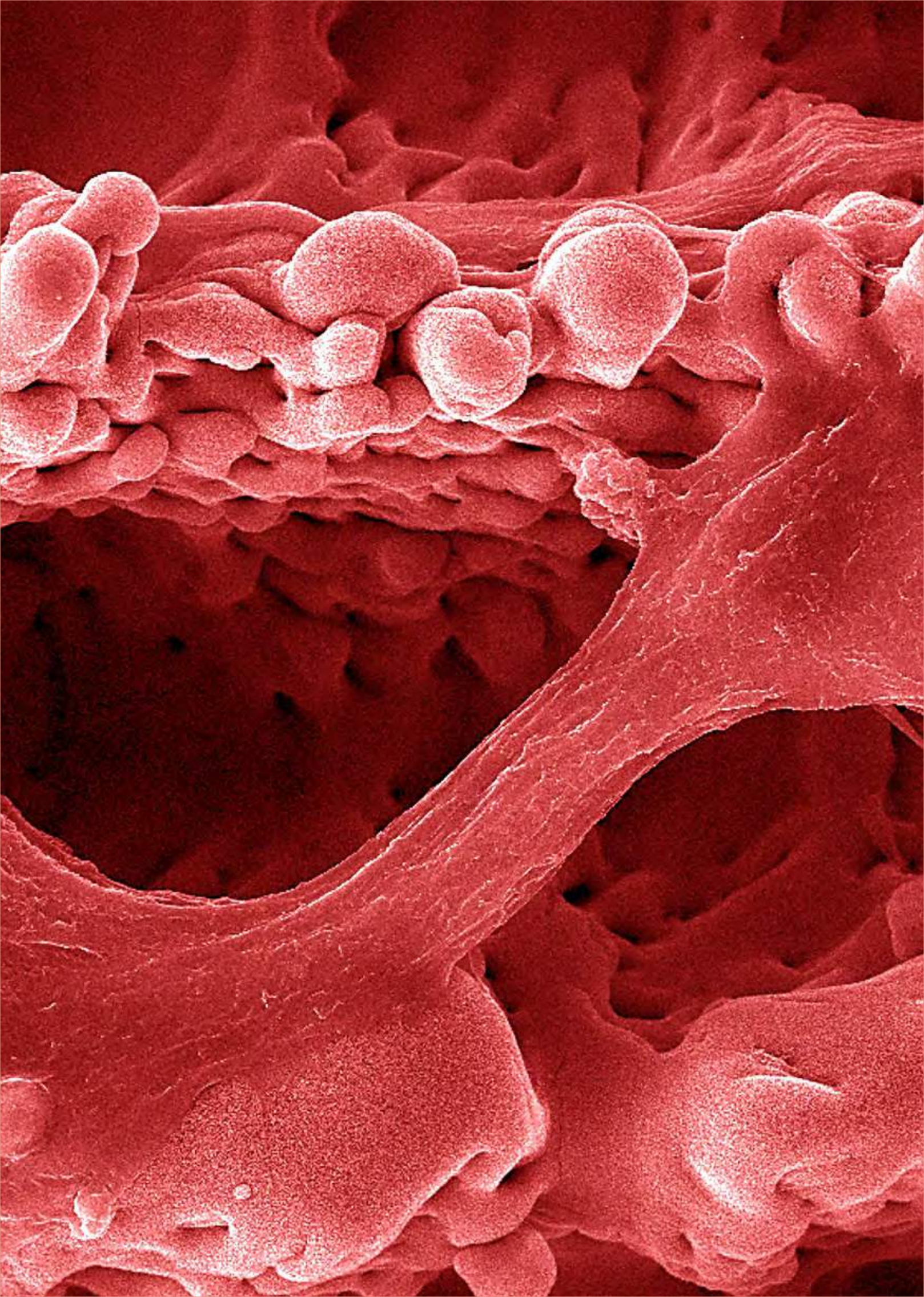
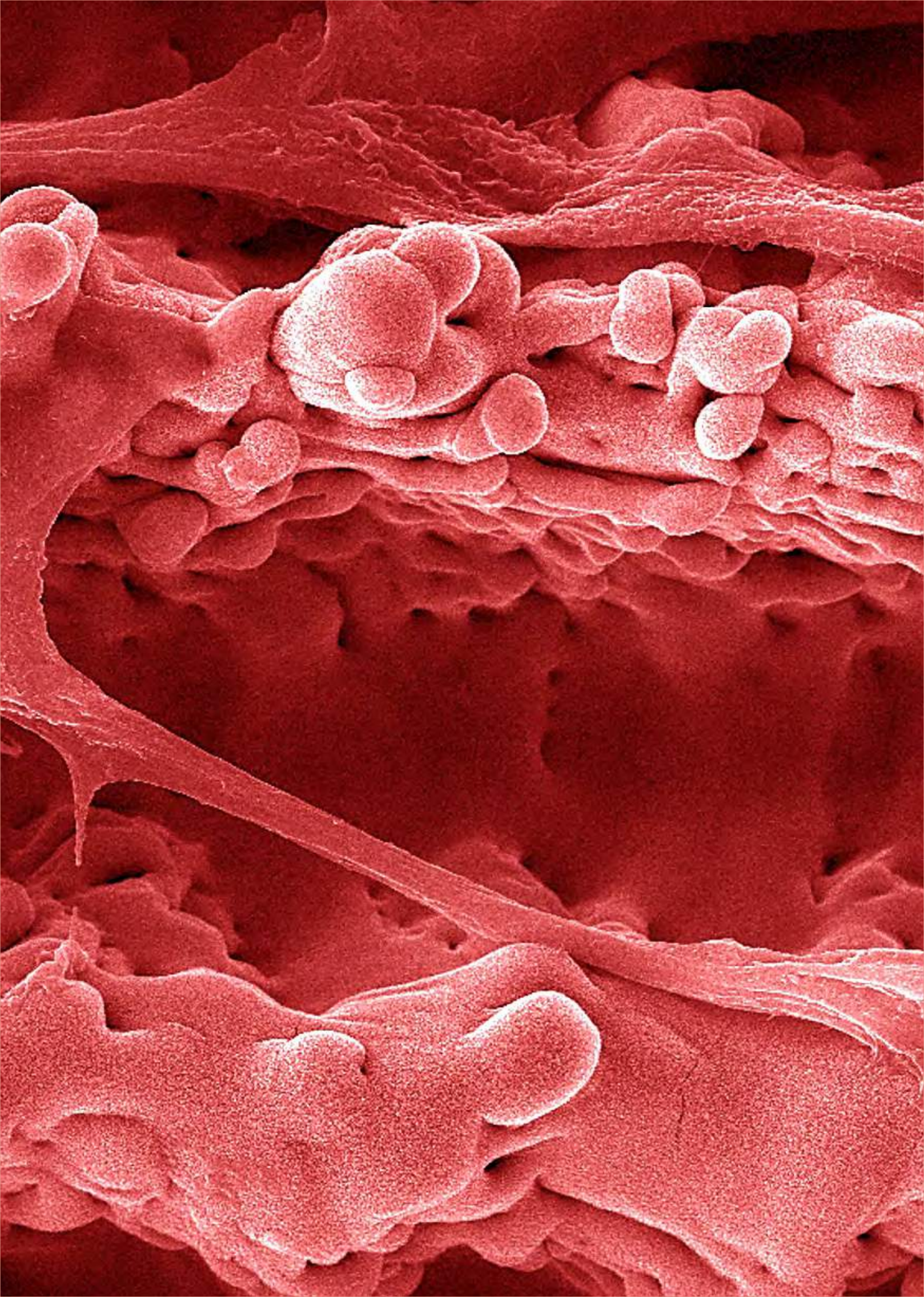
Biomate SWISS

BIOMATE & BIOMATE PLUS DENTAL IMPLANT SYSTEM

Biomate SWISS
Implant Technology





DENTAL IMPLANT SYSTEM

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Biomate Dental Implant System

The spirit of the craftsman is deeply characterized
In the soul of Biomate Swiss Implant System

Switzerland; The worldwide-recognized authority on mechanical design and craftsmanship. The craftsmanship is not only presents high precision, but also combines professional knowledge and ultimate beauty format.

The credit of Biomate SWISS implant system is because of its excellent surface treatment. This surface treatment is a collection of historical quenching,vision and view point of worldwide.

PDL® Laser Surface Treatment

Hemocompatibility

Structure of Micro-Nino Pore

Better Biocompatibility

With the primary mission of "being the best support team of dentists, and allowing patients to regain confidence and charming smiles", Biomate Swiss implant system listens closely to users' needs, provides localized and considerate services, and creates customized products and services.

We strive to become the physician's most trustworthy partner to help restore the smiles on the faces of our patients with our innovations and services.

Combining exclusive technology and professional certification, to develop PDL®(Precision Dimension Laser) core laser technology, market the Biomate SWISS implant system globally, and create a global operation model that integrates hardware and teaching services.

Global Distributor

Cambodia
Egypt
Ghana
Iran
Iraq
Japan
Jordan
Junji
Lithuania
Malaysia
Oman
Pakistan
Philippines
Romania
Russia
Saudi Arabia
Taiwan
Thailand
Türkiye
Vietnam

European Exhibition of Creativity and Innovation / Special Award

Archimedes Moscow International Salon of Inventions and Innovation Technologies / Gold Medal

International Warsaw Invention Show / Silver Medal

International Salon Of Inventions and Innovation Technologies / Gold Medal

PDL® Surface Treatment

BIOMATE Dental Implant is Designed with New Concept and New Technique, It Possesses the Best Stability to Ensure Long-Term Efficacy.

PDL®(Precision Dimension Laser) Surface Treatment applies precise parametric design. Through this high efficacy laser Iuminous energy, the structure can be formed on the implant surface with qualitative micro and complex 3D pores, it even carves out multiple micro-channel in linear arrangement which is suitable for the adhesion and growth of osteocytes that help increase the contact surface area of the bone and fixture, optimizing the effect of cell proliferation and osseointegration.

Better Biocompatibility

With PDL® surface treatment, a micro composite structure multiple micro-channel on the surface of the implant will guide the predecessor cells of osteoblast moving to the surface of the implant and distributing according to the track structure. The feature can increase rapid distribution and stability of the cells. When the cells are moving nearby complex 3D pores, they will randomly attach to the pores and differentiate to osteoblast which can accelerate the growth of new bone and shorten the time of osseointegration.

Completely Cleanly production process

The production interface adopts the environmental friendly manufacturing process without any chemical media. Thus, the risk of chemical material remains can be prevented.


SEM image of osseointe gration at 5,000 times magniPcations

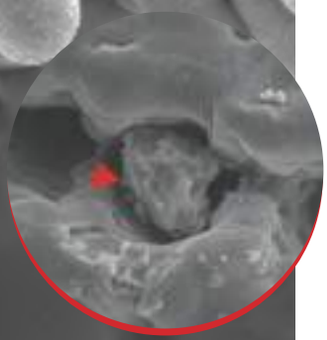
Osseointegration

The complex micro 3D pores of BIOMATE fixture surface can effectively help to:

- Optimize the adhesion and growth of osteocytes
- Accelerate the healing of wound
- Improve osseointegration

Contact Area

PDL®(Precision Dimension Laser) Surface Treatment applies precise parametric design and through high efficacy laser luminous energy to strike qualitative micro , complex 3D texture that help increase the contact surface area of the bone and fixture, optimizes the effect of cell proliferation and osseointegration.

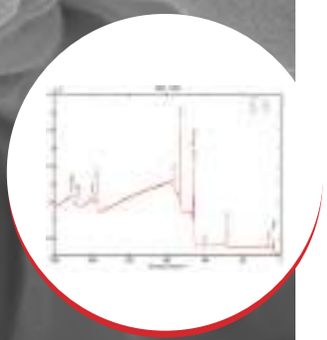


Cell Adhesion

The structure surface of multiple micro channel created by PDL® technique can help the adhesion of hydrophilic protein like cells, fibrin and so on. There is special metal solution and molecular arrangement in the micro pore. When osteocyte enters the pore, it can stably adhere to the structure, plus with the special pore size of Biomate which can accelerate the cells extension and differential, it can significantly improve the osseointegration (the red arrow in the picture shows the cell. SEM report shows the PDL® treated surface is highly suitable for the growth of osteocytes).

Hemocompatibility

Proven by experiment, the complex micro texture of BIOMATE-PLUS fixture surface has the best hemocompatibility, which absorbs blood rapidly to the fixture surface during implantation. This feature can effectively accelerate bone regeneration and osseointegration.



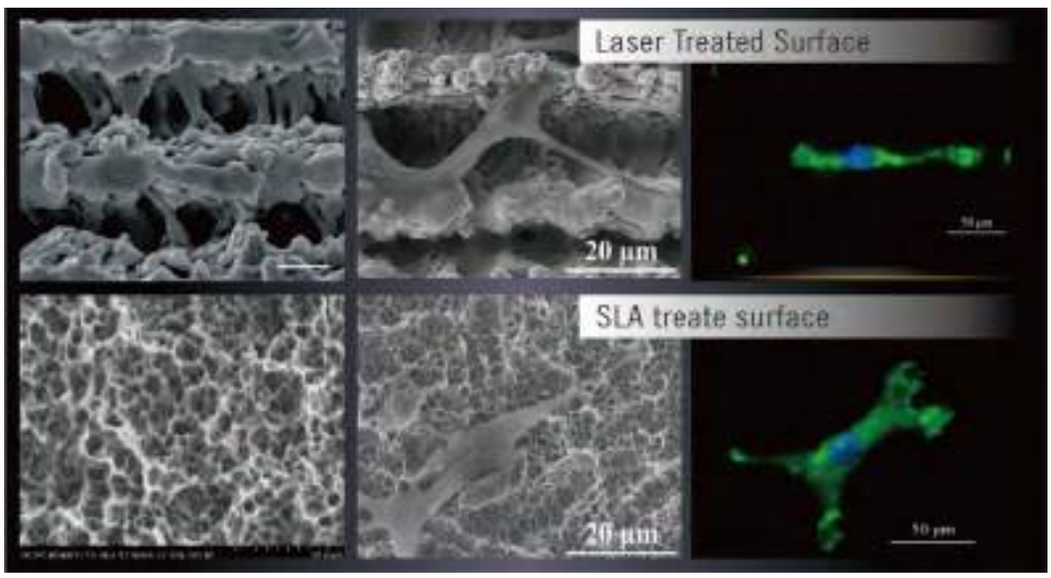
Cleanliness

Unlike SLA surface treatment that risk of sand & acidic residue after treatment, PDL® surface treatment modifies the fixture surface with laser that does not leave any toxic residue.

Surface Elements:Ti, N, O, C
Analysis of Chemical Bond:TiO2
Evidence shows there is no residual on surface.
The surface is fully clean.

Osteoblasts Guiding Growth Directionality

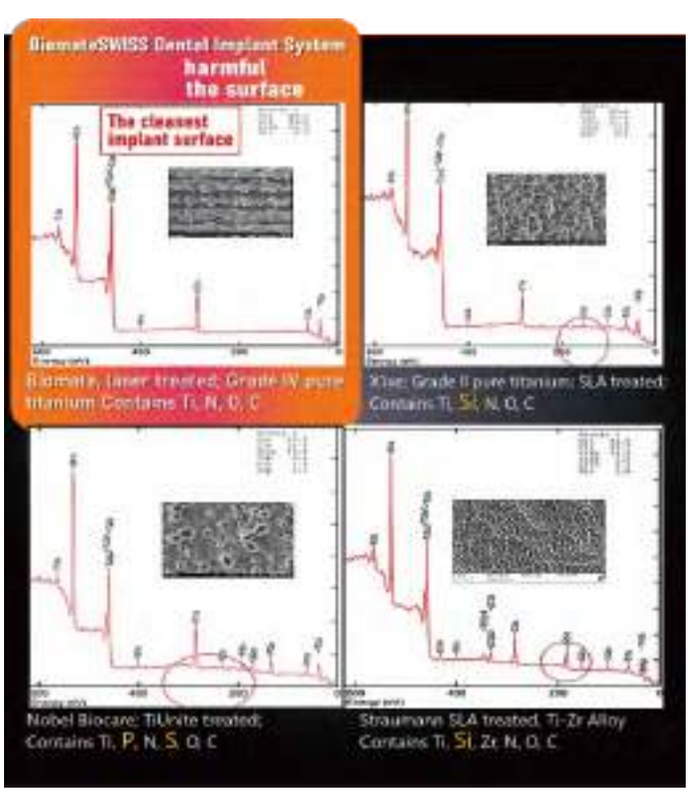
(National Yang-Ming Chiao Tung University)



Biomate laser surface treatment is a type of hot working technique, which applies high energy density laser (up to 1700 C°), focusing on the metal surface to fuse and evaporate the surface with the heat.

BiomateSWISS Implants Ultra-Cleanliness

National Chung Hsing University Experiment



(Comparison with Xive/Nobel/Straumann)

國立中興大學
National Chung Hsing University

The Cleanest Implant Surface

Utilizing laser high-heat treatment for implant surface processing, without the use of any acid etching, sandblasting, or other chemical surface treatments.

After analyzing products from other brands (Nobel, Xive, Straumann), the results indicate that BiomateSWISS's laser surface treatment leaves no chemical residue, achieving 100% cleanliness.

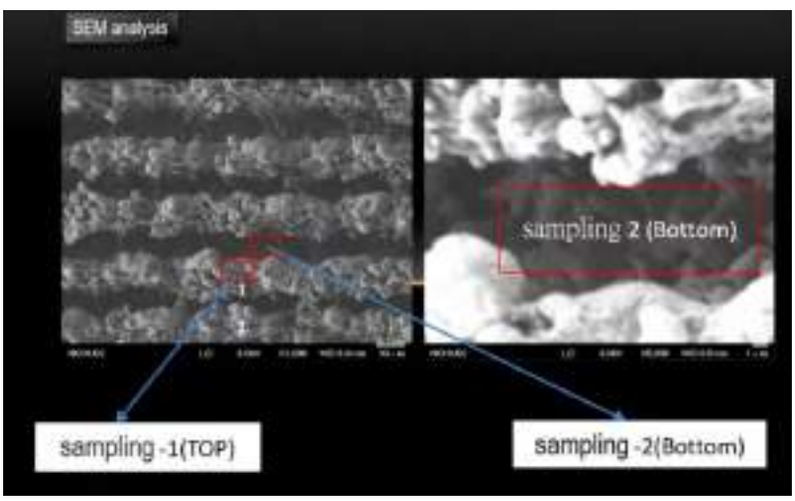
100% Clean! No residues of harmful substances on the surface!

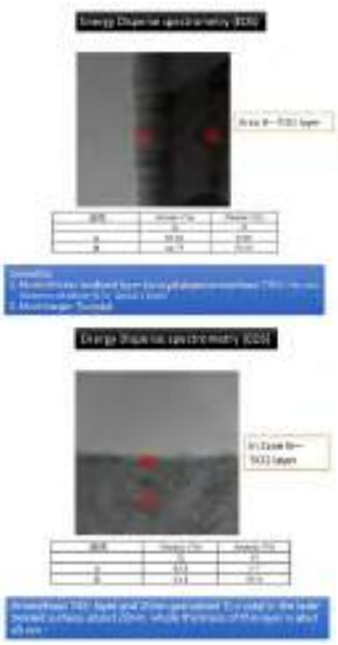
BiomateSWISS: Enhancing Oxide Thickness to Increase Hemocompatibility (National Chung Hsing University)

What is the thickness of the oxide layer?

We have measured the thickness of the oxide layer.

The top of the groove (raised area): 110nm The bottom of the groove: 45nm





Implants with the Fastest Bone Healing Effect

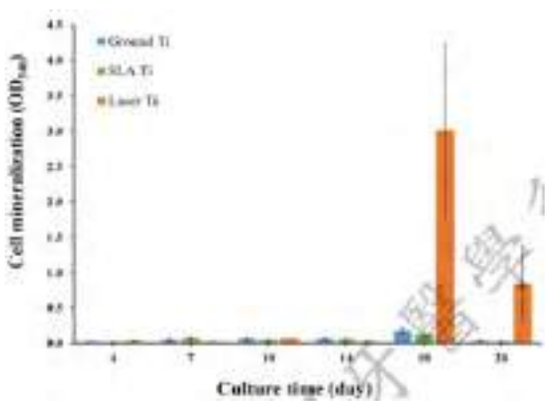
(Medical research by Professor Dr. Amr Hosny Elkhadem, University of Cairo, Egypt)

After dental implant surgery, the post-operative period is typically the most unstable phase, making implants prone to failure. Medical research conducted by Professor Dr. Amr Hosny Elkhadem at the University of Cairo, Egypt, has confirmed that, during the initial 8 weeks of dental implantation, BiomateSWISS implants with PDL® technology not only remain stable but also demonstrate a continuous increase in stability, contrasting with the usual instability observed during this critical phase.

No longer need to pursue torque values of over 50Ncm to perform immediate extraction and implantation/loading! Shortening the initial ISQ (Implant Stability Quotient) decline time can reduce the occurrence of unexpected situations!

Mineralization is a crucial factor in the early stages of bone formation.

The PDL® laser surface treatment patent of BiomateSWISS implants is the optimal choice for significantly enhancing mineralization capabilities.
In experiments conducted over 18 days, BiomateSWISS implants, with PDL® laser surface treatment, demonstrated the best mineralization capabilities compared to other brands with different surface treatments. This effectively helps prevent early-stage implant failures.

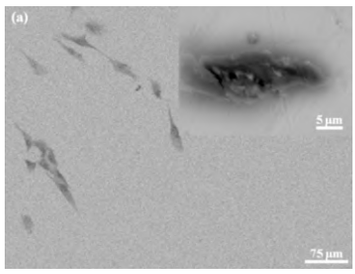


The structure of the surface is enhancing osseointegration

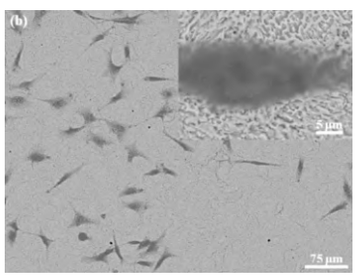
BiomateSWISS team utilizes a unique combination of special micrometric tracks and full nanoscale structures to accelerate bone healing. Validated through research papers jointly published by top universities worldwide, the implant demonstrates robust healing and long-term repair capabilities.

This effectiveness aids dental implant patients in reducing postoperative recovery time and swiftly returning to their daily lives.

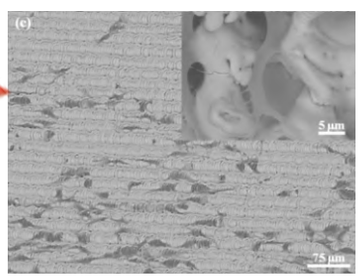
Moreover, BiomateSWISS is suitable for various special cases, including conditions such as osteoporosis, long-standing bone deficiencies, elderly individuals, minimally invasive flapless surgeries, immediate extraction and implantation, and many others.



The cells from the ceiling of other brand general dental implant.

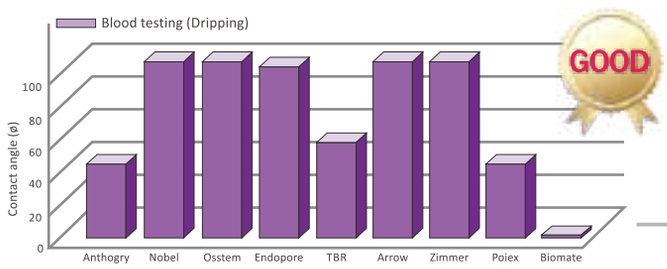


The cells from the ceiling of other brand SLA dental implant.

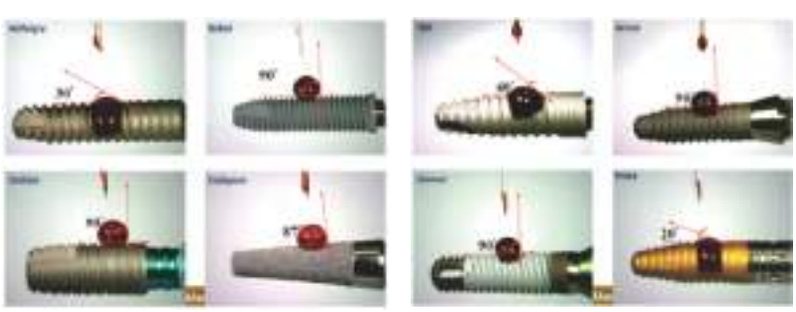


The cells from the ceiling of BiomateSWISS PDL dental implant.

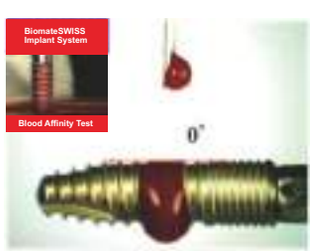
The cell attachment on the surface of Biomate implants is more abundant and dense compared to other implant brands.



Inspection Hemocompatibility Test-1



Blood Contact Angle



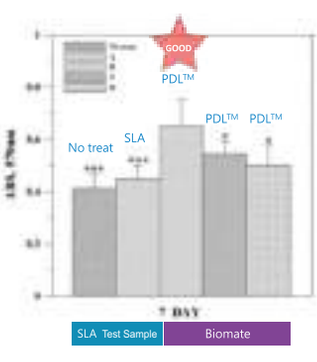
The blood will completely adhere to the fixture surface within 20 secs

Contact angle Inspection machine

MTT Assay-1 /MTT Cell Activity Test

- MMT statistical analysis of the 7th day. Using ANOVA to compare the difference of team "B" with team "No treat", "A", "C" and "D".
- The outcome shows (p<0.05), **(p<0.01) and ***(p<0.001), which indicates that there is a large difference between the teams. PDL™ shows better result than SLA in MTT test. According to the report of SEM, we can be sure that PDL™ surface is suitable for the growth of osteoblast.

Test Unit: Cell Activity and Alkaline Phosphatase Test; by Biomaterial Laboratory, I-Shou University



BiomateSWISS laser surface-treated implants is significantly lower than that observed with SLA surface implants.

Clinical research at Cairo University in Egypt confirms

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Original Article

Effect of Different Implant Surface Treatments on Bony Changes around Mandibular Implants for Completely Edentulous Patients: A Split-Mouth Comparative Study

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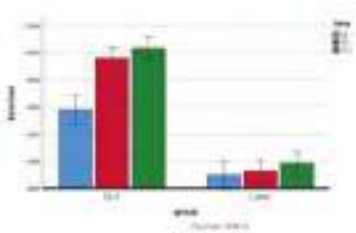
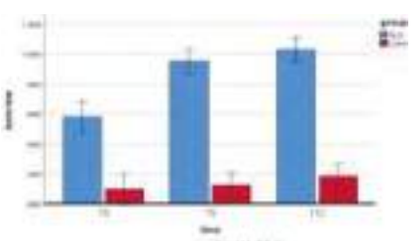
Submitted: 23-4-2023
Accepted: 7-5-2023

	6 months after overdenture insertion (T6)	9 months after overdenture insertion (T9)	12 months after overdenture insertion (T12)
SLA (X±SD)	.580±.243	.954±.192	1.031±.161
Laser (X±SD)	.096±.047	.127±.029	.183±.113
Independent samples t-test (p value)	<.001*	<.001*	<.001*

P value is significant at 5% level



Comparison of bone loss between same group at different observation time

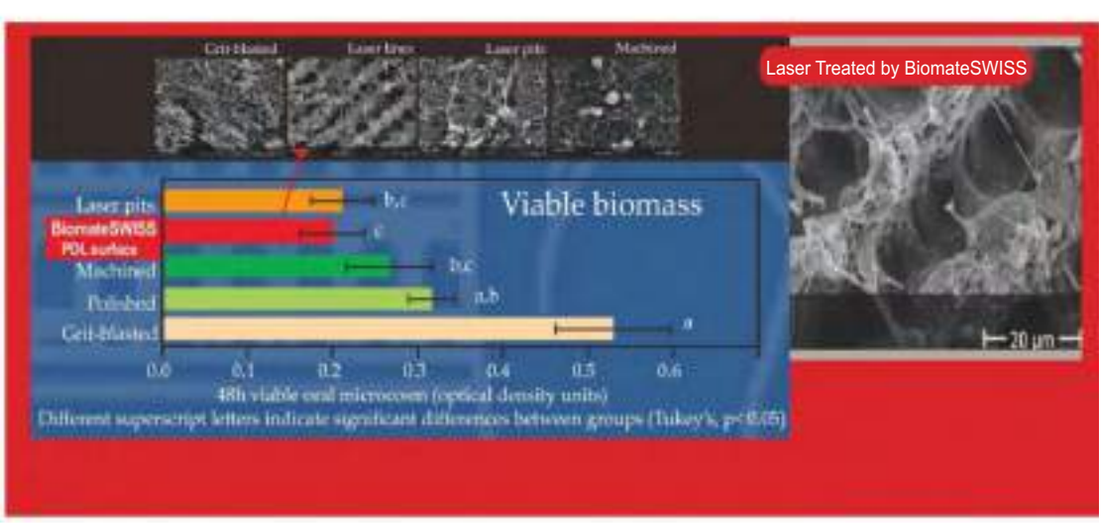


Comparison of bone loss between both groups at different observation time

Research from the University of Milan, Italy – Atibacterial Effects on Implant Surface

Self-existing bacterial resistance

Laser-treated surfaces showed the lowest biofilm formation



Source: Oral Microbiology and Biomaterials Laboratory, Department of Biomedical, University of Milan, via Pascal, 36, 20133 Milan, Italy.)2021 Research Results

A Total Solution

Digital Surgical Guide & Customized Prosthetics Service

Biomate SWISS possesses leading CAD CAM(Computer-aided design / Computer-aided manufacture) dental facilities. This technique integrate 3D photographing and computerized digital application, helping to quickly and accurately produce different type of dental restorations.
Allow to produce digital artificial teeth product with high added-value.

Provide Customized Abutment Service

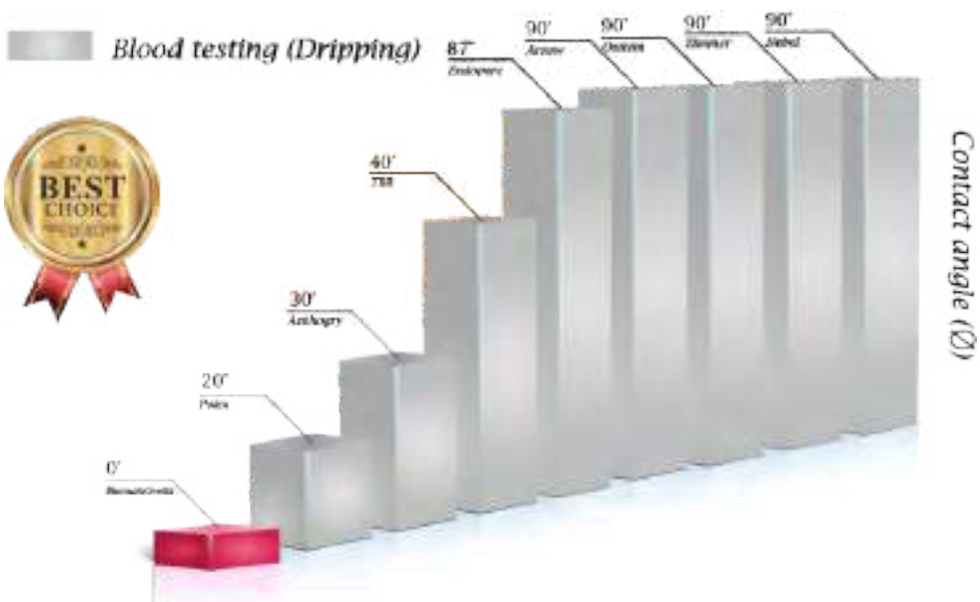
Solid Titanium customized abutment

Zirconia plus Titanium base customized abutment

BIOnavi. Digital Implant System

Biomate ArchFixation

IRB Clinical Trial



Description:
As shown on the above bar chart, Biomate SWISS fixture with the patent functional laser surface treatment shows best hemocompatibility.

Source of Origin:
Surface Functionalization Treatment on Dental Implant; P118-131, 2013 Clinical Oral Implantology II, Taipei Congress of Oral Implantologists

Biomate SWISS Dental Implant System

Design Feature

BP

BM

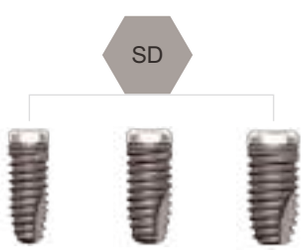
Biomate Plus Implant System

- Single Inner hole - SD 2.0 Hex
- Inner hole Morse Taper - 10°
- Size - 3.5 / 4.0 / 4.5 mm
- Length - 8 / 10 / 12 / 14mm

Features
- 1mm machined surface / threaded root-form implant
- All-in-one SD inner hole - reduces inventory

Suitable for
- General bone conditions (D1-D4)

Surface treatment
- PDL®



Size - 3.5 / 4.0 / 4.5 mm

Biomate Implant System

- Inner hole - SD 2.0 Hex / RD 2.5 Hex
- Inner hole Morse taper - 10 °
- Flared-out Head 10º design
- Size - 3.3 / 4.1 / 4.8 / 5.5 mm
- Length - 8 / 10 / 12 / 14mm

Features
- Size 3.3 is suitable for anterior teeth and lateral incisors.
- Sizes 4.1 / 4.8 / 5.5 have Flared-out design (10 degrees) suitable for softer bone. This design can provide better initial stability when used for maxillary sinus lift.

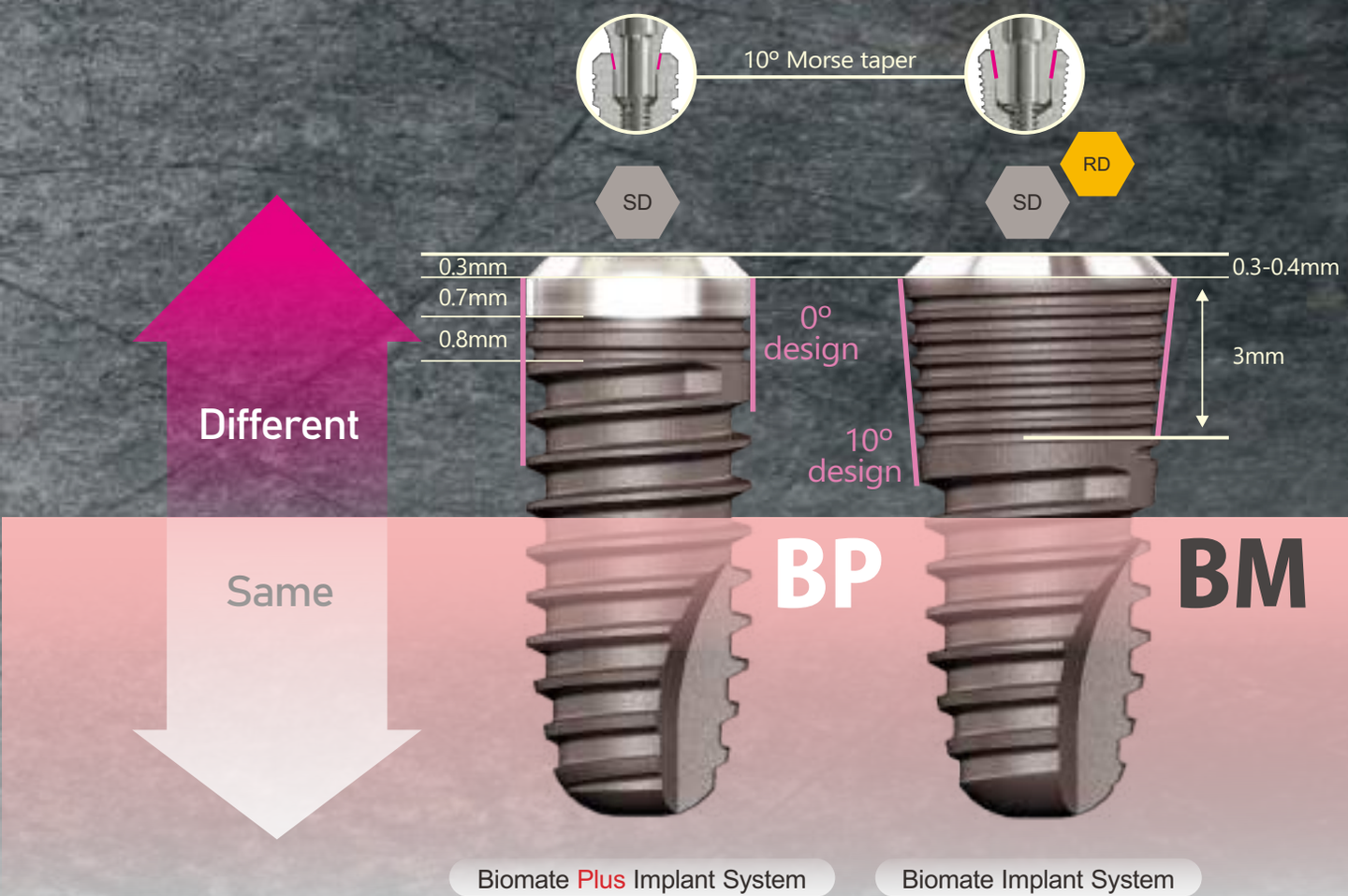
Suitable for
- D4 bone and maxillary sinus lift.

※D1-D3 bone requires the use of Counter Sink.

Surface treatment
- PDL®

Size - 3.3 / 4.1 / 4.8 / 5.5 mm

The differences between Biomate Plus (BP) & Biomate (BM) Fixture



Biomate Implant System

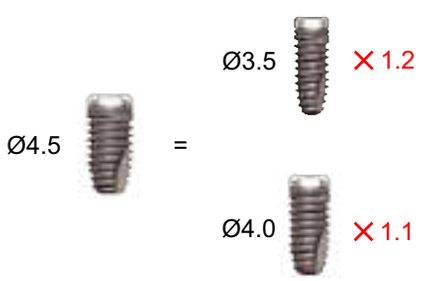
BM | BP | BM

Surface Area by Diameter

Fixture : 10 mm length

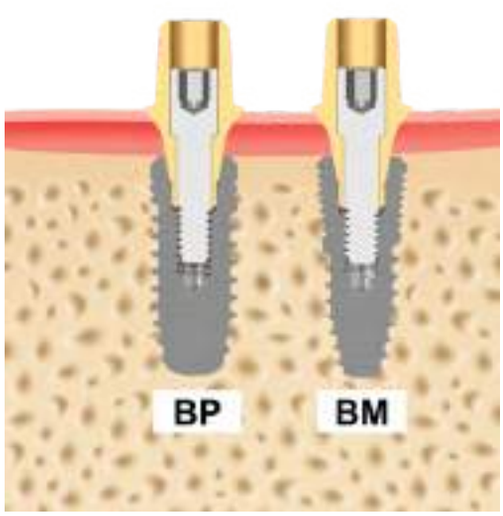
	Biomate (RD)		Biomate Plus (SD)			Biomate (RD)	
Dlameter	Ø3.3	Ø4.1	Ø3.5	Ø4.0	Ø4.5	Ø4.8	Ø5.5
Surface Area (mm^2)	171.55	182.44	178.58	203.29	229.74	225.01	266.47
L10	-16%	-10%	-12%	Reference 203.29 mm^2	13%	11%	31%

Surface Area of Biomate-Plus Ø4.5 Fixture



Surface Area of Biomate Ø5.5 Fixture

Types of Biomate fixture connection



(Left) BP implant size 4.0*10+ Simple abutment D4.5*H4*G2

(Right) BM implant size 4.1*10+ Simple abutment D4.5*H4*G2

Selection Guideline BP&BM

Idea emergence profile for each tooth position and bone condition

D1-D3 Bone

D4 Bone

Sinus Lift / Immediate Implant Placement

Biomate Implant System

Suitable for:

- ✓ Surgery needs initial stability
- ✓ Immediate replacement and immediate loading
- ✓ D3~D4 bone

Material:

- Medical grade 4 pure titanium
- In the posterior area, please use implants of over diameter 4.1mm (inclusive) size

Material: Medical grade 4 pure titanium

Unit:mm , Scale 1 : 1.5 / mm

	L8	L10	L12	L14
SD D3.3 Hex 2.0	1AA-001	1AA-002	1AA-003	1AA-004
SD D4.1 Hex 2.0	1AA-005	1AA-006	1AA-007	1AA-008
RD D4.8 Hex 2.5	1AA-009	1AA-010	1AA-011	1AA-012
RD D5.5 Hex 2.5	1AA-013	1AA-014	1AA-015	1AA-016

Biomate Plus implant System

Suitable for:

✓ All Bone densities(D1~D4)

✓ Minimally invasive surgery

Material:

- Medical grade 4 pure titanium
- In the posterior area, please use implants of over diameter 4.0mm (inclusive) size

Material: Medical grade 4 pure titanium

Unit:mm , Scale 1 : 1.5 / mm

	L8	L10	L12	L14
SD D3.5 Hex 2.0	1AA-017	1AA-018	1AA-019	1AA-020
SD D4.0 Hex 2.0	1AA-021	1AA-022	1AA-023	1AA-024
SD D4.5 Hex 2.0	1AA-025	1AA-026	1AA-027	1AA-028

Biomate Implant Design

Cross Section Design

- Cross section design for preventing denture rotation.

0.3mm Platform Switch Design

- The anti-bacterial and machined surface on the platform avoid the growth of dental plaque and decrease bone absorption.
- Avoid bone loss and gum recession.

Minor External Expansion Design (Ø4.1、Ø4.8、Ø5.5)

- Increase fixture stability in primary stage and helpful for stability in extracted socket.

Root Form Design

- Tapered body for use in anatomically constricted area.

Self-Tapping Thread Design

- Ensure better primary stability and avoid excessive force causing cortical bone absorption and promotes bone tapering during insertion.

Arced Root Design

- Arc shape at the bottom of the fixture.
- Avoid damaging vital structure like inferior alveolar nerve or maxillary sinus.

Anodized Coloring Treatment

Medical coloring treatment technique

- An oxide layer formed by anodic treatment color the abutment gold, increasing the aesthetic of the gum.
- Coloring treatment can improve the affinity of the abutment and gum, thus solidify the connection of fibro-tissue.

Various Abutment Specifications

- Various abutment configurations to suit different oral conditions.
- M1.6 abutment screw is designed to be compatible to all abutments.
- Screw Driver Hex 1.25mm is designed to match all abutment configuration (Ball abutment / Positioner abutment / Multi Unit abutment excluded).

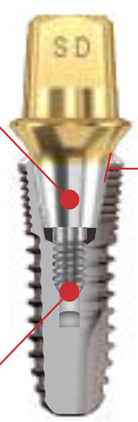
Internal Hexagon & 10° Morse Taper

Internal Hex Design

- Avoid abutment rotation, increasing stability of the connection between the fixture and the abutment.

Abutment Screw

- The abutment screw connects the abutment firmly to the fixture; such component is not subject to load, eliminating the risk of breakage.

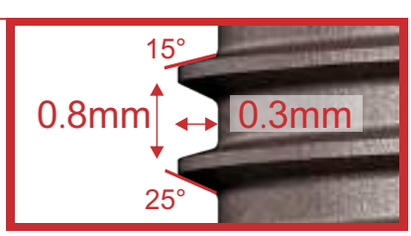


10° Morse Tapper Design

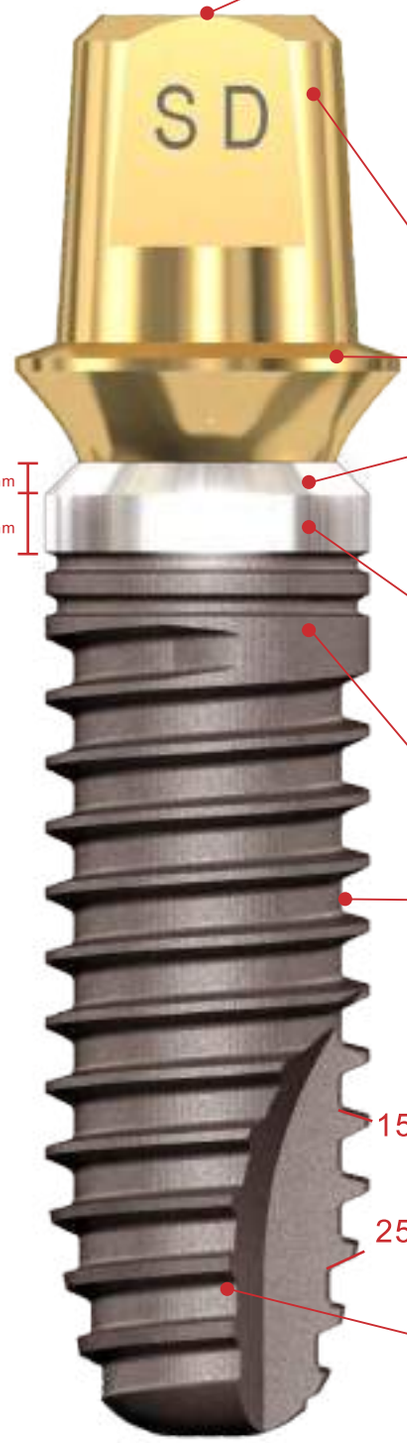
- Ensure firm connection between the fixture and the abutment, eliminating the possibility of unscrewing and micromovement, avoiding mechanical stimulation to surrounding tissue as well as preventing the intrusion of cell and bacteria.

Trapezoid Thread Design

- The lower part of the thread carries a larger angle of 25 degree allowing easier insertion of implant.
- The upper part carries a smaller angle of 15 degree preventing implant from dislodging.
- The space between the threads also forms an asymmetric trapezoid shape with a 0.3mm depth and 0.8mm apart. During the insertion of implant, the lower slope of this asymmetric trapezoid space (the upper part of the thread) squeezing the bone upward and compacting the bone into the space.
- The asymmetric trapezoid also benefits the laser processing on implant surface which providing good environment for optimal bone



Biomate Plus Implant Design



Single pore dimension of abutment design

- With the simplification of the restoration components for Biomate & Biomate-Plus implant system. We can complete the locked function of restoration components by only using 1.25mm Hex Driver HP/RT.

Cross Section Design

- Cross section design for preventing denture rotation.

0.3mm Platform Switch Design

- The anti-bacterial and machined surface on the platform avoid the growth of dental plaque and decrease bone absorption.
- Avoid bone loss and gum recession.

0.7mm vertical machined surface

- May adjust different insertion depth according to the requirement of implant area.

0.8mm non-continuous parallel thread

- Excellent effect for maintaining the height of bone level.

Root Form Design

- Tapered body for use in anatomically constricted area.

Self-Tapping Thread Design

- Ensure better primary stability and avoid excessive force causing cortical bone absorption and promotes bone tapering during insertion.

Arced Root Design

- Arc shape at the bottom of the fixture.
- Avoid damaging vital structure like inferior alveolar nerve or maxillary sinus.

Anodized Coloring Treatment

Medical coloring treatment technique

- An oxide layer formed by anodic treatment color the abutment gold, increasing the aesthetic of the gum.
- Coloring treatment can improve the affinity of the abutment and gum, thus solidify the connection of fibro-tissue.

Various Abutment Specifications

- Various abutment configurations to suit different oral conditions.
- M1.6 abutment screw is designed to be compatible to all abutments.
- Screw Driver Hex 1.25mm is designed to match all abutment configuration (Ball abutment / Positioner abutment / Multi Unit abutment excluded).

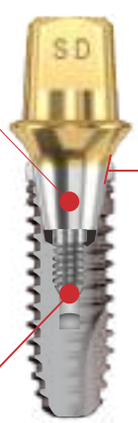
Internal Hexagon & 10° Morse Taper

Internal Hex Design

- Avoid abutment rotation, increasing stability of the connection between the fixture and the abutment.

Abutment Screw

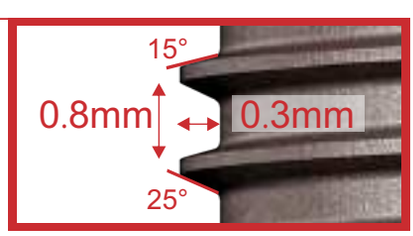
- The abutment screw connects the abutment firmly to the fixture; such component is not subject to load, eliminating the risk of breakage.



10° Morse Tapper Design

- Ensure firm connection between the fixture and the abutment, eliminating the possibility of unscrewing and micromovement, avoiding mechanical stimulation to surrounding tissue as well as preventing the intrusion of cell and bacteria.

Trapezoid Thread Design

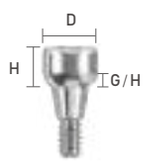
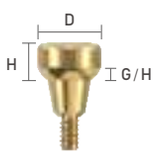
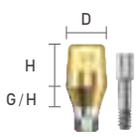
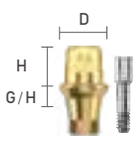


- The lower part of the thread carries a larger angle of 25 degree allowing easier insertion of implant.
- The upper part carries a smaller angle of 15 degree preventing implant from dislodging.
- The space between the threads also forms an asymmetric trapezoid shape with a 0.3mm depth and 0.8mm apart. During the insertion of implant, the lower slope of this asymmetric trapezoid space (the upper part of the thread) squeezing the bone upward and compacting the bone into the space.
- The asymmetric trapezoid also benefits the laser processing on implant surface which providing good environment for optimal bone

Biomate Dimension Table

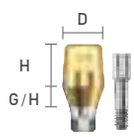
Diameter 3.3 is designed for anterior area, not recommended for posterior area.

Unit : mm

Fixture	 SD		 RD	
Diameter	3.3	4.1	4.8	5.5
Length	8 10 12 14		8 10 12 14	
Platform	3.3	4.1	4.8	5.5
Body Diameter	2.8	2.8	3.3	4.0
Bevel Height	0.3	0.4	0.4	0.4
Final Drill	2.8 (Blue)	2.8 (Blue)	3.3 (Purple)	4.0 (Orange)
Counter Sink	/	4.1 (Green)	4.8 (Purple)	5.5 (Orange)
Healing Abutment	 SD		 RD	
Diameter	4.0	4.5	5.0	6.0
Height	2 3 5 7		2 3 5 7	
Simple Abutment (Hex / Non Hex)	 SD		 RD	
Diameter	4.0	4.5	5.0	6.0
Height	4.0 5.5 7.0		4.0 5.5 7.0	
Gingival Height	1 2 3 4		1 2 3 4	

Biomate Plus Dimension Table

Unit : mm

Fixture	 SD	 SD	 SD
Diameter	3.5	4.0	4.5
Length	8 10 12 14	8 10 12 14	8 10 12 14
Platform	3.5 (Dark blue)	4.0 (Pink)	4.5 (Brown)
Body Diameter	2.8 (Blue)	3.3 (Purple)	4.0 (Orange)
Bevel Height	1.0	1.0	1.0
Final Drill	2.8 (Blue)	3.3 (Purple)	4.0 (Orange)
Profile Drill	3.5 (Dark blue)	4.0 (Pink)	4.5 (Brown)
Healing Abutment		 SD	
Diameter	4.0	4.5	5.0
Height		2 3 5 7	
Simple Abutment (Hex / Non Hex)		 SD	
Diameter	4.0	4.5	5.0
Height		4.0 5.5 7.0	
Gingival Height		1 2 3 4	

PROSTHETIC FLOW DIAGRAM 1

PROSTHETIC FLOW DIAGRAM 2

PROSTHETIC FLOW DIAGRAM 3

PROSTHETIC FLOW DIAGRAM 4

PROSTHETIC FLOW DIAGRAM 5

Healing Abutment (mark)

- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:10Ncm

Material:

- Medical Grade 4 Pure Titanium

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D \ H	2.0	3.0	5.0	7.0
				
4.0	1AA-316	1AA-313	1AA-314	1AA-315
4.5	1AA-317	1AA-301	1AA-302	1AA-303
5.0	1AA-318	1AA-307	1AA-308	1AA-309
6.0	1AA-324	1AA-321	1AA-322	1AA-323

R

Implant Size

Ø4.8 Ø5.5

D \ H	2.0	3.0	5.0	7.0
				
5.0	1AA-319	1AA-304	1AA-305	1AA-306
6.0	1AA-320	1AA-310	1AA-311	1AA-312

Unit : mm Scale 1 : 1.5 / mm

Cover Screw

✓ Hand tightened with 1.25 hex driver

Material:

- Medical Grade 4 Pure Titanium

S
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5

SD	1AA-101

R
Implant Size
Ø4.8 Ø5.5

RD	1AA-102

Membrane Screw

✓ Used for securing membranes to implant.
✓ Threaded into the cover screw inner thread.
✓ Hand tightened with 1.25 hex driver

Material:

- Medical Grade 4 Pure Titanium

S
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5

D \ G/H	0	0.5	1	2
H	5.5	6.0	6.5	7.5
3.3	1AA-111	1AA-112	1AA-113	1AA-114
5.0	1AA-115	1AA-116	1AA-117	1AA-118

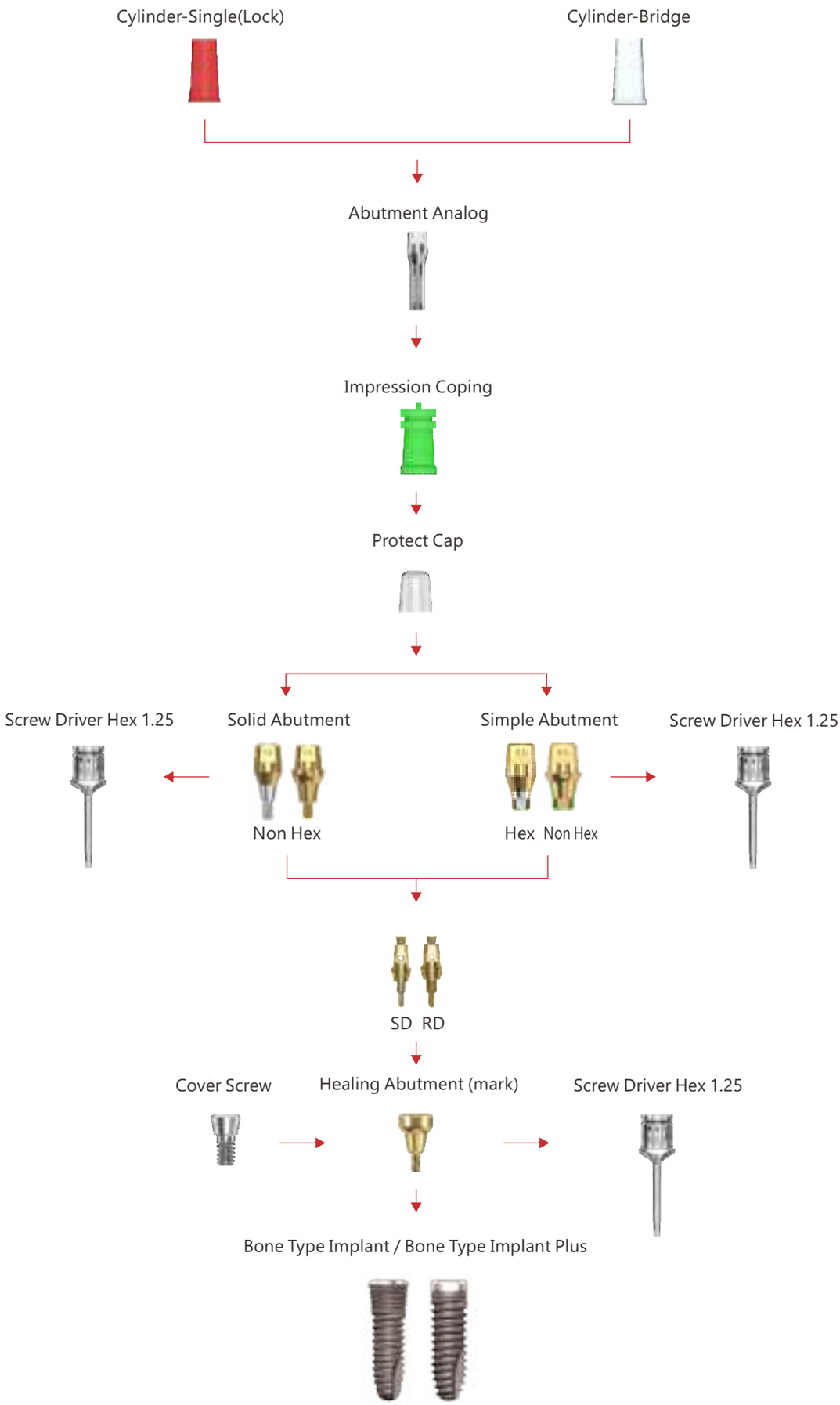
R
Implant Size
Ø4.8 Ø5.5

D \ G/H	0	0.5	1	2
H	6.2	6.7	7.2	8.2
4.8	1AA-103	1AA-104	1AA-105	1AA-106
6.0	1AA-107	1AA-108	1AA-109	1AA-110

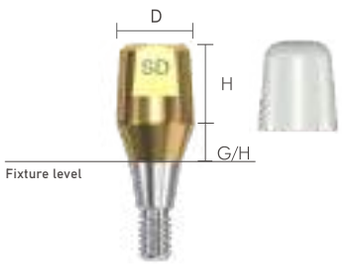
Unit : mm Scale 1 : 1.5 / mm

Solid Abutment / Simple Abutment

Abutment Level Impression



Solid Abutment



- ✓ Abutment for producing cement-retained/combination prosthesis
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:25Ncm

Material:

- Medical Grade 4 Pure Titanium

D	G/H	1	2	3	4
	H				
Non Hex 4.0	4.0	4AA-A41	4AA-A44	4AA-A47	4AA-A50
Non Hex 4.0	5.5	4AA-A42	4AA-A45	4AA-A48	4AA-A51
Non Hex 4.0	7.0	4AA-A43	4AA-A46	4AA-A49	4AA-A52
Non Hex 4.5	4.0	4AA-A53	4AA-A55	4AA-A57	4AA-A59
Non Hex 4.5	5.5	4AA-A01	4AA-A02	4AA-A03	4AA-A04
Non Hex 4.5	7.0	4AA-A54	4AA-A56	4AA-A58	4AA-A60
Non Hex 5.0	4.0	4AA-A05	4AA-A08	4AA-A11	4AA-A14
Non Hex 5.0	5.5	4AA-A06	4AA-A09	4AA-A12	4AA-A15
Non Hex 5.0	7.0	4AA-A07	4AA-A10	4AA-A13	4AA-A16

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D	G/H	1	2	3	4
	H				
Non Hex 5.0	4.0	4AA-A17	4AA-A20	4AA-A23	4AA-A26
Non Hex 5.0	5.5	4AA-A18	4AA-A21	4AA-A24	4AA-A27
Non Hex 5.0	7.0	4AA-A19	4AA-A22	4AA-A25	4AA-A28
Non Hex 6.0	4.0	4AA-A29	4AA-A32	4AA-A35	4AA-A38
Non Hex 6.0	5.5	4AA-A30	4AA-A33	4AA-A36	4AA-A39
Non Hex 6.0	7.0	4AA-A31	4AA-A34	4AA-A37	4AA-A40

R

Implant Size

Ø4.8 Ø5.5

Unit : mm Scale 1 : 1.5 / mm

Solid Abutment Components

Protect Cap

- ✓ Used for Solid/Simple abutment protection and reducing patient discomfort
- ✓ Used as a temporary crown base

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

D \ H	4.0	5.5	7.0
4.0	6AA-087	6AA-051	6AA-049
4.5	6AA-052	6AA-019	6AA-050
5.0	6AA-053	6AA-020	6AA-021
6.0	6AA-088	6AA-022	6AA-023

Impression Coping

- ✓ Components for Solid/Simple abutment impression
- ✓ The top lug is designed to align with the cross section of the body of abutment for accurate positioning

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

D \ H	10.0
4.0	6AA-048
4.5	6AA-016
5.0	6AA-017
6.0	6AA-018

Unit : mm Scale 1 : 1.5 / mm

Solid Abutment Components

Cylinder-Single / Cylinder-Bridge

- ✓ Enabling the production of copping with abutment analog
- ✓ Used after casting, after cleaning the margin for proper fitting

Cylinder-Single

Cylinder-Bridge

D \ H	10.0	D \ H	10.0
4.5	6AA-010	4.5	6AA-013
5.0	6AA-011	5.0	6AA-014
6.0	6AA-012	6.0	6AA-015

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

Abutment Analog

- ✓ Solid/Simple abutment reproduction on model after impression

D \ H	4.0	5.5	7.0
4.0	6AA-054	6AA-055	6AA-056
4.5	6AA-057	6AA-003	6AA-058
5.0	6AA-004	6AA-005	6AA-006
6.0	6AA-007	6AA-008	6AA-009

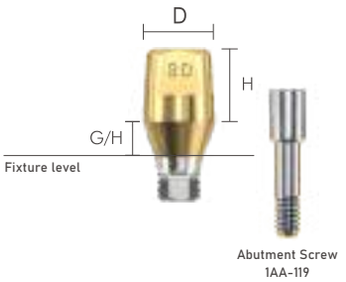
S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

Unit : mm Scale 1 : 1.5 / mm

Simple Abutment



Simple abutment is the same as solid abutment above margin, so all components of solid abutment can be shared with simple abutment

- ✓ Abutment for producing cement-retained/combination prosthesis
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical Grade 4 Pure Titanium

D	G/H	1	2	3	4
	H				
Hex 4.0	4.0	4AA-B41	4AA-B44	4AA-B47	4AA-B50
Hex 4.0	5.5	4AA-B42	4AA-B45	4AA-B48	4AA-B51
Hex 4.0	7.0	4AA-B43	4AA-B46	4AA-B49	4AA-B52
Hex 4.5	4.0	4AA-B53	4AA-B55	4AA-B57	4AA-B59
Hex 4.5	5.5	4AA-B01	4AA-B02	4AA-B03	4AA-B04
Hex 4.5	7.0	4AA-B54	4AA-B56	4AA-B58	4AA-B60
Hex 5.0	4.0	4AA-B05	4AA-B08	4AA-B11	4AA-B14
Hex 5.0	5.5	4AA-B06	4AA-B09	4AA-B12	4AA-B15
Hex 5.0	7.0	4AA-B07	4AA-B10	4AA-B13	4AA-B16

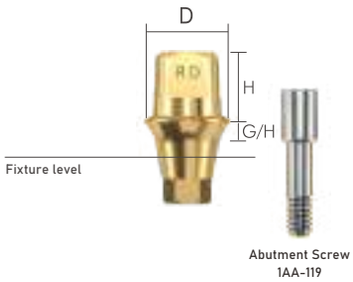
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5

D	G/H	1	2	3	4
	H				
Non Hex 4.0	4.0	4AA-C41	4AA-C44	4AA-C47	4AA-C50
Non Hex 4.0	5.5	4AA-C42	4AA-C45	4AA-C48	4AA-C51
Non Hex 4.0	7.0	4AA-C43	4AA-C46	4AA-C49	4AA-C52
Non Hex 4.5	4.0	4AA-C53	4AA-C55	4AA-C57	4AA-C59
Non Hex 4.5	5.5	4AA-C01	4AA-C02	4AA-C03	4AA-C04
Non Hex 4.5	7.0	4AA-C54	4AA-C56	4AA-C58	4AA-C60
Non Hex 5.0	4.0	4AA-C05	4AA-C08	4AA-C11	4AA-C14
Non Hex 5.0	5.5	4AA-C06	4AA-C09	4AA-C12	4AA-C15
Non Hex 5.0	7.0	4AA-C07	4AA-C10	4AA-C13	4AA-C16

Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5

Unit : mm Scale 1 : 1.5 / mm

Simple Abutment



Simple abutment is the same as solid abutment above margin, so all components of solid abutment can be shared with simple abutment

- ✓ Abutment for producing cement-retained/combination prosthesis
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical Grade 4 Pure Titanium

R
Implant Size
Ø4.8 Ø5.5

D		G/H	1	2	3	4
		H				
Hex	5.0	4.0	4AA-B17	4AA-B20	4AA-B23	4AA-B26
Hex	5.0	5.5	4AA-B18	4AA-B21	4AA-B24	4AA-B27
Hex	5.0	7.0	4AA-B19	4AA-B22	4AA-B25	4AA-B28
Hex	6.0	4.0	4AA-B29	4AA-B32	4AA-B35	4AA-B38
Hex	6.0	5.5	4AA-B30	4AA-B33	4AA-B36	4AA-B39
Hex	6.0	7.0	4AA-B31	4AA-B34	4AA-B37	4AA-B40

R
Implant Size
Ø4.8 Ø5.5

D		G/H	1	2	3	4
		H				
Non Hex	5.0	4.0	4AA-C17	4AA-C20	4AA-C23	4AA-C26
Non Hex	5.0	5.5	4AA-C18	4AA-C21	4AA-C24	4AA-C27
Non Hex	5.0	7.0	4AA-C19	4AA-C22	4AA-C25	4AA-C28
Non Hex	6.0	4.0	4AA-C29	4AA-C32	4AA-C35	4AA-C38
Non Hex	6.0	5.5	4AA-C30	4AA-C33	4AA-C36	4AA-C39
Non Hex	6.0	7.0	4AA-C31	4AA-C34	4AA-C37	4AA-C40

Unit : mm Scale 1 : 1.5 / mm

Simple Abutment Components

Abutment Screw

✓ Screw used to assemble implant and abutment

Material:

- Medical Grade 5 Titanium Alloy

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

Hex 1.25

1AA-119

Laboratory Screw

✓ Abutment screw for lab work

✓ Coating:Golden

Material:

- Medical Grade 5 Titanium Alloy

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

Hex 1.25

6AA-085

Implant Analog

✓ Lab analog for fixture level impression

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

6AA-001

R

Implant Size

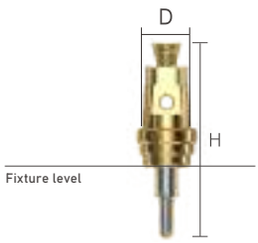
Ø4.8 Ø5.5

6AA-081

Unit : mm Scale 1 : 1.5 / mm

Simple Abutment Components

Try-in Abutment



- ✓ Used in selecting specifications of Solid/Simple abutment
- ✓ Coating:SD/Semi-Golden; RD/Golden

Material:

- Medical Grade 4 Pure Titanium

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D	4.0	4.5	5.0
	3AA-054	3AA-046	3AA-047

R

Implant Size

Ø4.8 Ø5.5

D	5.0	6.0
	3AA-048	3AA-049

Unit : mm Scale 1 : 1.5 / mm

Impression Post-Open Tray

- ✓ Components for fixture level impression taking with open tray
- ✓ Multi-undercutting design that is stably fixed within the impression body
- ✓ Hand tightened with 1.25 hex driver

D \ H	10.8
Hex 4.0	6AA-024
Hex 5.0	6AA-025
Non Hex 4.0	6AA-035
Non Hex 5.0	6AA-036

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D \ H	10.8
Hex 5.0	6AA-059
Hex 6.0	6AA-060
Non Hex 5.0	6AA-063
Non Hex 6.0	6AA-064

R

Implant Size

Ø4.8 Ø5.5

Impression Post-Open Tray Screw

- ✓ Screw used to assemble implant and impression post-open tray

L	22	26
	6AA-028	6AA-029

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

Unit : mm Scale 1 : 1.5 / mm

Impression Post-Close Tray

- ✓ Components for fixture level impression taking with closed tray
- ✓ Undercutting design for stable fastening and accurate repositioning
- ✓ Hand tightened with 1.25 hex driver

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D \ H	10.5
Hex 4.0	6AA-030
Hex 5.0	6AA-031
Non Hex 4.0	6AA-039
Non Hex 5.0	6AA-040

R

Implant Size

Ø4.8 Ø5.5

D \ H	10.5
Hex 5.0	6AA-061
Hex 6.0	6AA-062
Non Hex 5.0	6AA-065
Non Hex 6.0	6AA-066

Impression Post-Close Tray Screw

- ✓ Screw used to assemble implant and impression post-close tray

S R

Implant Size

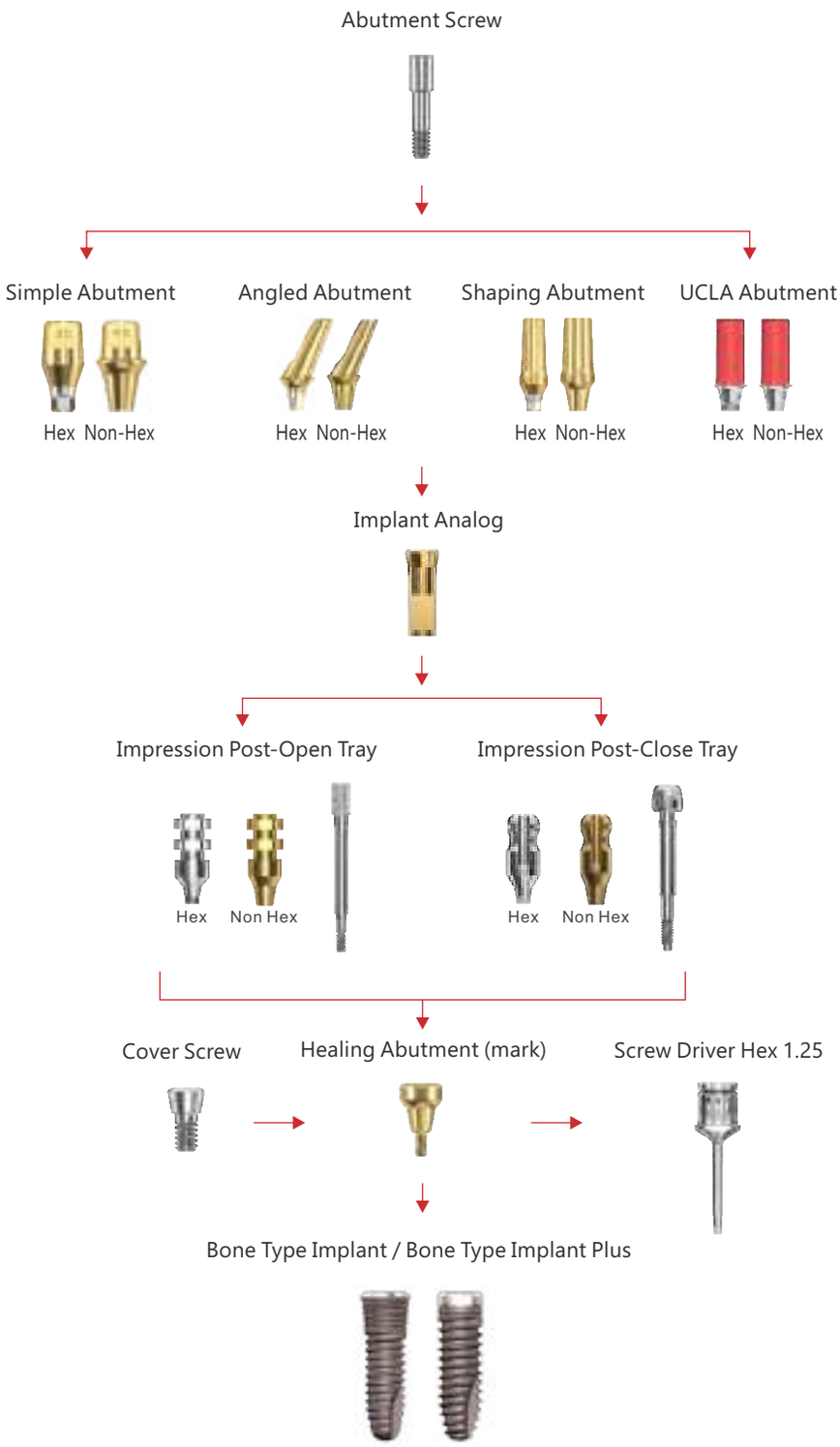
Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

L	16.5
	6AA-034

Unit : mm Scale 1 : 1.5 / mm

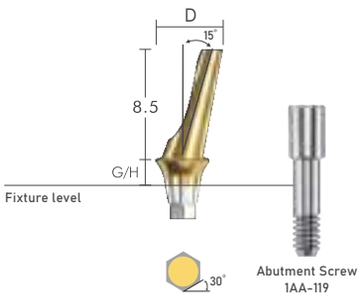
Simple / Angled / Shaping / UCLA

Fixture Level Impression



Unit : mm Scale 1 : 1.5 / mm

15°Angled Abutment



- ✓ Used when a prosthesis's path adjustment is necessary at 15°
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ The angled direction is pointed to hexagonal edge
- ✓ Accurate specification selected by angled Try-in Abutment
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical Grade 4 Pure Titanium

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D		G/H	1	2	3	4
		H				
Hex	4.0	8.5	4AA-D17	4AA-D01	4AA-D18	4AA-D02
Hex	5.0	8.5	4AA-D19	4AA-D03	4AA-D20	4AA-D04
Non Hex	4.0	8.5	4AA-D25	4AA-D09	4AA-D26	4AA-D10
Non Hex	5.0	8.5	4AA-D27	4AA-D11	4AA-D28	4AA-D12

R

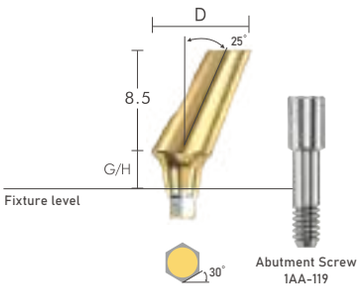
Implant Size

Ø4.8 Ø5.5

D		G/H	1	2	3	4
		H				
Hex	5.0	8.5	4AA-D21	4AA-D05	4AA-D22	4AA-D06
Hex	6.0	8.5	4AA-D23	4AA-D07	4AA-D24	4AA-D08
Non Hex	5.0	8.5	4AA-D29	4AA-D13	4AA-D30	4AA-D14
Non Hex	6.0	8.5	4AA-D31	4AA-D15	4AA-D32	4AA-D16

Unit : mm Scale 1 : 1.5 / mm

25°Angled Abutment



- ✓ Used when a prosthesis's path adjustment is necessary at 25°
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ The angled direction is pointed to hexagonal edge
- ✓ Accurate specification selected by angled Try-in Abutment
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical Grade 4 Pure Titanium

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D		G/H	1	2	3	4
		H				
Hex	4.0	8.5	4AA-E17	4AA-E01	4AA-E18	4AA-E02
Hex	5.0	8.5	4AA-E19	4AA-E03	4AA-E20	4AA-E04
Non Hex	4.0	8.5	4AA-E25	4AA-E09	4AA-E26	4AA-E10
Non Hex	5.0	8.5	4AA-E27	4AA-E11	4AA-E28	4AA-E12

R

Implant Size

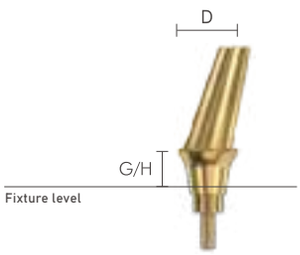
Ø4.8 Ø5.5

D		G/H	1	2	3	4
		H				
Hex	5.0	8.5	4AA-E21	4AA-E05	4AA-E22	4AA-E06
Hex	6.0	8.5	4AA-E23	4AA-E07	4AA-E24	4AA-E08
Non Hex	5.0	8.5	4AA-E29	4AA-E13	4AA-E30	4AA-E14
Non Hex	6.0	8.5	4AA-E31	4AA-E15	4AA-E32	4AA-E16

Unit : mm Scale 1 : 1.5 / mm

Angled Abutment Components

15° Angled Try-in Abutment



✓ Used in selecting diameter、and G/H of angled abutment when in oral cavity or in model

Material:

- Medical Grade 4 Pure Titanium

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D \ G/H	2	4
4.0	3AA-068	3AA-072
5.0	3AA-070	3AA-071

R

Implant Size

Ø4.8 Ø5.5

D \ G/H	2	4
5.0	3AA-069	3AA-073
6.0	3AA-074	3AA-075

25° Angled Try-in Abutment

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D \ G/H	2	4
4.0	3AA-076	3AA-077
5.0	3AA-078	3AA-079

R

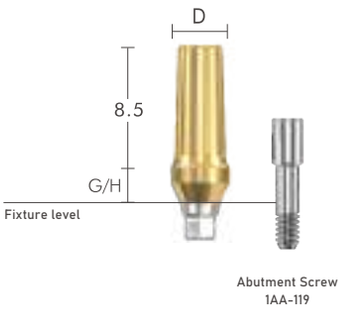
Implant Size

Ø4.8 Ø5.5

D \ G/H	2	4
5.0	3AA-080	3AA-081
6.0	3AA-082	3AA-083

Unit : mm Scale 1 : 1.5 / mm

Shaping Abutment



- ✓ Used when an abutment's path must be altered or a prosthesis's margin area must be customized
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical Grade 4 Pure Titanium

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D		G/H	0	1.5	3
		H			
Hex	4.0	11.0	4AA-H41	4AA-H42	4AA-H43
Hex	5.0	11.0	4AA-H44	4AA-H45	4AA-H46
Non Hex	4.0	11.0	4AA-H53	4AA-H54	4AA-H55
Non Hex	5.0	11.0	4AA-H56	4AA-H57	4AA-H58

R

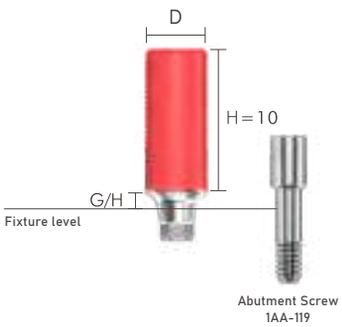
Implant Size

Ø4.8 Ø5.5

D		G/H	0	1.5	3
		H			
Hex	5.0	11.0	4AA-H47	4AA-H48	4AA-H49
Hex	6.0	11.0	4AA-H50	4AA-H51	4AA-H52
Non Hex	5.0	11.0	4AA-H59	4AA-H60	4AA-H61
Non Hex	6.0	11.0	4AA-H62	4AA-H63	4AA-H64

Unit : mm Scale 1 : 1.5 / mm

UCLA Abutment



- ✓ Used in producing cement-retained/combination/screw-retained prosthesis
- ✓ Used when path、asthetics、or space have limitations
- ✓ After customization、prosthesis must be produced by casting using dental-quality CCM
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Upper part/POM; Lower part/ CCM(Co-Cr-Mo)

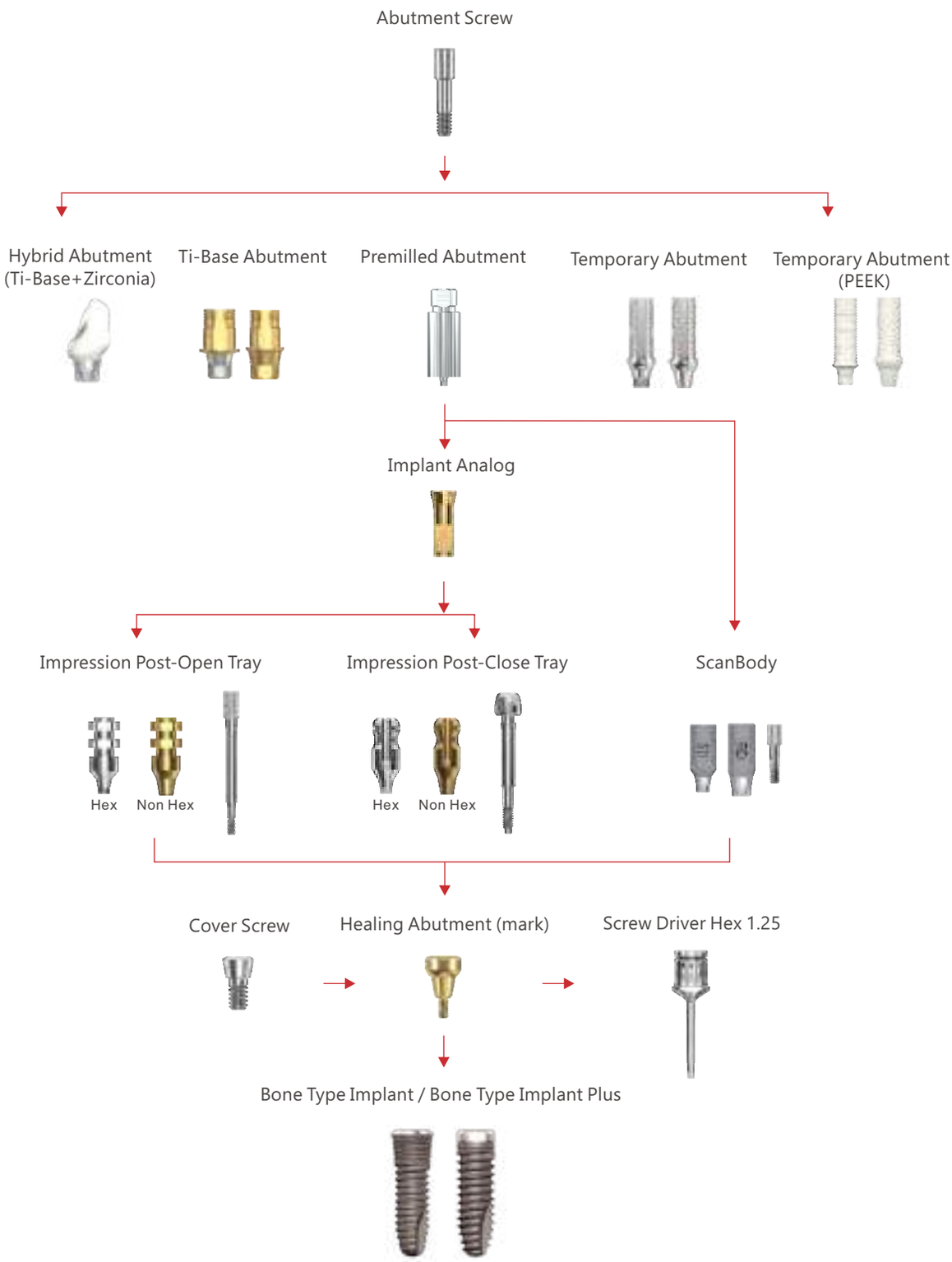
	D	G/H	1
Hex	4.5	10.0	4AA-K01
Non Hex	4.5	10.0	4AA-K03

	D	G/H	1
Hex	5.0	10.0	4AA-K02
Non Hex	5.0	10.0	4AA-K04

Unit : mm Scale 1 : 1.5 / mm

CAD CAM / Ti-Base / Temporary / Premilled

Fixture Level Impression



ScanBody

- ✓ Scan body for intra oral scan
- ✓ Hand tightened with 1.25 hex driver

Material:

- Medical Grade 4 Pure Titanium

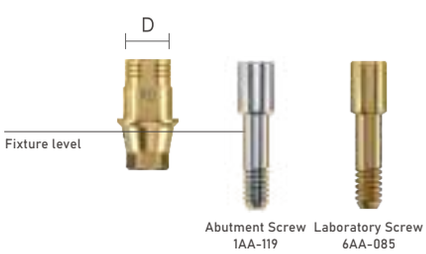
S
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5

6AA-083

R
Implant Size
Ø4.8 Ø5.5

6AA-084

Ti-Base Abutment



- ✓ Abutment for producing cement-retained/combination/ screw-retained prosthesis
- ✓ Used for producing Ti+Zr custom abutment with CAD/CAM equipment
- ✓ Biomate's offical implant library provided
- ✓ Use fixture level or intra oral scan body impression
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical Grade 4 Pure Titanium

S
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5

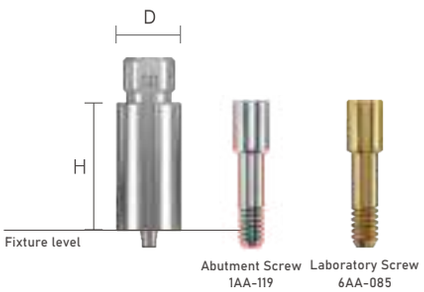
D	GH	0.5	1.5	2.5
	H			
4.0	4.0	4AA-L01	4AA-L03	4AA-L05
	6.0	4AA-L07	4AA-L09	4AA-L11

R
Implant Size
Ø4.8 Ø5.5

D	GH	0.5	1.5	2.5
	H			
4.0	4.0	4AA-L02	4AA-L04	4AA-L06
	6.0	4AA-L08	4AA-L10	4AA-L12

Unit : mm Scale 1 : 1.5 / mm

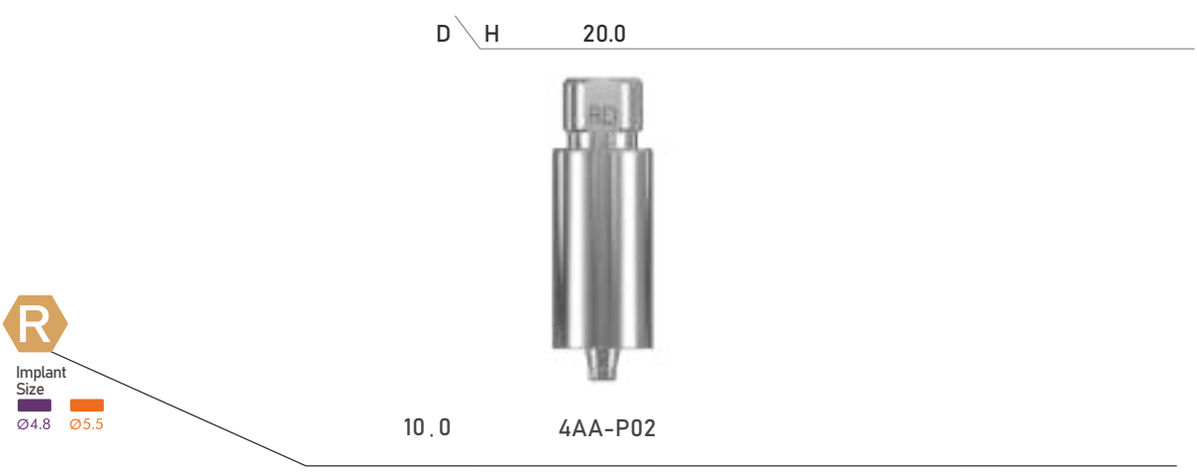
Premilled Abutment



- ✓ Milling equipment for dental work to product custom abutment
- ✓ Biomate's offical implant library provided
- ✓ Use fixture level or intra oral scan body impression
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

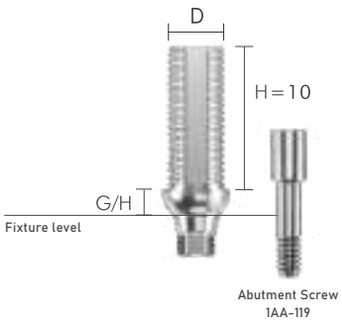
Material:

- Medical Grade 4 Pure Titanium



Unit : mm Scale 1 : 1.5 / mm

Temporary Abutment



- ✓ Used in producing temporary prosthesis
- ✓ Structure enabling easy customization
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical Grade 4 Pure Titanium

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D	G/H	0.5	2
	H		
Hex 4.0	10.0	4AA-G05	4AA-G07
Hex 4.5	10.0	4AA-G01	4AA-G08
Non Hex 4.0	10.0	4AA-G06	4AA-G10
Non Hex 4.5	10.0	4AA-G03	4AA-G11

R

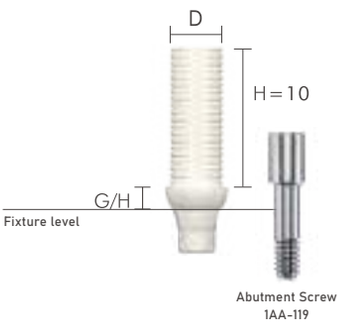
Implant Size

Ø4.8 Ø5.5

D	G/H	0.5	2
	H		
Hex 5.0	10.0	4AA-G02	4AA-G09
Non Hex 5.0	10.0	4AA-G04	4AA-G12

Unit : mm Scale 1 : 1.5 / mm

Temporary Abutment (PEEK)



- ✓ Used in producing temporary prosthesis
- ✓ Structure enabling easy customization
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical PEEK

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D		G/H	0.5	2
H				
Hex	4.0	10.0	4AA-G13	4AA-G19
Hex	4.5	10.0	4AA-G14	4AA-G20
Non Hex	4.0	10.0	4AA-G16	4AA-G22
Non Hex	4.5	10.0	4AA-G17	4AA-G23

R

Implant Size

Ø4.8 Ø5.5

D		G/H	0.5	2
H				
Hex	5.0	10.0	4AA-G15	4AA-G21
Non Hex	5.0	10.0	4AA-G18	4AA-G24

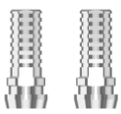
Unit : mm Scale 1 : 1.5 / mm

Multi-Unit Straight / Multi-Unit Angled

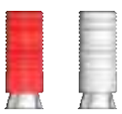
Abutment Level Impression

Multi-Unit Ti-Retaining Screw

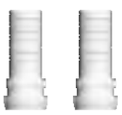
Multi-Unit Titanium Cylinder (Hex / Non Hex)



Multi-Unit Metal Cylinder (Hex / Non Hex)



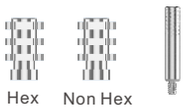
Multi-Unit Burn-out Cylinder (Hex / Non Hex)



Multi-Unit Polishing Protector

Multi-Unit Analog

Multi-Unit Impression Coping Pick-up



Multi-Unit Impression Coping Transfer

Multi-Unit Straight Abutment

Multi-Unit Angled Abutment

Multi-Unit Abutment Adapter

Multi-Unit Comfort Cap

Cover Screw

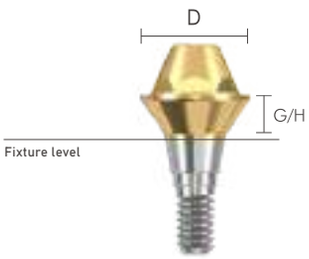
Healing Abutment (mark)

Screw Driver Hex 1.25

Screw Driver Hex 1.25

Bone Type Implant / Bone Type Implant Plus

Multi-Unit Straight Abutment



- ✓ Used for producing screw-retained prosthesis in multiple case
- ✓ Tightened with multi-unit adapter
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ Recommended tightening torque:Single/30Ncm; Biomate Archfixation/35Ncm

Material:

- Medical Grade 5 Titanium Alloy

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

G/H	1	2	3	4	5
Non Hex	4AA-M01	4AA-M02	4AA-M03	4AA-M04	4AA-M05

R

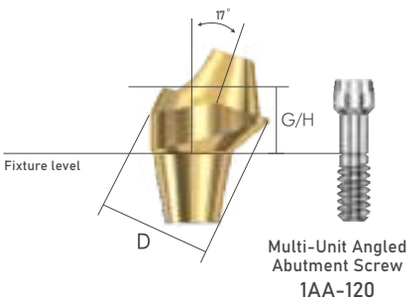
Implant Size

Ø4.8 Ø5.5

G/H	1	2	3	4	5
Non Hex	4AA-M06	4AA-M07	4AA-M08	4AA-M09	4AA-M10

Unit : mm Scale 1 : 1.5 / mm

Multi-Unit 17° Angled Abutment



Multi-Unit Angled Abutment Screw
1AA-120

- ✓ Used for producing screw-retained prosthesis in multiple case
- ✓ Up to 60°path compensation(two implant standard)
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ Recommended tightening torque: Single/30Ncm; Biomate Archfixation/15Ncm

Material:

- Medical Grade 5 Titanium Alloy

S

Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5

G/H	2	3	4
			
Hex	4AA-T02	4AA-T03	4AA-T04
Non Hex	4AA-T06	4AA-T07	4AA-T08

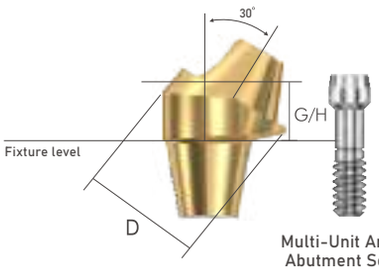
R

Implant Size
Ø4.8 Ø5.5

G/H	2	3	4
			
Hex	4AA-T10	4AA-T11	4AA-T12
Non Hex	4AA-T14	4AA-T15	4AA-T16

Unit : mm Scale 1 : 1.5 / mm

Multi-Unit 30° Angled Abutment



Multi-Unit Angled Abutment Screw
1AA-120

- ✓ Used for producing screw-retained prosthesis in multiple case
- ✓ Up to 60°path compensation(two implant standard)
- ✓ Coating:SD/Semi-Golden; RD/Golden
- ✓ Recommended tightening torque: Single/30Ncm; Biomate Archfixation/15Ncm

Material:

- Medical Grade 5 Titanium Alloy

S

Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5

G/H	3	4	5
			
Hex	4AA-U02	4AA-U03	4AA-U04
Non Hex	4AA-U06	4AA-U07	4AA-U08

R

Implant Size
Ø4.8 Ø5.5

G/H	3	4	5
			
Hex	4AA-U10	4AA-U11	4AA-U12
Non Hex	4AA-U14	4AA-U15	4AA-U16

Multi-Unit Straight / Multi-Unit Angled Components

Multi-Unit Comfort Cap

- ✓ Used for protecting multi-unit abutment in the oral cavity
- ✓ Hand tightened with 1.25 hex driver

S R

Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5
Ø4.8 Ø5.5

BSMUCC480600A

Unit : mm Scale 1 : 1.5 / mm

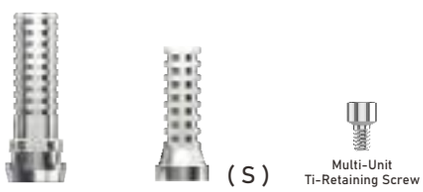
Multi-Unit Straight / Multi-Unit Angled Components

Multi-Unit Titanium Cylinder / Multi-Unit Titanium Cylinder (S)

- ✓ Used for producing temporary prosthesis in multi-unit abutment
- ✓ (S) specification suitable for overdenture with thinner diameter
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:10-15Ncm

Material:

- Medical Grade 4 Pure Titanium



S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

Hex	BSMUTC48000HA	BSMUTC4800SHA
Non Hex	BSMUTC48000NA	BSMUTC4800SNA

Multi-Unit Metal Cylinder

- ✓ Used for producing screw-retained prosthesis in multi-unit abutment
- ✓ Used to produce customized prosthesis by casting with CCM
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:10-15Ncm

Material:

- Upper part/POM; Lower part/ CCM(Co-Cr-Mo)

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

Hex	BSMUMC48000HA
Non Hex	BSMUMC48000NA

Unit : mm Scale 1 : 1.5 / mm

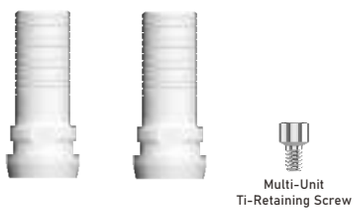
Multi-Unit Straight / Multi-Unit Angled Components

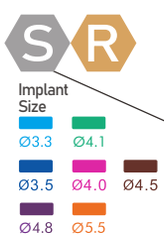
Multi-Unit Burn-out Cylinder

- ✓ Used for producing screw-retained prosthesis in multi-unit abutment
- ✓ Used to produce customized prosthesis by casting with nonprecious metal alloy
- ✓ Tightened with 1.25 hex driver
- ✓ Recommended tightening torque:10-15Ncm

Material:

- POM





Hex	BSMUBC48000HA
Non-Hex	BSMUBC48000NA

Multi-Unit Polishing Protector

- ✓ Protecting the joint in the polishing procedure after producing a prosthesis using multi-unit metal/burn-out cylinder
- ✓ Hand tightened with 1.25 hex driver

Material:

- Medical Grade 4 Pure Titanium

BSMUPP480000A

Multi-Unit Analog

- ✓ Lab analog for multi-unit abutment
- ✓ Hand tightened with 1.25 hex driver

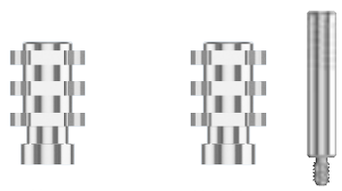
BSMUAL480000A

Unit : mm Scale 1 : 1.5 / mm

Multi-Unit Straight / Multi-Unit Angled Components

Multi-Unit Impression Coping Pick-up

- ✓ Components for multi-unit abutment impression taking with open tray
- ✓ Multi-undercutting design that is stably fixed within the impression body
- ✓ Hand tightened with 1.25 hex driver



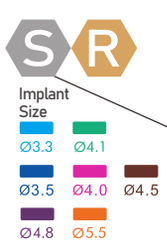
Hex | Non Hex

BSMUIP48000HA | BSMUIP48000NA

Multi-Unit Impression Coping Transfer

- ✓ Components for multi-unit abutment impression taking with close tray
- ✓ Undercutting design for stable fastening and accurate repositioning
- ✓ Hand tightened with 1.25 hex driver

BSMUIT48000NA

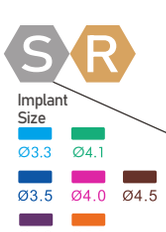


Multi-Unit Abutment Adapter

- ✓ Dedicated torque driver for multi-unit abutment

HP | RT

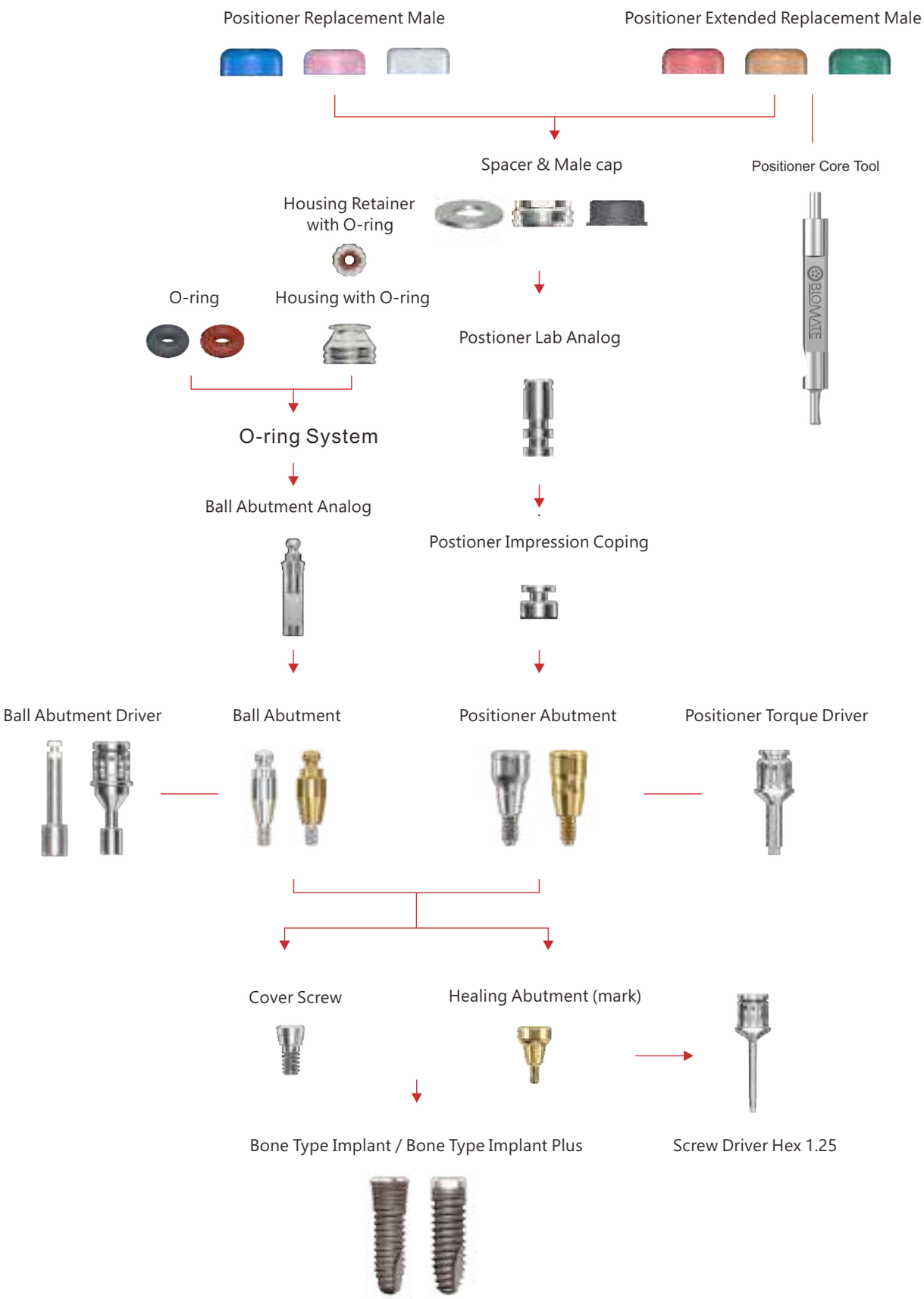
BSMUHP000000A | BSMURT000000A



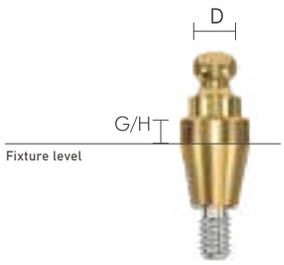
Unit : mm Scale 1 : 1.5 / mm

Ball Abutment / Positioner

Abutment Level Impression



Ball Abutment



- ✓ Abutment for overdenture with o-ring attachment
- ✓ Insertion angle compensated up to 20°
- ✓ Coating:SD/Silver; RD/Golden
- ✓ Tightened with ball abutment driver
- ✓ Recommended tightening torque:25Ncm

Material:

- Medical Grade 4 Pure Titanium

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D	G/H	1	2	3	4	5	6
	H						
Non Hex	2.25	4AA-J01	4AA-J02	4AA-J03	4AA-J04	4AA-J05	4AA-J06
	3.3						

R

Implant Size

Ø4.8 Ø5.5

D	G/H	1	2	3	4	5	6
	H						
Non Hex	2.25	4AA-J13	4AA-J14	4AA-J15	4AA-J16	4AA-J17	4AA-J18
	3.3						

Unit : mm Scale 1 : 1.5 / mm

Ball Abutment Components

Housing Retainer with O-ring

✓ Used when vertical dimension is shorter than the housing cap

S R
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5
Ø4.8 Ø5.5

Housing Retainer with O-ring

6AA-044

O-ring

6AA-082 / 6AA-045

Housing with O-ring

✓ O-ring attachment for ball abutment
✓ O-ring replaced in metal housing

S R
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5
Ø4.8 Ø5.5

Housing with O-ring

6AA-067

Ball Abutment Analog

✓ Lab analog for ball abutment

S R
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5
Ø4.8 Ø5.5

D 2.25

6AA-043

Ball Abutment Driver

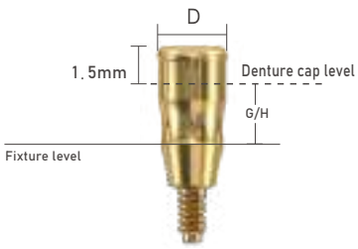
✓ Dedicated driver for ball abutment

S R
Implant Size
Ø3.3 Ø4.1
Ø3.5 Ø4.0 Ø4.5
Ø4.8 Ø5.5

3AA-050 3AA-051 3AA-053

Unit : mm Scale 1 : 1.5 / mm

Positioner Abutment



- ✓ Achieves low vertical dimension, stability and various attachments with retention
- ✓ Possible path compensation up to 40°(two implant standard)
- ✓ Tightened with positioner torque driver
- ✓ Recommended tightening torque:30Ncm

Material:

- Medical Grade 5 Titanium Alloy

S

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5

D \ G/H	1	2	3	4	5	6
H						
Non Hex 3.87	4AA-I01	4AA-I02	4AA-I03	4AA-I04	4AA-I05	4AA-I06

R

Implant Size

Ø4.8 Ø5.5

D \ G/H	1	2	3	4	5	6
H						
Non Hex 3.87	4AA-I07	4AA-I08	4AA-I09	4AA-I10	4AA-I11	4AA-I12

Positioner Abutment Components

Positioner torque driver

✓ Dedicated driver for positioner abutment

3AA-085 3AA-086

Positioner Core Tool

✓ Used in attaching and changing replacement males

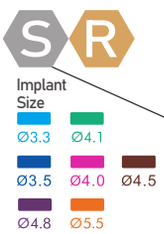
3AA-087

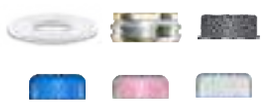
Unit : mm Scale 1 : 1.5 / mm

Positioner Abutment Components

Positioner Male Processing Kit

- ✓Component
  - -Block out spacer/ denture cap connected black processing male
  - -Replacement male blue/pink/clear
- ✓Used by selecting the male with the adequate retention force for each case
- ✓Positioner core tool for replacing the male

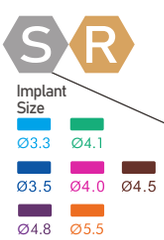




6AA-079

Positioner Replacement Male

- ✓Retention:Approximately Blue:1.5 lbs/Pink:3 lbs/Clear:5 lbs
- ✓Placement angled compensation up to 20°(two implant standard)
- ✓Packing unit: single color replacement male 4ea

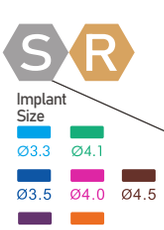


(Blue) (Pink) (Clear)

6AA-068 6AA-069 6AA-070

Positioner Extended Replacement Male

- ✓Retention:Approximately Red:1 lbs/Orange:2 lbs/Green:4 lbs
- ✓Placement angled compensation up to 20°~40°(two implant standard)
- ✓Packing unit: single color replacement male 4ea



(Red) (Orange) (Green)

6AA-071 6AA-072 6AA-073

Unit : mm Scale 1 : 1.5 / mm

Positioner Abutment Components

Positioner Black Processing Male

- ✓ Male used in prosthesis fabrication process
- ✓ Packing unit:4ea

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

6AA-074

Positioner Block Out Spacers

- ✓ Used for sealing of the space between the abutment and the denture cap when attaching the the overdenture and denture cap in the oral cavity
- ✓ Packing unit:20ea

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

6AA-075

Positioner Impression Coping

- ✓ Pick-up impression coping for positioner abutment with close tray
- ✓ Packing unit:4ea

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

6AA-078

Positioner Lab Analog

- ✓ Lab analog for positioner abutment
- ✓ Packing unit:4ea

S R

Implant Size

Ø3.3 Ø4.1 Ø3.5 Ø4.0 Ø4.5 Ø4.8 Ø5.5

6AA-076

Unit : mm Scale 1 : 1.5 / mm


Perfect craftsmanship
Safe and reliable

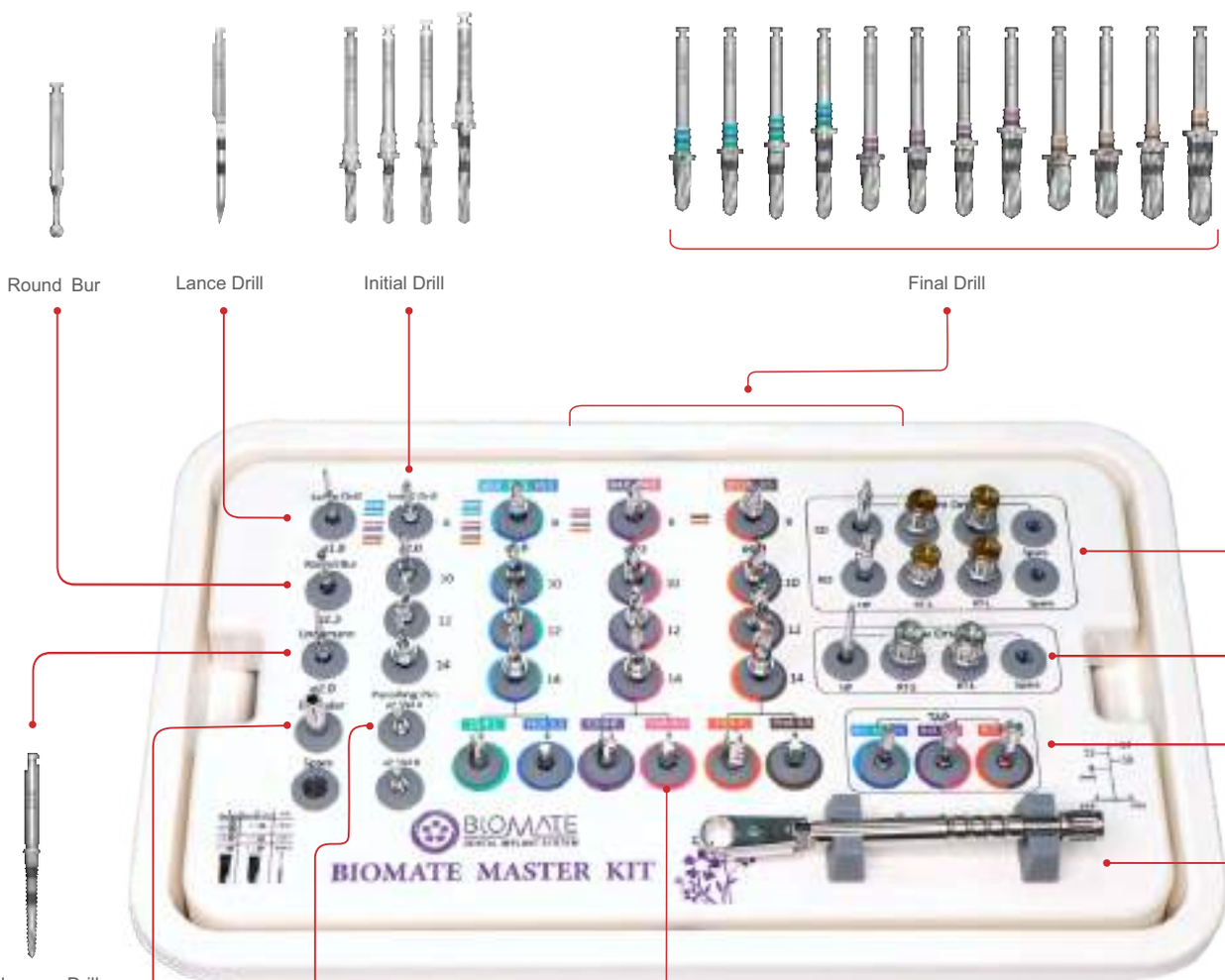
Surgical Kits

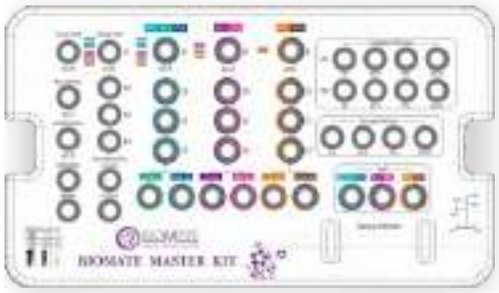
BIOMATE MASTER KIT

Color management:

◆BIOMATE/ Blue(ø3.3)、Green(ø4.1)、Purple(ø4.8)、Orange(ø5.5)

◆BIOMATE PLUS/ Dark Blue(ø3.5)、Pink(ø4.0)、Brown(ø4.5)





Implant Driver HP

Implant Driver RT

Screw Driver HP

Screw Driver RT

Taps D3.3 for Ø3.3/4.1 Implant

Taps D4.0 for Ø4.0/4.8 Implant

Taps D4.7 for Ø4.5/5.5 Implant

Torque Ratchet

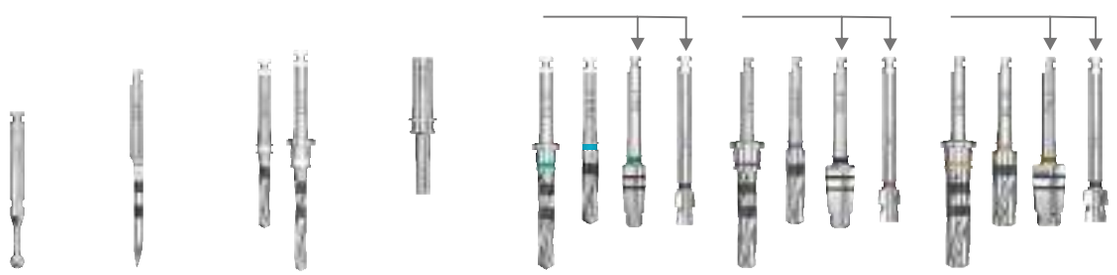
	Description	Catalog No.	
1	BIOMATE MASTER KIT	3AA-154	Full Instruments
2	Lance Drill D1.8	3AA-038	1EA
3	Initial Drill D2.0-8mm	3AA-184	1EA
	Initial Drill D2.0-10mm	3AA-185	1EA
	Initial Drill D2.0-12mm	3AA-186	1EA
	Initial Drill D2.0-14mm	3AA-187	1EA
4	Round Bur D2.3	3AA-001	1EA
5	Paralleling Pin D2.0-D2.8	3AA-052	2EA
6	Lindemann Drill (Pilot Drill)D2.0xL14	3AA-037	1EA
7	Drill Extender	3AA-035	1EA
8	Final Drill D2.8-8mm for ø3.3/4.1 Implant	3AA-188	1EA
	Final Drill D2.8-10mm for ø3.3/4.1 Implant	3AA-189	1EA
	Final Drill D2.8-12mm for ø3.3/4.1 Implant	3AA-190	1EA
	Final Drill D2.8-14mm for ø3.3/4.1 Implant	3AA-191	1EA
	Final Drill D3.3-8mm for ø4.8 Implant	3AA-192	1EA
	Final Drill D3.3-10mm for ø4.8 Implant	3AA-193	1EA
	Final Drill D3.3-12mm for ø4.8 Implant	3AA-194	1EA
	Final Drill D3.3-14mm for ø4.8 Implant	3AA-195	1EA
	Final Drill D4.0-8mm for ø5.5 Implant	3AA-196	1EA
	Final Drill D4.0-10mm for ø5.5 Implant	3AA-197	1EA
	Final Drill D4.0-12mm for ø5.5 Implant	3AA-198	1EA
	Final Drill D4.0-14mm for ø5.5 Implant	3AA-199	1EA
9	Counter Sink D4.1	3AA-014	1EA
	Counter Sink D4.8	3AA-015	1EA
	Counter Sink D5.5	3AA-016	1EA
10	Profile Drill D3.5	3AA-065	1EA
	Profile Drill D4.0	3AA-066	1EA
	Profile Drill D4.5	3AA-067	1EA
11	Taps D3.3 for ø3.3/4.1 Implant	3AA-017	1EA
	Taps D4.0 for ø4.0/4.8 Implant	3AA-018	1EA
	Taps D4.7 for ø4.5/5.5 Implant	3AA-019	1EA
12	Implant Driver Hex2.0 HP-L	3AA-056	1EA
	Implant Driver Hex2.0 RT-S	3AA-030	1EA
	Implant Driver Hex2.0 RT-L	3AA-039	1EA
	Implant Driver Hex2.5 HP-L	3AA-057	1EA
	Implant Driver Hex2.5 RT-S	3AA-032	1EA
	Implant Driver Hex2.5 RT-L	3AA-040	1EA
13	Screw Driver Hex1.25-HP-L	3AA-041	1EA
	Screw Driver Hex1.25-RT-S	3AA-042	1EA
	Screw Driver Hex1.25-RT-L	3AA-043	1EA
14	Torque Ratchet 10-40Ncm	3AA-034	1EA

Surgical Kits

BIOMATE PLUS SC KIT

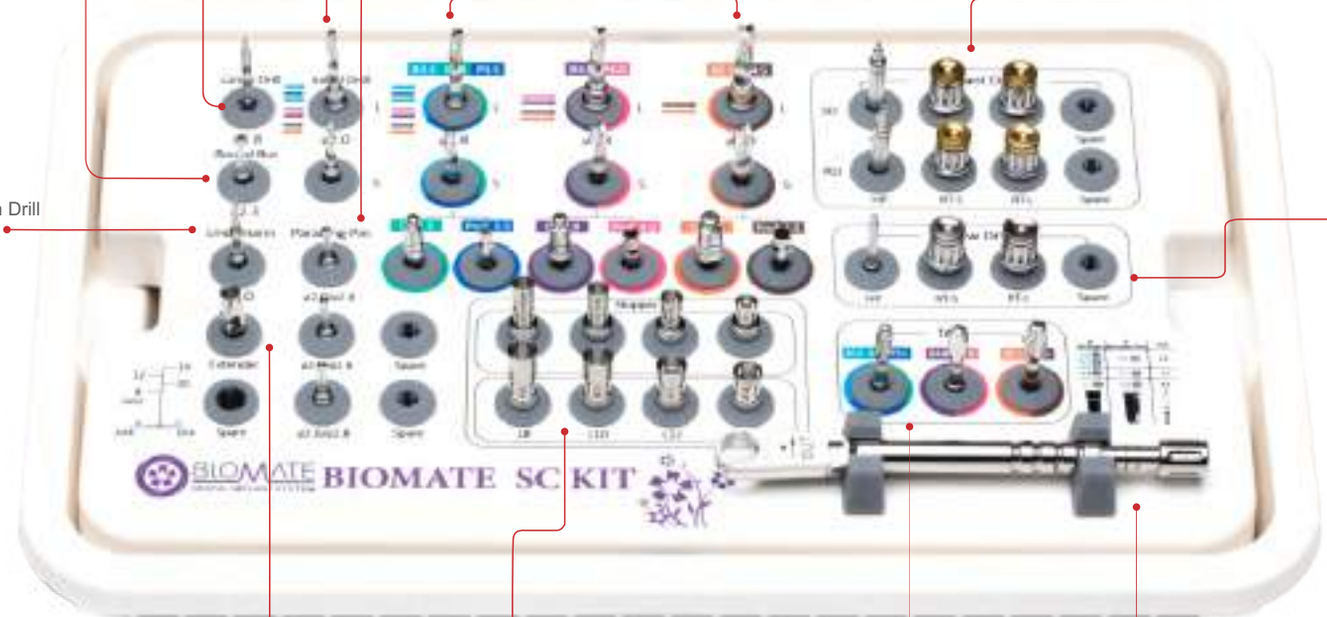
Color management:

- BIOMATE/ Blue(ø3.3)、Green(ø4.1)、Purple(ø4.8)、Orange(ø5.5)
- BIOMATE PLUS/ Dark Blue(ø3.5)、Pink(ø4.0)、Brown(ø4.5)



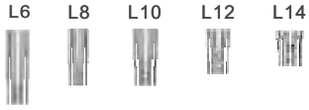
Round Bur | Lance Drill | Initial Drill | Paralleling Pin | Final Drill D2.8, Counter Sink D4.1, Profile Drill D3.5 | Final Drill D3.3, Counter Sink D4.8, Profile Drill D4.0 | Final Drill D4.0, Counter Sink D5.5, Profile Drill D4.5

Lindemann Drill (Pilot Drill)



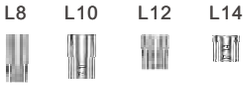
Drill Extender

L6 L8 L10 L12 L14



Stopper for Drill D2.0/D2.8

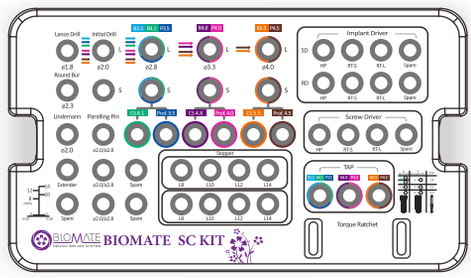
L8 L10 L12 L14



Stopper for Drill D3.3/D4.0

Taps D3.3 for Ø3.3/4.1 Implant
Taps D4.0 for Ø4.0/4.8 Implant
Taps D4.7 for Ø4.5/5.5 Implant

Torque Ratchet



Implant Driver HP

Implant Driver RT

Screw Driver HP

Screw Driver RT

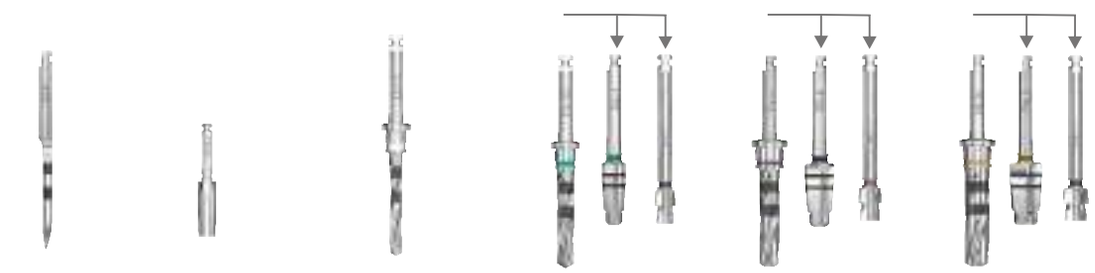
	Description	Catalog No.	
1	BIOMATE PLUS SC KIT	3AA-137	Full Instruments
2	Lance Drill D1.8	3AA-038	1EA
3	Initial Drill D2.0-S	3AA-006	1EA
	Initial Drill D2.0-L	3AA-007	1EA
4	Round Bur D2.3	3AA-001	1EA
5	Paralleling Pin D2.0- D2.8	3AA-052	3EA
6	Lindemann Drill (Pilot Drill) D2.0xL14	3AA-037	1EA
7	Drill Extender	3AA-035	1EA
8	Final Drill D2.8-S for ø3.3/4.1 Implant	3AA-008	1EA
	Final Drill D2.8-L for ø3.3/4.1 Implant	3AA-009	1EA
	Final Drill D3.3-S for ø4.8 Implant	3AA-010	1EA
	Final Drill D3.3-L for ø4.8 Implant	3AA-011	1EA
	Final Drill D4.0-S for ø5.5 Implant	3AA-012	1EA
	Final Drill D4.0-L for ø5.5 Implant	3AA-013	1EA
9	Counter Sink D4.1	3AA-014	1EA
	Counter Sink D4.8	3AA-015	1EA
	Counter Sink D5.5	3AA-016	1EA
10	Profile Drill D3.5	3AA-065	1EA
	Profile Drill D4.0	3AA-066	1EA
	Profile Drill D4.5	3AA-067	1EA
11	Taps D3.3 for ø3.3/4.1 Implant	3AA-017	1EA
	Taps D4.0 for ø4. 0/4.8 Implant	3AA-018	1EA
	Taps D4.7 for ø4. 5/5.5 Implant	3AA-019	1EA
12	Implant Driver Hex2.0 HP-L	3AA-056	1EA
	Implant Driver Hex2.0 RT-S	3AA-030	1EA
	Implant Driver Hex2.0 RT-L	3AA-039	1EA
	Implant Driver Hex2.5 HP-L	3AA-057	1EA
	Implant Driver Hex2.5 RT-S	3AA-032	1EA
	Implant Driver Hex2.5 RT-L	3AA-040	1EA
13	Screw Driver Hex1.25-HP-L	3AA-041	1EA
	Screw Driver Hex1.25-RT-S	3AA-042	1EA
	Screw Driver Hex1.25-RT-L	3AA-043	1EA
14	Stopper L6 for Drill D2.0/D2.8	3AA-020	1EA
	Stopper L8 for Drill D2.0/D2.8	3AA-021	1EA
	Stopper L10 for Drill D2.0/D2.8	3AA-022	1EA
	Stopper L12 for Drill D2.0/D2.8	3AA-023	1EA
	Stopper L14 for Drill D2.0/D2.8	3AA-024	1EA
	Stopper L8 for Drill D3.3/D4.0	3AA-025	1EA
	Stopper L10 for Drill D3.3/D4.0	3AA-026	1EA
	Stopper L12 for Drill D3.3/D4.0	3AA-027	1EA
	Stopper L14 for Drill D3.3/D4.0	3AA-028	1EA
15	Torque Ratchet 10-40Ncm	3AA-034	1EA

BIOMATE FULL KIT

Color management:

◆BIOMATE/ Blue(ø3.3)、Green(ø4.1)、Purple(ø4.8)、Orange(ø5.5)

◆BIOMATE PLUS/ Dark Blue(ø3.5)、Pink(ø4.0)、Brown(ø4.5)



Lance Drill

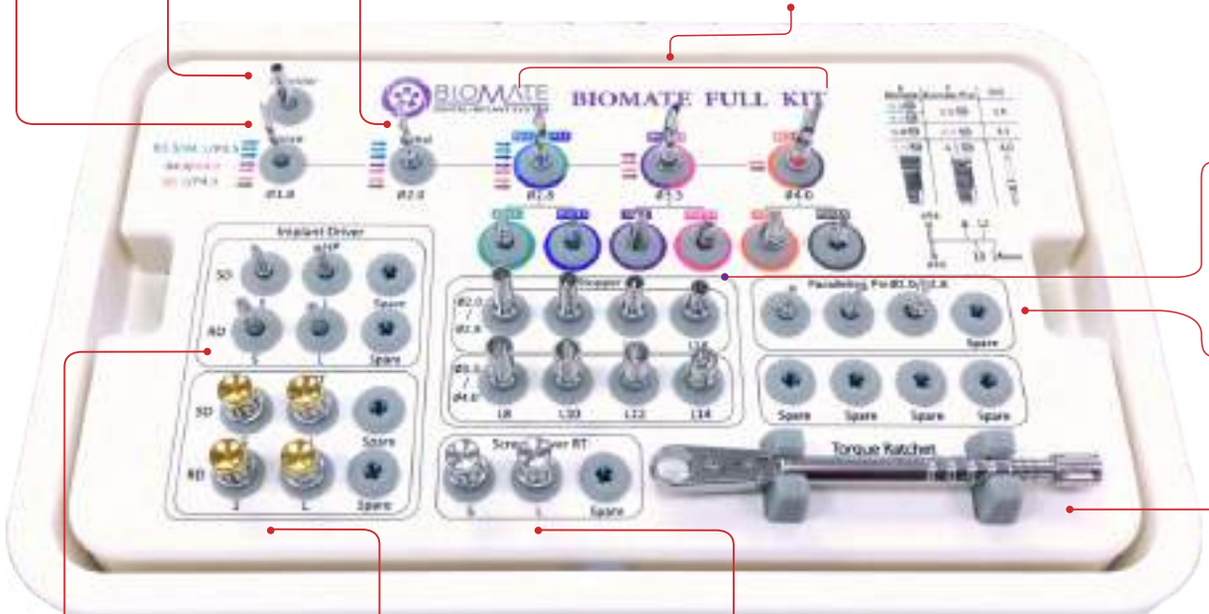
Drill Extender

Initial Drill

Final Drill D2.8-L
Counter Sink D4.1
Profile Drill D3.5

Final Drill D3.3-L
Counter Sink D4.8
Profile Drill D4.0

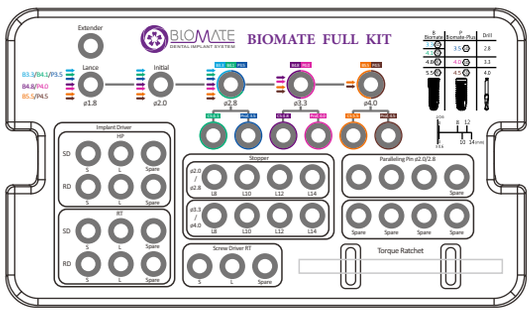
Final Drill D4.0-L
Counter Sink D5.5
Profile Drill D4.5



Implant Driver HP

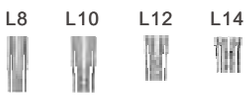
Implant Driver RT

Screw Driver RT



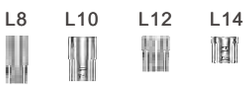
	Description	Catalog No.	
1	BIOMATE FULL KIT	3AA-139	Full Instruments
2	Lance Drill D1.8	3AA-038	1EA
3	Initial Drill D2.0-L	3AA-007	1EA
4	Paralleling Pin D2.0- D2.8	3AA-052	3EA
5	Drill Extender	3AA-035	1EA
6	Final Drill D2.8-L for ø3.3/4.1 Implant	3AA-009	1EA
	Final Drill D3.3-L for ø4.8 Implant	3AA-011	1EA
	Final Drill D4.0-L for ø5.5 Implant	3AA-013	1EA
9	Counter Sink D 4.1	3AA-014	1EA
	Counter Sink D 4.8	3AA-015	1EA
	Counter Sink D 5.5	3AA-016	1EA
10	Profile Drill D 3.5	3AA-065	1EA
	Profile Drill D 4.0	3AA-066	1EA
	Profile Drill D 4.5	3AA-067	1EA
11	Implant Driver Hex2.0 HP-S	3AA-029	1EA
	Implant Driver Hex2.0 HP-L	3AA-056	1EA
	Implant Driver Hex2.0 RT-S	3AA-030	1EA
	Implant Driver Hex2.0 RT-L	3AA-039	1EA
	Implant Driver Hex2.5 HP-S	3AA-031	1EA
	Implant Driver Hex2.5 HP-L	3AA-057	1EA
	Implant Driver Hex2.5 RT-S	3AA-032	1EA
	Implant Driver Hex2.5 RT-L	3AA-040	1EA
12	Screw Driver Hex1.25-RT-S	3AA-042	1EA
	Screw Driver Hex1.25-RT-L	3AA-043	1EA
13	Stopper L8 for Drill D2.0/D2.8	3AA-021	1EA
	Stopper L10 for Drill D2.0/D2.8	3AA-022	1EA
	Stopper L12 for Drill D2.0/D2.8	3AA-023	1EA
	Stopper L14 for Drill D2.0/D2.8	3AA-024	1EA
	Stopper L8 for Drill D3.3/D4.0	3AA-025	1EA
	Stopper L10 for Drill D3.3/D4.0	3AA-026	1EA
	Stopper L12 for Drill D3.3/D4.0	3AA-027	1EA
	Stopper L14 for Drill D3.3/D4.0	3AA-028	1EA
14	Torque Ratchet 10-40Ncm	3AA-034	1EA

L8 L10 L12 L14



Stopper for Drill D2.0/D2.8

L8 L10 L12 L14



Stopper for Drill D3.3/D4.0

Paralleling Pin

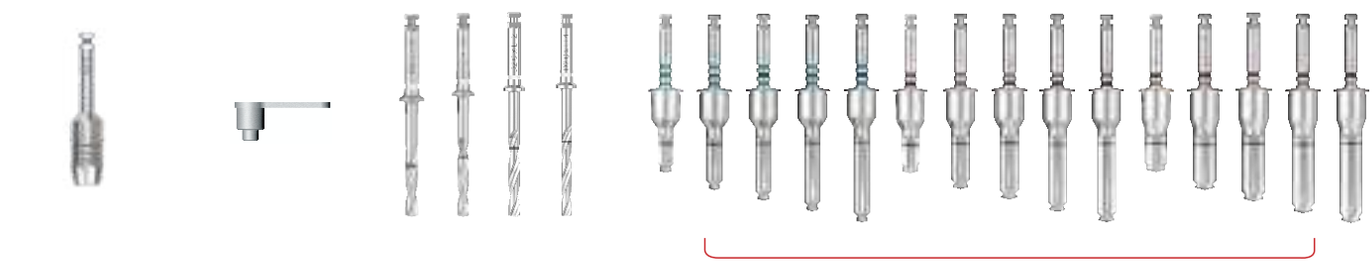
Torque Ratchet

BIOnavi MASTER KIT

Color management:

◆BIOMATE/ Blue(ø3.3)、Green(ø4.1)、Purple(ø4.8)、Orange(ø5.5)

◆BIOMATE PLUS/ Dark Blue(ø3.5)、Pink(ø4.0)、Brown(ø4.5)

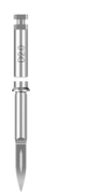


BIOnavi Tissue Punch

BIOnavi Drill Tube

BIOnavi Initial Drill

BIOnavi Final Drill



BIOnavi Lance Drill

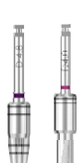
BIOnavi Bone Flattening

Drill Extender

BIOnavi Abutment Drill

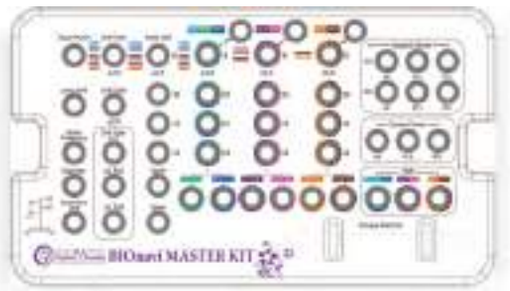
BIOnavi Point Straight Drill

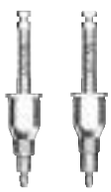
BIOnavi Counter Sink D4.1
BIOnavi Profile Drill D3.5



BIOnavi Counter Sink D4.8
BIOnavi Profile Drill D4.0

Counter Sink D5.5
BIOnavi Profile Drill D4.5





BIOnavi Implant Driver-HP

BIOnavi Implant Driver-RT

Screw Driver -HP

Screw Driver -RT

BIOnavi Taps D3.3 for Ø3.3/3.5/4.1 Implant

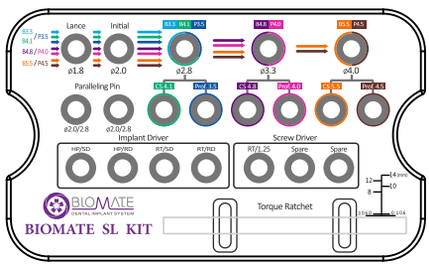
BIOnavi Taps D4.0 for Ø4.0/4.8 Implant

BIOnavi Taps D4.7 for Ø4.5/5.5 Implant

Torque Ratchet

	Description	Catalog No.	
1	BIOnavi MASTER KIT	3AA-159	Full Instruments
2	BIOnavi Tissue Punch D3.0	3AA-N35	1EA
3	BIOnavi Bone Flattening	3AA-N03	1EA
4	BIOnavi Drill Tube D2.0/D5.3	3AA-N04	2EA
	BIOnavi Drill Tube D2.5/D5.3	3AA-N05	1EA
5	BIOnavi Lance Drill D2.0	3AA-N51	1EA
6	BIOnavi Initial Drill D2.0-8mm	3AA-N24	1EA
	BIOnavi Initial Drill D2.0-10mm	3AA-N25	1EA
	BIOnavi Initial Drill D2.0-12mm	3AA-N26	1EA
	BIOnavi Initial Drill D2.0-14mm	3AA-N27	1EA
7	BIOnavi Final Drill D2.8-5mm for ø3.3/3.5/4.1 Implant	3AA-N58	1EA
	BIOnavi Final Drill D2.8-8mm for ø3.3/3.5/4.1 Implant	3AA-N06	1EA
	BIOnavi Final Drill D2.8-10mm for ø3.3/3.5/4.1 Implant	3AA-N07	1EA
	BIOnavi Final Drill D2.8-12mm for ø3.3/3.5/4.1 Implant	3AA-N08	1EA
	BIOnavi Final Drill D2.8-14mm for ø3.3/3.5/4.1 Implant	3AA-N09	1EA
	BIOnavi Final Drill D3.3-5mm for ø4.0/4.8 Implant	3AA-N59	1EA
	BIOnavi Final Drill D3.3-8mm for ø4.0/4.8 Implant	3AA-N10	1EA
	BIOnavi Final Drill D3.3-10mm for ø4.0/4.8 Implant	3AA-N11	1EA
	BIOnavi Final Drill D3.3-12mm for ø4.0/4.8 Implant	3AA-N12	1EA
	BIOnavi Final Drill D3.3-14mm for ø4.0/4.8 Implant	3AA-N13	1EA
	BIOnavi Final Drill D4.0-5mm for ø4.5/5.5 Implant	3AA-N60	1EA
	BIOnavi Final Drill D4.0-8mm for ø4.5/5.5 Implant	3AA-N14	1EA
	BIOnavi Final Drill D4.0-10mm for ø4.5/5.5 Implant	3AA-N15	1EA
	BIOnavi Final Drill D4.0-12mm for ø4.5/5.5 Implant	3AA-N16	1EA
	BIOnavi Final Drill D4.0-14mm for ø4.5/5.5 Implant	3AA-N17	1EA
8	BIOnavi Counter Sink D4.1	3AA-N52	1EA
	BIOnavi Counter Sink D4.8	3AA-N53	1EA
	Counter Sink D5.5	3AA-016	1EA
9	BIOnavi Profile Drill D3.5	3AA-N30	1EA
	BIOnavi Profile Drill D4.0	3AA-N31	1EA
	BIOnavi Profile Drill D4.5	3AA-N49	1EA
10	BIOnavi Implant Driver-Stopper Hex 2.0-HP-S	3AA-N18	1EA
	BIOnavi Implant Driver-Stopper Hex 2.0-RT-S	3AA-N19	1EA
	BIOnavi Implant Driver-Non Stopper Hex 2.0-RT	3AA-N22	1EA
	BIOnavi Implant Driver-Stopper Hex 2.5-HP-S	3AA-N20	1EA
	BIOnavi Implant Driver-Stopper Hex 2.5-RT-S	3AA-N21	1EA
	BIOnavi Implant Driver-Non Stopper Hex 2.5-RT	3AA-N23	1EA
11	BIOnavi Abutment Drill	3AA-N01	1EA
12	Screw Driver Hex1.25-HP-L	3AA-041	1EA
	Screw Driver Hex1.25-RT-S	3AA-042	1EA
	Screw Driver Hex1.25-RT-L	3AA-043	1EA
13	BIOnavi Taps D3.3 for ø3.3/4.1 Implant	3AA-N33	1EA
	BIOnavi Taps D4.0 for ø4.8 Implant	3AA-N34	1EA
	BIOnavi Taps D4.7 for ø5.5 Implant	3AA-N50	1EA
14	Drill Extender-L	3AA-035	1EA
15	BIOnavi Point Straight Drill-S	3AA-N28	1EA
	BIOnavi Point Straight Drill-L	3AA-N29	1EA
16	Torque Ratchet 10-40Ncm	3AA-034	1EA

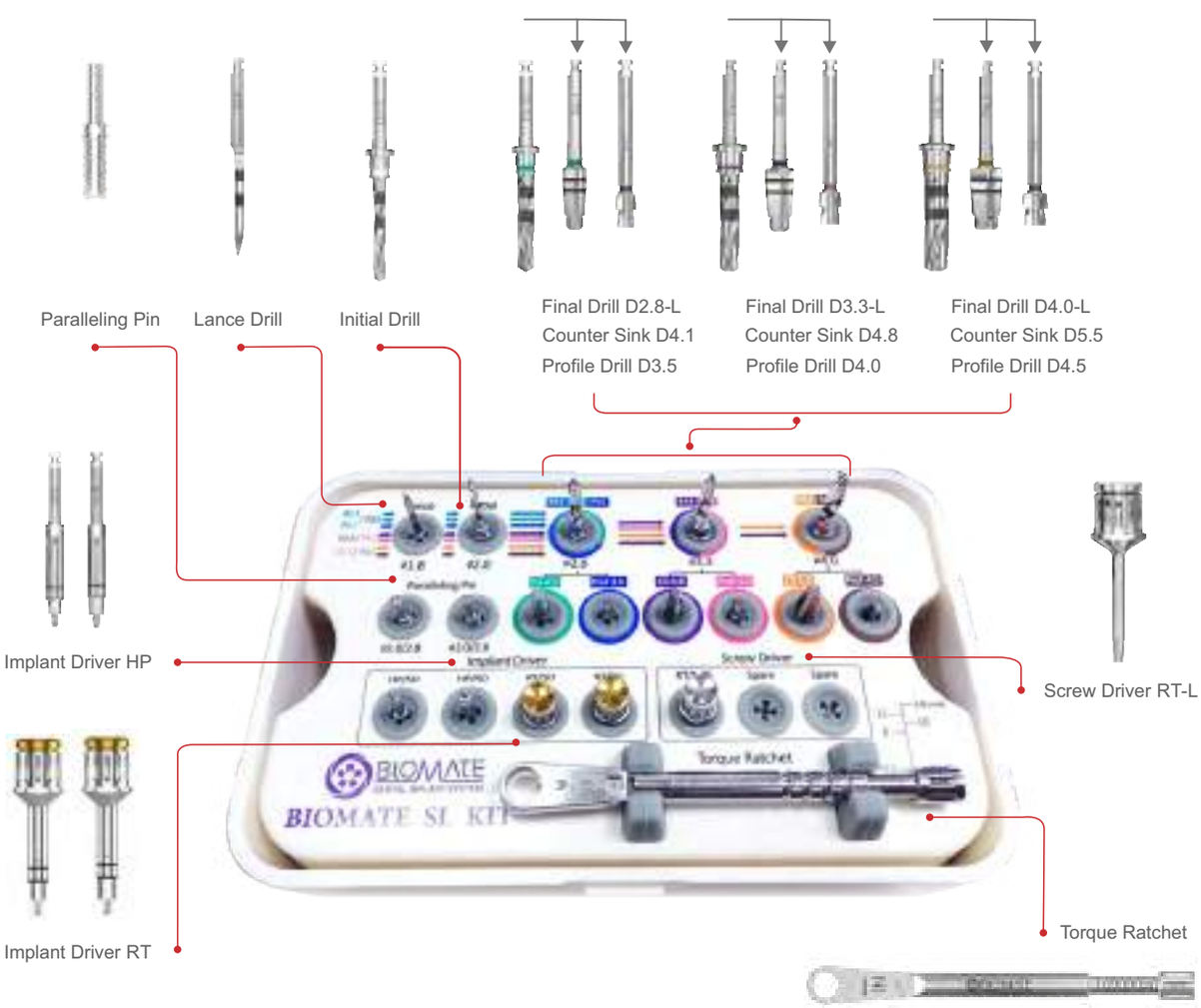
BIOMATE SL KIT



Color management:

◆BIOMATE/ Blue(ø3.3)、Green(ø4.1)、Purple(ø4.8)、Orange(ø5.5)

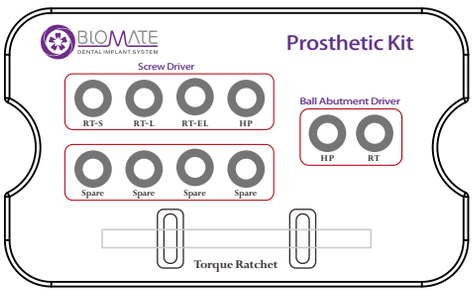
◆BIOMATE PLUS/ Dark Blue(ø3.5)、Pink(ø4.0)、Brown(ø4.5)



	Description	Catalog No.	
1	BIOMATE SL KIT	3AA-063	Full Instruments
2	Lance Drill D1.8	3AA-038	1EA
3	Initial Drill D2.0-L	3AA-007	1EA
4	Paralleling Pin D2.0- D2.8	3AA-052	2EA
5	Final Drill D2.8-L for ø3.3/4.1 Implant	3AA-009	1EA
	Final Drill D3.3-L for ø4.8 Implant	3AA-011	1EA
	Final Drill D4.0-L for ø5.5 Implant	3AA-013	1EA
6	Counter Sink D4.1	3AA-014	1EA
	Counter Sink D4.8	3AA-015	1EA
	Counter Sink D5.5	3AA-016	1EA

	Description	Catalog No.	
7	Profile Drill D3.5	3AA-065	1EA
	Profile Drill D4.0	3AA-066	1EA
	Profile Drill D4.5	3AA-067	1EA
8	Implant Driver Hex2.0 HP-L	3AA-056	1EA
	Implant Driver Hex2.0 RT-L	3AA-039	1EA
	Implant Driver Hex2.5 HP-L	3AA-057	1EA
	Implant Driver Hex2.5 RT-L	3AA-040	1EA
9	Screw Driver Hex1.25-RT-L	3AA-043	1EA
10	Torque Ratchet 10~40Ncm	3AA-034	1EA

BIOMATE PROSTHETIC KIT



Screw Driver -RT

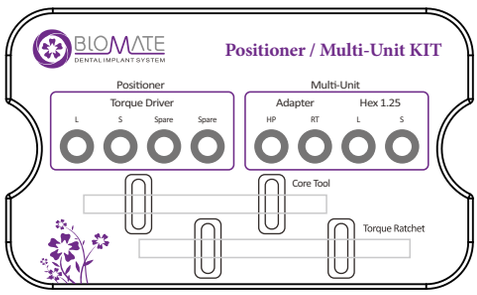
Screw Driver -HP

Ball Abutment Driver

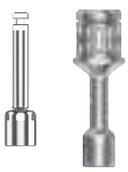
Torque Ratchet (10-40Ncm)

	Description	Catalog No.	
1	BIOMATE PROSTHETIC KIT	3AA-089	Full Instruments
2	Screw Driver Hex 1.25-HP-L	3AA-041	1EA
	Screw Driver Hex 1.25-RT-S	3AA-042	1EA
	Screw Driver Hex 1.25-RT-L	3AA-043	1EA
	Screw Driver Hex 1.25-RT-EL	3AA-148	1EA
3	Ball Abutment Driver Hex-HP	3AA-050	1EA
	Ball Abutment Driver Hex-RT-L	3AA-053	1EA
4	Torque Ratchet 10-40Ncm	3AA-034	1EA

POSITIONER / MULTI-UNIT KIT



Positioner Torque Driver



Multi-Unit Adapter

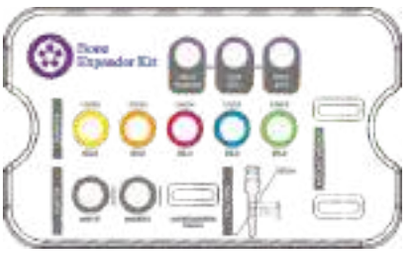
Screw Driver

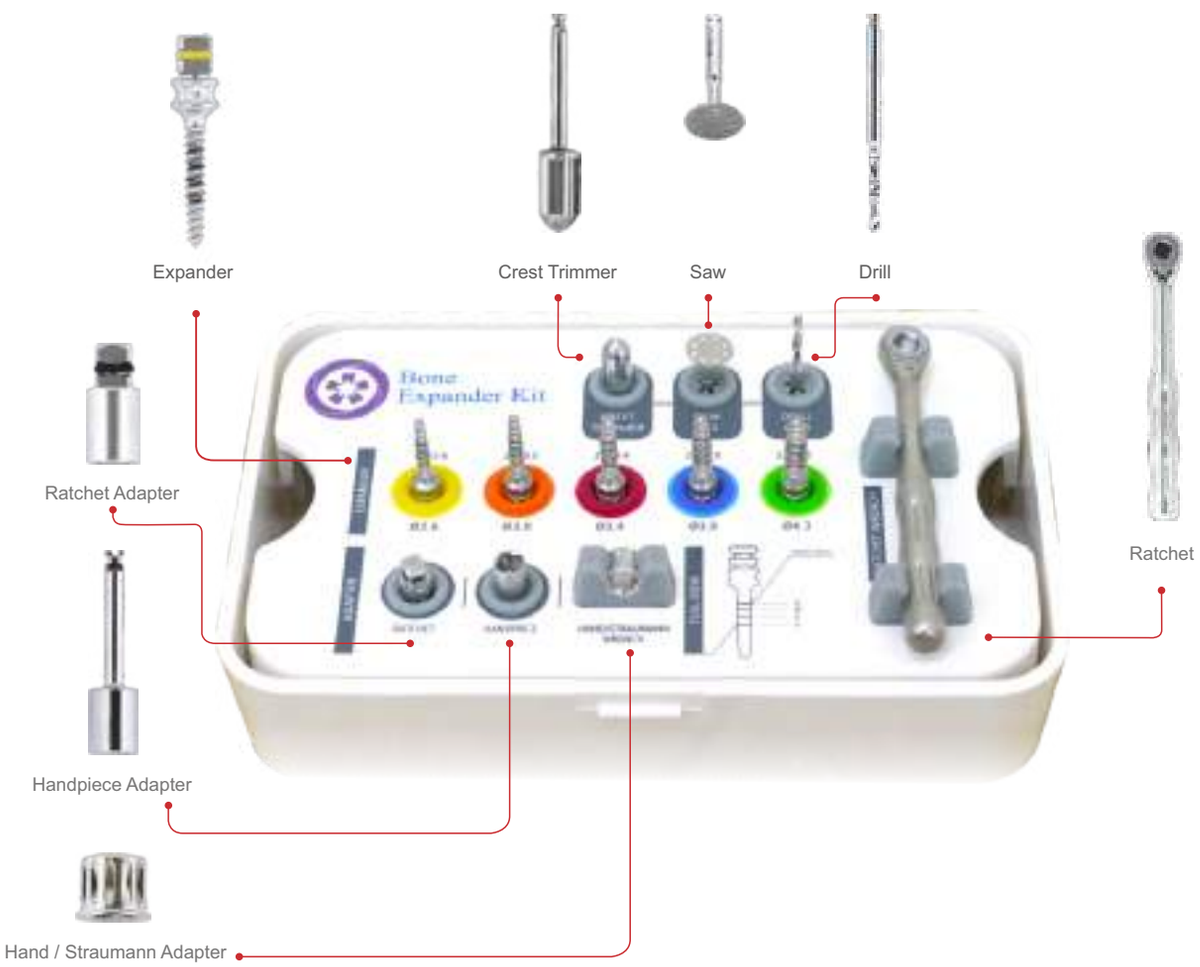
Positioner Core Tool

Torque Ratchet (10-40Ncm)

	Description	Catalog No.	
1	Positioner Multi-Unit KIT	BSSIPM00000FA	Full Instruments
2	Positioner Torque Driver-S	3AA-085	1EA
	Positioner Torque Driver-L	3AA-086	1EA
3	Multi-Unit Abutment Adapter-HP	BSMUHP000000A	1EA
	Multi-Unit Abutment Adapter-RT	BSMURT000000A	1EA
4	Screw Driver Hex 1.25-RT-S	3AA-042	1EA
	Screw Driver Hex 1.25-RT-L	3AA-043	1EA
5	Positioner Core Tool	3AA-087	1EA
6	Torque Ratchet 10-40Ncm	3AA-034	1EA

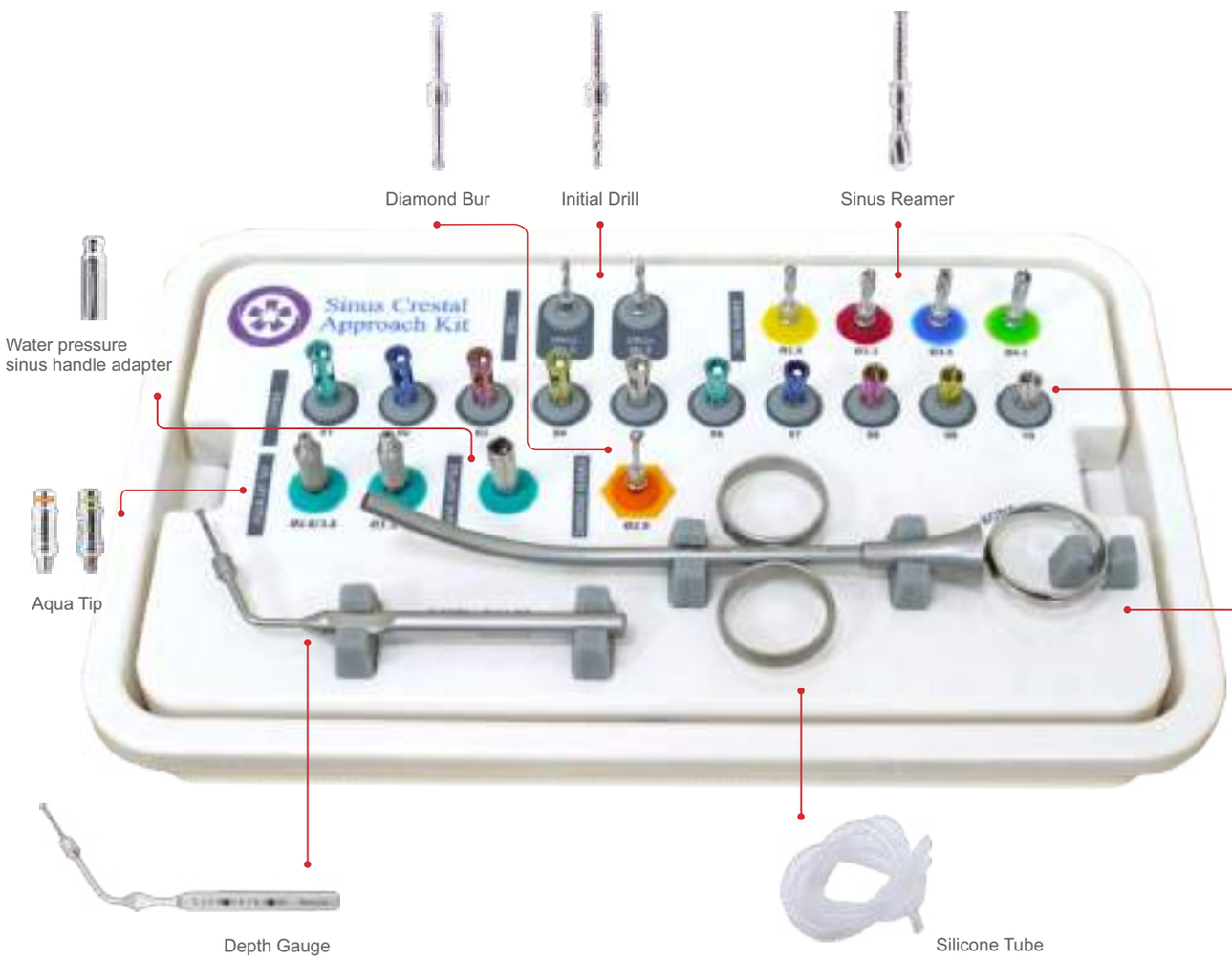
BONE EXPANDER KIT

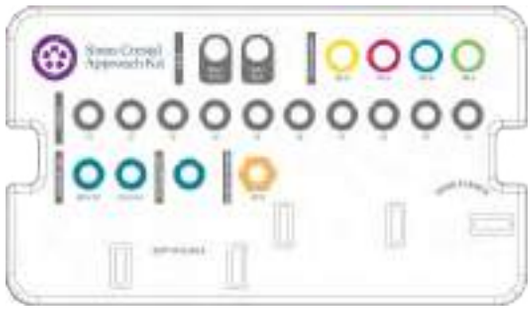




	Description	Catalog No.	
1	BONE EXPANDER KIT	3AK-A00	Full Instruments
2	Crest Trimmer	3AK-A01	1EA
3	Saw	3AK-A02	1EA
4	Drill D1.8	3AK-A03	1EA
5	Expander D2.6	3AK-A04	1EA
	Expander D3.0	3AK-A05	1EA
	Expander D3.4	3AK-A06	1EA
	Expander D3.8	3AK-A07	1EA
	Expander D4.3	3AK-A08	1EA
6	Ratchet	3AK-A09	1EA
7	Ratchet Adapter	3AK-A10	1EA
8	Handpiece Adapter	3AK-A11	1EA
9	Hand / Straumann Adapter	3AK-A12	1EA

SINUS CRESTAL APPROACH KIT





	Description	Catalog No.	
1	Sinus Crestal Approach Kit	3AK-B00	Full Instruments
2	Initial Drill D1.8	3AK-B13	1EA
	Initial Drill D2.3	3AK-B14	1EA
3	Sinus Reamer D2.8	3AK-B15	1EA
	Sinus Reamer D3.3	3AK-B16	1EA
	Sinus Reamer D3.8	3AK-B17	1EA
	Sinus Reamer D4.2	3AK-B18	1EA
4	Stopper 1mm	3AK-B01	1EA
	Stopper 2mm	3AK-B02	1EA
	Stopper 3mm	3AK-B03	1EA
	Stopper 4mm	3AK-B04	1EA
	Stopper 5mm	3AK-B05	1EA
	Stopper 6mm	3AK-B06	1EA
	Stopper 7mm	3AK-B07	1EA
	Stopper 8mm	3AK-B08	1EA
	Stopper 9mm	3AK-B09	1EA
	Stopper 10mm	3AK-B10	1EA
5	Aqua Lift Tap D2.8 (2.8~3.8)	3AK-B20	1EA
	Aqua Lift Tap D3.3 (3.3~4.2)	3AK-B21	1EA
6	Hand Adapter	3AK-B19	1EA
7	Diamond Bur D2.8	3AK-B11	1EA
8	Bone Syringe D3.5 / D4.0	3AK-B23	1EA
9	Depth Gauge	3AK-B22	1EA
10	Silicone Tube	3AK-B12	1EA

Stopper 1mm-10mm

Bone Syringe

Biomate Plus SC Kit

Description	Dimension	Catalog No.
Biomate Plus SC Kit	Full Instruments 43PCS+1BOX	3AA-137

Biomate Master Kit

Description	Dimension	Catalog No.
Biomate Master Kit	Full Instruments 41PCS+1BOX	3AA-154

Biomate Full Kit

Description	Dimension	Catalog No.
Biomate Full Kit	Full Instruments 34PCS+1BOX	3AA-139

Biomate SL Kit

Description	Dimension	Catalog No.
Biomate SL Kit	Full Instruments 19PCS+1BOX	3AA-063

Biomate SS Kit

Description	Dimension	Catalog No.
Biomate SS Kit	Full Instruments 13PCS+1BOX	3AA-062

BIOnavi Master Kit

Description	Dimension	Catalog No.
BIOnavi Master Kit	Full Instruments 51PCS+1BOX	3AA-159

BIOMATE Prosthetic Kit

Description	Dimension	Catalog No.
Prosthetic Kit	Full Instruments 7PCS+1BOX	3AA-089

Positioner / Multi-Unit Kit

Description	Dimension	Catalog No.
Positioner / Multi-Unit Kit	Full Instruments 8PCS+1BOX	BSSIPM00000FA

Sinus Crestal Approach Kit

Description	Dimension	Catalog No.
Sinus Crestal Approach Kit	Full Instruments 23PCS+1BOX	3AK-B00

Bone Expander Kit

Description	Dimension	Catalog No.
Bone Expander Kit	Full Instruments 12PCS+1BOX	3AK-A00

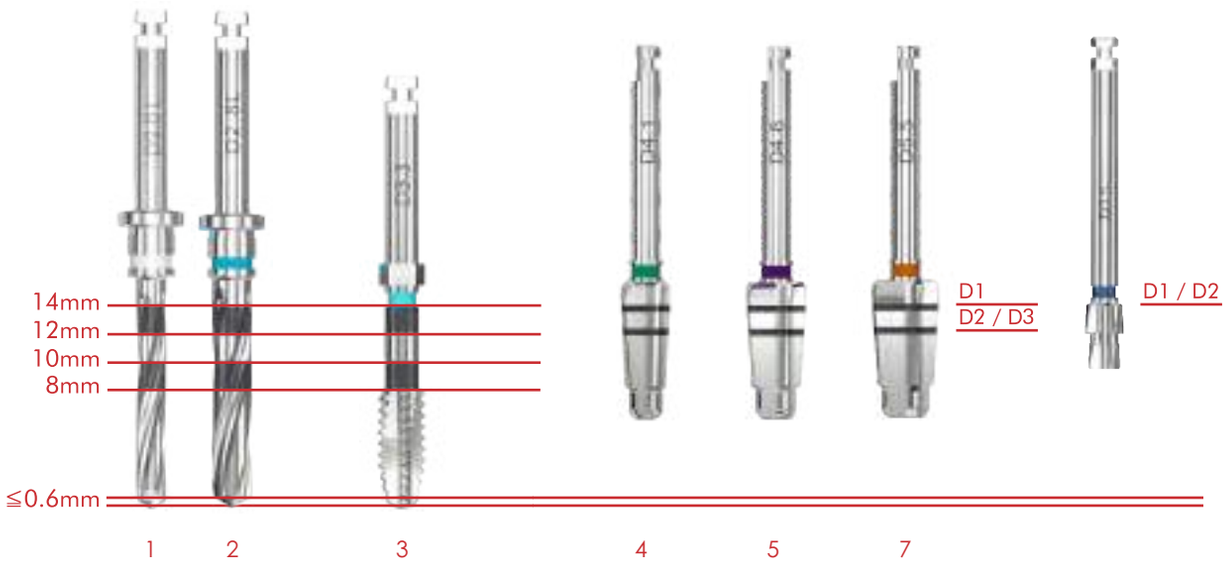
Implant & Screw Remover Kit (S)

Description	Dimension	Catalog No.
Implant & Screw Remover Kit (s)	Full Instruments 24PCS+1BOX	3AK-D00

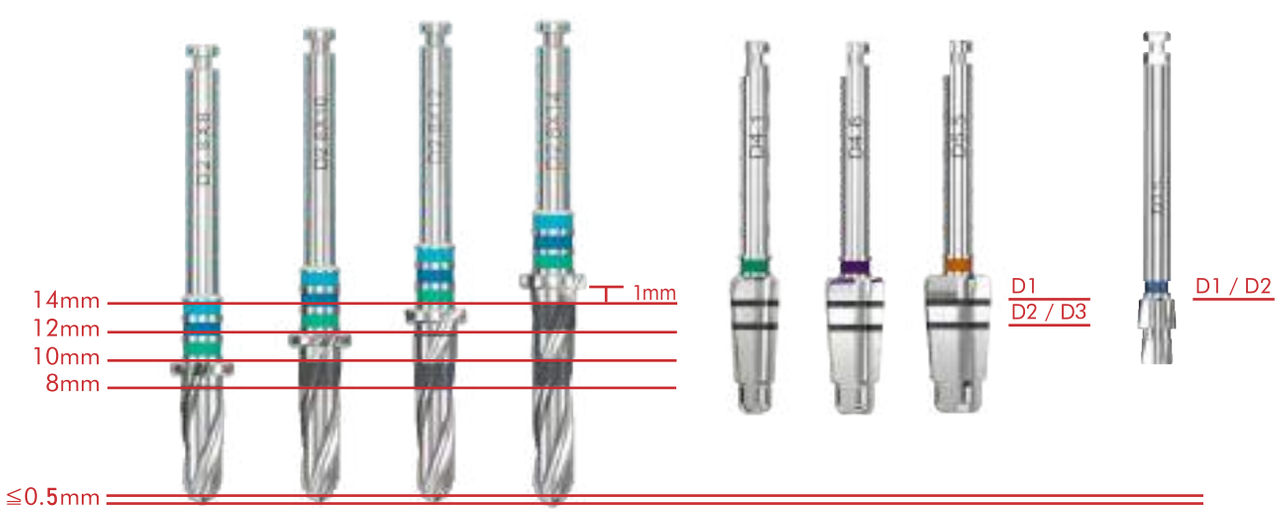
Surgical Instruments

Depth Marks on Biomate Instruments

Laser marks are made on the bladed end of the drills to indicate drilled depth for the practitioner



1. Initial Drill D2.0-L
2. Final Drill D2.0-L corresponds with Ø4.1mm/Ø3.5mm fixtures
3. Taps D3.3mm corresponds with Ø4.1mm/ Ø3.5mm fixtures
4. Counter Sink D4.1 is used after Final Drill D2.8
5. Counter Sink D4.8 is used after Final Drill D3.3
6. Counter Sink D5.5 is used after Final Drill D4.0
7. Profile Drill D3.5mm corresponds with Ø3.5mm fixtures



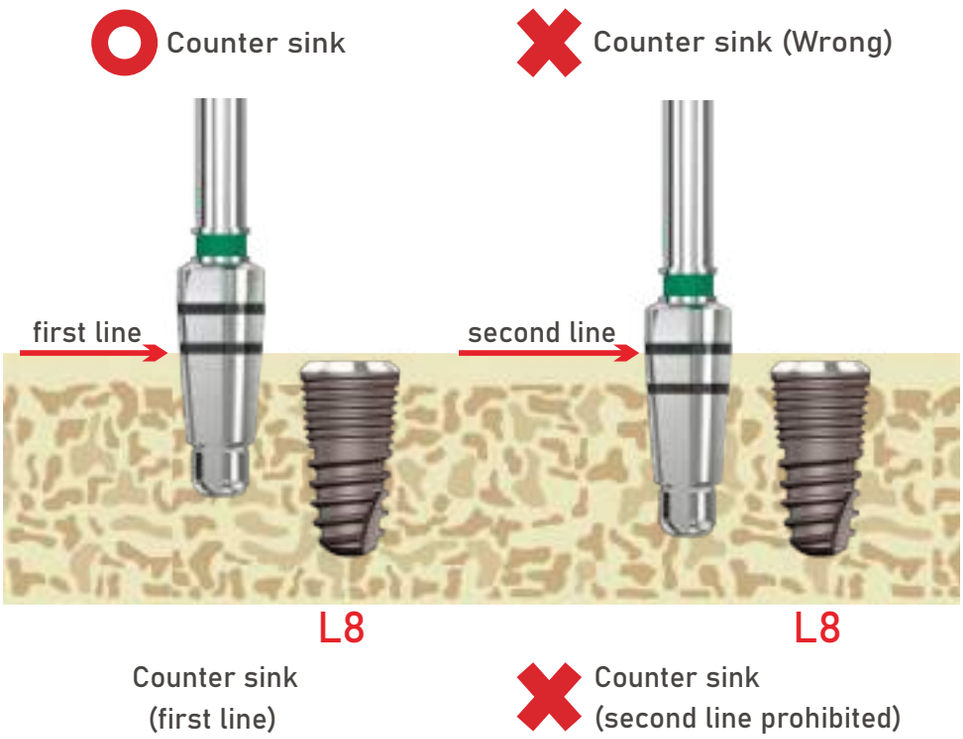
Final Drill : three fluted blade

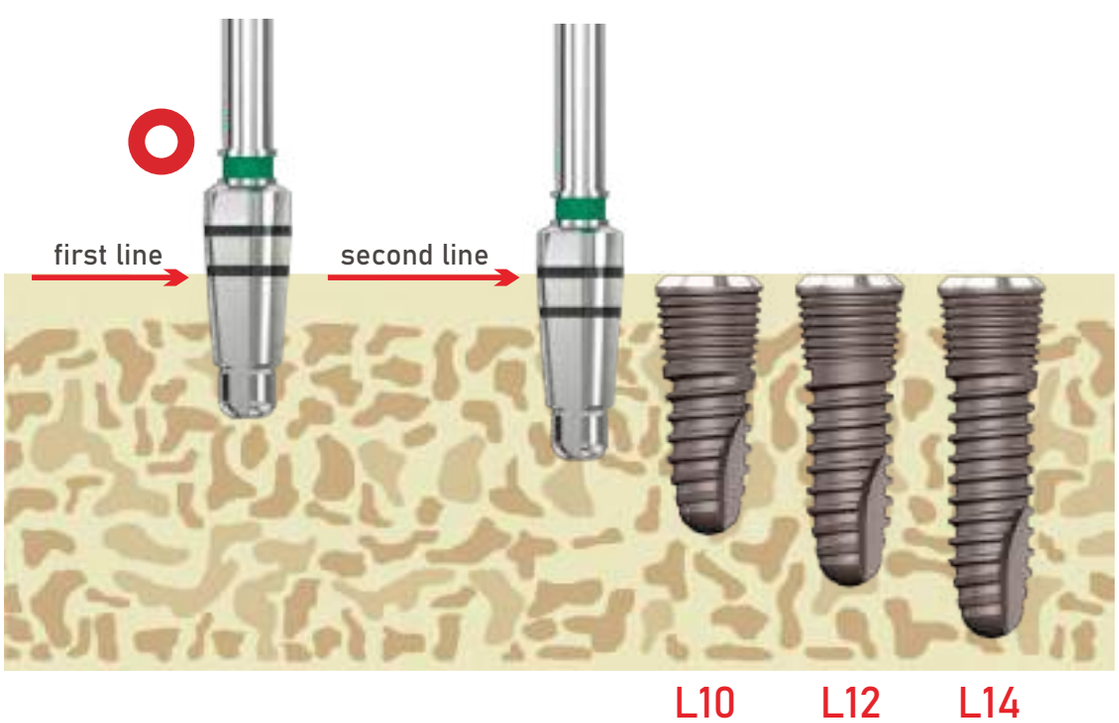
Master Kit Instrument - Torque Ratchet
Torque Ratchet Diagram

Healing Abutment	10N	
Simple / Angled Shaping / UCLA Multi-Unit...Abutment	30N	
Fixture	35N	
Fixture	Unlimited	
Fixture Tap+Adapter	Reverse	

Biomate System Description

When placing L8mm fixture, do not drill the countersink beyond the first laser-marked line, as this can cause low initial stability of the implant.



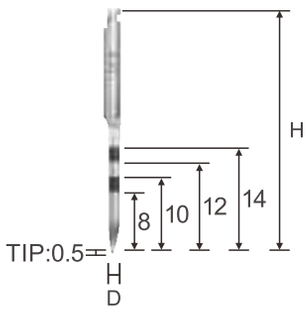


- Countersink is used to first line when the implant length is at 8mm
- To second line when the implant length is at 10mm / 12mm / 14 mm

Surgical Instruments

Round Bur

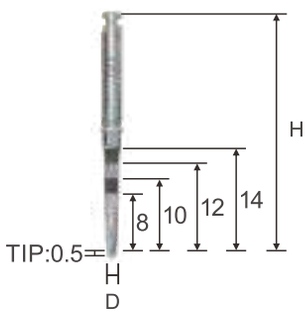
Lance Drill



Name	TIP	Diameter(D)	Height(H)	Catalog No.
Round Bur	—	D2.3	26	3AA-001
Lance Drill	0.5	D1.8	33	3AA-038

- Used in the initial stage of surgery to mark the position for implantation
- Used with rotation speed set at 1,200 rpm, torque 20 Ncm, feed water
- Round Bur can mark and smooth out a flat bone surface for drilling
- The pointed design on the Lance Drill provides a stable drilling into the cortical bone

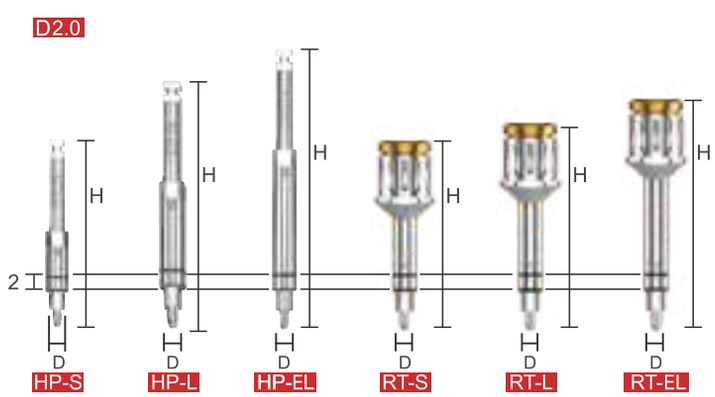
Lindemann Drill (Pilot Drill)

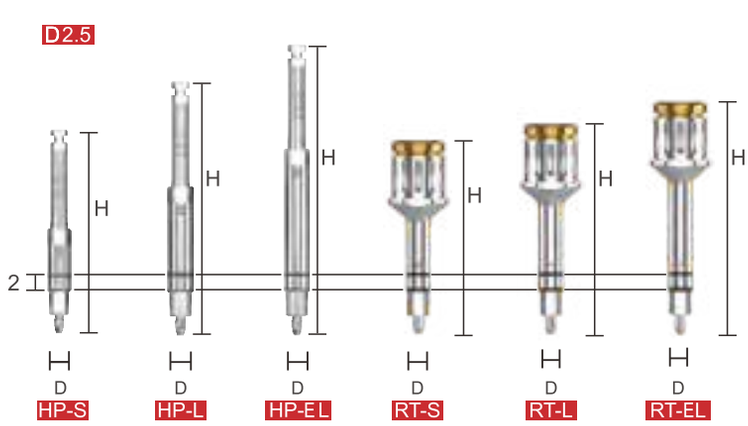


Name	TIP	Diameter(D)	Height(H)	Catalog No.
Lindemann Drill (Pilot Drill)	0.5	D2.0xL14	32	3AA-037

- Its side-cut design can correct the deviated position and angle of the initial drilling path
- Used with rotation speed set at 1,200 rpm, feed water
- Also called a Sidecut or a Lindemann

Implant Driver



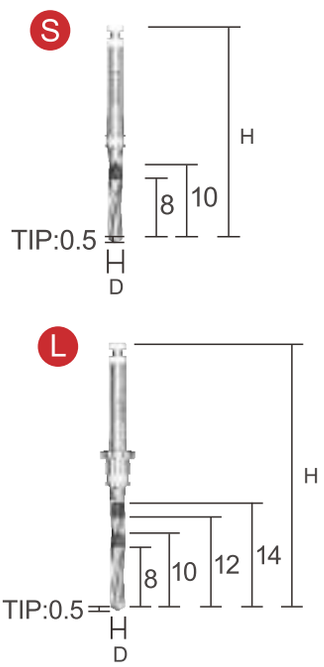


Name	Diameter(D)	Height(H)	Catalog No.
Implant Driver	Hex2.0-HP-S	27	3AA-029
	Hex2.0-HP-L	32	3AA-056
	Hex2.0-HP-EL	37	3AA-124
	Hex2.0-RT-S	24	3AA-030
	Hex2.0-RT-L	26	3AA-039
	Hex2.0-RT-EL	29	3AA-126
	Hex2.5-HP-S	27	3AA-031
	Hex2.5-HP-L	32	3AA-057
	Hex2.5-HP-EL	37	3AA-125
	Hex2.5-RT-S	24	3AA-032
	Hex2.5-RT-L	26	3AA-040
	Hex2.5-RT-EL	29	3AA-127

- Hex D2.0 corresponds with D3.1/ 4.1 fixture to lock the fixture into the bone
- Hex D2.5 corresponds with D4.8/ 5.5 fixture to lock the fixture into the bone
- HP instruments are used with implant motor, RT instruments are used with the torque ratchet
- Line markings are 2mm apart to help determine the gingival height during minimal invasive surgery
- The dots indicate each flat surface of the internal hexagon of the fixture to help determine which direction the abutment is facing

Unit : mm Scale 1 : 1 / mm

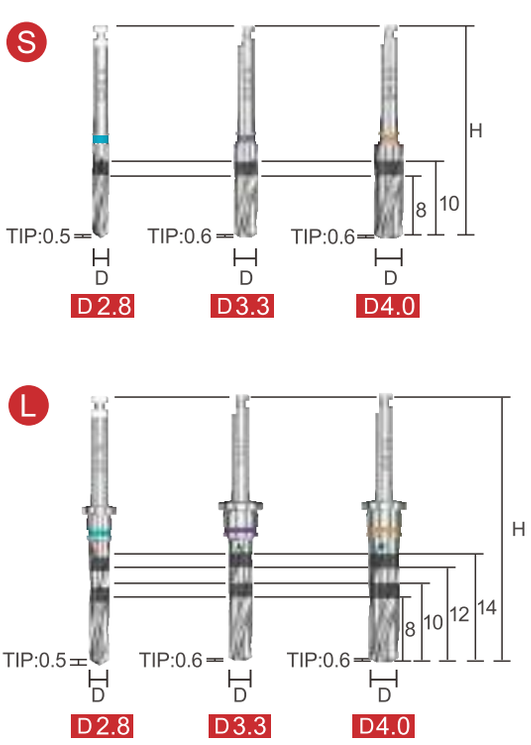
Initial Drill



Name	TIP	Diameter(D)	Height(H)	Catalog No.
Initial Drill	0.5	D2.0-S	27	3AA-006
Initial Drill	0.5	D2.0-L	35	3AA-007

- The size of the initial drill is D2.0
- The measured length excludes the tip
- Used with rotation speed set at 1,200 rpm, torque 20 Ncm, feed water
- Used for drilling the hole to the required depth in the bone after locating point of implantation
- Initial Drill S is used when there is limited workspace in patient's mouth
- Initial Drill L can be used with a stopper when there are neighboring teeth

Final Drill

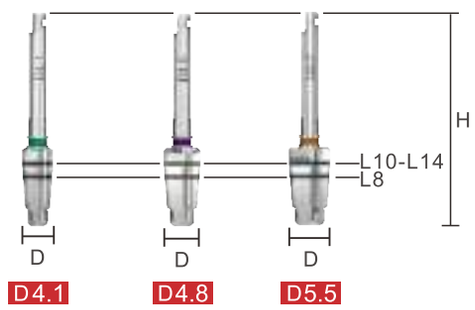


Name	TIP	Diameter(D)	Height(H)	Catalog No.	Fixture ∅
Final Drill	0.5	D2.8-S	27	3AA-008	Ø3.3 Ø4.1 Ø3.5
Final Drill	0.5	D2.8-L	35	3AA-009	Ø3.3 Ø4.1 Ø3.5
Final Drill	0.6	D3.3-S	27	3AA-010	Ø4.8 Ø4.0
Final Drill	0.6	D3.3-L	35	3AA-011	Ø4.8 Ø4.0
Final Drill	0.6	D4.0-S	27	3AA-012	Ø5.5 Ø4.5
Final Drill	0.6	D4.0-L	35	3AA-013	Ø5.5 Ø4.5

- Each drill corresponds to different diameters of fixtures
- The measured length excludes the tip
- Used with rotation speed set at 1,200 rpm, torque 20 Ncm, feed water
- Final Drill S is used when there is limited workspace in patient's mouth
- Final Drill L can be used with a stopper when there are neighboring teeth
- Final Drill D2.8 is used for enlarging the hole after using Initial Drill
- Final Drill D3.3 is used for enlarging the hole after using Final Drill D2.8
- Final Drill D4.0 is used for enlarging the hole after using Final Drill D3.3

Unit : mm Scale 1 : 1 / mm

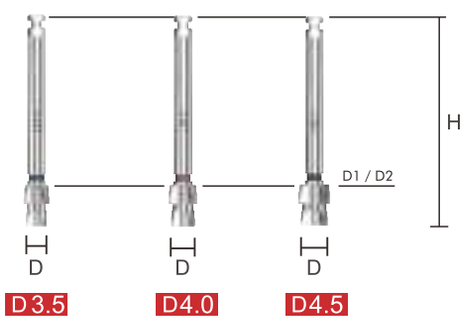
Counter Sink



Name	Diameter(D)	Height(H)	Catalog No.	Fixture ∅
Counter Sink	D4.1	29	3AA-014	Ø4.1
	D4.8	29	3AA-015	Ø4.8
	D5.5	29	3AA-016	Ø5.5

- Used to trim the cortical bone with rotation speed 1,200rpm, torque 20Ncm, feed water; each drill corresponds to different diameters of fixtures
- Drill to the second laser mark for L10-L14 Implant or the first for L8mm Implant
- Counter Sink D4.1 is used after Final Drill D2.8
- Counter Sink D4.8 is used after Final Drill D3.3
- Counter Sink D5.5 is used after Final Drill D4.0

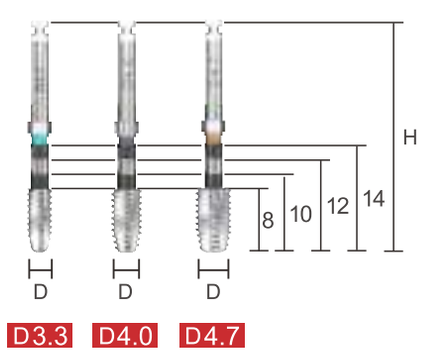
Profile Drill



Name	Diameter(D)	Height(H)	Catalog No.	Fixture ∅
Profile Drill	D3.5	28	3AA-065	Ø3.5
	D4.0	28	3AA-066	Ø4.0
	D4.5	28	3AA-067	Ø4.5

- Used to trim the cortical bone with rotation speed 1,200rpm, torque 20Ncm, feed water; each drill corresponds to different diameters of fixtures
- Profile Drill
- Profile Drill D3.5 is used after Final Drill D2.8
- Profile Drill D4.0 is used after Final Drill D3.3
- Profile Drill D4.5 is used after Final Drill D4.0

Taps



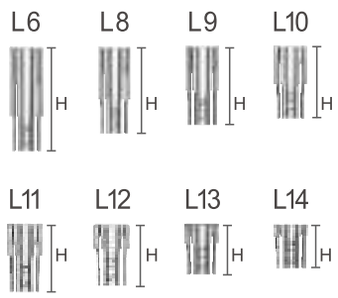
Name	Diameter(D)	Height(H)	Catalog No.	Fixture ∅
Taps	D3.3	29	3AA-017	Ø3.3 Ø4.1 Ø3.5
	D4.0	29	3AA-018	Ø4.8 Ø4.0
	D4.7	29	3AA-019	Ø5.5 Ø4.5

- Used on D1 bone to create threads inside the hole; each drill corresponds to different diameters of fixtures
- Used with rotation speed set at 20 rpm, torque 35 Ncm; set the implant motors to reversed rotation to withdraw the instrument after drilling
- Taps D3.3 is used after drilling with Final Drill D2.8 and Counter Sink D4.1
- Taps D4.0 is used after drilling with Final Drill D3.3/ Profile Drill D4.0
- Taps D4.7 is used after drilling with Final Drill D4.0/ Counter Sink D5.5

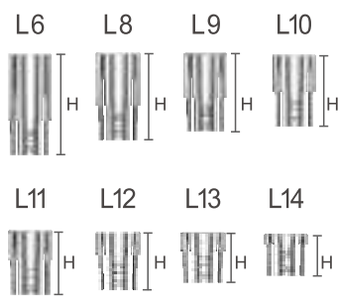
Unit : mm Scale 1 : 1 / mm

Stopper For Drill

D2.0 / D2.8



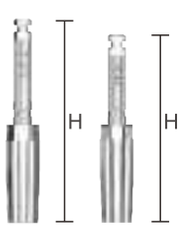
D3.3 / D4.0



Name	Diameter(D)	Height(H)	Catalog No.
Stopper For Drill L6	D2.0/D2.8	14	3AA-020
Stopper For Drill L8	D2.0/D2.8	12	3AA-021
Stopper For Drill L9	D2.0/D2.8	11	3AA-090
Stopper For Drill L10	D2.0/D2.8	10	3AA-022
Stopper For Drill L11	D2.0/D2.8	9	3AA-091
Stopper For Drill L12	D2.0/D2.8	8	3AA-023
Stopper For Drill L13	D2.0/D2.8	7	3AA-092
Stopper For Drill L14	D2.0/D2.8	6	3AA-024
Stopper For Drill L6	D3.3/D4.0	14	3AA-064
Stopper For Drill L8	D3.3/D4.0	12	3AA-025
Stopper For Drill L9	D3.3/D4.0	11	3AA-093
Stopper For Drill L10	D3.3/D4.0	10	3AA-026
Stopper For Drill L11	D3.3/D4.0	9	3AA-094
Stopper For Drill L12	D3.3/D4.0	8	3AA-027
Stopper For Drill L13	D3.3/D4.0	7	3AA-095
Stopper For Drill L14	D3.3/D4.0	6	3AA-028

- The Stopper is a safety sleeve that can be fit onto the Initial Drill-L or the Final Drill-L through the tip to prevent drilling too deep
- Stopper D2.0/2.8 is used with Initial Drill D2.0 and Final Drill D2.8
- Stopper D3.3/4.0 is used with Final Drill D3.3/4.0

Drill Extender



Name	Diameter(D)	Height(H)	Catalog No.
Drill Extender	L	27	3AA-035
	S	25	3AA-058

- Used for extending drills to avoid neighboring teeth

Handpiece Adapter

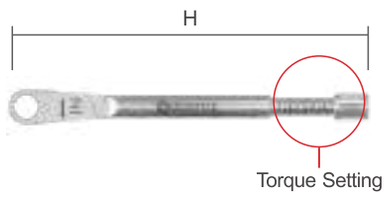
Name	Height(H)	Catalog No.
Handpiece Adapter	16	3AA-045

- Adapt instrument for use on handpeice to the torque ratchet
- Switching from motorized mode to manual mode
- How to use:

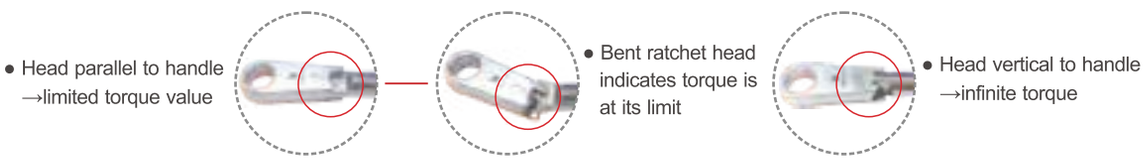
Unit : mm Scale 1 : 1 / mm

Torque Ratchet

Name	Diameter(D)	Height(H)	Catalog No.
Torque Ratchet	10-40Ncm	83	3AA-034



- Wrench to apply a constant torque (10/20/30Ncm) to screws and abutments
- When the set torque is applied, the neck of the Torque Wrench is bent for indication
- If a continuous force is applied while the neck is bent, excessive torque is applied, resulting in screw fracture
- Twist the adjustable end to set the required torque value; loosen fully to achieve inifinite torque



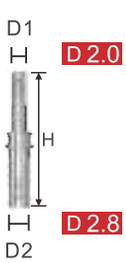
BioSmart Torque Ratchet

Name	Diameter(D)	Catalog No.
BioSmart Torque Ratchet	80Ncm	BSSITR000000A

- A set of a two-way Torque Wrench and a Torque Connector
- Applying forward/reverse torque by rotating the Torque Wrench handle without removing the connector
- Applying torque according to the line marked with the torque value to be applied by pulling the bar
- Torque applied up to 80Ncm (15/30/45/80Ncm scale display)
- Washed and sterilized after use for storing

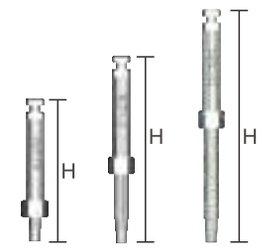
Paralleling Pin

Name	Diameter(D)	Height(H)	Catalog No.
Paralleling Pin	D2.0/2.8	18	3AA-052

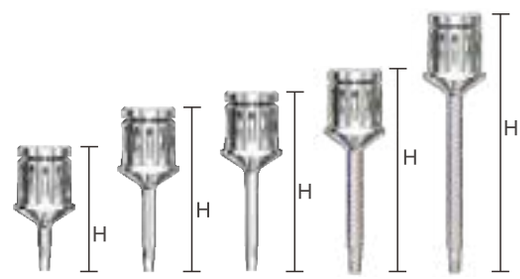


- Placed in the hole to inspect the occlusion and the distance of the implant with neighboring teeth

Screw Driver



HP-S HP-L HP-EL

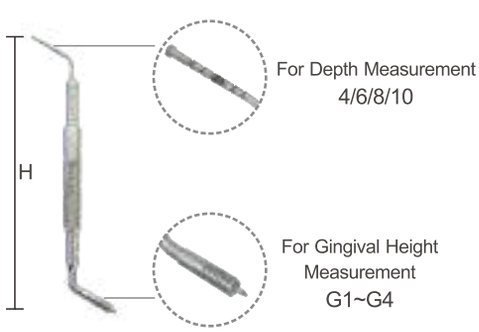


RT-SS RT-S RT-M RT-L RT-EL

Name	Diameter(D)	Height(H)	Catalog No.
Screw Driver	Hex 1.25-HP-S	19	3AA-033
	Hex 1.25-HP-L	25	3AA-041
	Hex 1.25-HP-EL	31	3AA-145
	Hex 1.25-RT-SS	14.8	3AA-146
	Hex 1.25-RT-S	19.8	3AA-042
	Hex 1.25-RT-M	21.8	3AA-147
	Hex 1.25-RT-L	24.8	3AA-043
	Hex 1.25-RT-EL	31.8	3AA-148

- Used for connecting the healing components (Cover Screw/Healing Abutment) or the prosthetic components (Abutments) with the fixtures
- HP instruments are used with implant motor, RT instruments are used with the torque ratchet

Depth Gauge



Name		Height(H)	Catalog No.
Depth Gauge	–	139	3AA-044

- Used to inspect the height of the healing abutment and abutment after implant, and the depth of the hole

Ball Abutment Driver

Name	Diameter(D)	Height(H)	Catalog No.
Ball Abutment Driver	Hex-HP	18.5	3AA-050
	Hex-RT-S	20.0	3AA-051
	Hex-RT-L	26.0	3AA-053

- Used for Ball Abutment
- Hex-HP is used with handpiece at 30 Ncm
- Hex-HP is used with handpiece at 25 Ncm

Surgical Procedure

Preoperative Evaluation

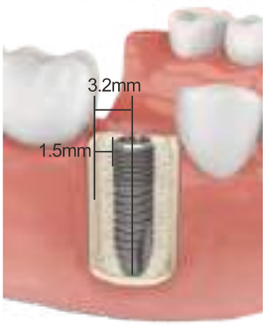
Implant position of each case is different. Evaluation should be made in consideration of occlusion, neighboring teeth, thickness of the soft tissue, and the type of prosthetic components that will be used.

Distance between the bevel of the fixture and the neighboring teeth should be more than 1.5 mm

Distance between Biomate Implant and Neighboring Teeth				
Natural Teeth/Implant	3.3	4.1	4.8	5.5
Natural Teeth	3.2	3.6	3.9	4.3

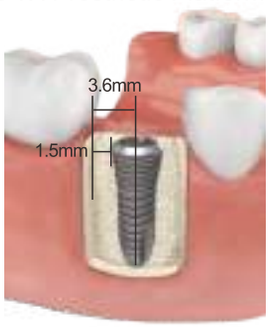
Distance between Biomate Plus Implant and Neighboring Teeth			
Natural Teeth/Implant	3.5	4.0	4.5
Natural Teeth	3.3	3.5	3.8

Ø3.3 Prosthetic Platform



Osteotomy Center from Adjacent Tooth

Ø4.1 Prosthetic Platform

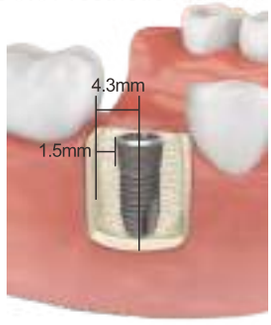


Osteotomy Center from Adjacent Tooth

Ø4.8 Prosthetic Platform

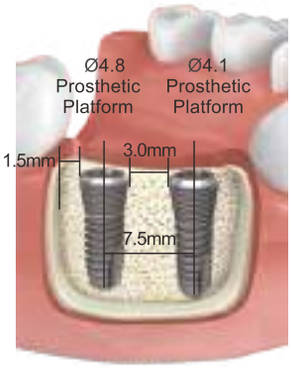
Osteotomy Center from Adjacent Tooth

Ø5.5 Prosthetic Platform

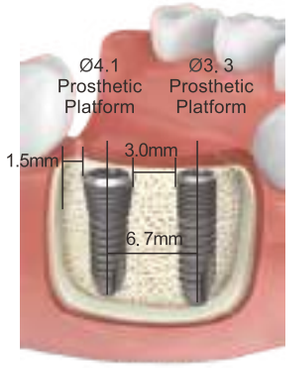


Osteotomy Center from Adjacent Tooth

If two fixtures are placed next to each other, the distance between the bevels of the two fixtures should be more than 3.0 mm



Measurement is Dependent on the Two Prosthetic Platform Diameters



Measurement is Dependent on the Two Prosthetic Platform Diameters

Distance between Biomate and Neighboring Teeth				
Fixture/ Fixture	3.3	4.1	4.8	5.5
3.3	6.3	6.7	7.1	7.4
4.1	6.7	7.1	7.5	7.8
4.8	7.1	7.5	7.8	8.2
5.5	7.4	7.8	8.2	8.5

Distance between Biomate-Plus Fixture and Neighboring Teeth			
Fixture/ Fixture	3.5	4.0	4.5
3.5	6.5	6.8	7
4.0	6.8	7	7.3
4.5	7	7.3	7.5

The Procedure

Operation Steps for Implanting Ø4.1 x L12 Fixture
Operation Steps for Implanting Ø3.5 x L12 Fixture

STEP.1

STEP.2

② Lance Drill D1.8

STEP.3

⑥ Initial Drill D2.0(L)

Incision

Select a suitable scalpel to incise the gingiva and the periosteum at the desired implant sit in order to expose the alveolar bone.

Note: The incision direction is subject to the patient's real bone condition, and the healing mode must also be considered (trans-gingival or submerged)

Marking the Implant Position

After detaching mucosa, the Lance Drill is used to determine the implant site on the bone. The drilling depth is variable and is maximum the length of the implant.

Use the implant motor for the drilling procedure. Recommend speed max. 1,200 rpm (revolutions per minute) at 20Ncm; adjust appropriate water flow for cooling the drilling site.

Note: Surgical guide may be used to assist in marking the implant position.

Initial Drilling

Using the D2.8 mm Initial Drill, the implant length and axial alignment are then determined. The required drilling depth can be checked optically using the depth marking on the drills or using the optionaldepth pin. Recommended speed setting is 1,200 rpm at 20Ncm. The cavity is rinsed again with physiological saline solution.

Note: Stopper D2.0/2.8 may be used according to the needed depth.

STEP.4

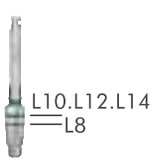
⑦ ⑧ ⑨
Paralleling Pin
D2.0 / D2.8

STEP.5

⑪
Final Drill D2.8

STEP.6

⑬
Counter Sink D4.1



⑬
Profile Drill D3.5

Axial Alignment

Check the alignment with neighboring teeth and the occlusion by using paralleling pin. Alignment can be adjusted in subsequent steps.

Note: The incision direction is subject to the patient's real bone condition, and the healing mode must also be considered (trans-gingival or submerged)

Initial Extension Drilling

The initial drill hole is extended by using D2.8 mm final drill. Alignment can still be adjusted slightly at this stage. Recommended speed setting is 1,200 rpm at 20Ncm. Cooling is to use a chilled, sterile, physiological saline solution.

Note: Stopper D2.0/2.8 may be used according to the needed depth.

Expanding with Counter Sink (Only for BIOMATE)

Use Counter Sink D4.1 for trimming the cortical bone according to the patient's bone density. Enlarge the rim of the hole to correspond to the outer diameter of the fixture's platform.

Expanding with Profile Drill

Use Profile Drill D3.5 for trimming the cortical bone according to patient's bone density. Enlarge the rim of the hole to correspond to the outer diameter of the fixture's platform. Recommended speed setting is 1,200 rpm at 20 Ncm (feed water).

Note: Counter Sink is available for D1-D3 but not needed for D4 bone ; Profile Drill is available for D1-D2 bone , D3-D4 bone may be skipped with this step.

The Procedure

Operation Steps for Implanting Ø4.1 x L12 Fixture
Operation Steps for Implanting Ø3.5 x L12 Fixture

STEP.7

STEP.8

Threading with Taps

BIOMATE fixture is applied with self-tapping design. However, for patients with high bone density (D1 bone), Taps D3.3 is Recommended. The reason of threading the drilled hole is to avoid excessive stress that might damage the bone and result a bone loss. Recommended speed is 20 rpm at 35 Ncm; set up a reversed rotation to withdraw tap after drilling.

Note: Taps is avaliable for D1 bone, D2-D4 bone may be skipped with this step.

After drilling procedure, conduct implantation. Open the outer package to take out the sterile blister package. Peel the blister package open to obtain the fixture bottle and gently pull it open. Use Implant Driver D2.0-HP/RT to take the fixture out.

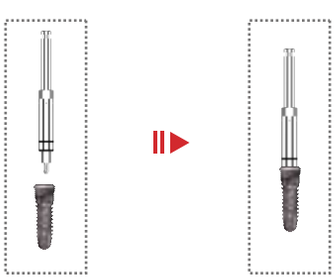
STEP.8




Note 1:
The hexagon and taper design of the fixture and the Implant Driver are made complimentary to each other. Gently press the Implant Driver to ensure it is firmly connected to the fixture before taking it out of the bottle.

Note 2:
Hold the Implant Driver with the fixture upside down to prevent the fixture from contacting other matter or dropping before placing it in the patient's mouth.

Note 3:
BIOMATE implant has a mount free design.



The Procedure

Operation Steps for Implanting Ø4.1 x L12 Fixture
Operation Steps for Implanting Ø3.5 x L12 Fixture

STEP. 9

Use the Implant Driver with implant motor or torque ratchet to screw the fixture into the bone with recommended torque 35Ncm. When the fixture cannot be fully screwed in, assess the necessity of unscrewing the fixture. Verify the diameter of the hole before a second approach.

Note: Using excessive force to screw in the fixture may damage the bone and cause bone infarction due to excessive stress. It is recommended to unscrew the fixture and re-drill the hole.

STEP. 10

Cover Screw

- Please turn Screw Driver D1.25-HP/RT(Tightened with 1.25 hex driver) counterclockwisely for 2 to 3 laps to take out the cover screw.

STEP.11 Post-Implantation Procedure

Two Stage Surgery

- After implantation, use Screw Driver D1.25-HP/RT to take out the cover screw in the bottle cover. Ensure the Cover Screw is attached firmly with the Screw Driver to avoid the risk of dropping.
- Use the D1.25 screw driver to hand -tighten the Cover Screw into the fixture by torque ratchet(10Ncm).

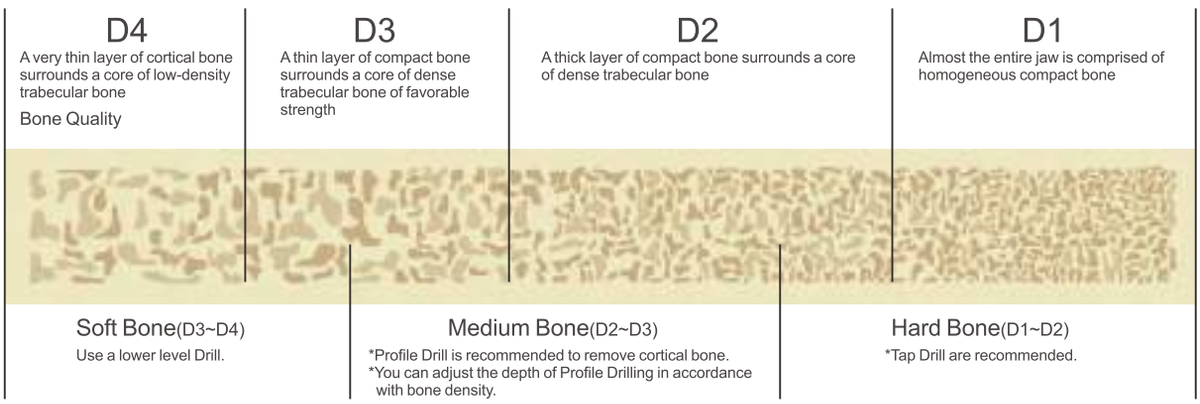
Note 1: Do not use excessive force to prevent damaging the internal socket of the fixture.
Note 2: Healing abutment & cover screw, please keep the sterilization condition during surgery.

One Stage Surgery

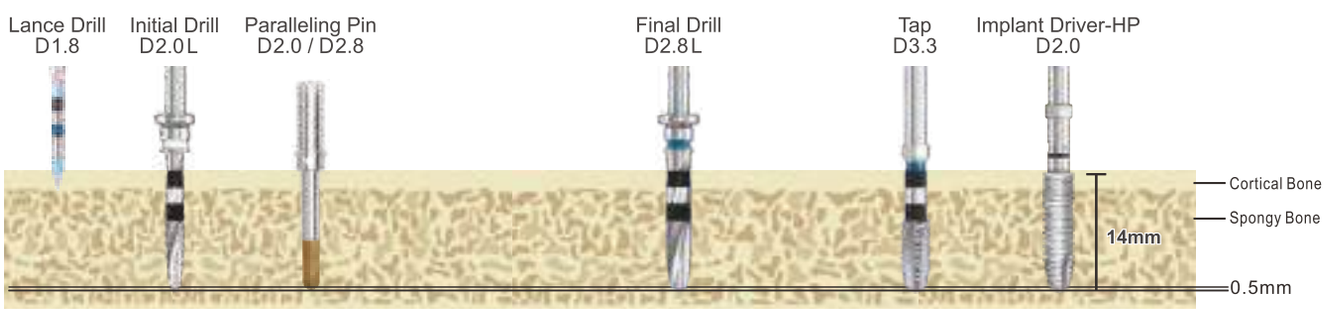
- According to dentist's evaluation of patient's oral condition, a corresponding Healing Abutment can be placed right after implantation to omit incision a second time.
- Use the D1.25 screw driver to hand-tighten the Healing Abutment into the fixture by torque ratchet(10Ncm).

Note 1: Do not use excessive force to prevent damaging the internal socket of the fixture.
Note 2: Healing abutment & cover screw, please keep the sterilization condition during surgery.

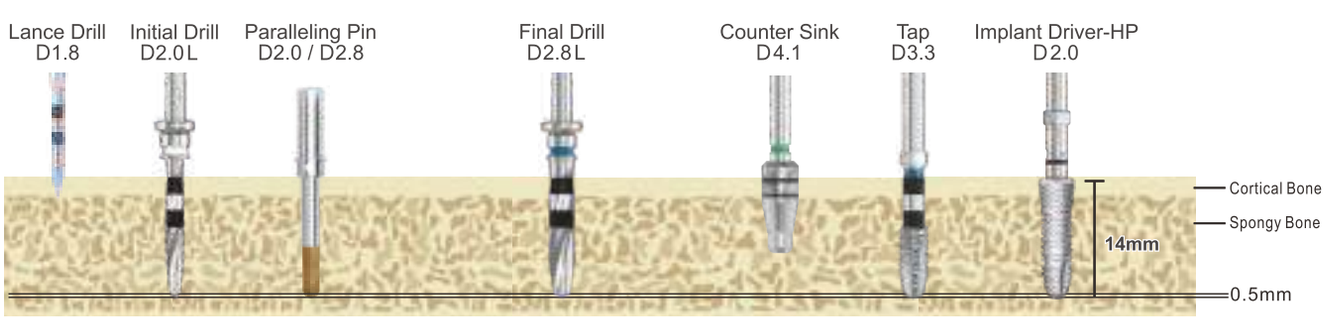
Biomate Drilling Sequence of Instruments



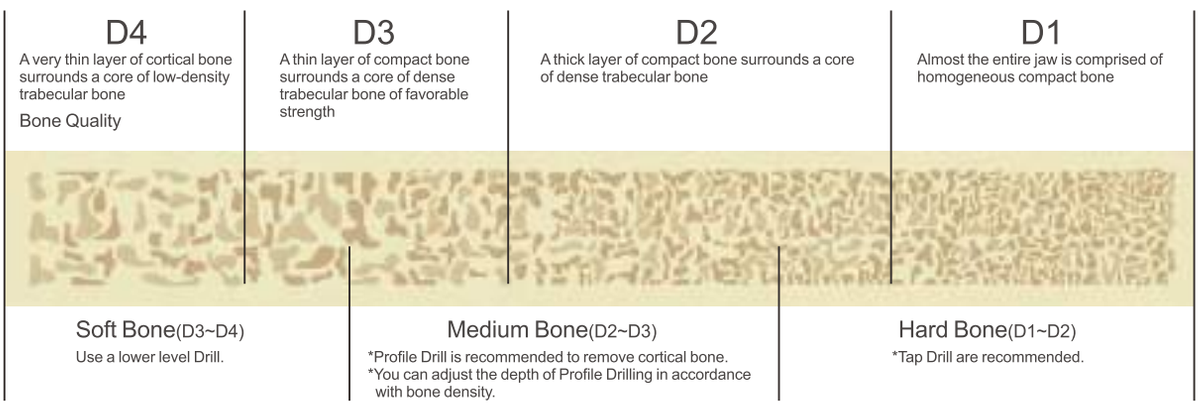
Ø3.3 x L14 (Periodontal flap surgery)



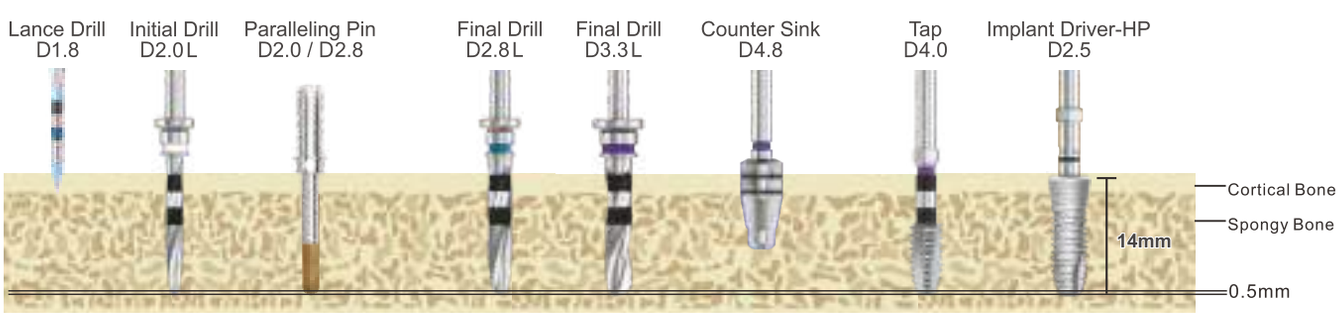
Ø4.1 x L14 (Periodontal flap surgery)



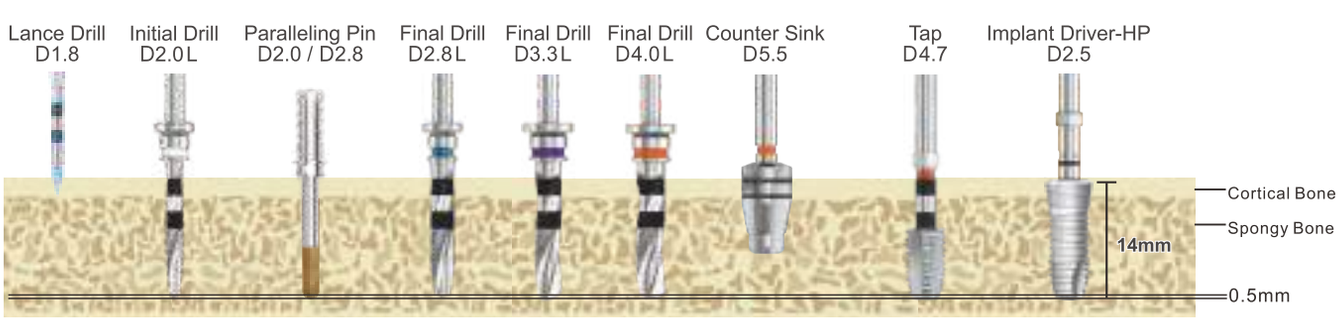
- **Recommended:**
  If you prefer to submerge the implant, we recommend Biomate Implant with 0.5-1.00 mm submerged.
  If you follow up the drill mark, please exceed the mark on initial drill, final drill and counter sink in case of 0.5-1.00 mm submerged.



Ø4.8 x L14 (Periodontal flap surgery)

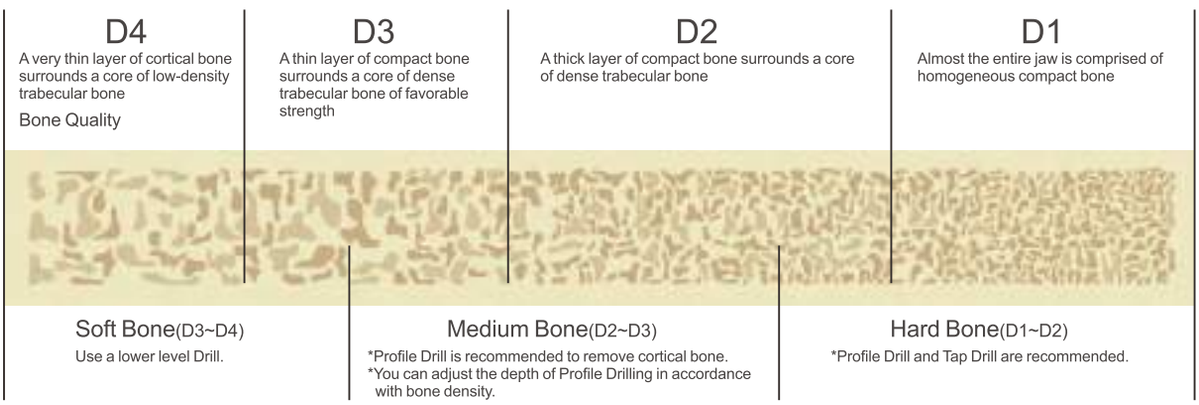


Ø5.5 x L14 (Periodontal flap surgery)

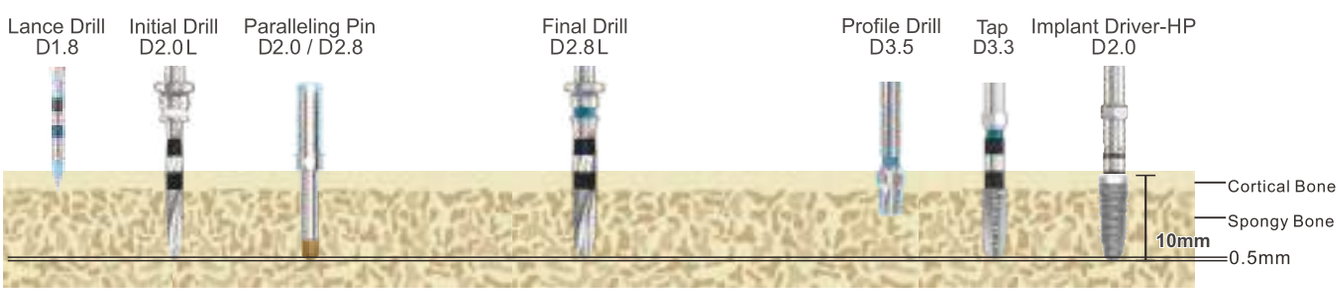


- **Recommended:**
  If you prefer to submerge the implant, we recommend Biomate Implant with 0.5-1.00 mm submerged.
  If you follow up the drill mark, please exceed the mark on initial drill, final drill and counter sink in case of 0.5-1.00 mm submerged.

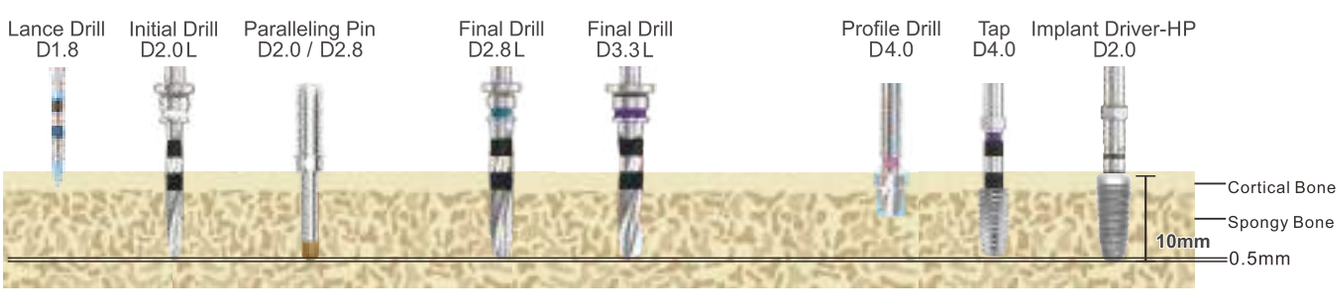
Biomate Plus Drilling Sequence of Instruments



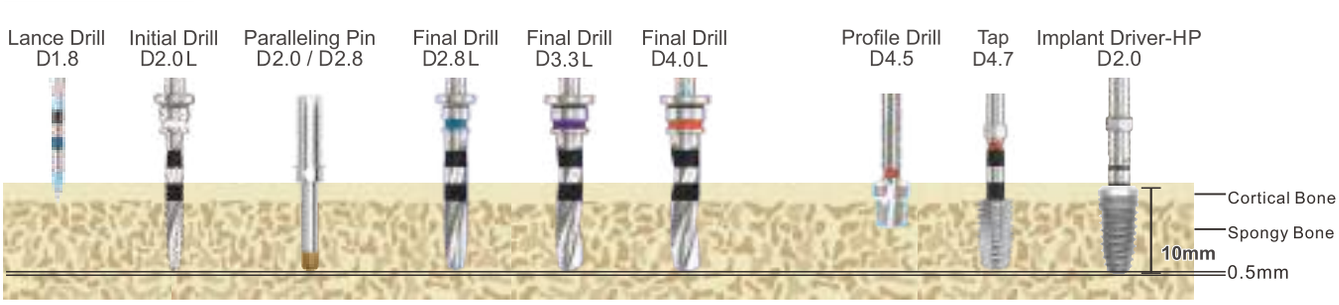
Ø3.5 x L10 (Periodontal flap surgery)



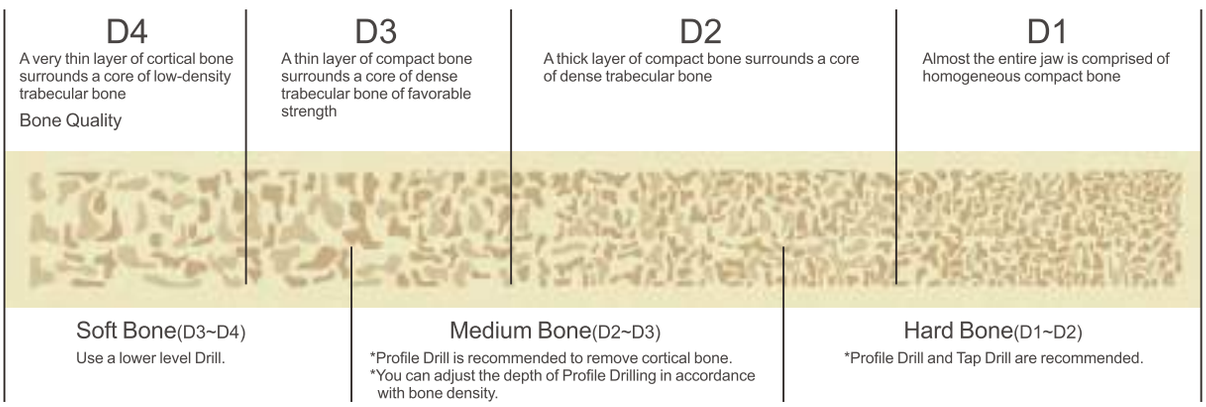
Ø4.0 x L10 (Periodontal flap surgery)



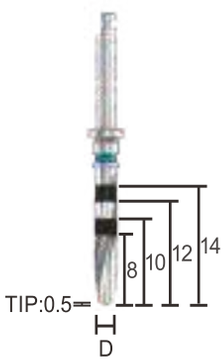
Ø4.5 x L10 (Periodontal flap surgery)



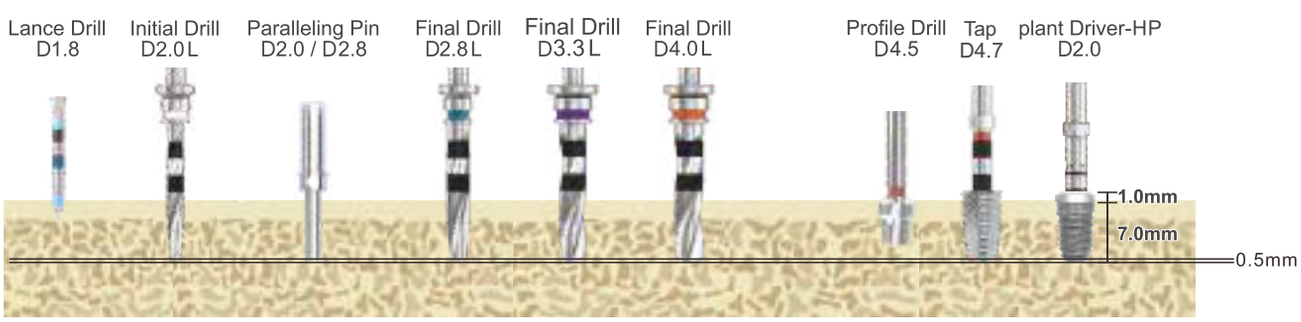
- **Recommended: If you prefer to submerge the implant, we recommend Biomate Plus Implant with 0.5mm submerged. If you follow up the drill mark, please exceed the mark on initial drill, final drill and profile drill in case of 0.5mm submerged.**



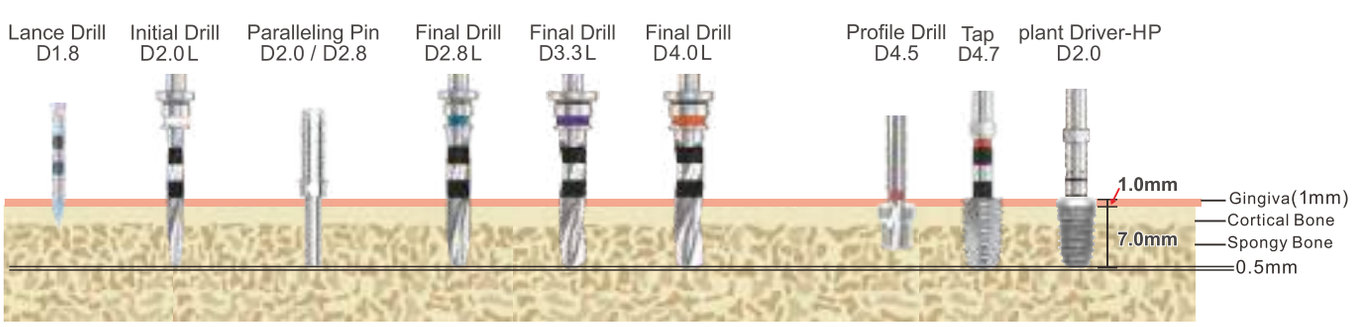
※When the bone height is not enough to 8mm, it is recommended to use ø4.5xL8 implant, which makes the 1.0mm smooth surface appear above the bone plane. (ø4.5xL7)



Ø4.5 x L8 (Periodontal flap surgery)



Ø4.5 x L8 (Periodontal flap surgery)



- **Recommended: If you prefer to submerge the implant, we recommend Biomate Plus Implant with 0.5mm submerged. If you follow up the drill mark, please exceed the mark on initial drill, final drill and profile drill in case of 0.5mm submerged.**

Fixture Packaging and Label & Instrument Cleansing and Maintenance

Instrument Cleansing and Maintenance

Attention! Instructions are not sterilized when delivered, please autoclave prior to use.

Please follow the instructions to clean and sterilize used surgical instruments.

Cleaning
01.During surgical process, soak used surgical instruments into saline solution.
02.After surgical process, use soft brush to clean remained blood stain and residues with clean water.
Soak surgical instruments into a container with quadruple enzyme cleaner that is covering all the instruments, and then put the container into a ultrasonic cleaning machine for 9 minutes. Finally, rinse the instruments with ultra-pure water several times and dry them.
-Do not use detergent containing aldehydes that can regulate and preserve protein.
-Please see manual of quadruple enzyme cleaner. (3M TM Rapid : Water, 1:100)

Package
03.Put the cleaned instruments back into surgical kit, and cover it with a surgical towel.
(Avoid collision among drills in order not to affect the cutting ability.)

Sterilization
04.Put the surgical kit with towel covered into sterilization pot(see manual of sterilization pot)
Recommended temperature: 132℃ . Sterilization time: At least 4 minutes. Drying time: At least 30 minutes

Storage
05. After sterilization, keep the kit in a dust-proof and moisture-proof space. (Validity: Do not exceed 7 days)

Notes:
Before using the surgical instrument, have to check. Discard the surgical instruments immediately if there is a defect as following:
-The blade becomes dull or damaged.
-Deformation(such as bending/twisting/folding)
-Surface corrosion

Recommendation for Use

To ensure quality use of instruments, instruments with cutting capability are recommended to be used less than 10 times. Please clean with sterile saline to prevent damage from excessive friction during surgery.

Sterilization Identification

Orange

Non Sterilized

Red

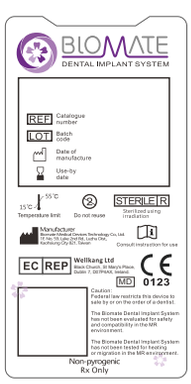
Sterilized

Fixture Package and Label

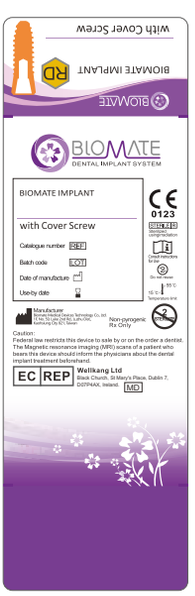
Fixture Product Packaging

Cover Screw

Implant internal label



Implant external label & sealing sticker



CATALOG

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of Technology
and Healthy Living

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