

# Why Dentium?

Dentium will continue to meet the demands of our valued customers  
by providing the highest quality products





# Overview

Dentium Co., Ltd. was found in South Korea in June 2000 as the first company to successfully achieve the S.L.A. (Sandblasting with Large grits and Acid etching) surface treatment technology. Ever since its establishment, Dentium has collaborated with leading clinicians, research institutes, and universities to develop and offer the state-of-the-art products to make dental implant surgeries easier and more predictable. Dentium's products are developed by industry leaders backed by unprecedented hours of research and long-term clinical documentation. To ensure that Dentium offers products highest in quality, Dentium attained the ISO13485 and CE (Europe) certification and met the Good Manufacturing Practice (GMP) set forth by many countries worldwide, including the United States Food and Drug Administration (FDA).

Dentium is globally recognized as a company dedicated to research and development. Dentium began with the manufacturing of high quality dental implant products and related instruments. Over time, to complement its dental implant systems, Dentium has embarked in developing regenerative materials. Some of Dentium's widely recognized biologics include bone graft material, growth factor, collagen membrane, and tissue engineering products. Moreover, Dentium has expanded its presences in the field of dentistry by developing and manufacturing Lab products (Zirconia Blocks, Porcelain) and equipment for Digital Dentistry (CAD/CAM System, iOS).

In addition to the R&D, Dentium is highly regarded for its commitment to providing edifying scientific programs. Every year, Dentium organizes Dentium World Symposium, Clinical Case Presentations, and seminars, where thousands of dental professionals from all around the world attend to share their professional experiences and knowledge in the field of dental implant, restorative, and digital dentistry.

Dentium will continue to meet the demands of our valued customers by providing the highest of quality products, comprehensive educational programs, and unrivaled customer service to dental professionals worldwide. It is an honor to have you as our valued customer.

Thank you.



# Global Networks

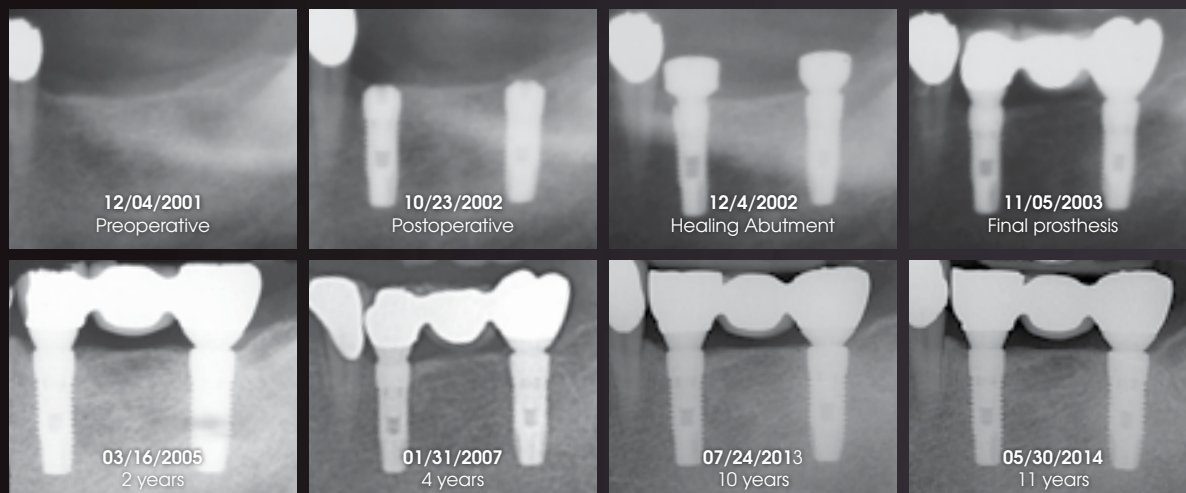


Dentium currently has its own corporate and branch offices in the U.S.A., China, Dubai, Germany, Singapore, Thailand, Hongkong, Iran, Malaysia, Indonesia and India. Dentium exports its implant products to more than 70 countries through local distributors. Information on the local distributors and corporate offices of Dentium can be searched on our web page. ( [www.dentium.com](http://www.dentium.com) )



# Dentium LONG-TERM CLINICAL CASE

over  
**10** years  
of Long  
term  
data



## Simple & Predictable 10 Years of Clinical Evidence

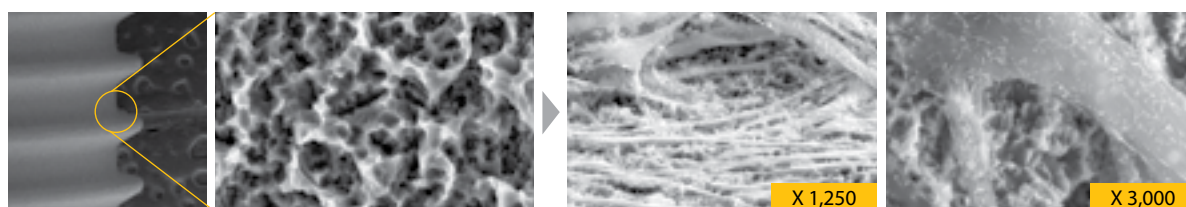
**Dentium provides PREDICTABILITY based on EVIDENCE.**

10 years history of consistent implant design with S.L.A. Surface  
(Sandblasted with Large grit and Acid etched) excellent bone preservation.

**EFFICIENCY through SIMPLICITY**

Single abutment connection is used for all implant diameters (**IMPLANTIUM®** & **SuperLine™**).  
One abutment screw fits all abutments and fixture platforms.

**S.L.A.** (Sandblasting with Large grits and Acid etching) **Surface?**



Cell number 3 X 10, after 7 days of cell culture

# Products of Dentium



Dentium is the first company in South Korea to successfully achieve the S.L.A. (Sandblasting with Large grits and Acid etching) surface treatment technology, which ensures excellent stability and biocompatibility. Dentium recently completed a clinical milestone by gathering “over 10 years of long-term data,” an amazing achievement and testament to its products and its research and development. Dentium has obtained the FDA clearance from the USA and the CE Certification from Europe and has been exporting products to over 70 different countries worldwide.



Dentium’s dedication and commitment to developing and manufacturing dental products does not stop with dental implants alone. As implant dentistry is becoming increasingly sophisticated, it is only a natural progression for companies like Dentium to develop counterparts to complement its dental implant systems. Hence, Dentium is constantly striving to develop more complementary products to simplify the complicated dental implant surgeries.



Dentium’s regeneration materials for bone preservation and soft tissue management for successful implant surgery has never been better. Supported by many documentations and researches, such as the one performed by Dr. Myron Nevins from the Harvard University - School of Dental Medicine, Dentium’s regenerative products has been proven to be one the most effective biologics in today’s market.



rainbow™ Digital Dentistry is a complete dental diagnostic system ranging from CAD/CAM equipment to Lab products. Dentium is committed to developing, manufacturing and offering a full series of products related to prosthetics for our customers. Dentium is currently the only company developing and manufacturing the “all-in-one system” in the nation (South Korea). We expect to release a diverse range of Digital Dentistry as we continue to pave the way as the leader in the industry.



As many as there are implant placed, there are that many restorations. Furthermore, an implant surgery is deemed successful when the patient achieves a functional and aesthetic restoration. Therefore, Dentium has embarked in developing lab products to deliver those desired outcomes. Dentium has gone even further by developing solutions and substances to provide users the control over the aesthetics in implant restorations. Dentium is one of the very few dental implant companies worldwide with such sophisticated line of dental lab products.

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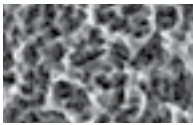






# **Implant System**

# SuperLine



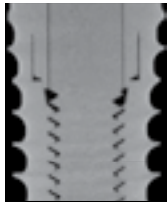
## S.L.A. Surface

(Sandblasted with Large grits and Acid etched)

- S.L.A. Surface allows good bone-to-implant contact with good clinical performance, maintaining crestal bone margin.

reference: Kim H., et. al. "The biocompatibility of SLA-treated Titanium Implants" Biomed. Mater. 2008; 3(2):025011

## Improved wall thickness

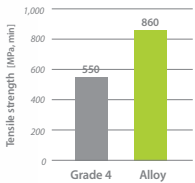


## Increased thread height and sharper



## Joint stability & Improved strength for zirconia crown

- Abutment material: Grade 4 ► Alloy



- Long hex design: Improved recognition

## Improved soft tissue management

- Concave abutment design
- Non-coating

## Double Thread & Thread Height

- Double-Threaded tapered body design may provide good success rate in immediate loading cases.

reference: Kim et. al., "A Prospective, 1-year observational study of double-threaded tapered body dental implants with immediate loading" J Prosthet Dent 2015;114:46-51



Preoperative



Surgery



Healing 2 months



Final Prosthesis



Preoperative



Surgery



GBR(OSTEON 3 Collagen)

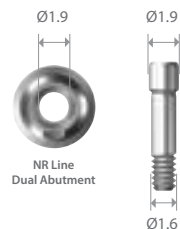


Healing 3 weeks  
(After 2nd Surgery)

# NR Line

## Abutment Screw

- Ø1.9mm hole size for abutment screw



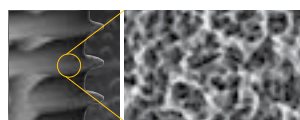
## Good Soft Tissue Response

### S.L.A. Surface

(Sandblasted with Large grits and Acid etched)

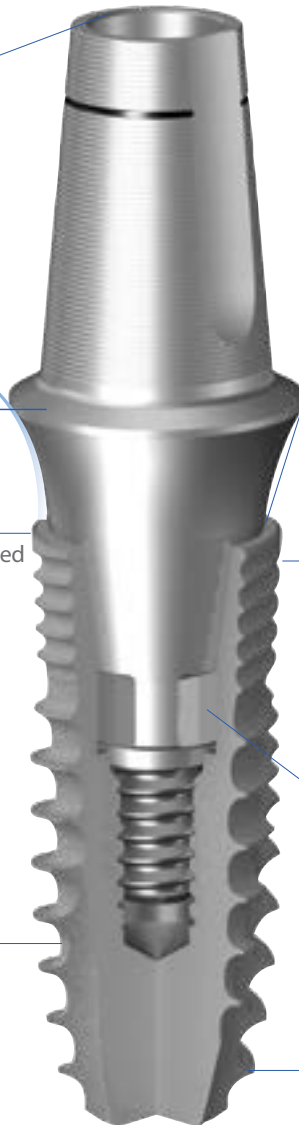
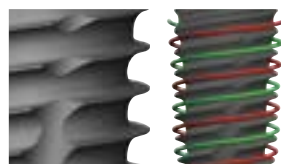
- Easy application combined with simplified GBR procedure on narrow ridges

Reference: Kim H., et. al. "The Biocompatibility of SLA-treated Titanium Implants" Biomed. Mater. 2008; 3(2):025011



## Double-Threaded, Tapered Body Design

- Easy and fast insertion can be done due to the double-threaded straight body design



## Platform-Switched Design

- Platform-Switched design may be beneficial in marginal bone preservation

Reference: Hsu. et. al., "Comparison of Clinical and Radiographic Outcomes of Platform-Switched Implants with a Rough Collar and Platform Matched Implants with a Smooth Collar: A 1-Year Randomized Clinical Trial Int. J. Oral Maxillofacial Implants 2016;30:382-290

## Narrow but can cover full Line up

- Ø3.1mm body diameter for narrow ridges
- Available in two platforms (Ø3.2mm & Ø3.6mm)
- 4.3mm body diameter equal to 4.0mm of superline & Implantium

## Internal Conical Connection

- Internal conical connection between implant and abutment interface allows tight sealing

## Apical Design

- The 3-blade self-tapping design can minimize bone destruction
- The flat end design reduces bone perforation risk



Preoperative



Preoperative



Implantation (NR Line 3009S)



Bone graft (OSTEON™ II Collagen)



Suture



Customized abutment



Final prosthesis



Final prosthesis

# IMPLANTIUM II

## Optimal Fixation Threads

- Synchronized positive neck threads.
- Initial stability & maximum sealing between the cortical bone and fixture.
- Optimal fixation threads reduce stress of marginal cortical bone and minimize marginal bone loss.

## Biological Thread

- Thread platform design creates excellent bone to implant contact.
- Threads engage and penetrate bone with ease.



## Dual Thread Design



## Extended Cutting Edge

- Improved self-tapping ability
- Allows more control over the depth of fixture placement
- Alleviates the occurrence of over-torque during placement in dense bone



Preoperative



Preoperative



Implant Guide



Implantium II (FXI4512)



Suture



Provisional restoration



Final prosthesis



Final prosthesis

# SimpleLine II

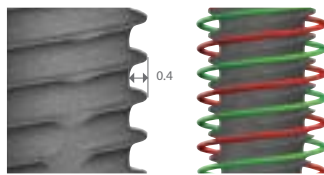
## Ti-Retaining Screw

- Smaller diameter of abutment screw has reduced a tendency of falling off a resin in the screw hole.
- More stable occlusal scheme



## Double-threaded Design

- Sharpened thread design promotes better initial stability in soft bone
- Easy & fast insertion can be done due to double threaded straight body design



## SCA Abutment

- Offers additional gingival height options
- Implantation with the SCA Abutment
- Able to reproduce emergence profile
- Effective soft tissue management

## 8 degree Morse Taper Octagon Connection

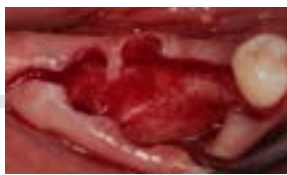
- Screw loosening is well prevented due to the cold welding mechanism for solid abutment application.
- Maximized depth of the octagon design to enable easy adaptation verification for dual abutment application.



Preoperative



Preoperative



Flap reflection



Implantation (SOFX654310S)



Bone graft  
(OSTEON™ II, OSTEON™ II Collagen)



Suture



Final prosthesis



Final prosthesis



# SlimLine

## Denture System

- Mini ball size (Ø1.8)
- Mini o-ring type denture socket
- Minimal-size denture socket
- Mini o-ring are replaceable

Ø4.05



(BFS3)

(300~500gf)

Ø4.85



(BFS2)

(500~700gf)



Mini O-ring

## Tilting Angle

Up to  $\pm 15$  degrees of tilting angles to accommodate the pathway of the implant.

## Angled Abutment

- Slanted implantation is possible with the combination of angled abutment (15°, 25°).
- Cement the final restoration onto the abutment.



IUA153720

IUA253720



- Selecting direction is easy due to the Octa 45° rotation angles.

## Double-threaded Design

- Sharpened thread design promotes better initial stability in soft bone
- Easy & fast insertion can be done due to double threaded straight body design



Preoperative



Preoperative



Parallel pin



SlimLine (Fix Type)



Implantation (SlimLine IUS281512)



Provisional restoration



Final prosthesis



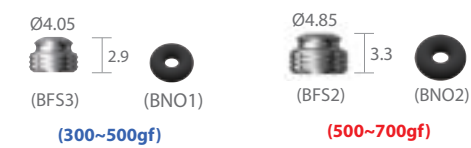
Final prosthesis

# Overdenture

## Mini Ball Attachment

Interchangeable (Large & Small female)

- Mini ball: Mini ball size (Ø1.8)  
Mini o-ring type denture socket  
Minimal-size denture socket
- Tilting angle: Up to ±15 degrees of angled tilting freedom for pathway of the implant.



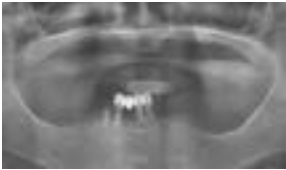
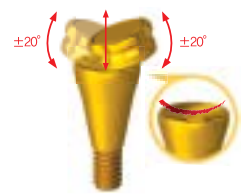
## Positioner

- For multiple-unit and full-arch restorations
- Self aligning: Self aligning mechanism allows easy and convenient denture placement
- Tilting angle: Tilting type ( ±10° ) / Non-tilting type ( ±5° )
- Four different retention options: 100gf, 300gf, 500gf and 1,000gf



## Magnetic Attachment

- Lowest vertical height
- Horizontal stablilty
- Easy insertion
- Dome type and flat type



Preoperative



Preoperative



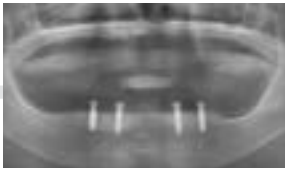
Extraction



Implant Guide



Ball attachment connection



Postoperative



Healing 3 months



Final prosthesis





# **Kits & Instruments**

# for Sinus Elevation

## DASK (Dentium Advanced Sinus Kit)

- Simple and easy access to sinus cavity
- Minimal risk of membrane perforation
- Broad exposure of bony walls with special tools



Crestal Approach (Sinus Lifting)



Lateral Approach (Sinus Elevation)



Wall-off Technique

Thin-out Technique

### Clinical Case 1 Crestal Approach



Preoperative



Preoperative



DASK drill #2 with depth stopper (XRT372035)



Detach sinus membrane using DASK curette (XSE1L)



OSTEON™ II Lifting



Implantation (FX3610SE)



Final prosthesis



Final prosthesis

### Clinical Case 2 Lateral Approach [Wall-off Technique]



Preoperative



DASK drill #6 to prepare a bony window



The bony island can be repositioned after bone augmentation



Final prosthesis

### Clinical Case 3 Lateral Approach [Thin-out Technique]



Preoperative



DASK drill #4 for antrostomy approach onto the lateral wall of the maxilla.



OSTEON™ II Sinus

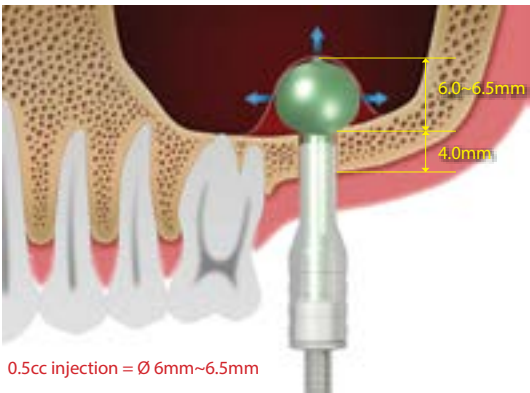


Final prosthesis

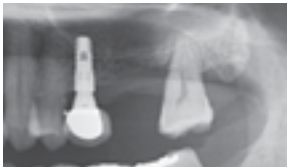


Sinus Elevator

- Makes the sinus lift easy and drastically reduce the possibility of membrane perforation.
- Balloon expansion of 0.5cc saline equals 6mm of membrane elevation.



Clinical Case 1



Preoperative



Preoperative



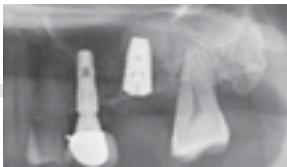
Sinus Elevator



Implantation



Suture



Postoperative



Healing after 4 months



Final prosthesis

Clinical Case 2



Preoperative



Preoperative



Sinus Elevator



Implantation



Suture



Healing after 4 months



Final prosthesis



Final prosthesis

# for Narrow Ridge

## RS Kit (Ridge Spreader Kit)

- Allows the achievement of space for implantation through the spreading of the bone with chisel and without drilling
- There are three types of Ridge Spreaders to create space up to Ø4.5
- Convenient surgeries due to the compatibility with hand-piece and ratchet
- Easy-to-use kit component



## Clinical Case



Preoperative



Bone chisel



Ridge spreader drill



Implantation(GFX4309S)  
& Bone graft (OSTEON™ II)



GBR (Collagen Membrane)



Healing after 1 month



Second Stage Surgery  
(Healing after 7 months)



Final prosthesis

## Harvest Drill

Collect Autogenous Bone and Preosteotomy Simultaneously and Effectively Using the Specially Designed Drills, the Harvest Drills

- Sharp, pointed tip to prevent drill chattering for precise drilling
- Drill stoppers applicable to control the depth of the drilling for safe and efficient bone harvesting, especially in the buccal side of the ridge
- Recommended drill speed of less than 100 rpm / 50N.cm helps preserve the vital autogenous bone
- Excellent clinical results may be achieved when harvested autogenous bone is combined with Osteon™ II



Harvest drill  
30~100rpm / 30~50N-cm  
without irrigation



Harvest drill & stopper  
Bone collection in the buccal side of ridge:  
50~200rpm / 30~50N-cm



# for Surgical Guide

## Implant Guide

### Surgical Guide Utilizing Silicon Spacer and Unique Parallel Pin

- The tripod parallel pin is designed to take into consideration the mesiodistal width and drilling position in the edentulous area
- Parallel pins and Spacers are configured based on the average width of a tooth



## Clinical Case



Preoperative



Preoperative



Guide drill & Spacer



Ellipse parallel pin



Implantation (NR Line GFX4311S)  
& Bone graft (OSTEON™ II Collagen)



Healing after 3 months



Final prosthesis



Final prosthesis

## Polymer Guide

### Thermoplastic Surgical Template for Dental Implant Placement

- Fabricate precise surgical template in just minutes using hot water
- Disposable material to promote control of infection and contamination
- Titanium sleeve is compatible with Dentium final drills



## Clinical Case



Preoperative



Preoperative



Polymer Guide adaptation



Final drilling



Implantation (NR Line)



Suture



Final prosthesis



Final prosthesis

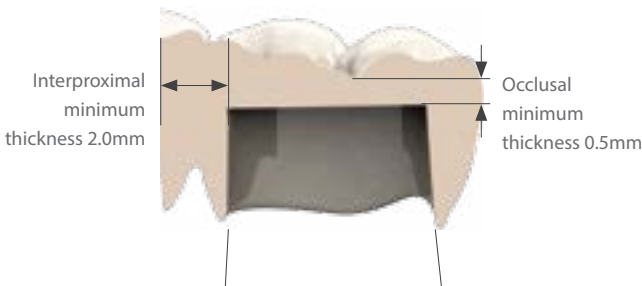
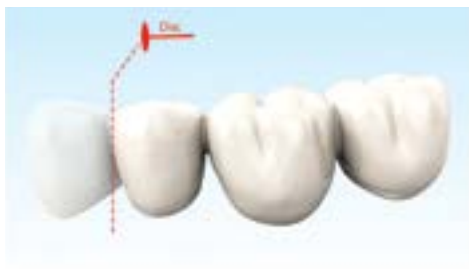


# for Prosthetic

## Temporary Shell

### Preformed Temporary Crown

- Esthetic appearance that mimics a natural tooth
- Convenient for both single and multi-unit restoration



## Clinical Case



Healing



Temporary Abutment connection



Temporary Shell try-In



Filling of the Temporary Shell with acrylic resin



Acrylic resin setting



Contouring of the cervical crown margin



Contoured restoration



Provisional restoration

## White Seal™

### Abutment Hole Sealing Material

- No color and odor change
- Plush material for easier filling and removal
- Stable form maintenance
- Easy to cut into desired size



White Seal™



Hole resin filling



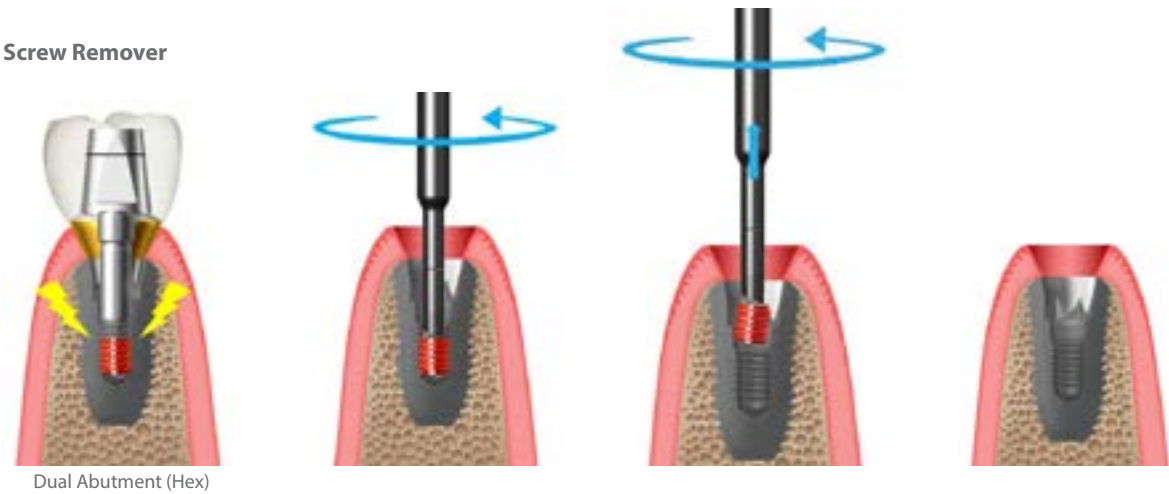
After 15 months

# for Maintenance

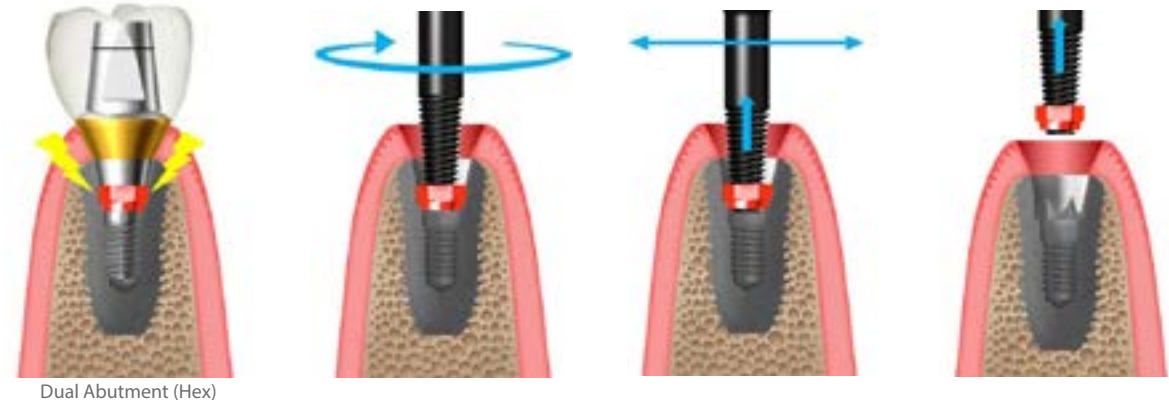
## Help Kit

- Easy solution for critical problems which may occur in the prosthetics process
- 5 tools in 1 kit  
(Screw Remover / Abutment Hex Remover / Screw Tap Repair Fixture Remover / Cover & Abutment Screw Remover)
- Compatible with most dental implant products now available on the global market
- Heavy duty with robust design and proven materials

### Screw Remover



### Abutment Hex Remover



### Screw Tap Repair

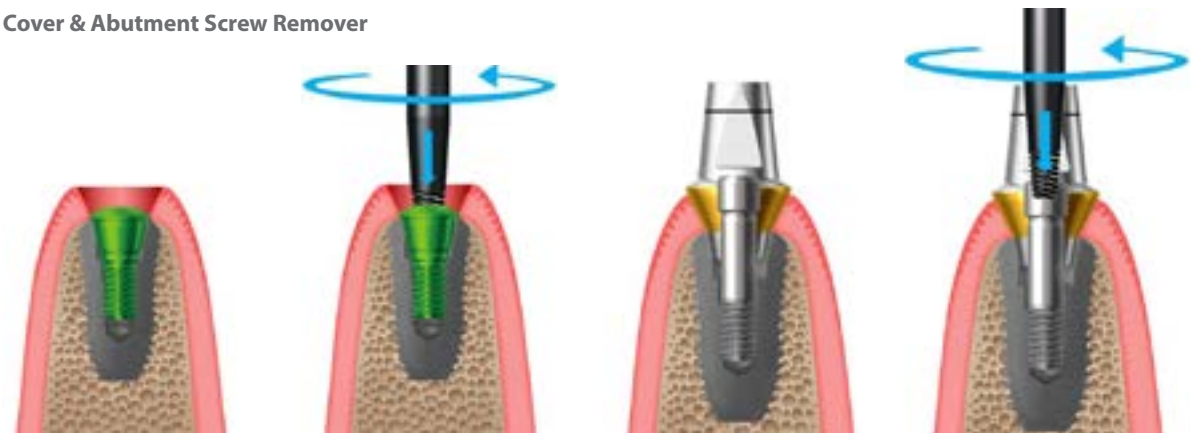




### Fixture Remover

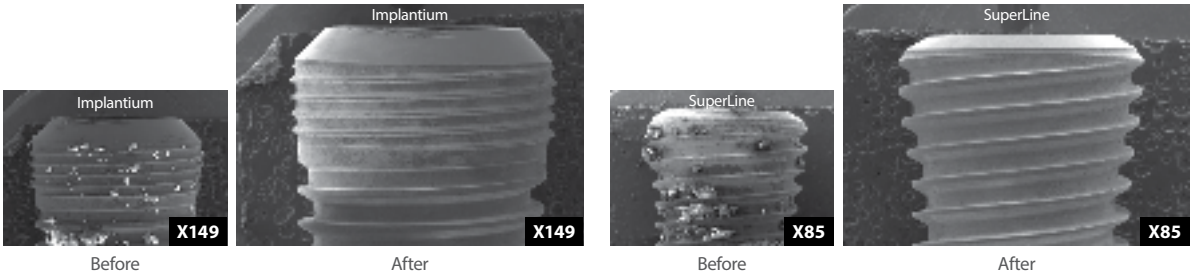


### Cover & Abutment Screw Remover



### TN Brush

- Remove plaque and granulation tissue around the fixture using spinning brush.
- The force of shape restoration is excellent with chosen highly elastic brush.



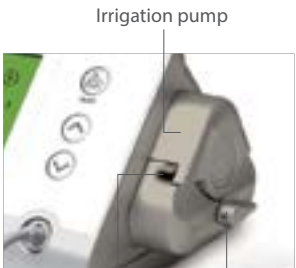
# iCT Injection<sup>SE</sup>

- Wireless portable injection device
- Easy installation and removal of anesthetic agent cartridge
- Sterilizable anesthetic agent cartridge holder
- No pain function from 3-step of speed control
- Non-contact charge
- Voice information system
- Device condition display in text



# iCT Motor

- 2-button foot paddle switch for convenience
- Strong and accurate power (70 N.cm)
- Compactable size
- Automatic power supply unit for precise and stable output



Tube outlet Open / Close lever

Stanchion hole for irrigation bag holder      Foot controller socket



Tube inlet      Power switch





**Regeneration**

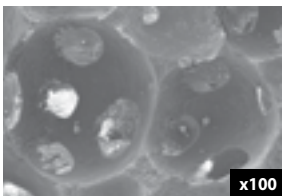
# OSTEON™ III

Biphasic Calcium Phosphate composed of 60% HA and 40%  $\beta$ -TCP  
**OSTEON™ III = HA 60% +  $\beta$ -TCP 40%**

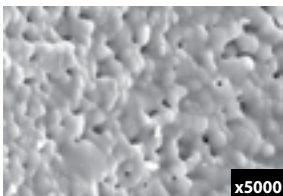
- Osteoconductive synthetic bone graft
- Easy manipulation
- Excellent wettability
- Porosity : 80%



## Microstructure

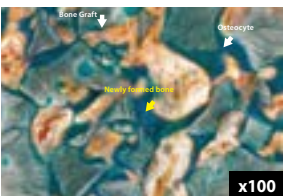


Macropore

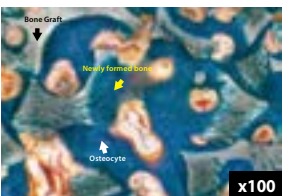


Micropore

## Animal Test Rabbit calvaria model, 4-8 weeks



4 weeks



8 weeks

## Clinical Case



Preoperative



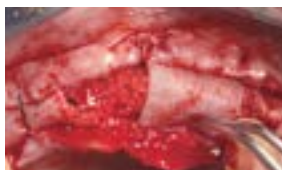
Flap reflection



Implantation (NR Line, Implantium II)



Bone graft (OSTEON™ III)



Collagen Membrane



Healing after 6 months



Second stage surgery



Final prosthesis



# OSTEON™ 3 Collagen

Collagen Mixing with OSTEON™ III Particles  
**OSTEON™ 3 Collagen = OSTEON™ III + Type I Collagen**



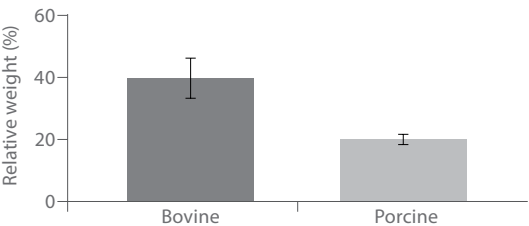
- OSTEON™ 3 Collagen is easy to apply and reduces chair time
- Stable space-maintenance and new bone formation
- Hydrated OSTEON™ 3 Collagen can be easily shaped and applied to defect site

### Indication for use

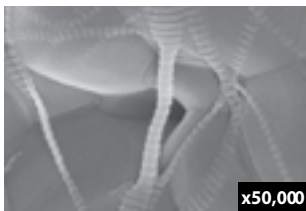
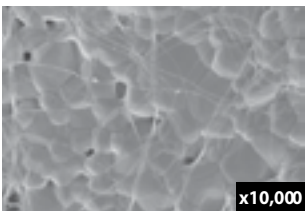
OSTEON™ 3 Collagen is intended to augment the ingrowth of new hard tissues into bony defects around teeth and on alveolar ridges.

- Contour augmentation
- Socket Preservation
- Simple grafting (Volume up)
- Sinus Lift

### In vitro degradation



### Microstructure



### Clinical Case



Preoperative



Flap reflection (Parallel pin)



Bone graft (OSTEON™ 3 Collagen)



Bone graft (OSTEON™ 3 Collagen)



Suture



Healing after 1 month



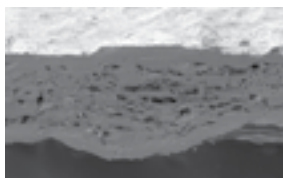
Provisional restoration



Follow up 3 months

# Collagen Membrane-P

Soft Type Resorbable Barrier Membrane with Excellent Manipulation



- Periodontal defects
- Ridge augmentation
- Sinus lift
- GBR procedure
- Highly pure type I collagen
- Double-sided usage



# Collagen Membrane

Biodegradable Barrier Membrane for Guided Bone and Tissue Regeneration



- Good space maintenance
- Thin membrane (300µm) with multiple layers for easy manipulation and high mechanical strength in surgery
- Resorption period of 6 months to provide enough time for stabilizing graft material and supporting bone growth



## Clinical Case



Preoperative



Flap reflection



Implantation



GBR (OSTEON™ II)



Collagen Membrane



Suture



2nd Stage Surgery



Final Prosthesis

## Clinical Case



Preoperative



Flap reflection



Ridge splitting



Implantation



GBR  
(OSTEON™ II + Collagen Membrane)



Healing 4Month



Flap reflection  
(After Healing 4Month)



Final Prosthesis

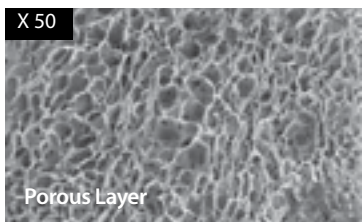
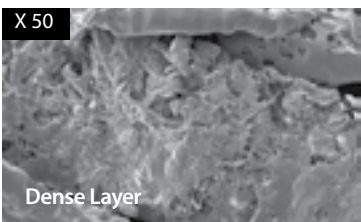
# Collagen Graft

## Absorbent Periodontal Tissue Regeneration Inducer

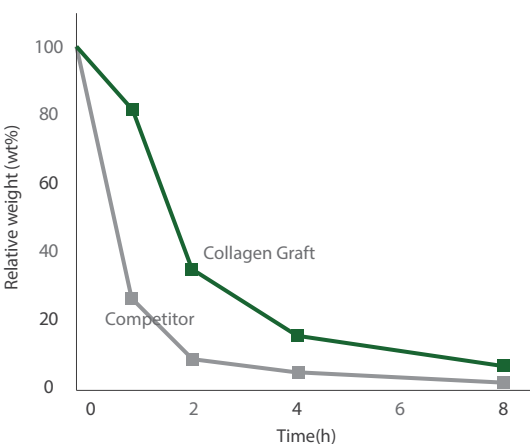
- Stabilized environment of soft tissue regeneration
- Bilayer design : dense layer + porous layer
- Faster soft tissue healing due to promoted epithelization
- Function for hemostasis, blood clot and wound site protection



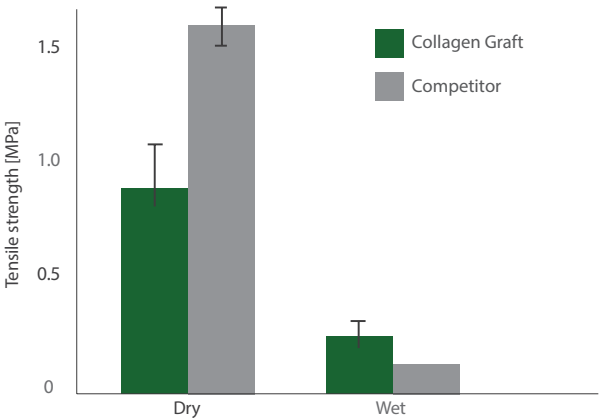
Microstructures



In Vitro Degradation



Tensile Strength



## Clinical Case



Preoperative



Installation(NR Line)



Bone graft  
(OSTEON™ II Collagen, Collagen Graft)



Suture



Healing 2 months



Provisional restoration



Final Prosthesis



Final Prosthesis





# **Lab Products**



# rainbow™ Shine-T

**Zircornia block with superb aesthetics and high flexural strength.**

- Simultaneously securing transparency and strength similar to natural teeth
- Transparency rate (~45%, A0) enables aesthetic prosthetics on the anterior site



**Case 1.**



Brushing



Final prosthesis



**Case 2.**



Brushing



Final prosthesis



## Indication

- Full-Contour Single Crown
- Full-Contour Bridge
- Single Crown Frameworks
- Bridge Frameworks



# rainbow™ LS Pressing

## A Lithium disilicate ingot for pressing technique

- Excellent esthetic results and flexural strength (>500Mpa, 3-point)
- Applicable to diverse cases including veneers, inlays, onlays and single crowns
- Capable of precise marginal fit



## Clinical Cases of rainbow™ LS Pressing



# rainbow™ LS Block

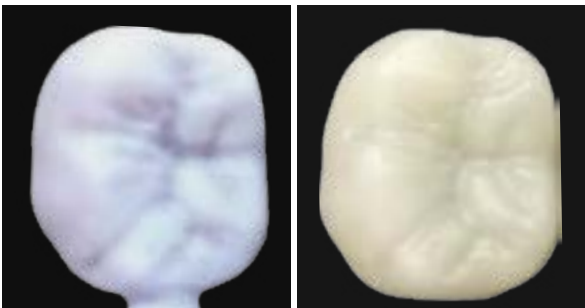
- Excellent transparency and 9 shades (A1, A2, A3, A3.5, A4, B1, B2, B3, B4)
- Excellent flexural strength (>360MPa, 3-point)
- Various indications (Veneer, Inlay, Onlay, Single crown and so on)
- Compatible mandrel type block for milling machine



## Transparent Test rainbow™ LS Block



## Sintering rainbow™ LS Block



Milling

Firing

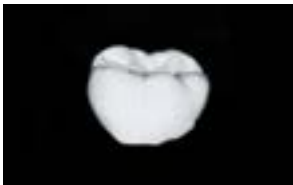
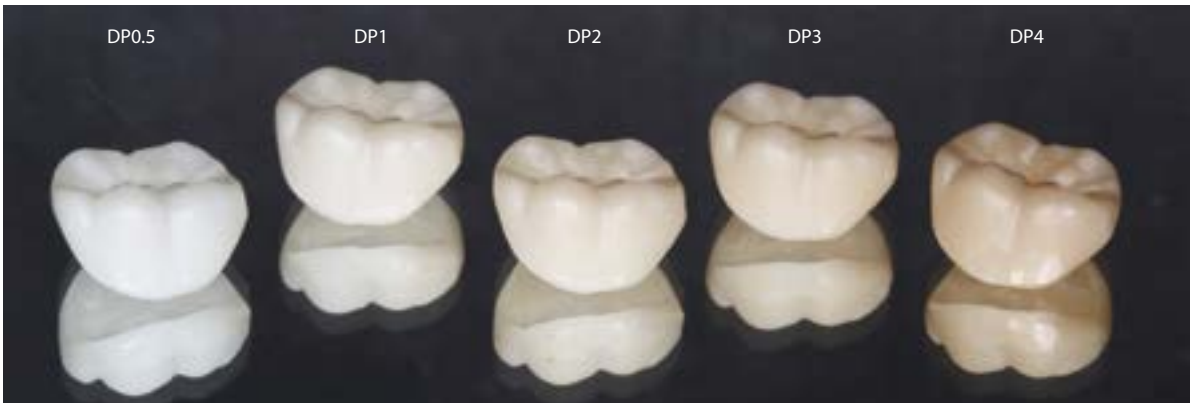


# rainbow™ Coloring Liquid

**Color results after dipping rainbow™ shade block into rainbow™ coloring liquid**

- Coloring liquid for Zirconia prosthesis
- Comprised of the five most commonly used dipping colors
- Deep color penetration to express a natural esthetic

■ DP0.5   ■ DP1   ■ DP2   ■ DP3   ■ DP4



Coping



Dipping



Brushing

# rainbow™ Brushing Liquid

- Fine detailing by implementing the brushing technique
- Solution type and pen type are available to accommodate user's preference
- Comprised of 11 colors to enhance the esthetics of the prosthesis and a diluting solution to adjust the color intensity
- Brushed area is easily distinguishable through the incorporated food dyes



Solution type



Pen type



Before
























After



Before



After

Type	Color	Art. No.		
Liquid	11	 Brushing Liquid-B	 Brushing Liquid-O	 Brushing Liquid-W
		 Brushing Liquid-G	 Brushing Liquid-P	 Brushing Liquid-V
		 Brushing Liquid-BL	 Brushing Liquid-DG	 Brushing Liquid-DB
		 Brushing Liquid-GV	 Brushing Liquid-WO	+ Thinner (Liquid)
Pen	10	 Brushing Pen-B	 Brushing Pen-O	 Brushing Pen-W
		 Brushing Pen-G	 Brushing Pen-P	 Brushing Pen-V
		 Brushing Liquid-BL	 Brushing Liquid-DG	 Brushing Liquid-DB
		 Brushing Liquid-GV		

# rainbow™ Porcelain

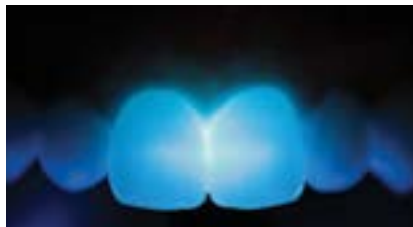
## Veneering porcelain for zirconia substructure

- Harmonized coefficient of thermal expansion with Zirconia minimizes the possibility of cracking
- Can express a huge diversity of color shade while delivering an excellent esthetic due to the superb Opalescent and Flourescent effect
- Natural-looking prosthesis production is possible with such a simple build-up procedure
- The special treatment to the powder creates high viscosity even when mixed with just distilled water, offering high user convenience

## Opal Effect



## Fluor Effect



## Excellent Workability





# rainbow™ Paste Stain

## Enhanced uniform application and ease of use

- The paste-like consistency of the product allows for ease of use and makes uniform application possible
- The sintering temperature requirement was lowered to under 800°C to allow application on diverse materials including Zirconia and lithium disilicate
- Available in 16 most commonly used shades



## Clinical Cases of rainbow™ Paste Stain







rainbow™

# Digital Dentistry

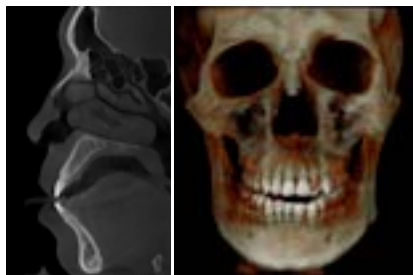


## rainbow™ Digital Dentistry

rainbow™ Digital Dentistry is a complete dental diagnostic system ranging from CAD/CAM equipment to Lab products. Dentium is committed to developing, manufacturing and offering a full series of products related to prosthetics for our customers. The system is compatible with other companies' software and equipment. Dentium is currently the only company developing and manufacturing the "all-in-one system" in the nation (South Korea). We expect to release a diverse range of Digital Dentistry as we continue to pave the way as the leader in the industry.

# rainbow™ CT

- Provided CT, Pano and Cephalo for dental diagnosis
- Implementation of implant planning software
- Multiple panoramic scan arch
- High resolution and standard scan mode for CT
- Image data format compatible with DICOM 3.0
- Providing a large FOV (Normal: 16x10cm, Stitching: 16x18cm)



CT Scan



Panorama Scan

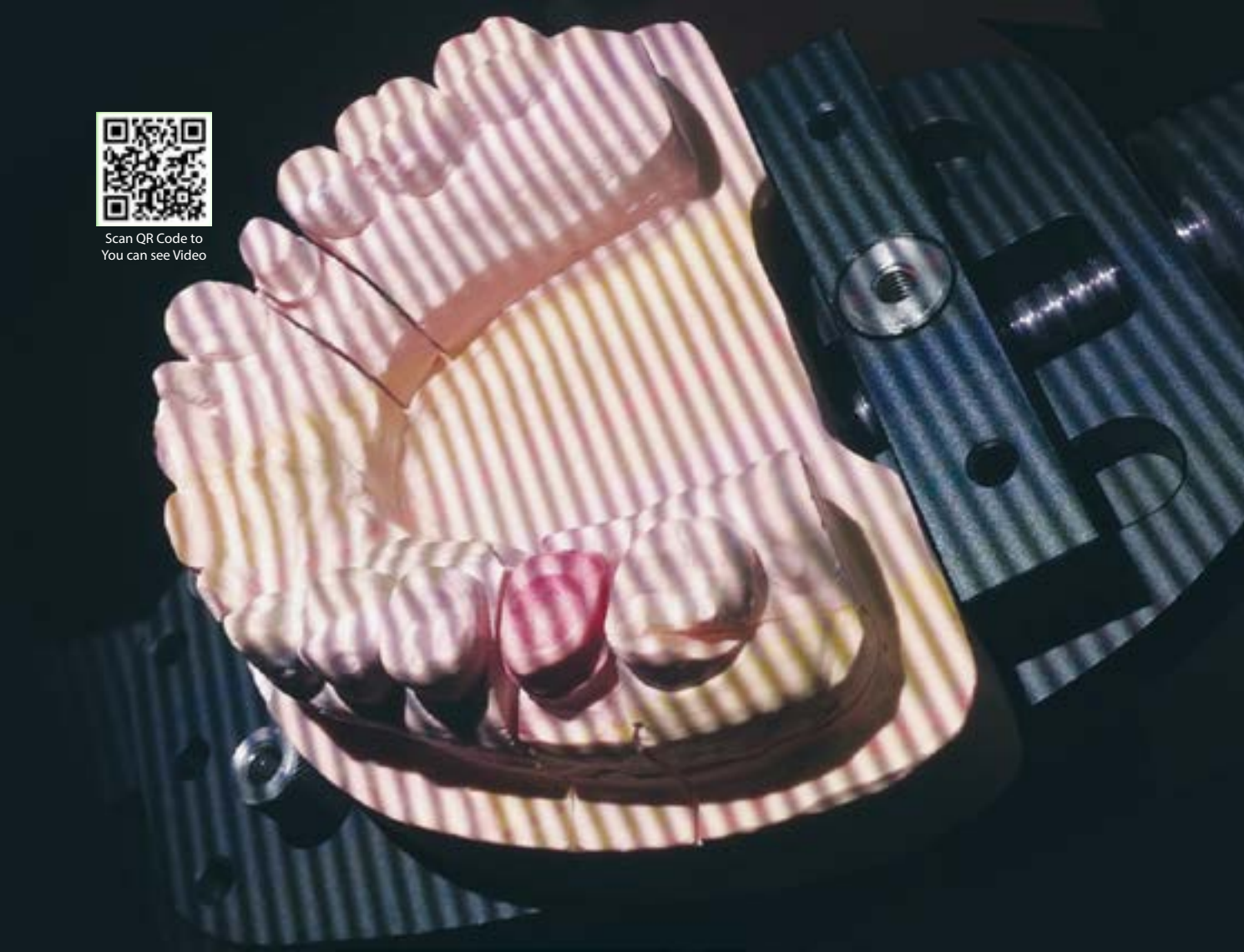
Cephalo Scan

FOV size (cm)	5x5, 16x10, 16x18 (Stitching Mode)
Scan time	CBCT: 19s, Pano: 19s, Line Ceph: 19s, One-shot Ceph: 1s
CBCT sensor	CMOS sensor
Focal spot	0.5mm
Generator voltage	60 ~ 100 kVp
Generator current	4 ~ 12 mA
Reconstruction time	Less than 60s
Patient Position	Standing / Wheel chair accessible
Voxel size	300 μm (High 200 μm)





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You can see Video



# rainbow™ Scanner Prime

- 2.0 MP camera resolution
- Super speed USB 3.0 interface
- Structured light tech (Accuracy <10µm)
- Wide scan area & Deep depth of scan field
- Articulator compatibility
- White light scanning system
- Convenient scan jig accessory



Scan type	White light technology
Camera resolution	2.0 Mega pixels (Twin-Camera)
Scan time	Single: 29 sec, 4-Bridge: 103 sec
Accuracy	≤10µm
Interface	USB 3.0
File format	Open STL
Scan area (W X D X H)	80 X 60 X 60 mm
Dimensions	28 X 40 X 45 cm
Weight	15 kg

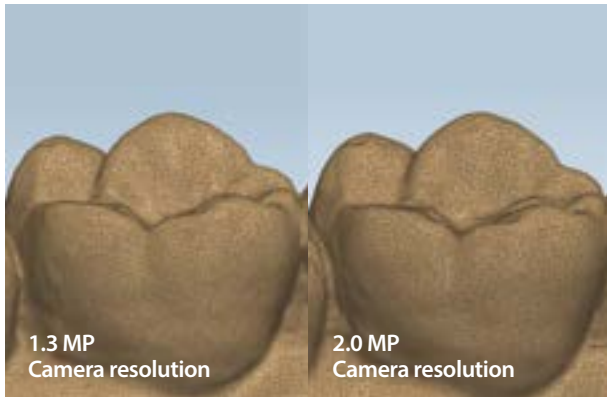
White light scanning



EXOCAD (CAD software)



2.0 MP Camera resolution



Wide scan area & Deep depth of scan field



Basic jig



Standard jig

Multi die

Calibration jig

All-in-one jig

Optional jig



Impression jig

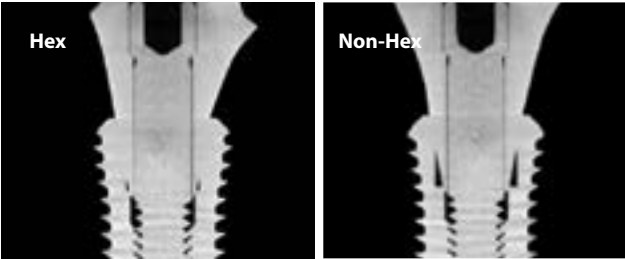
Occlusion jig

Adapter plate (Artex)

rainbow™ Scanner offers precise and accurate scanning capability and reliable performance. The doorless entry accessibility makes the setting up of the scan-jig fast and easy. The open STL file format enables compatibility of various CAD software. Increased speed and highly accurate scanning of 3D data are possible due to the perfect synchronization between cameras and pattern projection device, and data processing technology. Dentium's diverse implant system library, as well as other implant systems' library provides convenience of prosthetic design.



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Cross section of Dentium customized titanium abutment & SuperLine FX4510W

Dentium Ti Blank

Optimized for implant products from Dentium

rainbow™ Mill - Metal

- Optimized for titanium abutment milling
- High speed and steady quality in milling
- Multi NC data loading system
- Stable water cooling control system
- Easy control and user friendly interface

Material	Titanium, PMMA, Glass ceramic, Wax
Control axis	4 Axis
Spindle	50,000rpm / 0.45kw
Tool Posts	8 Posts (Automatic tool change)
Ti Blank holder	10
Milling type	Wet processing
Dimensions	51 x 71 x 64 cm
Weight	150kg





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## rainbow<sup>TM</sup> Mill for Clinic

- Optimized for glass ceramic milling by stable water-cooling control system
- Simultaneous 5-axis milling system optimized for variety of designs
- High speed and steady quality in milling
- Tool load and broken detection system
- Multi NC data loading system
- Easy control and User-friendly interface
- Simple and elegant design for dental clinic

Material	Glass ceramic, Zirconia, PMMA
Control axis	Simultaneous 5-axis
Spindle	60,000 rpm, 250W
Motion drives	All servo motors
Tool posts	7 posts (Automatic tool change)
Milling type	Wet processing
Dimensions	45 x 71 x 71 cm
Weight	100 kg





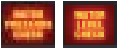
Optimized for Glass ceramic, Zirconia, PMMA



Water-cooling system



Double layered filter, cutting oil insufficiency and filter replacement alarm



Bar & disk type block can be applied



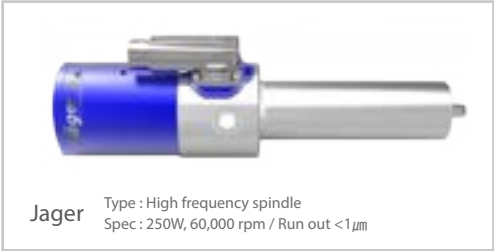
MNLS function applied  
(Multi NC data loading system)



7 Tool posts (Automatic change)



High-precision spindle



User friendly touch interface



hyperDENT (CAM Software)



Dentium is planning on releasing CAD/CAM System which is not only available to dental labs, but also to dental clinics for chairside use. This same-day prosthesis will increase the satisfaction of clinicians and patients, and we intend to further that benefit by developing more convenient system and comprehensive software through on-going investment in research and development. The rainbow™ Mill for Clinic is an in-practice milling equipment optimized for glass ceramic. It is capable of simultaneous 5-axis milling, delivering prosthesis with high precision.





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You can see Video



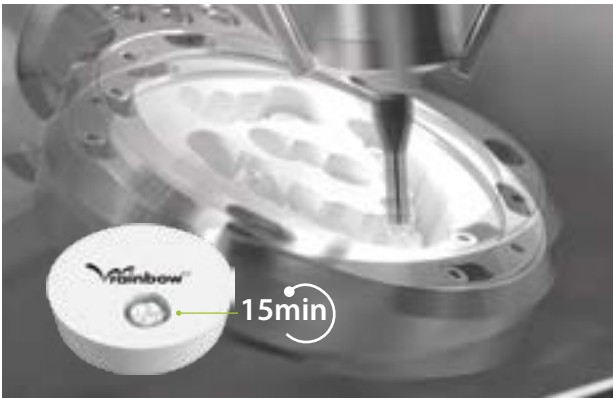
# rainbow<sup>TM</sup> Mill - Zr

- Diverse design and precise production with simultaneous 5-axis milling system
- Equipped with a spindle, allowing highly precise and fine machining
- Enhanced convenience with user-focused interface
- Provides space-efficient by intergrated design dust collector

Material	Zirconia, PMMA, Wax
Milling time	Single : 15 Min, 3Br : 45 Min
Control axis	Simultaneous 5-axis
Spindle	60,000 rpm, 250W
Motion drives	All servo motors
Tool posts	7 posts (Automatic changes)
Milling type	Dry processing
Dimensions (W x D x H)	71 x 81 x 170 cm
Weight	280 kg



Fast milling speed & Stable milling quality



Automatic tool change & Broken tool detection system



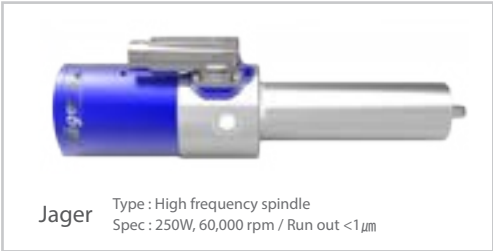
User friendly touch interface



Built-in dust collector



High-precision spindle



High precision & stiffness parts for maximum durability



hyperDENT (CAM Software)












rainbow™ Mill can undercut and mill various shapes freely and precisely with the simultaneous 5-axis milling system. rainbow™ Mill offers a reliable performance with high torque and fast movement due to the mounting of high performance servo motors. By adopting the high speed and the 1μm precision spindle, the low vibration minimizes block chipping. Furthermore, wasting of the materials and time may be minimized, which can be attributed to the self-diagnosis and automatic tool changing system. Among dental milling machines, rainbow™ Mill provides highly precise components and mechanical rigidity. It is now possible to mill various kinds of materials including Zirconia, PMMA, and Wax.

rainbow<sup>TM</sup>

Mill Bur List

rainbow<sup>TM</sup> Mill - Zr & For Clinic

Design	Art. No.	Type	Diameter	Size	Material
	BE3D2-D	ENDMILL	Ø 3	Ø 2	ZIRCONIA
	BE3D1-D	ENDMILL	Ø 3	Ø 1	ZIRCONIA
	BE3D0.5-D	ENDMILL	Ø 3	Ø 0.5	ZIRCONIA
	BE3D2-N	ENDMILL	Ø 3	Ø 2	PMMA / WAX
	BE3D1-N	ENDMILL	Ø 3	Ø 1	PMMA / WAX
	FE3D2-N	FLAT ENDMILL	Ø 3	Ø 2	CALIBRATION
	GT3D2-ED	GRINDING	Ø 3	Ø 2	GLASS CERAMIC / COMPOSITE RESIN
	GT3D1-ED	GRINDING	Ø 3	Ø 1	GLASS CERAMIC / COMPOSITE RESIN
	GT3D0.6-ED	GRINDING	Ø 3	Ø 0.6	GLASS CERAMIC / COMPOSITE RESIN

# rainbow™ Mill Bur List

## rainbow™ Mill - Metal

Design	Art. No.	Type	Diameter	Size	Material
	BE6D3-T	ENDMILL	Ø 6	Ø 3	TITANIUM
	BE6D2-T	ENDMILL	Ø 6	Ø 2	TITANIUM
	BE6D1.5-T	ENDMILL	Ø 6	Ø 1.5	TITANIUM
	BE6D2-N	ENDMILL	Ø 6	Ø 2	PMMA / WAX
	BE6D1-N	ENDMILL	Ø 6	Ø 1	PMMA / WAX
	GT6D2-ED	GRINDING	Ø 6	Ø 2	GLASS CERAMIC / COMPOSITE RESIN
	GT6D1-ED	GRINDING	Ø 6	Ø 1	GLASS CERAMIC / COMPOSITE RESIN
	GT6D0.6-ED	GRINDING	Ø 6	Ø 0.6	GLASS CERAMIC / COMPOSITE RESIN

# Dentium Global Milling Center



## Optimized for the implant products from Dentium

Better margin design and control  
A natural and better emergence profile  
Superior angulation

- Ti-based zirconia customized abutment
- Customized titanium Abutment
- Zirconia Crown (Full Zirconia and Build-up Crown)
- Surgical Guide
- Various restorations work



**Dentium**  
For Dentists By Dentists



# Dentium

For Dentists By Dentists

## **DENTIUM Co., Ltd.**

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