2023 Dentium Total Catalog for total solution



LONG-TERM CLINICAL CASE









Implantation 2001.11.28



Final prosthesis 2002.05.19



4 Year Follow-up 2005.05.23



11 Year Follow-up 2013.01.17



20 Year Follow-up 2021.04.14

Simple & Predictable **20Years** of Clinical Evidence

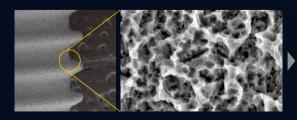
Dentium provides PREDICTABILITY based on EVIDENCE.

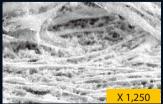
20 years history of consistent implant design with S.L.A. Surface (Sandblasted with Large grit and Acid etched) excellent bone preservation.

EFFICIENCY through SIMPLICITY

Single abutment connection is used for all implant diameters (IMPLAN†IUM® & **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



Dentium has provided only the best products to dentists for 22 years since its establishment, operated production plant in the United States for the first time in the domestic industry in 2004, and has obtained the certificate by MFDS of major overseas countries, including the US FDA. Based on world-class technology and reliable products, it is Korea's representative implant that is exported to more than 70 countries around the world, including Europe, Central Asia, Russia, the Middle East, and Asia.





Dental Implants

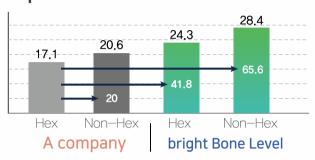
Bright Implant	06
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bright Implant

Bone Level



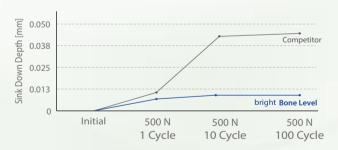
• Implant-Abutment Contact Area



• 10°, 3.70 mm Deep Connection

Larger implant-abutment contact surface area prevents **loosening** when using non-hex abutments and minimizes sink-down.

• Less Sink-Down



• Long Cutting Edge & Aggressive Thread

Extended thread design helps increase the initial stability Easy & fast insertion can be done

bright Implant

Tissue Level



Slim But, Strong

- Two-piece Ø2.5 mm implant restoration procedure can be performed on the anterior teeth.
- Applicable strength of ø3.5 mm implant restoration on the posterior teeth is determined.

Ø3.8 ONE-Platform

- Single platform applicable to all cases.
- · Simplified Prosthetic Work Flow.

20° External Taper Fit

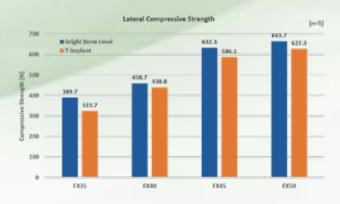
- · External Conical Seal Effect.
- · High Flexibility and Strength.
- · Easy Handling for Multiple Prosthetic.

Reduced Neck

- · Slim and Under-contoured.
- · Marginal bone protection design.
- · Leaves more space at the crestal level,

Thin and Deep Thread

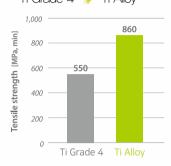
- Narrow and sharp spiral implant improves torque efficiency and primary stability.
- Increased contact area between the fixture and the alveolar bone, optimized for immediate or early loading.



Super Líne II

Joint stability & Improved strength for zirconia crown

Abutment material:
 Ti Grade 4 Ti Alloy



 Long hex design: Improved recognition + reduced sink down

Improved soft tissue management

- Concave abutment design
- Tin-coating

Double thread & Tapered design



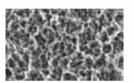
 Double threaded tapered body design may provide better success rate in immediate loading cases,

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

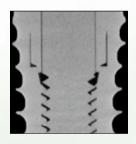
S.L.A. Surface (Sandblasted with Large grits and Acid etched)

 S.L.A Surface allows good bone—to—implant contact with good clinical performance, maintainingcrestal bone margin,

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



Improved wall thickness



Deep and sharper thread design

NR Lrne

Abutment Screw

• Ø 1.9 hole size for occlusion



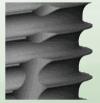
Good Soft Tissue Response

Simple GBR

• Minimize bone and gingival resorption

Extended thread design

 Extended thread design helps increase the initial stability







Platform-Switched Design

 Platform—Switched design may be beneficial in marginal bone preservation

Narrow but strong

- Body Ø3.1 fixture is very useful for narrow ridge
- Optimal for high occlusal stress

Firm & stable connection (Internal 10° taper & square shape)

Less screw, abutment & fixture fracture



- 10 taper & Square shape between implant and abutment interface ensures tight sealing
- Square connection

IMPLANTIUM II

Material

• Unalloyed Titanium ASTMF67 (Commercially pure titanium grade 4)

Optimal Fixation Threads

- · Synchronized positive neck threads
- Increased Initial stability & maximized sealing between the cortical bone and fixture
- Optimal fixation threads reduce stress on marginal cortical bone and minimize marginal bone loss.

Biological Thread

- Thread platform design creates excellent bone to implant contact, (BIC)
- Threads engage and penetrate into bone easily and immediately for maximum contact







S.L.A. Surface (Sandblasted with Large grits and Acid etched)

• Well documented and clinically proven technology.

Dual Thread Design



· Chair time decreased through faster ficture placement,

Extended Cutting Edge

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

Slim Line

Abutment Screw

- Mini ball size (Ø 1.8)
- Mini o-ring type denture socket
- Minimal-size denture socket
- Mini o-ring are replaceable



(BFS3)

(300~500gf)

Ø4.85

(BFS2) (500~700gf)

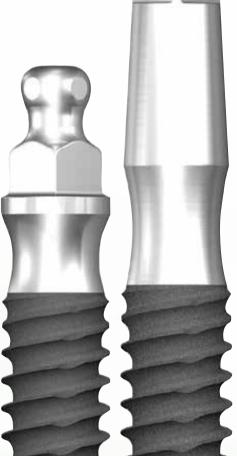


Mini O-ring

Abutment Screw

• Up to ± 15 degrees of adjustable angling enables improved accomodation of the implant-denture interface





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 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

SímpleLínell

Ti-Retaining Screw

- · Smaller diameter of abutment screw has reduced a tendency of falling off a resin in the screw
- 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,







OSTEON™ Xeno

Applications

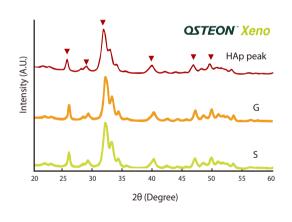
- Ridge augmentation
- Extraction site & Osteotomy
- Sinus lift
- · Periodontal defect

Characteristics

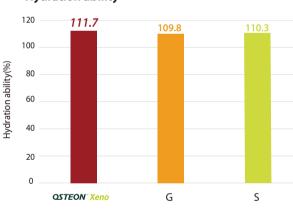
- Natural bovine bone substitute similar to human bone
- Highly interconnected macro/micro-pores
- Complete removal of organic substances
- Easy manipulation and excellent wettability

OSTEON Xeno

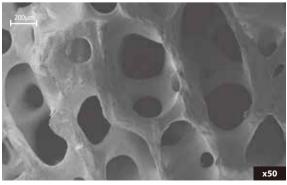
XRD spectra



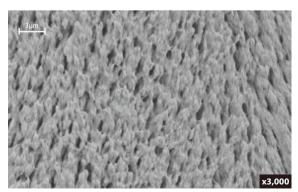
Hydration ability



Microstructures



Macropore



Micropore

OSTEON™ 3

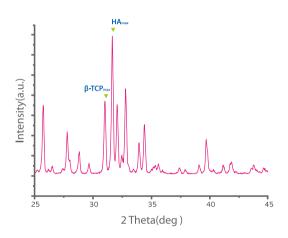


Applications

- Ridge augmentation
- Extraction site & osteotomy
- Sinus lift
- Periodontal defect

Composition

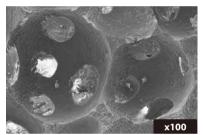
OSTEON™ 3 is a synthetic bone graft material composed of 60% HA and 40% beta-TCP



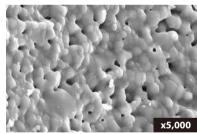
Characteristics

- Easy manipulation and excellent wettability
- Osteoconductive synthetic bone graft
- Larger surface area and higher porosity than OSTEON I and II (Highly inter-connected structure between macro/micro pores)

Microstructures

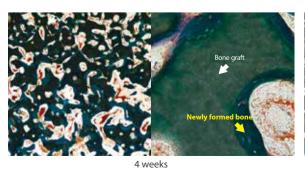


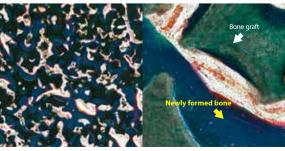
Macropore



Micropore

Animal Test Rabbit calvaria model





8 weeks

OSTEON™ 3 Collagen

Applications

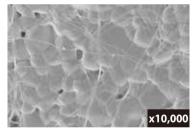
- Simple grafting (volume up)
- Ridge augmentation
- Extraction socket grafting
- Sinus lift (crestal approach)

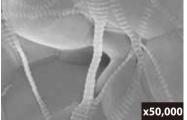


Characteristics

- Bone void filler composed OSTEON 3 and type I collagen
- Moldable to various defect shape after being wet
- · Easy handling, thus allowing reduced chair time

Microstructures

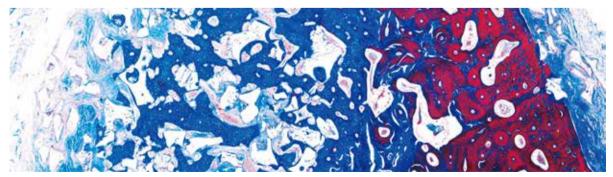




Manipulation



Animal Test



Beagle dog mandible (lateral onlay graft model), 8 weeks

Collagen Membrane 2

Applications

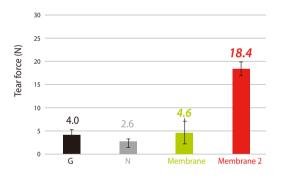
- Periodontal / infrabony defects
- Ridge augmentation
- Extraction sites (implant preparation / placement)
- · Sinus lift



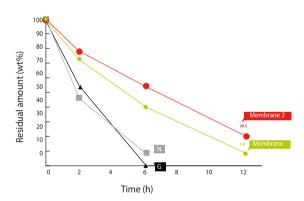
Characteristics

- Highly pure Type I Collagen
- Resorbable barrier membrane lasting for 6 months
- Multi-layered structure
- Easy manipulation (soft, tear-resistant, fast wetting)

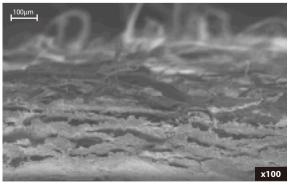
Tear force



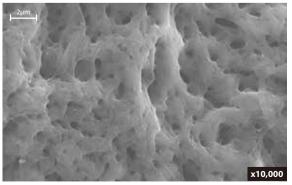
In Vitro Degradation



Microstructures



Cross section



Surface

Collagen Membrane

Applications

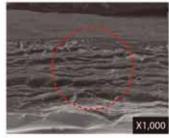
- · Periodontal / infrabony defects
- · Ridge augmentation
- · Extraction sites (implant preparation / placement)
- · Sinus lift
- GBR procedure

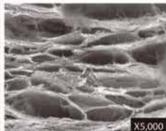


Characteristics

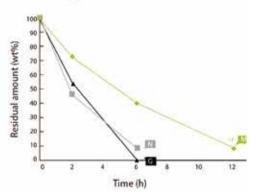
- · Easy manipulation (Hard type)
- · Both sides usable
- · Barrier function lasting for 6 months
- · Highly pure type I collagen

Microstructures



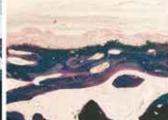


In Vitro Degradation



Animal Test





Rabbit calvaria model, 6 weeks

12 weeks

Collagen Graft 2

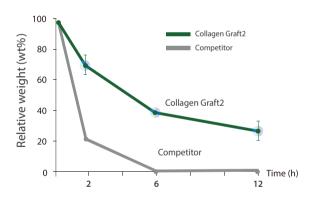
Applications

- Ridge Preservation (Open healing)
- Keratinized tissue augmentation
- Recovery of keratinized mucosa
- FGG alternative
- · Root coverage

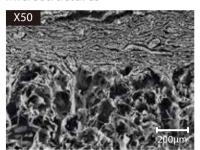
Characteristics

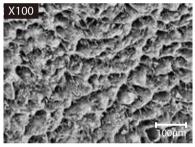
- Highly pure type I collagen
- Bilayer structure: Dense + porous layer
- Faster soft tissue healing by epithelization

In Vitro Degradation

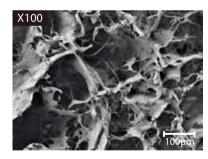


Microstructures

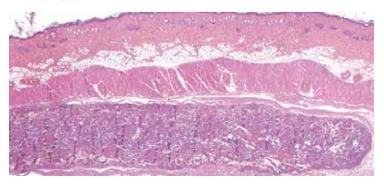




Dense Layer

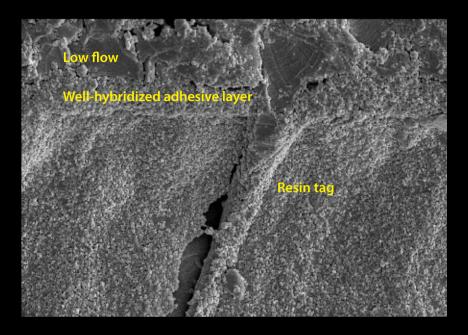


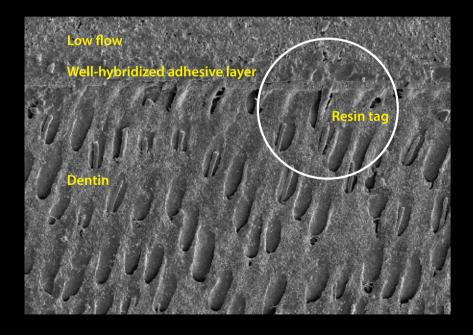
Animal Test



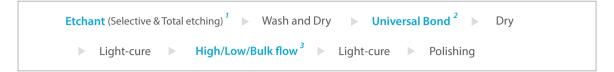
Bond & Restoratives

Total etching





Procedure



Case 1. Diastema









Pre-treatment

Case 2. Anterior fracture









Pre-treatment

3

Post-treatment

Case 3. Cervical abrasion









Post-treatment

Tip

- · Recommend etching time for dentin: \leq 15 seconds. (Excessive etching of dentin cause postoperative sensitivity and decrease in bond strength)
- · Wash and dry at once by etching dentin and enamel with time interval.
- · For efficient penetration of the adhesive to tooth surfaces, agitate for 20 seconds with a gentle pressure using a micro-brush.
- · Dry the agitated surface thoroughly with air till the adhesive does not move.

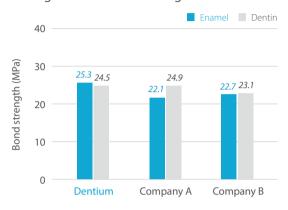
Universal Bond

Single bottle, light-cured dental adhesive

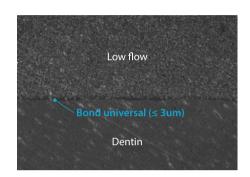
Strong (10-MDP, 4META) Strong and durable bonding Film thickness Low film thickness, ≤3um)



Strong and durable bonding ¹



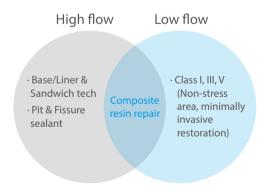
Low film thickness



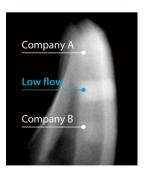
Flowable Resin

Single bottle, light-cured dental adhesive

Convenience Two kinds of viscosity (High/Low) **High radiopacity**







1. GENOSS Data on file

Bulk Fill Flowable

Light-cured flowable composite

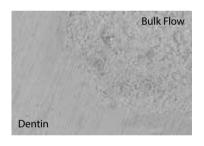
Self-leveling Good cavity adaptation **Convenience** High depth of cure & Low shrinkage



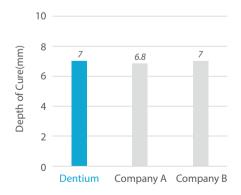
Product features

Properties	Value	Method
Shade	Universal, A2	-
Polymerization shrinkage(%)	2.14	-
Depth of cure(mm)	7.0	ISO 4049
Flexural strength(MPa)	125	ISO 4049
Fluoride release	Release	-

Cavity adaptation

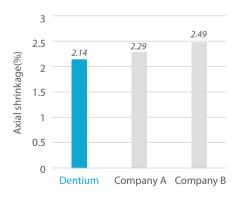


High depth of cure¹



1,2. GENOSS Data on file

Low polymerization shrinkage²



Etchant

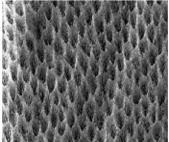
Dentin/Enamel etching gel

Convenience Selective or total ecthing **Enhancement** Improves bonding strength

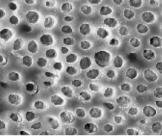


Clear etched surface

Enamel (15~30sec)



Dentin (10~15sec)



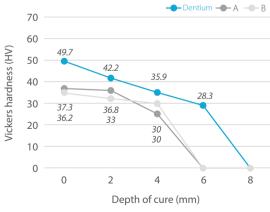
Core

Dual-cured core build-up composite

Convenience Excellent light-cure depth and high radiopacity **Preparation** Dentin-like cuttability to ensure controlled

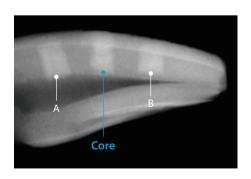


High depth of cure 1



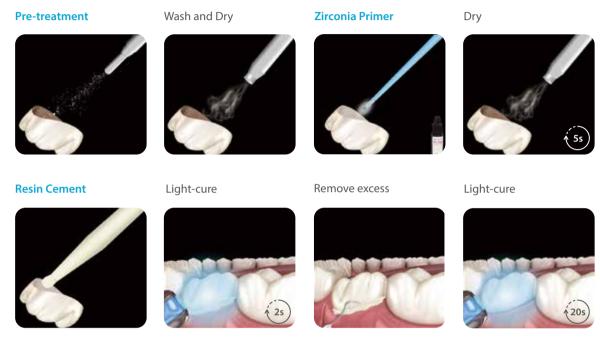
1. GENOSS Data on file

Excellent radiopacity



Cements

Procedure



Tip

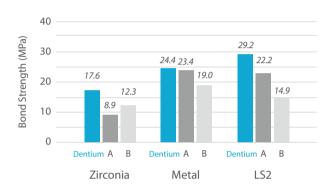
- · For higher bond strength, the restoration should be pre-treated prior to cementation.
- Zirconia & Metal: sandblast with 50 um Al_2O_3 for 15 sec at 2.5 bar
- Glass ceramic: etch with 5% hydrofluoric acid for 20 sec
- · Application of Bright Primer containing 10-MDP further improves the bond strength.
- · After applying Bright Resin Cement, place the restoration within 2 min and light cure for 2 sec to remove excess.

Resin Cement

Self-adhesive resin cement

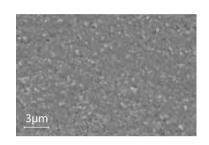
Strong (10-MDP) Strong bonding to indirect restoratives Film thickness Low film thickness for a better fit of indirect restorations

Strong bonding to indirect restoratives ¹



Homogeneous distribution of filler particles

Scriphi Barla Cement



Primer

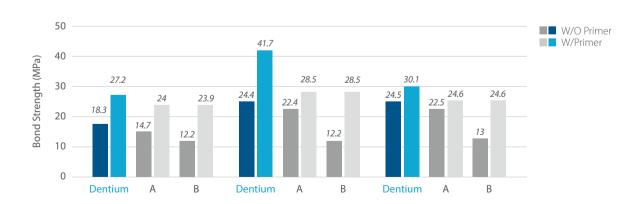
Primer for indirect restoration

Universal Universal primer containing 10-MDP

Improve Improves bond strength between cement and restorations



Stronger bonding to indirect restoratives²



Orthodontic Cement

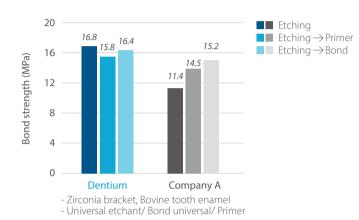
Light cure orthodontic adhesive

Strong (10-MDP)

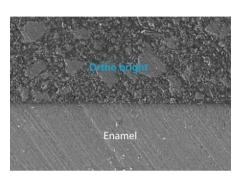
Stable and high bond strength between enamel and brackets

Simpe Simple orthodontic bonding procedure (No priming step)

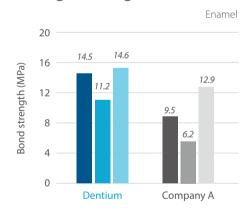
Simple yet strong bonding ¹



Uniform bonded interface



Strong bonding to enamel and zirconia brackets²





Impression materials

Impress

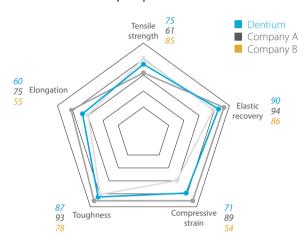
Vinyl polysiloxane impression material

Accuracy Highly accruate and void-free impression

Convenience Superior hydrophilicity and mechanical properties



Mechanical properties ¹





Accurate and detailed impression





1. GENOSS Data on file

MTA materials

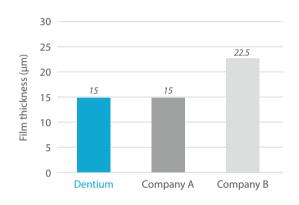
MTA Sealer

Root canal sealing material

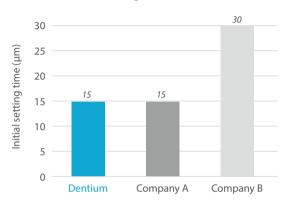
Anti-bacterial effect Impervious sealing with antibacterial effect

Convenience Paste-type calcium silicate based endodontic sealer

Thin film thickness 1



Fast initial setting time ²



MTA Capping

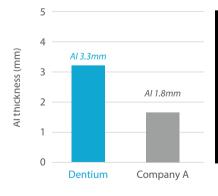
Pulp capping material

Pulp protection

Light curable, resin-modified calcium silicate for pulp protection

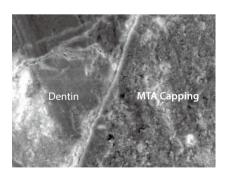
Convenience Controlled calcium release and high radiopacity

High radiopacity³





Excellent sealing



1~3. GENOSS Data on file

3D Printing materials

Model

3D dental model



Beige color Mechanical Properties

High mechanical properties enable various uses



Specification

Properties	Value Method	Method
Color	Beige	-
Viscosity	≤ 500 cP	BrookField
Flexural strength	≥ 120 MPa	ASTM D790
Hardness	≥ 80 Hs	ISO 868

Surgical Guide

Guide template for implant surgery



Transparency

High transparency improves surgical accuracy

Stability

Excellent discoloration resistance and fracture resistance



Properties	Value Method	Method
Color	Clear	-
Viscosity	≤ 400 cP	BrookField
Flexural strength	≥ 130 MPa	ASTM D790
Flexural modulus	≥ 2,000 MPa	ASTM D790



Bond & Restoratives

Product	Package	Model no.
Universal Bond	6ml x 1ea	BU6
Low flow	2ml x 1ea	LFA1/LFA2/LFA3/LFA3.5/LFA4 LFOA2/LFOA3/LFCV/LFBW
High flow	2ml x 1ea	HFA1/ HFA2/ HFA3/ HFA3.5/ HFA4 HFOA2/ HFOA3/ HFCV/ HFBW
Bulk Fill Flowable	2g x 1ea	BFUS/ BFA2S
Etchant	5ml x 2ea	E5
Core	7.7g x 2ea	BCN

Cements

Product	Package	Model no.
Resin Cement	7.6g x 1ea	RC
Zirconia Primer	2ml x 1ea	P2
Orthodontic Adhesive	2ml x 1ea	OB4G

Impression materials

Product	Package	Model no.
Impress-Light	50ml x 4ea	DIM50LBF-40
Impress-Bite	50ml x 4ea	DIM50BT-40
Impress-Medium	50ml x 4ea	DIM50RBF-40
Impress-Heavy	50ml x 4ea	DIM50HB-40
Impress-Putty	500g x 2ea	DIM50PTF-40

DIGITAL INNOVATION

Simple Workflow



Simple Surgery Diagnosis bright CT, MCT / Intraoral Sensor

ICTmotor / Digital Guide Software The Trust

rainbow™ CAD, CAM / 3D Printer

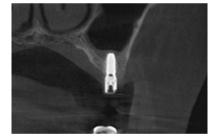
Simple Prothesis

bright CT

bright CT Make Low dose, Clear & Fast Images

- 3 in 1 of CT, Panoramic, Cephalometric
- · Large & Free FOV
- MAR & Auto Focusing
- Al Technique(Auto-detection Arch Line & Inferior Alveolar Nerve)













bright Alone Self-examination

Self-examination can be conducted by using the suction holder. Optimized moving distance in limited space and minimal A/S with changed Dr. Table design Convenient hygiene management with detachable spittoon and instrument holder.

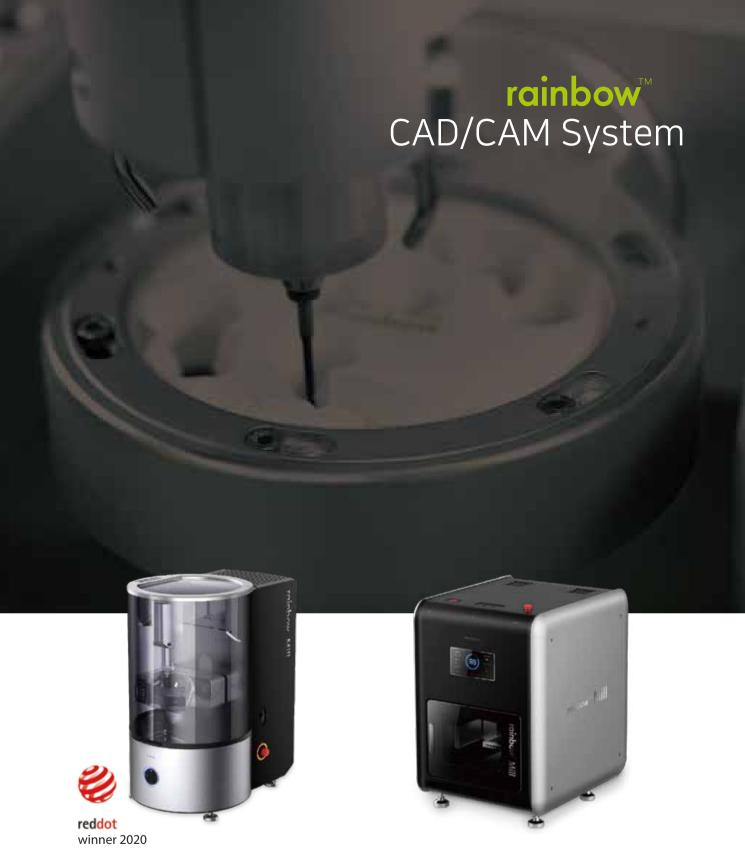






Detachable spittoon





rainbow[™] Mill - Zr 2nd

- · Diverse design and precise production with simultaneous 5-axis milling system
- · Wide view Easy material change
- Remote Control & NC File Scphedule System
- Tool Life Management & Error Detection System

rainbow[™] Mill - Metal 2nd

- · Diverse design and precise production with simultaneous 4-axis milling system
- · Optimized for titanium abutment milling
- · High speed and steady quality in milling
- Stable water cooling control system



iCT Injection^{SE}



The Trust

Implant Stability Measuring Device

Reliable & Accuracy









Easy operation

Quick check result

LCD window





DigitalGuideSoftware

- · Auto-registration
- · Nerve, Fixture Simulation
- · Applicable for Virtual Setup
- · Capable of file storage





02 Nerve Definition

03 Anatomy Design



DICOM-STL Auto-registration

Nerve Simulation

Crown simulation

04 Implant Planning 05 Surgical Guide 06 Add-on

Fixture Simulation

Surgical Guide Simulation

Surgical Report

3D Printer-P

- Full HD optical engine with high quality and long life span
- Easy, intuitive software
- Materials & applications: temporary crown, implant surgical guide, dental model for digital impression, patterns for casting



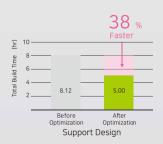








G Corp.



5,62 Dentium



rainbow[™] Mill - Zr 2nd

- Award of German reddot winner 2020
- User-friendly as a large work space
- Easy-to-Clean for PMMA through IONIZER







User convenience function



rainbow™ Mill - Metal 2nd

- Optimization design as a 4-axis control
- Enhanced durability by frame casting
- · Various prosthesis compatibility and scalability







Cross section of DentiumCustomized titanium Abutment & SuperLine FX4510 SW



Optimized for Glass ceramic, Zirconia, PMMA



Link type



Link-Less type



Bar type



Disc type



Ti-blank



Ti-blank



Glass Ceramic



Disc type

Water-cooling system



MNLS (Multi NC data load system)



hyperDENT (CAM Software)





rainbow

Dental Lab System

rainbow™ Multi-Layer Block

Excellent translucency and natural gradation Realization of high esthetics with simple staining

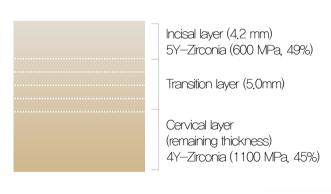
• Thickness: 14T/16T/18T/22T Shade: A1/A2/A3/A3.5

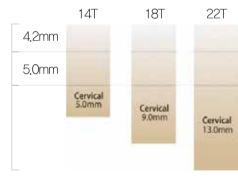
• Same incisal layer thickness(4,2mm)

· Highly esthetic materialization with easy and simple handling



Thickness Information





* Cervical thickness is increaed by T (Thickness).



Clinical Case

rainbow™ Multi-Layer Block Clinical Case 01







Pre-op

Sintering / Finishing

Final prothesis

rainbow™ Multi-Layer Block Clinical Case 02





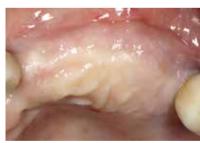


Pre-op

Sintering / Finishing

Final prothesis

Multi-Layer Block Clinical Case 03 rainbow™







Pre-op

Sintering / Finishing

Final prothesis

rainbow™ Multi-Layer Block Clinical Case 04







Pre-op

Sintering / Finishing

Final prothesis

rainbow™ Block

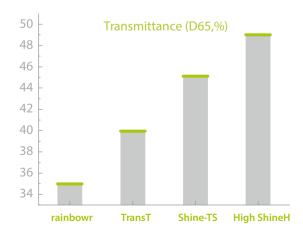
Indication

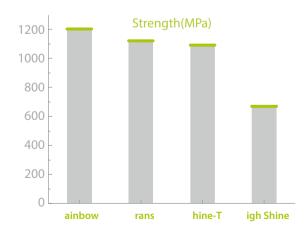
Case	Single Crown		Bridge (3-unit-Bridge)		- Bridge
	Anterior Crown	Posterior Crown	Anterior Bridge	Posterior Bridge	(≥4-unit Bridge)
Block			000	100	6000
Multi-Layer	•	•	•	0	
High Shine	•	0			
Shine-T	0	•	0	•	0
Shade/Trans				•	•
• recommend	○ Possible				

- In severe discoloration case, using rainbow block is recommended.
- In 4- and longer unit bridge case, using rainbow trans/shade block is recommended.

rainbow™ Block

Transmittance & Strength Test





rainbow™ Shine-T Block

Superb aesthetics and high flexural strength.

• Securing natural translucency and high strength

rainbow™ Shine-T Block Clinical Case 01



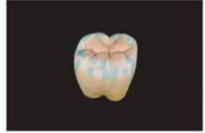




Brushing

Final prosthesis

rainbow™ Shine-T Block Clinical Case 02







Final prosthesis





rainbow™ High Shine Block

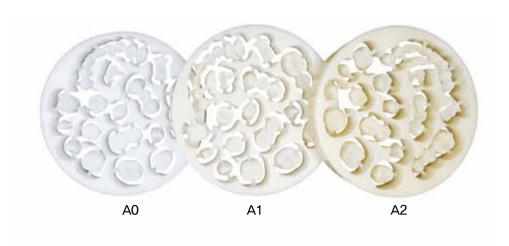
Transparent block for anterior application for superior esthetics

Transparency is an important criterion when it comes to choosing the CAD/CAM block for anterior prosthesis.

The main advantage of the rainbow™ High Shine is its transparency, making it a favorable material for achieving anterior esthetics.

rainbow™ Shine-T Block Clinical Case 01





rainbow™ Shine Liquid

Optimal color expression with simple brushing

- Pen type provides convenience in reproducing color of incisal surface
- 16 body can be expressed by brushing only



Shine Liquid

Shine Liquid Pen

rainbow™ Paste Stain SE

Half the time, double the performance in just one opera

- · Same color before and after firing
- · Convenience due toexcellent spreadability and fixation
- Wide usage ranges(Full zirconia, PFZ, Lithium disilicate)



rainbow™ Paste Stain^{SE} Clinical Case





Sintering

Final prosthesis

Final setting

bright **Multi-Layer**



Select	Shade A1 A2 A3 A3.5	The inside of Middle Color = Shade guide		
	Thickness A1 A2 A3 A3.5	Crown + 4mm		
Produce		Minimal Coloring & Staining		
Finalize		Glazing		







Characteristic

- 1) Intuitive selection based on body color
- 2) Stability of the cervical part and high translucency of the incisal part.
- 3) Minimization of distortion through layer-by-layer matching
- 4) Incisal & mid-grade thickness fixation: Incisal 4.3mm, mid-grade 4.3mm, Alveolar thickness by T(Thickness grade)

