Dentium Product Introduction

- SuperLine
- Implantium
- NRLine
- DASK
- RS Kit
- Help Kit
- Digital Guided Surgery Kit
- OSTEON II
- OSTEON 3
- Collagen Membrane
Welcome to Dentium,

Dentium is a world class manufacturer of high quality dental implant systems, SuperLine, Implantium and NRIline with a large selection of dental instruments and restorative components. Dentium distributes its products worldwide to more than 60 countries. Dentium’s manufacturing facilities, located in Korea and in the USA, are registered establishments with the FDA and are certified to ISO 13485. Dentium products are CE Marked to indicate their high quality and are backed by many research studies performed in collaboration with renowned universities and clinicians. Dentium is committed to the creation of a beautiful smile and satisfying our valued customers by providing the highest quality products, comprehensive educational programs and unrivaled customer service to dental professionals worldwide.
Global Network

Dentium currently has its own corporate and branch offices in the USA, China, Hong Kong, Dubai, Thailand, Russia, Germany, Turkey, India and Singapore. Dentium exports its implant products to more than 80 countries through local distributors. Dentium USA provides a direct sales network in CA, NJ, NY, PA, OH, NC and FL as well as customer service support. Information on local distributors and corporate offices of Dentium USA can be found on our website. (www.dentiumusa.com)
Dentium World Conference and Seminar

Dentium provides valuable information through scientific lectures in the Annual Dentium Symposium and Case Presentation since its establishment in 2000.

DentiumUSA Direct Sales Network
S.L.A. Surface  S.L.A. (Sandblasting with Large grit and Acid etching)


All histologic specimens demonstrated significant bone-to-implant contact. Newly formed dense bone was found in contact with the implant surfaces with normal bone marrow spaces and vasculature.

Human Osteoblast

(A) (B)

Figure 2. SEM Topography of S.L.A. surface.

Figure 3. SEM image of human osteoblasts on S.L.A. surface after 7 days.
**SuperLine™**

**Immediate Implantation with Excellent Bone Response**

**Tapered Design**
- Tapered design may harmonize with surrounding bone anatomically.
- Optimized design for immediate implant placement
- Higher stabilization in extraction socket
- Tapered design for sharp & fast insertion

**Biological Connection**
- The conical hex connection between the implant and abutment interface distributes the load to the fixture evenly. Therefore, it helps minimize micro-movement and marginal bone loss.
- All implant diameters share the same internal hex.

**Clinical Case**

* Osteon II™ Collagen in the clinical case is not available in the US market.
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.

Bacteria Resistant Bevel Platform
- The tapered bevel platform design may avoid bone profiling.

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

Clinical Case

*Osteon II™ Collagen in the clinical case is not available in the US market
NR Line™ Narrow Diameter Implant with Restorative Flexibility

Narrow but Strong: Optimized for Narrow Ridges
- Ø3.2mm platform, Ø3.1mm body diameter for narrow ridges
- Sustains high occlusal force
- 10° conical, square shaped connection between the implant and abutment interface helps tight sealing

Simplified Surgical & Prosthetic Options
- Less screw, abutment & fixture fractures
- NRLine Abutment for Angled screw & Angled mini-ball allows for more variety of angulation and gingival height selection in restoration
- The 3-blade self-tapping design may minimize bone loss

Biological Soft Tissue Response
- Concave abutment design optimized for thin biotype provides more room for soft tissue to grow

Clinical Case

Preoperative Radiography  Preoperative  Implantation  Bone Graft (OSTEON™ II Collagen*)
Suture  Customized Abutment  Final Prosthesis  Final Prosthesis Radiography

* Osteon II™ Collagen in the clinical case is not available in the US market
Instruments

DASK
RS (Ridge Spreader) Kit
Help Kit
Digital Guided Surgery Kit (Full & Simple)
**DASTK**

**Dentium Advanced Sinus Kit**

**Sinus Elevation Instruments**

- Simple & easy access to sinus cavity
- Minimal risk of membrane perforation
- Drills #4-6: Designed for wide lateral window

1. The Maxillary sinus (Lateral window) is opened.
2. A dome-shaped sinus membrane elevator is used to detach the sinus membrane from the circumference of the bony window.
3. Implants placed with bone graft filling [OSTEON™ Sinus]
4. The Maxillary sinus (Lateral window) is opened.
5. A dome-shaped sinus curette is introduced to detach the Schneiderian membrane from the sinus floor.
6. Bone graft material [OSTEON™ Lifting] is filled into the space under the membrane.
7. Postoperative panoramic view
8. Implants [SuperLine™] placed into the osteotomy.

**DASK Kit (Dentium Advanced Sinus Kit)**

**Sinus Bur Kit**

**Sinus Membrane Elevator Kit**
RS Kit Ridge Spreader Kit

- Allows the achievement of space for implantation through the spreading of the bone with chisel without drilling
- There are three types of Ridge Spreaders to create space up to Ø4.5mm
- Convenient surgeries due to the compatibility with hand-piece and ratchet
- Ridge Spreader Drills in the kit, can be used for osseodensification in soft bone.

Clinical Case

Preoperative  Bone chisel  Ridge spreader drill  Implantation (GFX43095) & Bone graft (OSTEON™ II)

GBR (Collagen Membrane)  Healing after 1 month  Second Stage Surgery (Healing after 7 months)  Final prosthesis
Help Kit

- Easy solution for critical problems which may occur in the prosthetic process
- Heavy duty with robust design and proven materials
- Help Kit is designed for single-use only

Super Line IMPLANTUM

- Contains 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

NR Line

- Contains Screw Remover/ Abutment Hex Remover/
  Screw Tap Repair / Fixture Remover /
  Cover & Abutment Screw Remover/
  Ratchet adapter
Digital Guided Surgery Kit

**Full Kit (XGSFK)**
- Preparation of the osteotomies and placement of the implants completely through the surgical template
- For Platform Ø3.6, Ø4.0, Ø4.5 Fixture
- Hybrid design for 6mm Final drill & Countersink

**Simple Kit (XGSSK)**
- Controls the position and angulations of the initial osteotomy sites and the final preparation is completed free hand.
- For Platform Ø3.6 Fixture
- Ø3.0 Narrow Sleeve

**Drilling Protocol**

**Full Kit (XGSFK)**
- SuperLine FX4510SWC Drilling
- Tissue Punch: FTR45, FLU45
- Flat Drill: FG02306, FG02310
- Guide Drill: FTD3605, FRD3610, FTD4006, FTD4010, FTD4506, FTD4510
- Final Drill: FTD3606
- Adapter: FRA28H

**Simple Kit (XGSSK)**
- SuperLine FX3610SWC Drilling
- Tissue Punch: SP25, SP25
- Flat Drill: SGD2306, SGD2310
- Guide Drill: FTD3606, SFD3610
- Final Drill: FTD3606
Regeneration Materials

Osteon II
Osteon 3
Collagen Membrane
Application of QSTEON II
- Ridge augmentation
- Extraction sites
- Cystic cavities
- Sinus lifts
- Periodontal intrabony defects

Composition of QSTEON II
HA scaffold coated with β-TCP
Osteoconductive biphasic calcium phosphate with higher β-TCP

QSTEON II = HA Scaffold (30%) + β-TCP Coating (70%)

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<td>0.25/0.5/1.0</td>
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Characteristics of QSTEON II
- Highly resorbable due to higher β-TCP content
- Easy manipulation
- Excellent wettability
- Osteoconductive synthetic bone graft - No risk of disease transmission
- Pore size: 250 μm
- Porosity: 70%

Microstructure

Microstructure with β-TCP coating
Application of OSTEON™³
- Ridge augmentation
- Extraction sites & osteotomy
- Sinus lifts
- Periodontal defects

Composition of OSTEON™³
HA scaffold coated with β-TCP
Osteoconductive biphasic calcium phosphate

OSTEON™³ = HA Scaffold (60%) + β-TCP Coating (40%)

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Characteristics of OSTEON™³
- Easy manipulation
- Excellent wettability
- Osteoconductive synthetic bone graft - No risk of disease transmission
- Long-term dimensional stability
- Porosity : 80%

Microstructure

Macropore

Micropore
Collagen Membrane

Applications of Collagen Membrane
- Periodontal / intrabony defects
- Ridge augmentation
- Extraction sites (implant preparation / placement)
- Sinus lift
- GBR procedure

Characteristics of Collagen Membrane
- Easy manipulation
- Dual-sided usage
- Highly pure type I collagen derived from bovine tendon: New Zealand
- Thin membrane (300 μm) with multiple layers for easy manipulation and good mechanical strength in surgery
- Resorption period of 6 months to provide enough time for stabilizing graft materials and supporting bone growth
- Multiple-layered structure enables more effective bone regeneration by sparing enough space for hard tissue formation and facilitates proliferation of osteoblasts

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Microstructure

Animal Test
Rabbit calvaria model, 6 weeks
12 weeks

In Vitro Degradation
Clinical Application: 3-wall defect overcoming with Osteon 3

**Clinical Application 1**

OSTEON™ 3
Collagen Membrane
Implantium®

- Preoperative Radiograph
- Preoperative
- Extraction Site
- Implantation (Implantium®)
- Bone graft (Osteon™ 3)
- Collagen Membrane
- Suture
- 2nd Surgery, after 6 months
- 2nd Surgery, suture
- Healing - after 3 months
- Final Prosthesis
- Postoperative Radiograph
Clinical Application: Delayed implantation

OSTEON™ 3 Collagen Membrane SuperLine

Preoperative Radiograph

Preoperative

Surgery

Bone graft (Osteon™ 3)

Collagen Membrane

Suture

Healing after 5 months / GBR Plate removed

Implantation (SuperLine™)

Healing - after 5 months

2nd Surgery - customized abutment

Final Prosthesis

Postoperative Radiograph
Clinical Application: Immediate implantation & GBR

Clinical Application 3

OSTEON™ 3
NR Line™

Preoperative Radiograph
Preoperative
Extraction Site

Implantation (NRLine™)
Bone graft (Osteon™ 3)
Suture
Healing: 3 months 2 weeks
2nd Surgery
Healing: 5 weeks

Impression
Final Prosthesis
Follow up: 3 years 5 months
Simple & Predictable

15 Years of Clinical Evidence

OVER A DECADE OF COMMITMENT TO THE BEST PRODUCTS FOR DENTISTS AND PATIENTS

06.20.2002 Pre-op
07.02.2002 Post-op
11.29.2002 Final Prosthesis
06.02.2004 1 Years 2 months