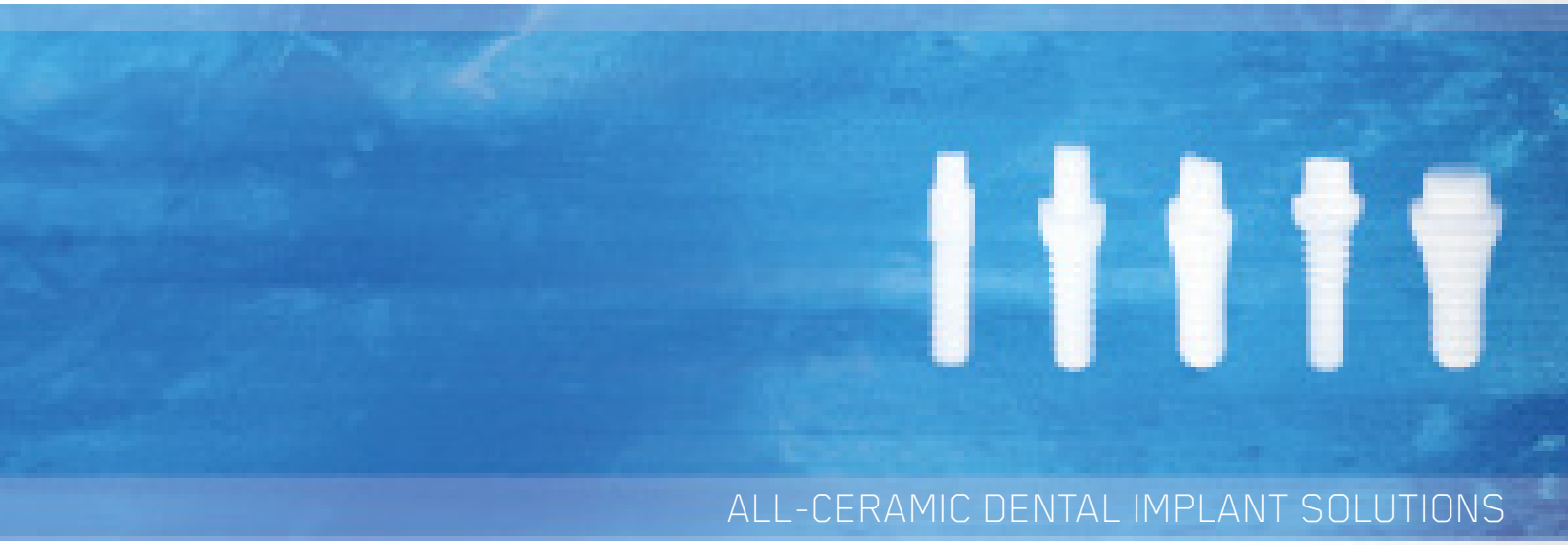


ALL-CERAMIC DENTAL IMPLANT SOLUTIONS

CeraRoot

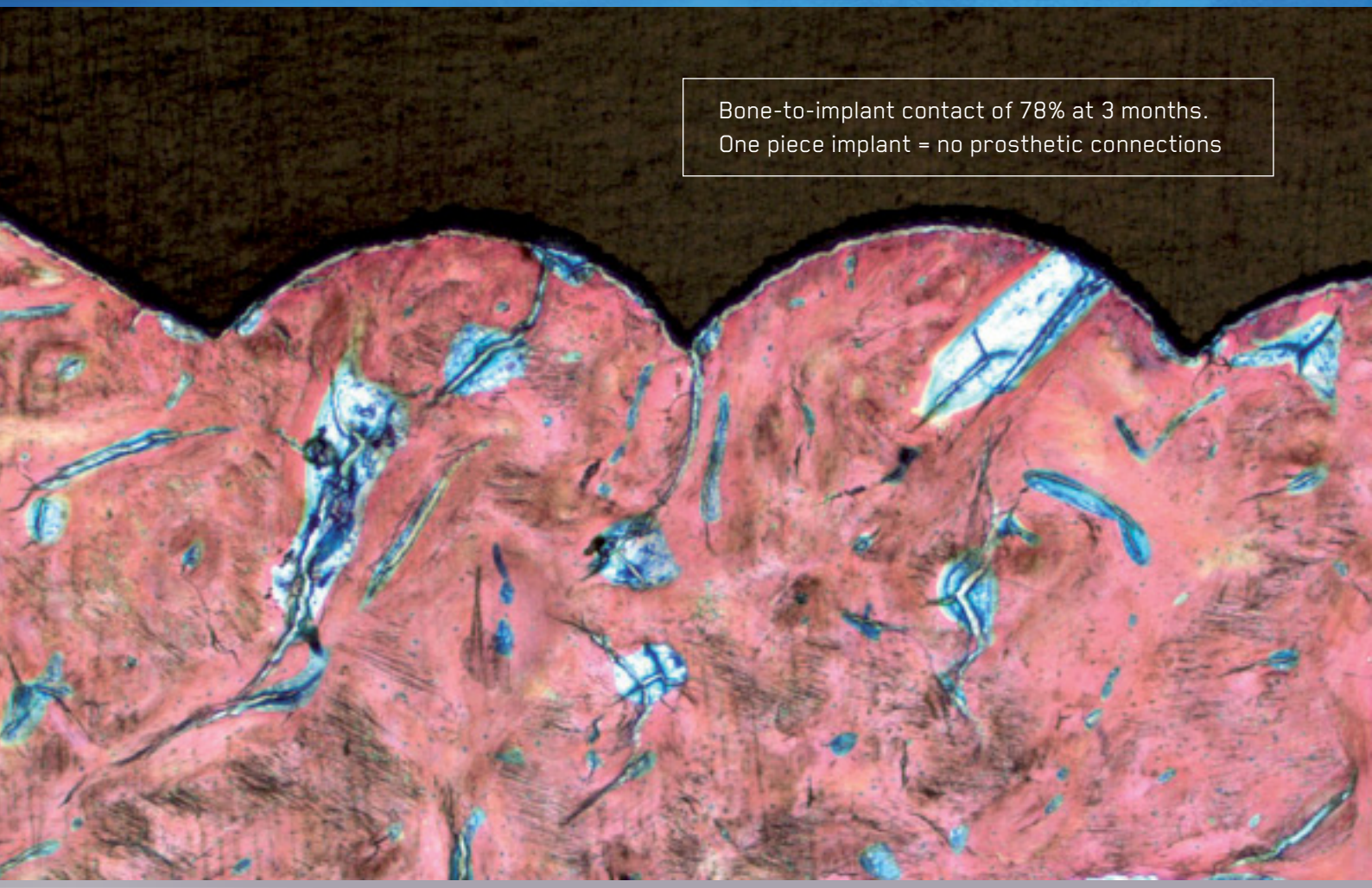
ZIRCONIUM OXIDE DENTAL IMPLANTS

CE

FDA

Health Canada Santé Canada

Scientific Evidence



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Full articles available at: www.ceraroot.com/store/download/scientific-publications/

Company

Oral Iceberg is a global leader in metal-free, holistic and esthetic implant dentistry. Having pioneered the latest research and developments in the field of zirconium oxide implant dentistry with the CeraRoot system, we have a philosophy of doing more to advance dental regeneration, restoration, and replacement, as well as patient care.

With the CeraRoot implant system and CeraCrown prosthetic components, we deliver superior solutions that allow dental professionals to provide the best possible care to patients.

Located in Barcelona, Spain, ORAL ICEBERG company is a global leader in zirconium oxide implant and restorative dentistry. Founded by Drs. Oliva in 1995, the company has experienced a great growth with the development of the CeraRoot zirconium oxide implant system and the CeraCrown prosthetic components.

In collaboration with The Leading Dental Centers, research institutes and universities, we study and develop implants, prosthetic components and instruments for use in tooth replacement solutions.

We also offer comprehensive training and services to the dental professionals worldwide, including training and education, which is provided in collaboration with the LDCW group. Our products are available worldwide through the online shop.

Oral Iceberg encourages healthy living and social responsibility.

The Leading Dental Centers of The World®

oral iceberg

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www.ceraroot.com
info@ceraroot.com
Skype id: oral.iceberg

CE 1275
ISO 13485
Our products are conformance with European Union regulations.

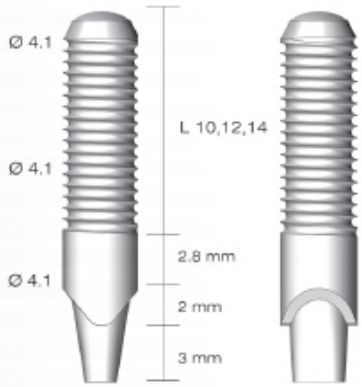
FDA K093595
Caution: Federal Law (USA) restricts this device to sale by or on the order of a physician / dentist

Health Canada Santé Canada 87566
Health Canada

Implants

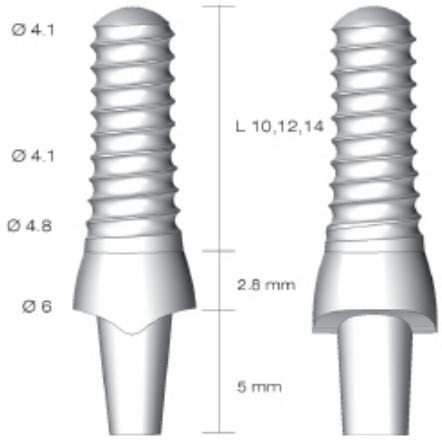
CeraRoot 12

FOR LATERAL OR LOWER INCISORS



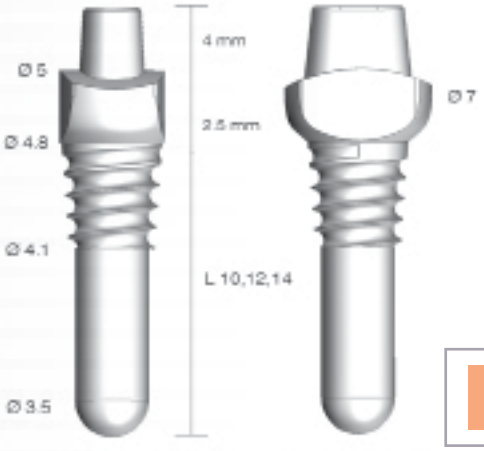
CeraRoot 21

FOR SMALL CENTRAL INCISORS AND CANINES



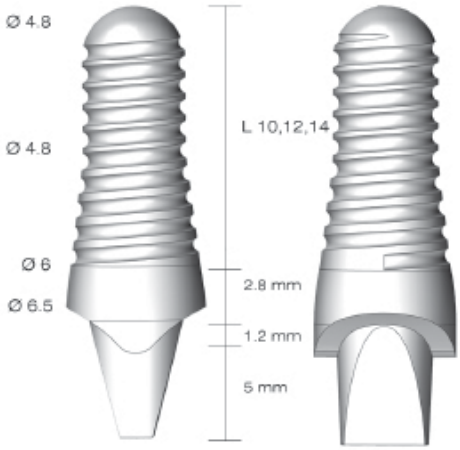
CeraRoot 14

FOR PREMOLARS AND BICUSPIDS



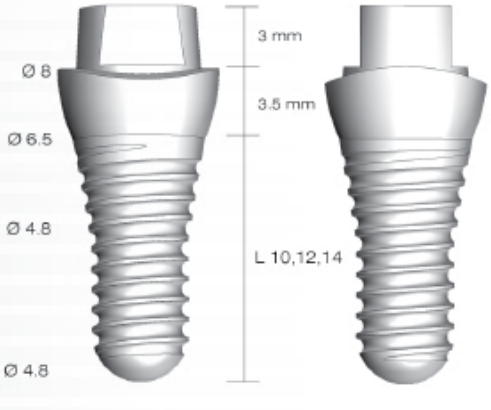
CeraRoot 11

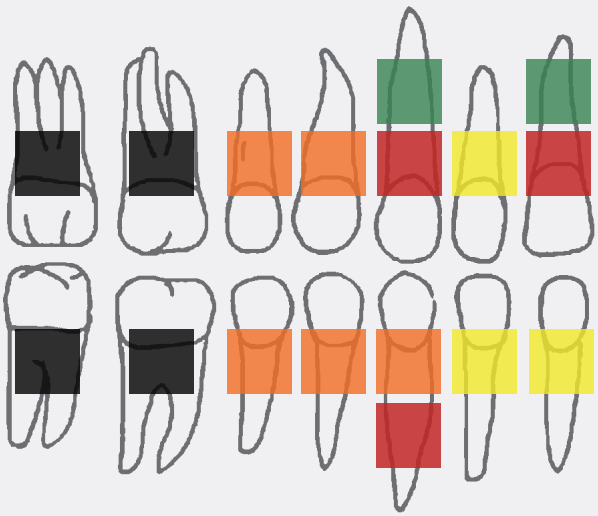
FOR CENTRAL INCISORS AND CANINES



CeraRoot 16

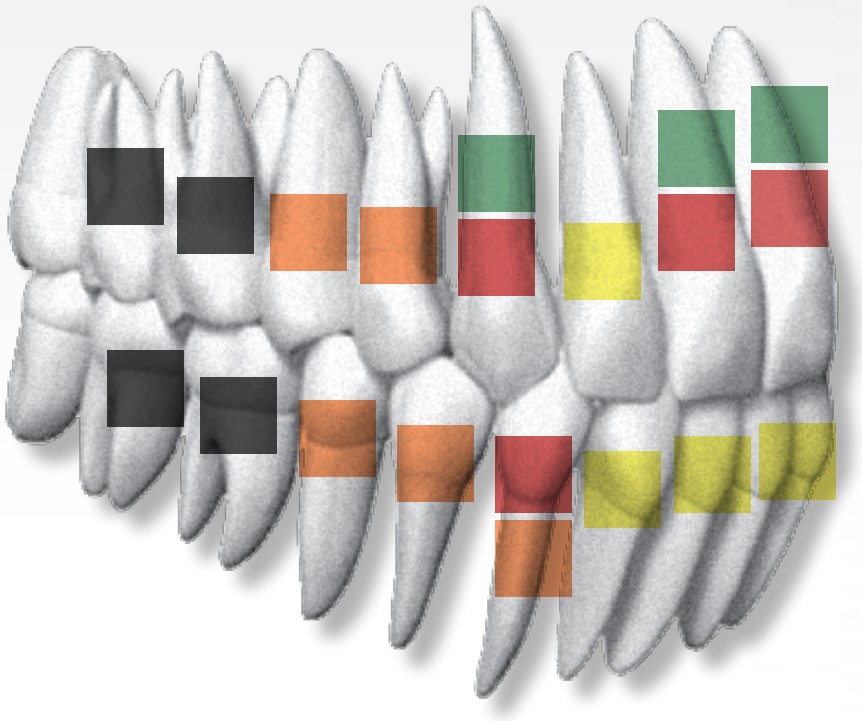
FOR MOLARS

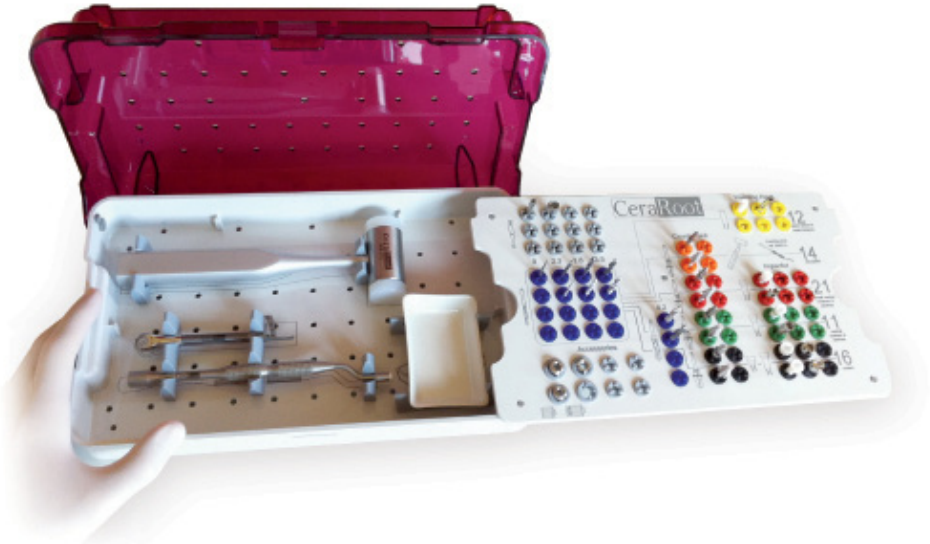




Indications

CeraRoot 12 | CeraRoot 21 | CeraRoot 11 | CeraRoot 14 | CeraRoot 16





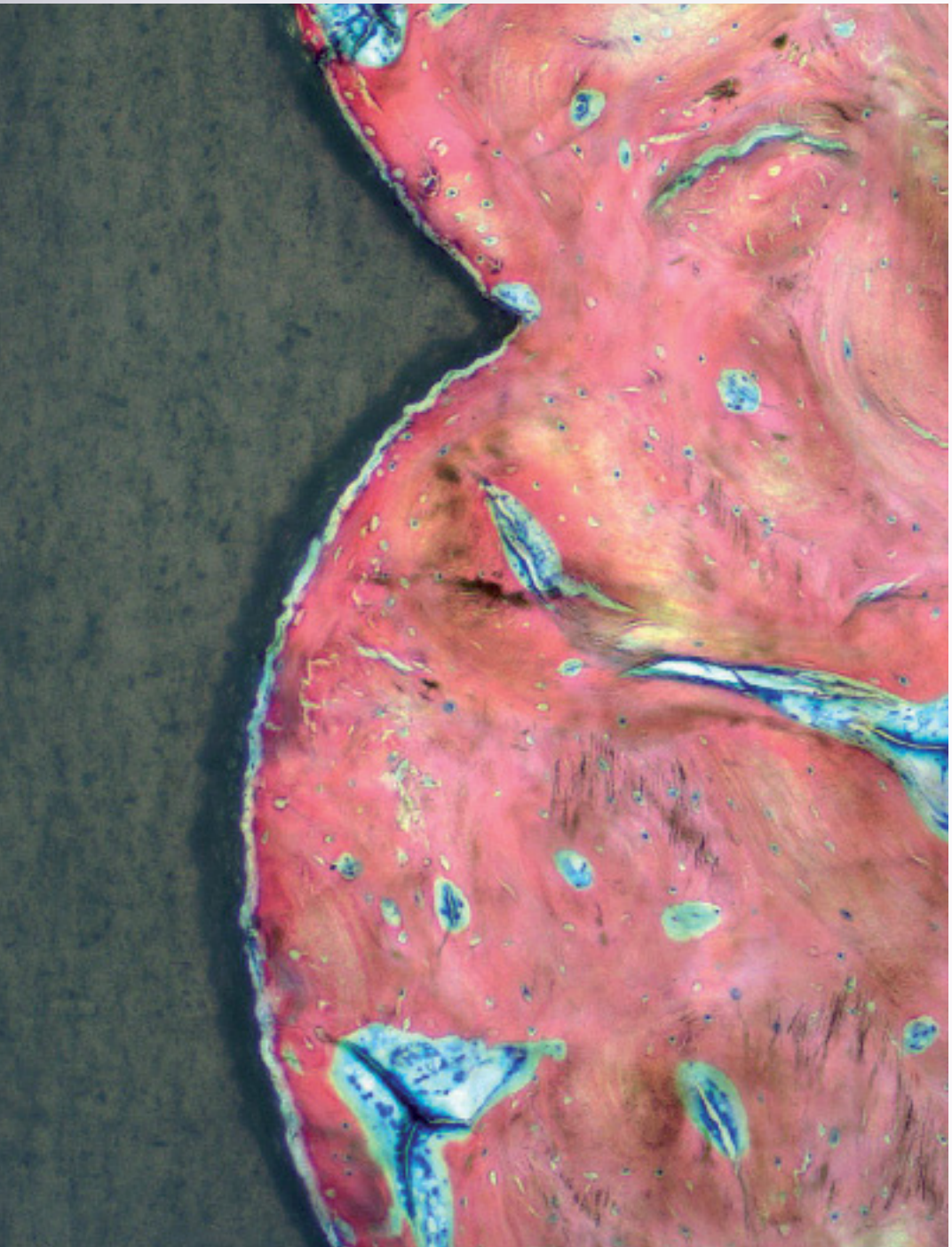
oral iceberg CeraRoot

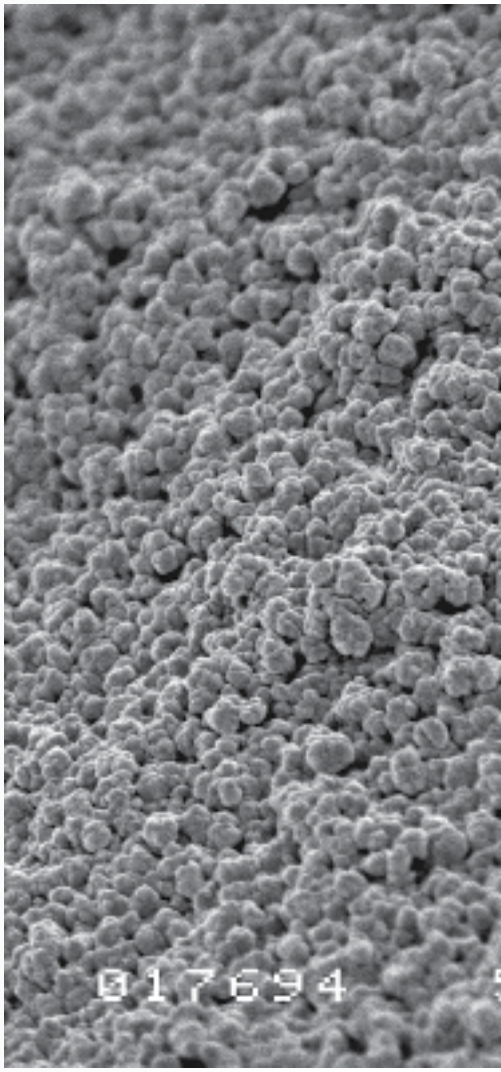
Osseointegration

The osseointegration that results from the enhanced bone formation and firm anchorage on Ice Surface is characterized by a remarkable bone-to-implant contact. Early loading is possible on CeraRoot implants when excellent stability is achieved in healthy patients with good bone quality.

The unique properties of the Ice Surface accelerate the osseointegration process and achieve secondary stability sooner than machined or blasted surface ceramic implants. This means that early loading protocols can be achieved with more predictability thanks to earlier osseointegration. The latest clinical results on Ice Surface confirm exceptional maintenance of marginal bone level after 5 years.

Ice Surface is currently being evaluated in several centers involving more than 800 CeraRoot implants placed in 378 patients. For the patient, this means the benefit of more bone more rapidly and the reliability of a long-term treatment outcome. CeraRoot is the first generation acid etched ceramic implant surface with more than 5 years' clinical follow-up. The absence of a prosthetic connection due to its one-piece structure accelerates the healing process and preserves the surrounding bone.

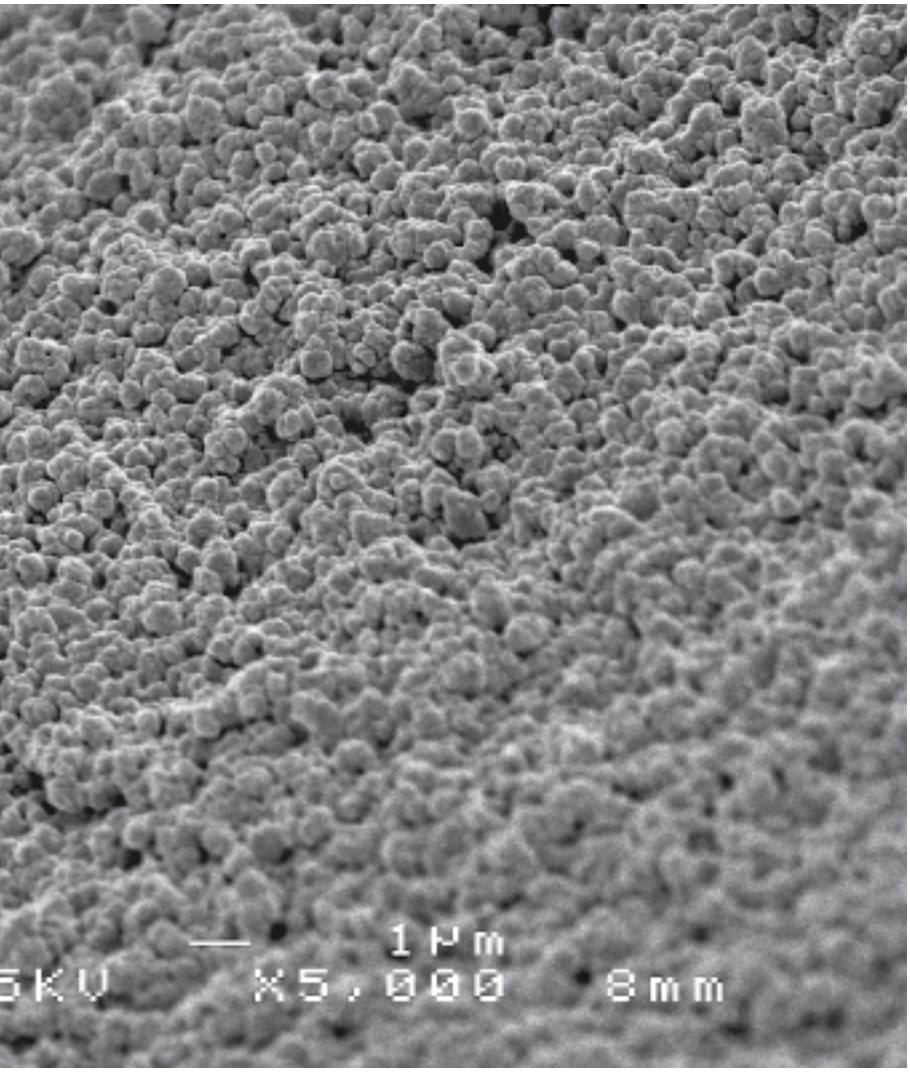


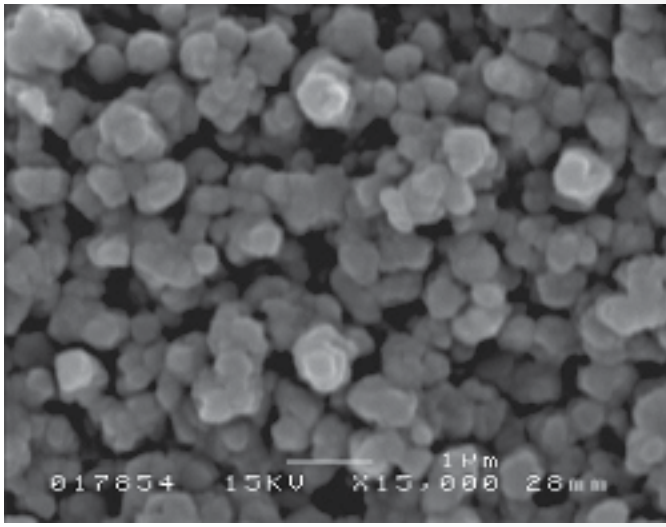


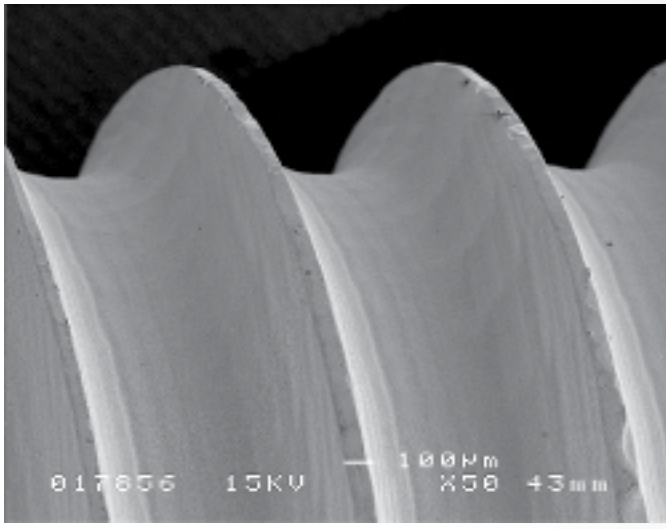
Ice Surface™

Ice Surface is the first acid etched surface applied on a zirconium oxide ceramic implant.

This new surface helps achieve optimal conditions for the integration between implant and bone and soft tissues. It is a rough surface especially designed for achieving faster and stronger osseointegration compared to machined zirconium oxide ceramic implants. The enhanced osseointegration and firmer anchorage in the surrounding tissues achieved with Ice Surface™ increase the predictability of implant treatment, especially in clinically demanding situations.







oral iceberg CeraRoot

Mechanical Testing

The strength and machining characteristics of yttrium reinforced - zirconium oxide (y-tzp) implants make this material ideal for the fabrication of durable, high-precision and highly esthetic ceramic implants and crowns.

The material properties, in combination with the design and production process technology of the CeraRoot implant system, result in an excellent mechanical stability.

To test the mechanical properties of the CeraRoot implant, fatigue strength testing according to the ISO 14801 standard was conducted.

With 5 million validation cycles at 10 Hz at the same benchmark load as the titanium implants, the CeraRoot implant met all acceptance criteria. The angle of loading force was at 30° to the axis of the implant body (Fig.1).

This test result show that the mechanical properties offered by implant type CeraRoot 11 indicated for Central Incisors and Canines has an excellent mechanical properties even in the most severe conditions.

The simulation of 5.000.000 cycles is to simulate an oral environment function of about 20 years (Fig. 2).

Zirconia has a flexural strength and fracture toughness almost twice as high as that of alumina, which makes zirconia very resistant to masticatory forces, while still maintaining an exact precision.

These proven mechanical qualities allow the restorative team high flexibility for indication and application.

Partially-stabilized zirconia powder with uniform dispersion of 3 mol % yttria exhibits superior sintering properties and higher aging resistance at a lower sintering temperature of 1350 ^{0}C.

Sintered bodies produced with primary powder show a fine crystal grain structure resulting in great improvements in strength, fracture toughness, as well as resistance to wear and aging.

Zirconium Oxide has numerous applications such as materials for medical devices, industrial parts and everyday products.

CeraRoot implants are manufactured with compositions according to ISO 13356.

FIG. 1 - 30^{0} Off-axis Fatigue Testing

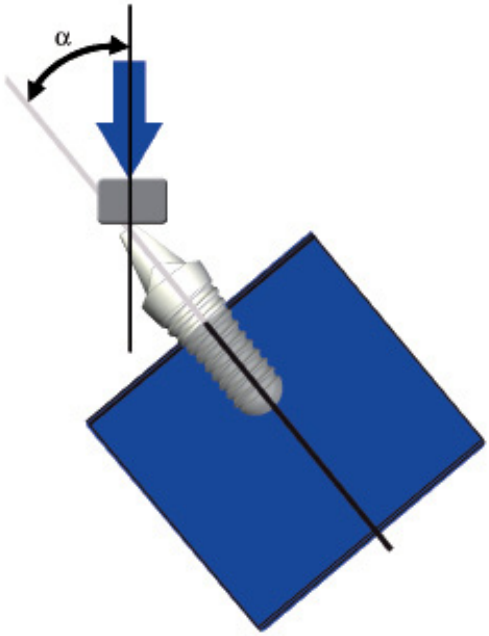


FIG. 2 - CeraRoot 11, Fatigue Test results

Test with CeraRoot 11	Load (N)	N°. of cycles
	Static	
Mean of 3 implants	2730	1
	Dynamic	
Mean of 8 implants	1967	5.000.000

CeraCrown™

the crown is available before the implant is inserted

All CeraRoot implants have been designed to avoid any preparation of the abutment and prosthetic shoulder part. That is why each implant has its own indication.

This makes zirconia stronger over time and provides a perfect fit between the implant and the crown.

The professional can grind or polish the crown to its final shape and send it to the lab to be finished with porcelain layers or over-pressing technique.

The CeraCrown can be used as:
Impression coping
Temporary crown
Zirconia crown core

CeraCrown 12 | CeraCrown 21 | CeraCrown 11 | CeraCrown 14 | CeraCrown 16

These products are intentionally designed to be easy to use in your daily practice. Combining the finest dental prosthetics with the world's only industrialized process customized crowns, we ensure you really can deliver functionality and esthetics to all your patients.

CeraRoot's unique CeraCrown™ technology offers esthetic and functional dental restorations for all teeth. Based on the latest manufacturing technologies, the CeraCrown system provides completely individualized prosthetics with unbeatably precise fit for crowns.

A combination of biocompatibility, beauty, and strength is guaranteed. Zirconia refracts and transmits light in much the same way as a natural tooth, thereby giving the restoration a natural looking appearance. In fact, the end result is often an improvement on nature. In thin periodontium type, the white body of the implant is never visible through the gum.

Beautiful gingiva. Best biomaterials, surface, design and procedures created for maintaining and regaining natural soft tissue. Supra or paragingival cementation of the crowns has never been easier.

CeraRoot 16

CeraCrown 16

Crown finished

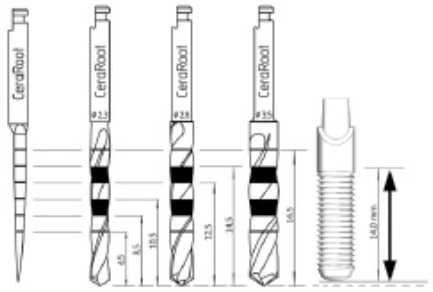
Assembling of
CeraRoot and CeraCrown

oral iceberg CeraRoot

Drill Sequence

CeraRoot 12

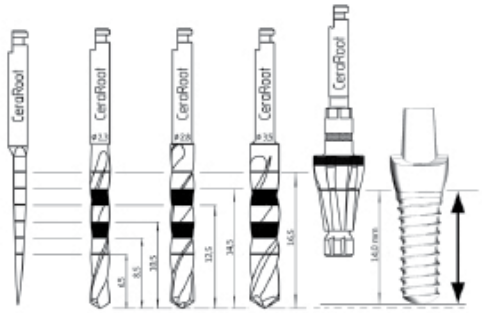
FOR LATERAL OR LOWER INCISORS



1) pilot drill
2) 2.3 mm
3) 2.8 mm
4) 3.5 mm
5) 4.2 mm (only the first 3 mm)
NO countersink!
ATTENTION: Do NOT exceed 35N of torque during insertion of implant

CeraRoot 21

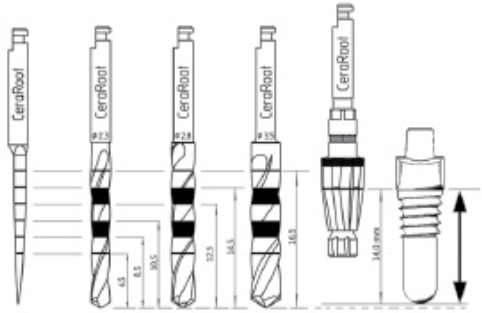
FOR SMALL CENTRAL INCISORS AND CANINES



1) pilot drill
2) 2.3 mm
3) 2.8 mm
4) 3.5 mm
5) Countersink 21 ref. 004.021

CeraRoot 14

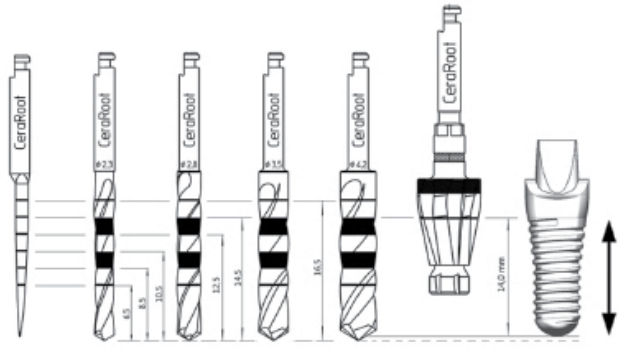
FOR PREMOLARS AND BICUSPIDS



1) pilot drill
2) 2.3 mm
3) 2.8 mm
4) 3.5 mm
5) Countersink 14 ref. 004.014

CeraRoot 11

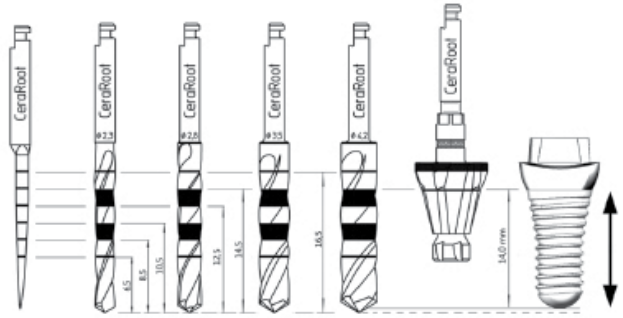
FOR CENTRAL INCISORS AND CANINES

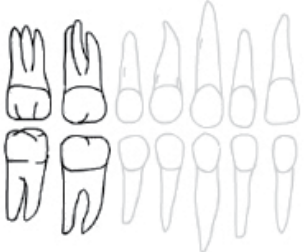


1) pilot drill
2) 2.3 mm
3) 2.8 mm
4) 3.5 mm
5) 4.2 mm
6) Countersink 11 ref. 004.011

CeraRoot 16

FOR MOLARS





1) pilot drill
2) 2.3 mm
3) 2.8 mm
4) 3.5 mm
5) 4.2 mm
6) Countersink 16 ref. 004.016

Instruments

SURGICAL PARTS

Reference	Description
001.001	Initial bur 2mm (triangle shaped)
001.002	Twist drill 2.3mm - steel
001.003	Twist drill 2.8mm - steel
001.004	Twist drill 3.5mm - steel
001.005	Twist drill 4.2mm - steel
001.006	Bur extension
001.007	Right-angle/Handpiece adapter 4x4
002.002	Twist drill 2.3mm - ceramic
002.003	Twist drill 2.8mm - ceramic
002.004	Twist drill 3.5mm - ceramic
002.005	Twist drill 4.2mm - ceramic
003.016	Countersink 16 - steel
003.011	Countersink 11 - steel
003.021	Countersink 21 - steel
003.014	Countersink 14 - steel
004.016	Countersink 16 - ceramic
004.011	Countersink 11 - ceramic
004.021	Countersink 21 - ceramic
004.014	Countersink 14 - ceramic
005.114	Mallet for implant 14
005.214	Impactor for implant 14
005.016	Transporter 16 Long- steel
005.017	Transporter 16 Short- steel
005.011	Transporter 11- steel
005.021	Transporter 21- steel
005.012	Transporter 12- steel
006.016	Transporter 16 Long- zirconia
006.017	Transporter 16 Short- zirconia
006.011	Transporter 11- zirconia
006.021	Transporter 21- zirconia
006.012	Transporter 12- zirconia
020.001	Big Surgical cassette empty
020.003	Small Surgical cassette empty
020.004	Ceramic tray 50x75 for disposal of drills
020.007	Surgical Kit with steel drills/instruments
020.008	Surgical Kit with ceramic drills/instruments
005.500	Steel Tweezers with zirconia tips
030.001	Torque Wrench 35N - titanium
030.002	Adapter 4x4 SHORT for Torque wrench
030.003	Adapter 4x4 LONG for Torque wrench
030.004	Torque Wrench Kit (030.001+ 030.002 + 030.003)
030.005	NobelBiocare® adapter
030.006	Straumann® adapter

PROSTHETIC PARTS

Reference	Description
007.016	CeraCrown 16 - zirconia coping white color
017.016	CeraCrown 16 - zirconia coping A1 color
027.016	CeraCrown 16 - zirconia coping A2 color
007.011	CeraCrown 11 - zirconia coping white color
017.011	CeraCrown 11 - zirconia coping A1 color
027.011	CeraCrown 11 - zirconia coping A2 color
007.021	CeraCrown 21 - zirconia coping white color
017.021	CeraCrown 21 - zirconia coping A1 color
027.021	CeraCrown 21 - zirconia coping A2 color
007.014	CeraCrown 14 - zirconia coping white color
017.014	CeraCrown 14 - zirconia coping A1 color
027.014	CeraCrown 14 - zirconia coping A2 color
007.012	CeraCrown 12 - zirconia coping white color
017.012	CeraCrown 12 - zirconia coping A1 color
027.012	CeraCrown 12 - zirconia coping A2 color
008.116	Lab Analogue 16 for CeraRoot 16 - zirconia
008.111	Lab Analogue 11 for CeraRoot 11 - zirconia
008.121	Lab Analogue 21 for CeraRoot 21 - zirconia
008.114	Lab Analogue 14 for CeraRoot 14 - zirconia
008.112	Lab Analogue 12 for CeraRoot 12 - zirconia

Implants

Reference	Description		
CeraRoot 16	FOR MOLARS		***a c s**
160.010	CeraRoot 16	L= 10 mm	4.8 - 6.5 - 8
160.012	CeraRoot 16	L= 12 mm	4.8 - 6.5 - 8
160.014	CeraRoot 16	L= 14 mm	4.8 - 6.5 - 8
CeraRoot 11	FOR UPPER CENTRAL INCISORS AND UPPER CANINES		
110.010	CeraRoot 11	L= 10 mm	4.8 - 6 - 6.5
110.012	CeraRoot 11	L= 12 mm	4.8 - 6 - 6.5
110.014	CeraRoot 11	L= 14 mm	4.8 - 6 - 6.5
CeraRoot 21	FOR UPPER CENTRAL INCISORS AND CANINES		
210.010	CeraRoot 21	L= 10 mm	4.1 - 4.8 - 6
210.012	CeraRoot 21	L= 12 mm	4.1 - 4.8 - 6
210.014	CeraRoot 21	L= 14 mm	4.1 - 4.8 - 6
CeraRoot 14	FOR BICUSPIDS/PREMOLARS AND LOWER CUSPIDS		
140.008	CeraRoot 14	L= 8 mm	3.5 - 4.8 - 5
140.010	CeraRoot 14	L= 10 mm	3.5 - 4.8 - 5
140.012	CeraRoot 14	L= 12 mm	3.5 - 4.8 - 5
140.014	CeraRoot 14	L= 14 mm	3.5 - 4.8 - 5
CeraRoot 12	FOR UPPER LATERAL AND LOWER INCISORS		
120.010	CeraRoot 12	L= 10 mm	4.1 - 4.1 - 4.1
120.012	CeraRoot 12	L= 12 mm	4.1 - 4.1 - 4.1
120.014	CeraRoot 12	L= 14 mm	4.1 - 4.1 - 4.1

*a --> diameter of implant at apical level
c --> diameter of implant at bone crest level
s --> diameter of implant at shoulder level

Drawings of parts are available on the website

oral iceberg CeraRoot

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oral iceberg

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02/2012 - 009.150