ZiNova

IMPLANT SYSTEM

ZIRCONIA INNOVATION

# Ceramic Dental Implants

## APPLIED NANOTECHNOLOGY

MABB
BIOMATERIAL

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# Zirconia Ceramic Dental Implants

More than 15 years of global casuistics developed by diverse dentistry associations dedicated to achieving metal-free implantology has demonstrated its countless benefits for patients and Oral Health Professionals as well.

MABB and its scientific- medical strategic allies continuously perform mechanical and biological testing under strict norms and procedures – ISO 14801 | 13356 | 10993 – showing high performance, quality and reliability.

## Benefits

### FOR PATIENTS

- Metal-free, no corrosion risk.
- Low bacterial adherence prevents gum retraction.
- Better esthetics outcome by natural tonality and translucency. No risk of dark shadow zones.
- Better oral and general health in the long term through absence of ions-release and invasive particles.
- No risks of metals allergies or sensitivities.
- Biological safety given to low thermal/ electromagnetic conductivity.

### FOR PROFESSIONALS

- Superior bio integration and low risk of peri-implantitis due to low bacterial affinity or adherence..
- Higher safety due to high mechanical performance and impurity-free implant surfaces
- Exclusive surface development with macro, micro and nano roughness pattern.
- Increasing patients' demand is a global trend as a metal free bioconcept.
- Lifetime warranty.

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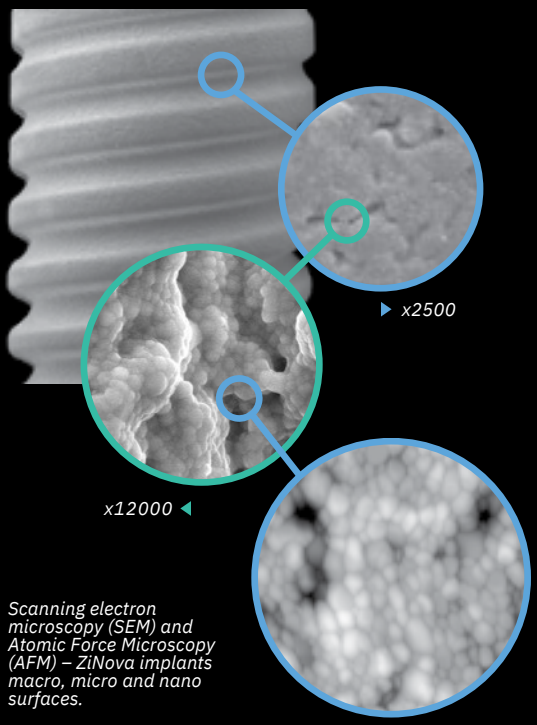
# Impurity-free 3D surface

## PURE IMPLANT SURFACE

Ultra-high pressure CIM Technology (Ceramic Injection Molding) allows the design and development of macro, micro and nano surfaces, directly structured in the **ZiNova** implants molds. [1]

This process significantly increases the contact surface between the implant and the bone (BIC), improving and accelerating all the stages of the osseointegration process. **[2-3]**

This technology avoids the conventional surfaces treatments for each implant, eliminating risks of particles releasing or biohazards materials surface incrustations. **[4]**




*Scanning electron microscopy (SEM) and Atomic Force Microscopy (AFM) – ZiNova implants macro, micro and nano surfaces.*

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# A better option to metal

## CORROSION RISK FREE

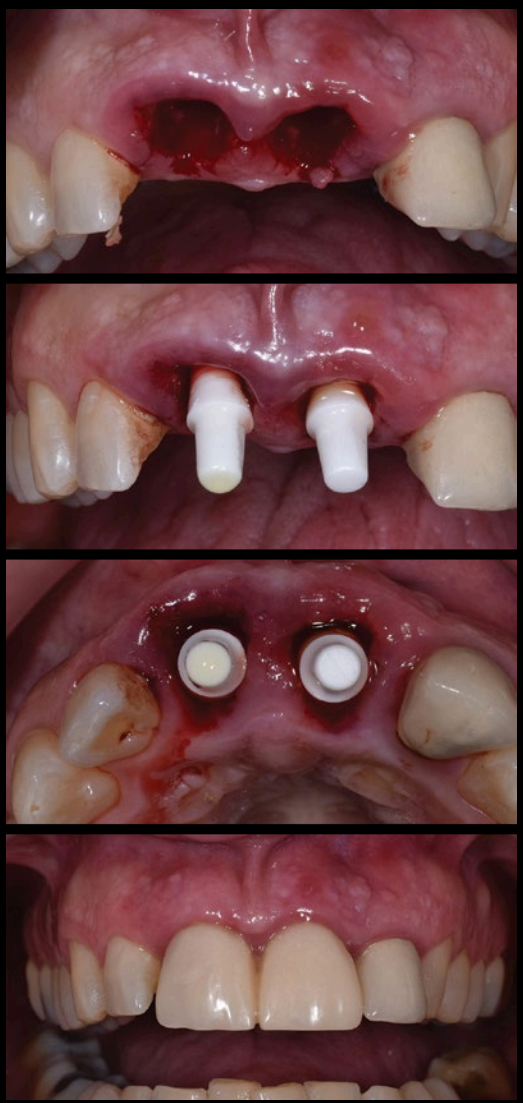
Ceramic implants systems are positioned as an alternative to metallic products, eliminating corrosive processes and their consequences, such as allergies and hyper sensitivities. **[8-9-15]**

# Excellent bio integration

## OSSEOINTEGRATION AND GINGIVAL ADAPTATION

Osseointegration processes similar to titanium implants demonstrated by scientific evidence followed by a better gingival attachment in an perfect bio-integration.

This ensures an effective relation between osseous tissue and oral environment, minimizing the risk of peri-implantitis given to an excellent biological performance. **[10-11-16-17]**



*Immediate implant placement*

COURTESY OF SADIC

# Low bacterial plaque adherence

## LOWER PERI-IMPLANTITIS RISK

Numerous scientific studies have demonstrated minimum affinity between bacterial biofilm and Zirconia (Y-TZP) ceramic surfaces due to its low surface energy. This makes Zirconia (Y-TZP) an excellent bio-inert material, which reduces the risk of peri - implantitis. **[10-11]**

# Monoblock system

## NO GAP AND THEREFORE NO MICROMOBILITY

One-piece (monoblock) implants eliminate micro-mobility (gap), which enhance mechanical properties and ignificantly contributes to the biological sealing from the beginning of the treatment, preventing bacterial infiltration and its consequences. **[12-13]**

# Superior esthetic solution

Esthetic advantages of ceramic compared to metal systems are well known. Patients demand grows every day. **[14]**

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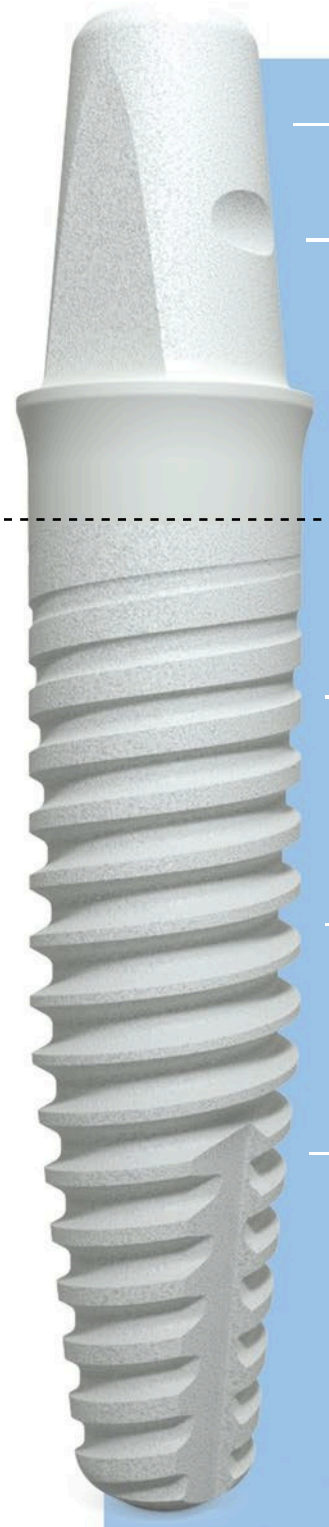
# One-Piece System

One-piece implant prepared for digital flow. 3D-native implant surface, impurity-free, designed with nano, micro and macro rugosities which accelerates osseointegration and reduces detachment and incrustation risks.



ABUTMENT DESIGNED FOR DIGITAL WORKFLOW

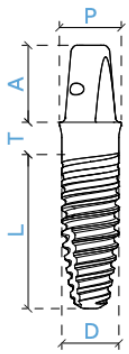
Ra-2.5 µm ABUTMENT SURFACE ENSURES EXCELLENT MECHANICAL RETENTION FOR CEMENTING

Bone level

IMPLANTABLE SURFACE (Ra 1.4 - 2.6 µm)

VARIABLE THREAD DIAMETER (Depth)

SELF-TAPPING CONICAL ZONE




Dimensions (mm)

| D | L | | P | T | A |
|---|---|---|---|---|---|
| 3.7 | 10 | 13 | 4 | 1.8 | 5 |
| 4.3 | 10 | 13 | 4.8 | 1.8 | 5 |

*D: intra osseous diameter;*
*L: intra osseous length;*
*P: platform diameter; T: trans mucous height; A: abutment height*

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# Two-Piece System

Strong internal connection to avoid micro mobility that is typically presented in two-piece implant systems, obtaining Zirconia's maximum mechanical performance. Several versions of prosthetic systems: Ti-Base, carbon fiber screw, Zirconia screw and cement retained versions, including straight and angled abutments.

Native 3D implant Surface, impurity-free, with nano, micro and macro rugosities which accelerates osseointegration and reduces detachment and incrustation risks.

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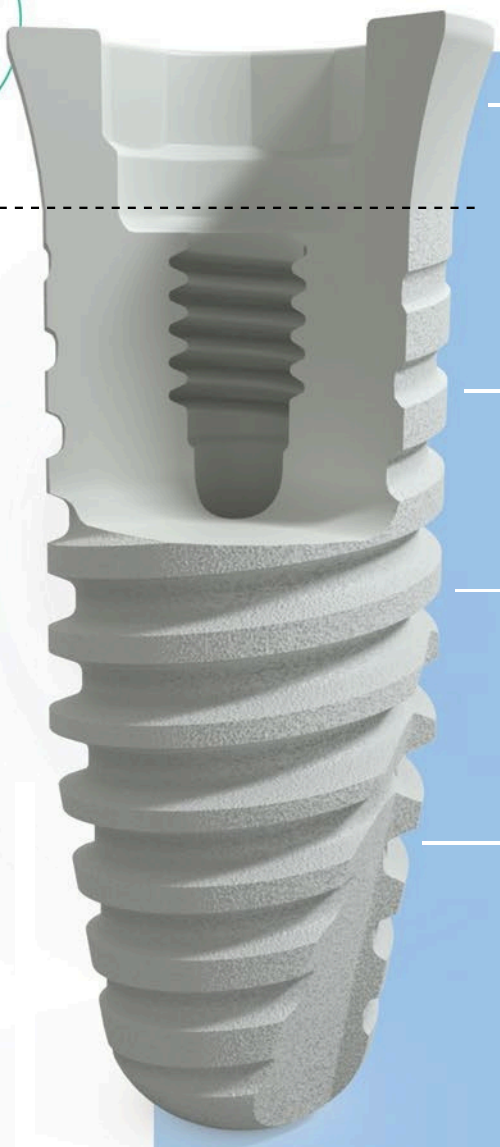


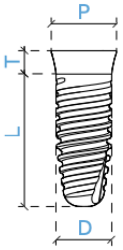


Dimensions (mm)

| D | L | | P | T |
|---|---|---|---|---|
| 3.7 | 10 | 13 | 4 | 1.8 |
| 4.3 | 8 | 10 | 13 | 4.8 | 1.8 |
| 5 | 8 | 10 | 5.5 | 1.8 |

*D: intra osseous diameter; L: intra osseous length; P: platform diameter; T: trans mucous height*