



**Zimmer®
Trabecular
Metal™
Dental
Implant**

TRABECULAR METAL MATERIAL:

Designed to Enhance Secondary Stability Through Bone Ingrowth.



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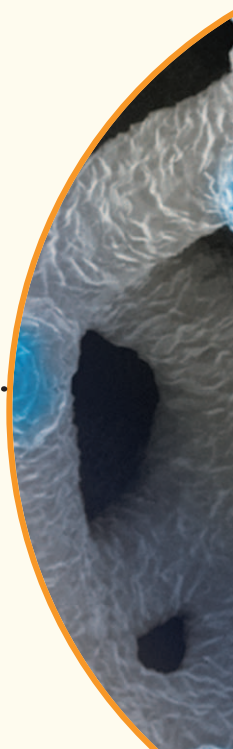
Artistic Rendering



TRABECULAR METAL MATERIAL

Designed to Enhance Secondary Stability Through Bone Ingrowth

The *Zimmer Trabecular Metal* Dental Implant combines the popular features of the *Tapered Screw-Vent*® Implant with the unique properties of *Trabecular Metal* Material. Due to the interconnected porosity it is designed to enhance secondary stability through osseoincorporation.



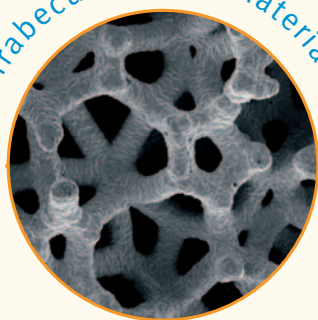
Osseoincorporation

Ongrowth + Ingrowth:

Zimmer Dental's *MTX*[®] Microtextured Surface has been documented to achieve high levels of bone-to-implant contact, or ongrowth.^{1,2} The *Trabecular Metal* Dental Implant features an osteoconductive mid-section designed for bone *ingrowth* as well as *ongrowth* in a process new to implant dentistry – *osseoincorporation*.³⁻⁵ Osseoincorporation refers to the healing potential of bone onto an implant surface and into an implant structure.

The interconnected porosity of *Trabecular Metal* Material is designed to enhance secondary stability through a high volume of ingrowth.^{5,9,21} Studies of the *Trabecular Metal* Dental Implant are currently underway and additional studies are planned to document the process of osseoincorporation by measuring the volume and rate of bone ingrowth.

Trabecular Metal Material



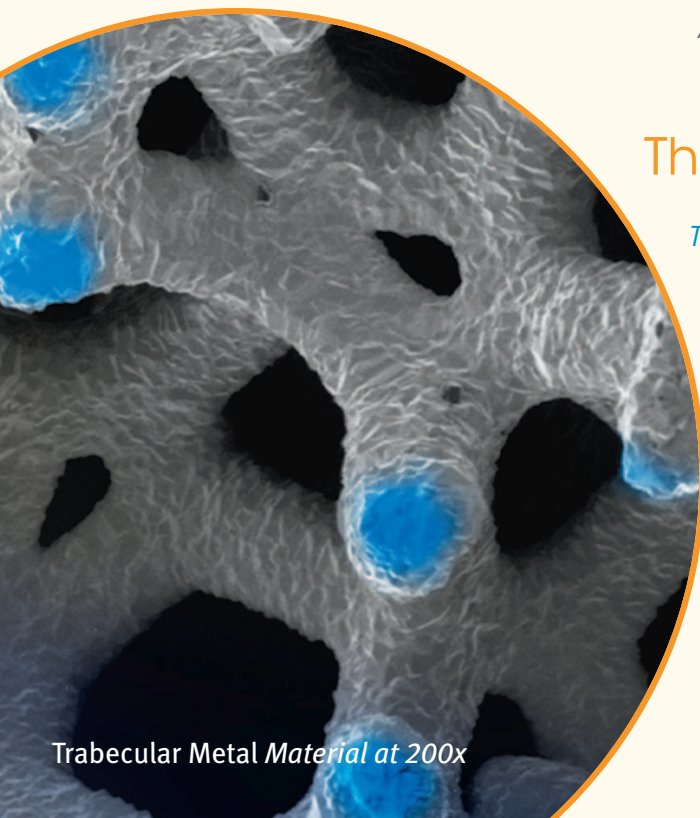
Osseoincorporation



The process of ingrowth

Artistic Rendering

Trabecular bone



Trabecular Metal Material at 200x

The Best Thing Next to Bone[™]

Trabecular Metal Technology is a three-dimensional material, not an implant surface or coating. Its structure is similar to cancellous bone.^{4,6,10} *Trabecular Metal* Material has up to 80% fully interconnected porosity designed for bone ingrowth.^{3-5,7,10,11}

Zimmer has utilized *Trabecular Metal* Material – *The Best Thing Next to Bone* – for over a decade in implantable orthopaedic devices. Now Zimmer brings this unique technology to implant dentistry with the *Trabecular Metal* Dental Implant.

The *Trabecular Metal* Dental Implant is placed with the *Zimmer Instrument Kit System* and restored using the extensive selection of *Tapered Screw-Vent* prosthetic components. This compatibility allows for convenient integration of the *Trabecular Metal* Dental Implant into treatment plans without requiring additional surgical purchases or new restorative procedures.

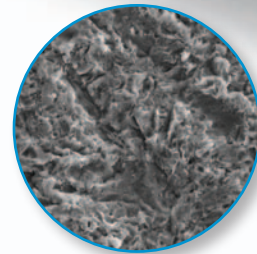
TRABECULAR METAL DEN

THE BEST THING NEXT TO BONE.™



5 TAPERED IMPLANT BODY

Designed for primary stability, the tapered titanium alloy body provides the strength of traditional dental implants.¹⁵⁻¹⁸



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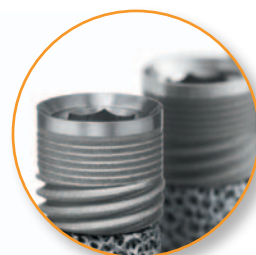
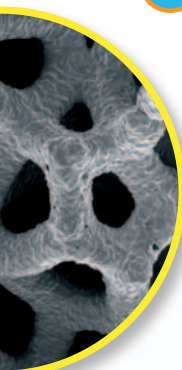
MTX SURFACE FOR ONGROWTH

The *MTX* Microtextured Surface has been documented to achieve high levels of bone-to-implant contact, or ongrowth.^{1,2}

TAL IMPLANT

1 TRABECULAR METAL MATERIAL FOR BONE INGROWTH

The implant's *Trabecular Metal* Material mid-section has been designed for bone ingrowth and ongrowth.³⁻⁵ Zimmer Dental continues to gather data to document the volume and rate of osseoincorporation and its effects on secondary stability.

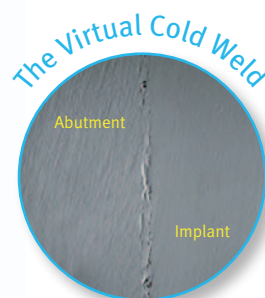
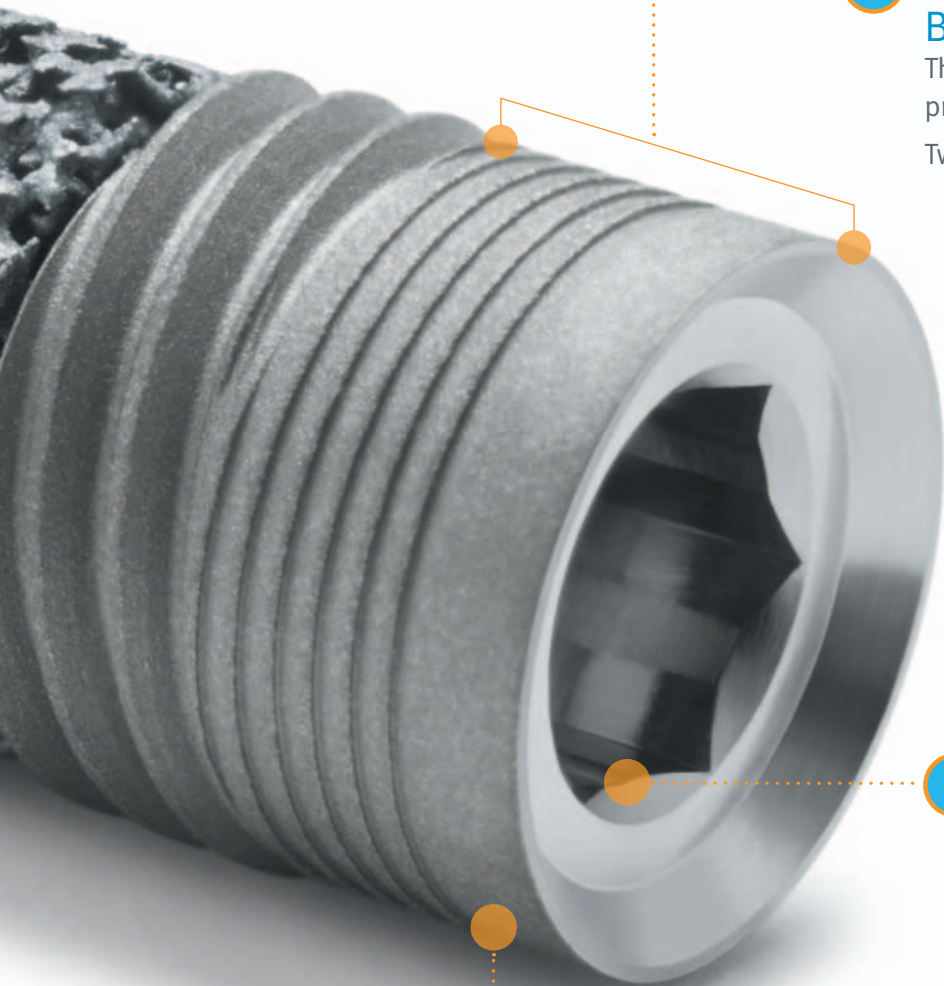


2 CRESTAL OPTIONS FOR BONE-LEVEL MAINTENANCE

The coronal microgrooves are designed to preserve crestal bone.¹⁴

Two coronal surface configurations are available:

- 0.5mm Machined Titanium (Model TMM, shown above).
- MTX Microtexturing to the top (Model TMT, shown to the left).



3 PLATFORM PLUS™ TECHNOLOGY

The proprietary internal hex connection, utilized with Zimmer Dental's friction-fit abutments, has been documented to shield crestal bone from concentrated occlusal forces, in an *in vitro* FEA.^{12,13*}

*Results are not necessarily predictive of human clinical results.

Clinical Cases

Human clinical studies of the *Trabecular Metal* Dental Implant began in 2010, and data collection will continue in the coming years. Additional studies to document osseoincorporation in humans and animals are in progress. In 2011, the availability of the *Trabecular Metal* Dental Implant was extended to clinicians and their patients in Europe, and in 2012, the United States and other countries.

In a preliminary study of *Trabecular Metal* Dental Implants in canine mandibular models, evidence of ingrowth by maturing bone was documented as early as two weeks after implantation.^{19,20} Further data is being collected to document the rate of ingrowth and its effects on secondary stability in human dental applications.

Trabecular Metal Dental Implant placed in the maxilla and immediately loaded.
Image ©2012 Dr. Markus Schlee, Forchheim, Germany.



Final restoration
at 14 days*



One-year result

Trabecular Metal Dental Implant placed in the mandible.
Images ©2012 Dr. Markus Schlee, Forchheim, Germany.

*Immediate loading is indicated when there is good primary stability and an appropriate occlusal load.

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- ¹⁸. Data on file., ¹⁹. Data on file., ²⁰. Data on file.
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For more information about the Zimmer Trabecular Metal Dental Implant, visit trabecularmetal.zimmerdental.com.

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