

# MAESTRO™

One System  
No Compromises





# MAESTRO™

The Maestro Implant System was conceived in 1994 with the goal of assembling an evidence-based implant system that could be universally employed regardless of the required surgical protocol.

Because the end goal of implant dentistry is a prosthetic tooth, not an implant, the system would be easy to restore while still providing a full range of restorative options.

BioHorizons Implant Systems®<sup>®</sup>, Inc. was formed as the vehicle to bring this innovative implant system to market. We have since evolved into one of the leading manufacturers and distributors of oral reconstructive products in the world.

We strive to provide the surgeon, restoring doctor and their staff with a single source for all their implant dentistry and tissue grafting needs:  
Products, Education and Support.

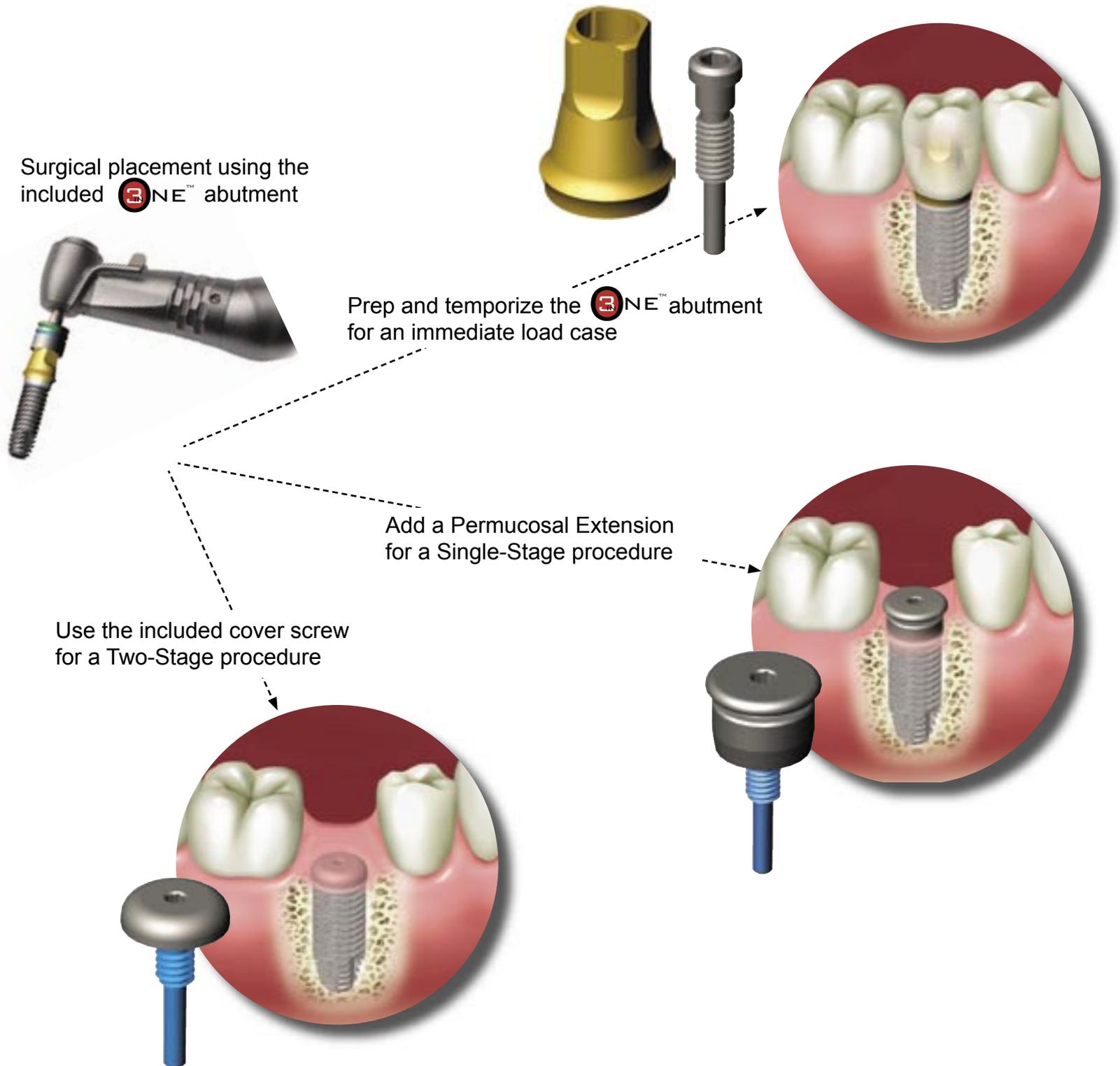
Our commitment to quality allows us to stand behind our implants and prosthetic components with an unlimited, lifetime warranty.

# The Only System You Need

The Maestro Implant System gives you everything you need to cover all indications, **plus the value of the included ONE™ abutment**. Its surgical and prosthetic versatility is unparalleled by any other implant on the market.

Why would you settle for a system that provides less and forces you to make compromises?

Three paths to the same result



Nobody can foresee everything they will encounter in a surgery. The Maestro Implant System allows you to alter your treatment plan if unexpected problems indicate change. A single-stage protocol can easily be changed to a two-stage protocol, or an immediate-load case can be turned into to a single-stage case. In other words, the patient's needs dictate the protocol used, not the limitations of the system.

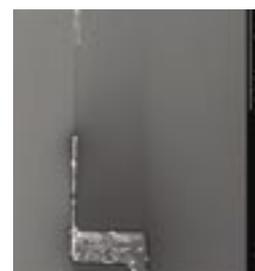
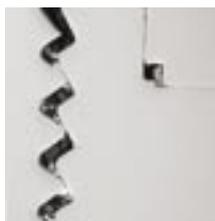
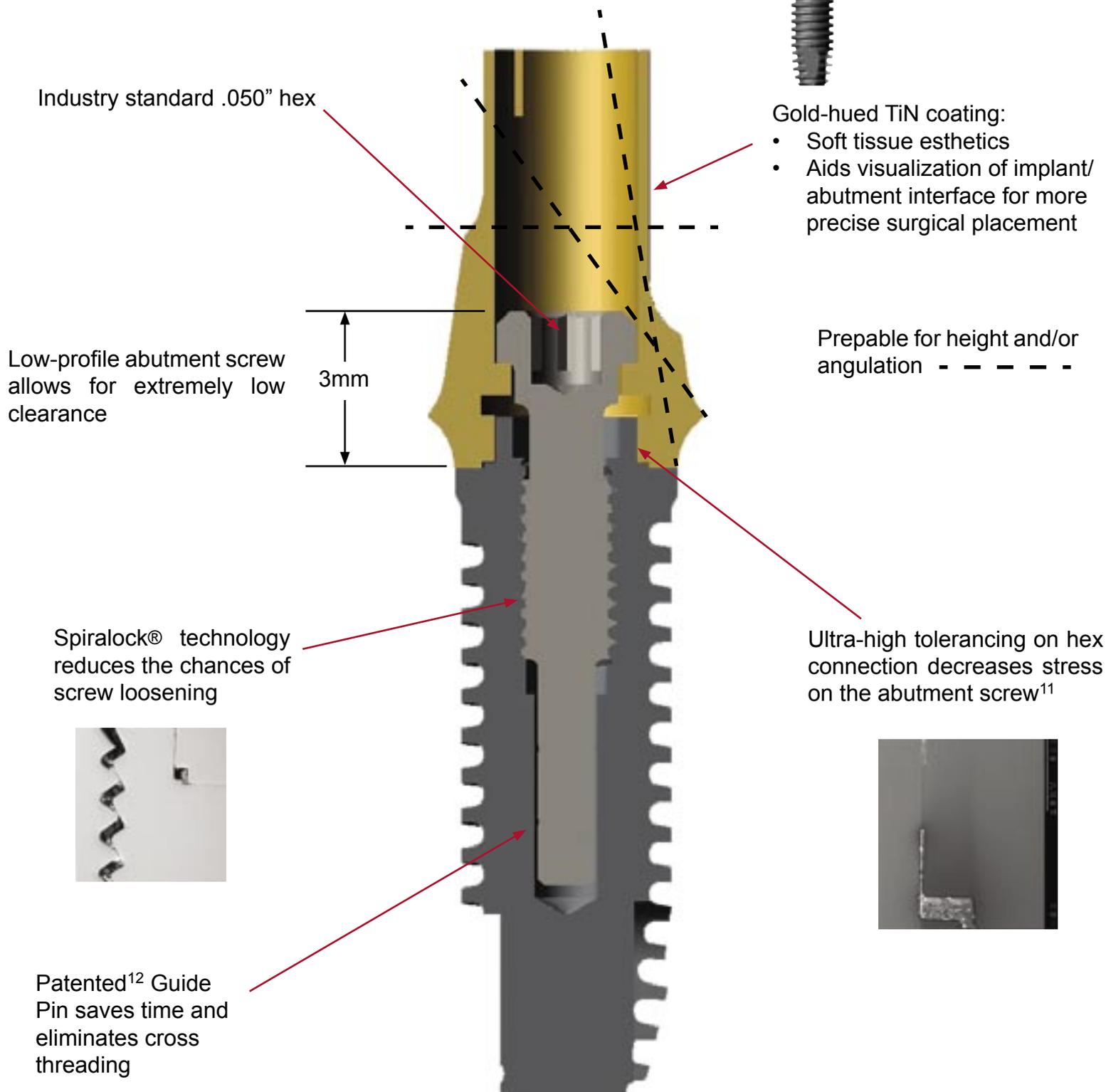
## Unparalleled

# Lower Total Cost with the NE™ Abutment

Every time the implant team makes use of the patented<sup>12</sup>  NE™ abutment, they save at least \$100 compared to other systems that make you pay extra for a preable abutment. Using the abutment keeps inventory and overhead costs to a minimum and practically eliminates the chance of not having the correct components to complete the case. By giving their restoring doctors fewer hassles and greater value, the specialist has a very powerful practice building tool at their disposal.

## One Abutment, Many Uses:

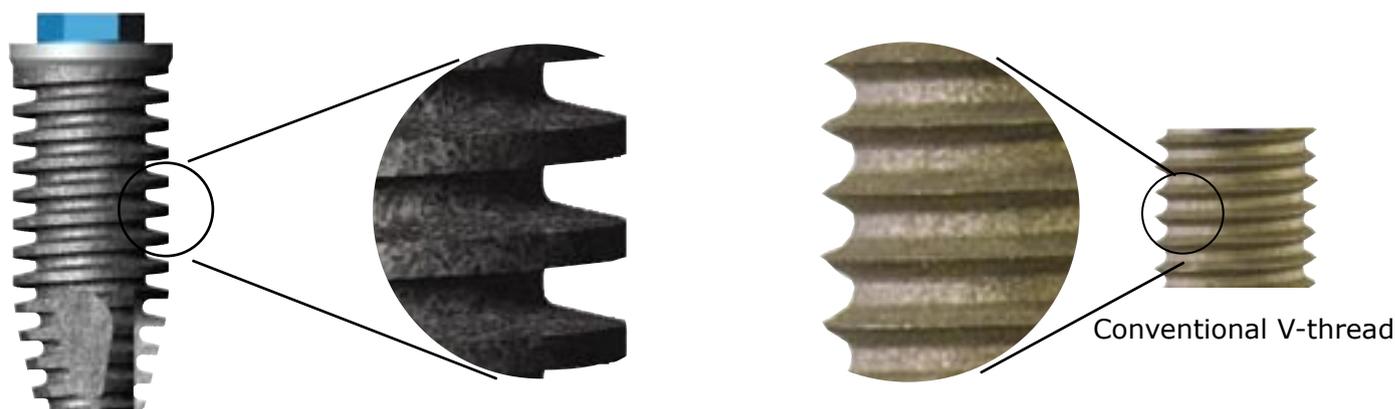
- A final abutment for a cement-retained crown or bar.
- A pre-mounted temporary abutment for immediate implants.
- An impression coping (when used with our patented<sup>12</sup> balltop screw).



## Versatility

# Load Bone Better with Increased Surface Area

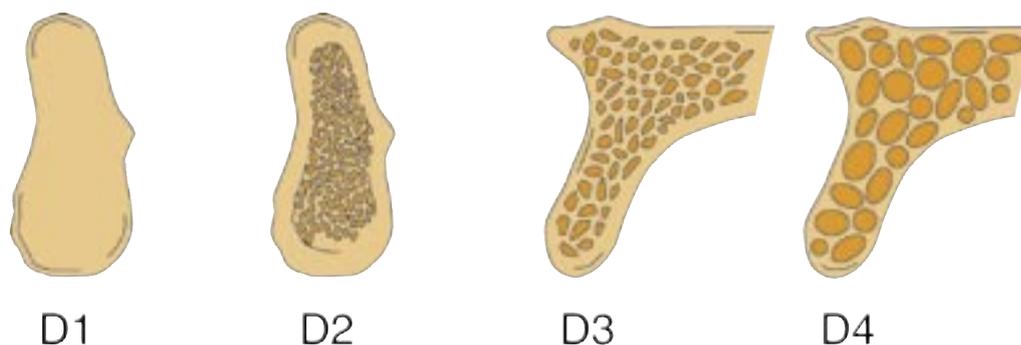
Bone is strongest in compressive loading; weakest in shear. Maestro's square thread design, known in engineering terms as a Power Thread, imparts 10 times less destructive stresses, while maximizing compressive load transfer and giving excellent primary stability. These attributes have become increasingly important with the emergence of early and immediate load protocols<sup>1,2,7</sup>.



The Maestro implant comes in three different thread forms for those clinicians who choose to match the implant to the bone density. The square thread design provides up to 154% greater surface area than conventional V-thread designs. For example, a  $\varnothing 4.0\text{mm}$  x 9mm D4 Maestro implant has the equivalent surface area of a  $\varnothing 4.0\text{mm}$  x 15mm V-thread implant.

## 99.4 % Success in All Bone Qualities

Scientific literature supports the use of greater surface area in regions of greater prosthetic load (e.g. cantilever, posterior vs. anterior, etc.), immediate and early load, and/or poor bone densities<sup>4</sup>. Experienced clinicians vary their treatment plan, osteotomy preparation and implant selection based on bone quality. The Maestro is the only dental implant system, according to the FDA, that is designed by original intent to meet the variable biomechanical strength requirements of the different bone densities within the oral environment<sup>5</sup>.

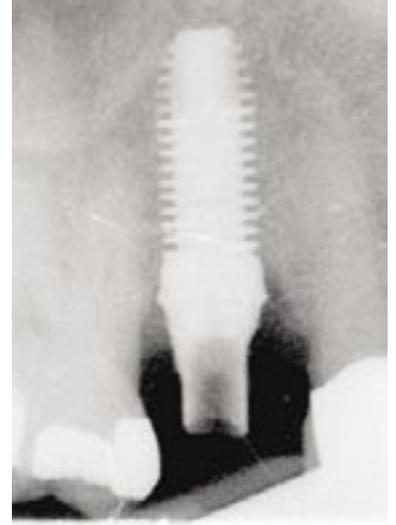
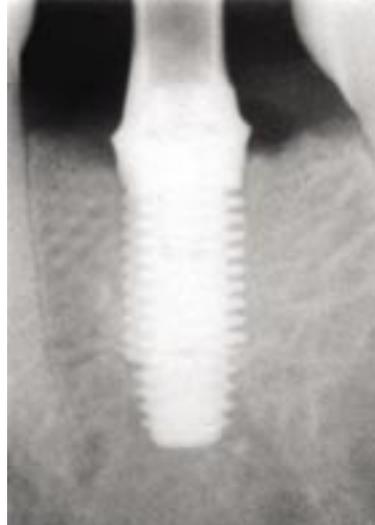


**A 5-year Prospective, Independently-Monitored Multi-Clinical trial demonstrated that the Maestro implant achieves 99.4% success rate independent of the area of the mouth the implants were placed or the type of prostheses used<sup>3</sup>.**

**Evidence**

# Less Marginal Bone Loss = Better Esthetics

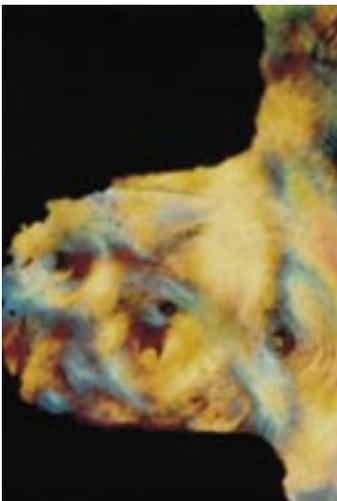
Bone will not integrate next to a polished metal surface. With this in mind, the Maestro implant was designed with a polished collar of only 0.5mm length, compared to 1.0mm to 2.0mm lengths for most other systems. By combining a smaller collar, improved thread form and increased surface area, the Maestro system is able to minimize marginal bone loss<sup>3</sup>. Because the soft tissue receives better osseous support, final outcomes are more predictable and esthetically pleasing.



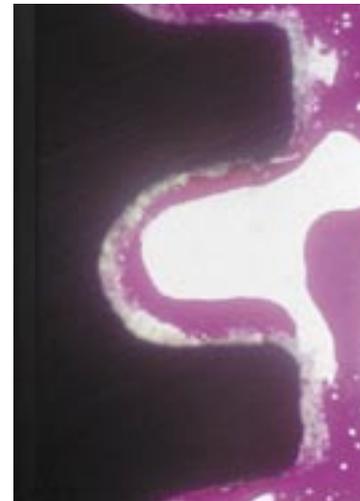
Radiographs courtesy of Dr. Michael Tischler

## Technology Replicating Biology™

The modified square thread design of the Maestro implant transmits compressive load to the bone supporting the implant. *In Vivo* animal and human histological research indicates lamellar bone formation apposing the implants to be similar to that found adjacent to natural teeth<sup>6,13</sup>.



Nomarsky microscopy showing bone apposition to the implant. Concentric lamellae of the forming osteons and interstitial lamellae are apparent



Photomicrograph of the implant interface of an immediately-loaded maxillary posterior implant removed one year after function demonstrating more than 80% bone contact.  
Photograph courtesy of Dr. Marco Degidi and Dr. Adriano Piattelli

Based

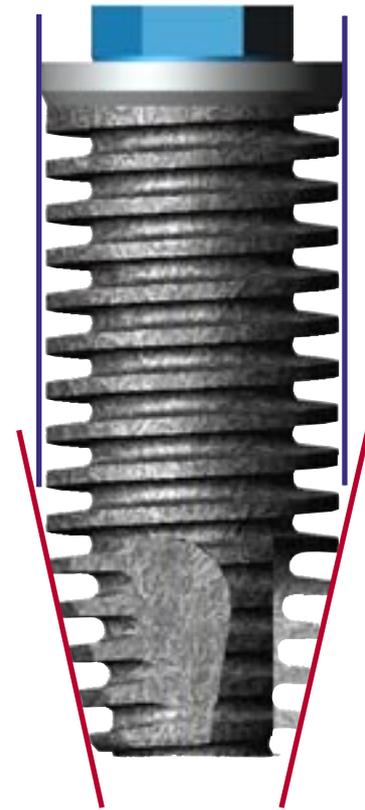
# Implant Geometry That Makes Sense

## Parallel walls for stability

The coronal two-thirds of the implant features parallel walls for initial stability and surgical simplicity. Unlike other systems that use tapered drills, you are not locked into placing the implant at only one level.

## Apical taper for anatomic limitations

The implant features a tapered, self-tapping apex for ease of placement and to address convergent roots, extraction sites and undercuts.

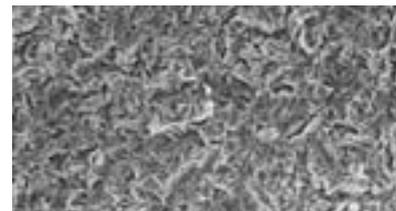


# Surface Treatment for Rapid Integration

## RBM – Resorbable Blast Media

A roughened surface is ideal for increasing the biological fixation and maximizing implant-to-bone contact. BioHorizons pioneered the use of RBM in 1997, and it has been proven to improve bone cell contact as compared to a machined titanium surface<sup>8</sup>. The biocompatible calcium phosphate used to blast the surface is resorbed during the passivation process, leaving the optimum roughness profile of a pure TiO<sub>2</sub> surface<sup>9</sup>. Maestro implants in D2 and D3 thread forms carry the RBM surface.

# RBM

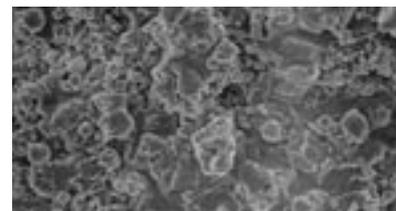


RBM – Resorbable Blast Media  
Pure TiO<sub>2</sub> for Rapid Integration

## HA – Hydroxylapatite

Rapid bone apposition is desired in the soft bone of the posterior maxilla. Clinical studies have verified improved success rates when implants, coated with hydroxylapatite (HA)<sup>3,10</sup>, are placed in D4-type bone. The HA coating on the D4 implant, combined with the improved Maestro thread form, create an unbeatable combination for rapid integration, initial stability and long-term success.

# HA

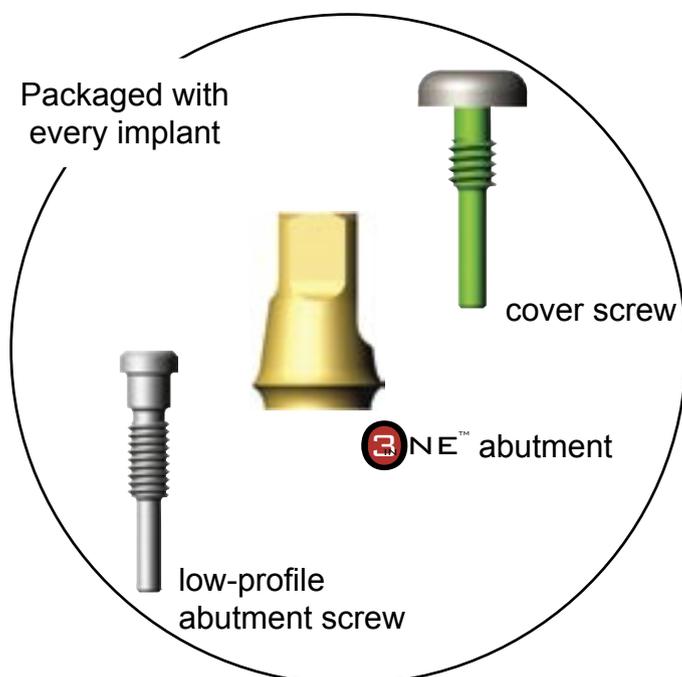
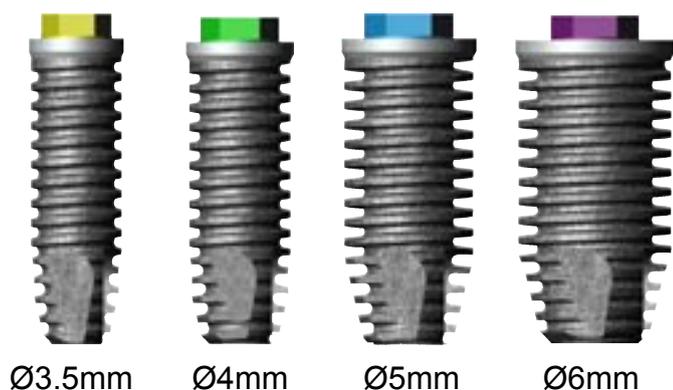


HA – Hydroxylapatite  
Maximum Surface Area  
Fastest Integration

# Innovative

# Low Inventory Requirements = Lower Overhead

Maestro implants come in four diameters: 3.5mm, 4.0mm, 5.0mm and 6.0mm, three lengths: 9mm, 12mm and 15mm, and three thread forms: D2, D3 and D4. This gives the doctor a comprehensive selection of lengths and diameters to meet any anatomic consequence; although most cases will be completed using a core group of five or six popular sizes.

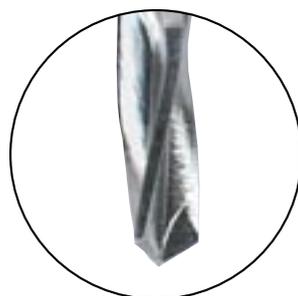
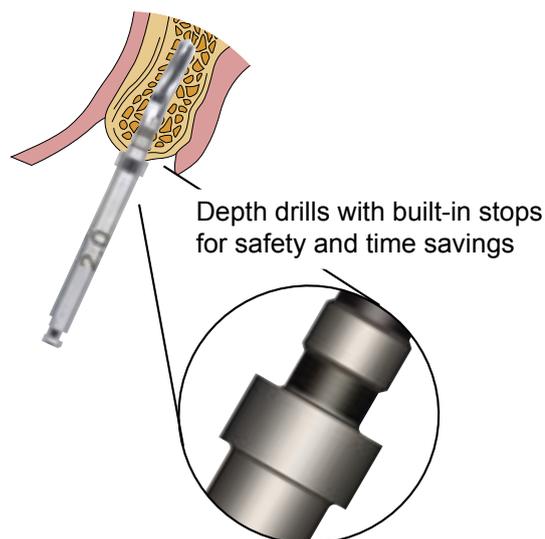


## Time-Saving Drills that Eliminate Guesswork

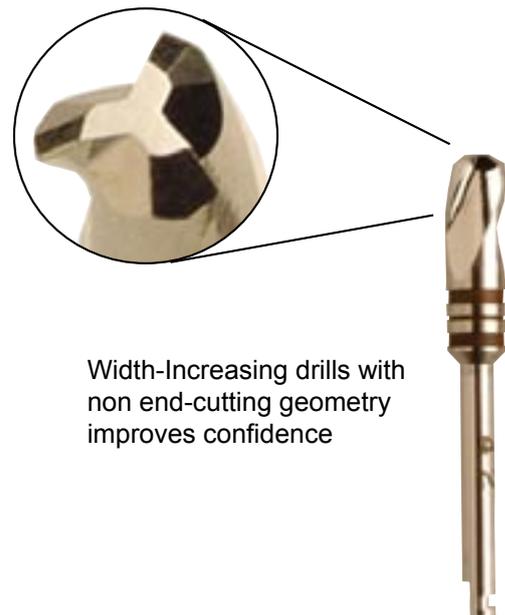
Maestro System Drills (*patent pending*) are designed for extremely efficient osteotomy preparation. The unique tri-flute design, depth stops, and easy to read depth markings save time, increase safety and improve osteotomy quality.

The surgical kit includes initial depth drills with stops that correspond to the lengths of the implants (9, 12 & 15mm). This feature is particularly important when working over the mandibular canal or under the maxillary sinus. The kit also contains depth drills without stops for those situations where placing the implant below the crest of the ridge is desired.

After the depth of the osteotomy is determined by use of the Depth drills, it is then widened with of the Width-Increasing drills. These drills feature a non end-cutting apical geometry that prevents them from penetrating further .



Efficient Tri-Flute design means fast, accurate osteotomy drilling

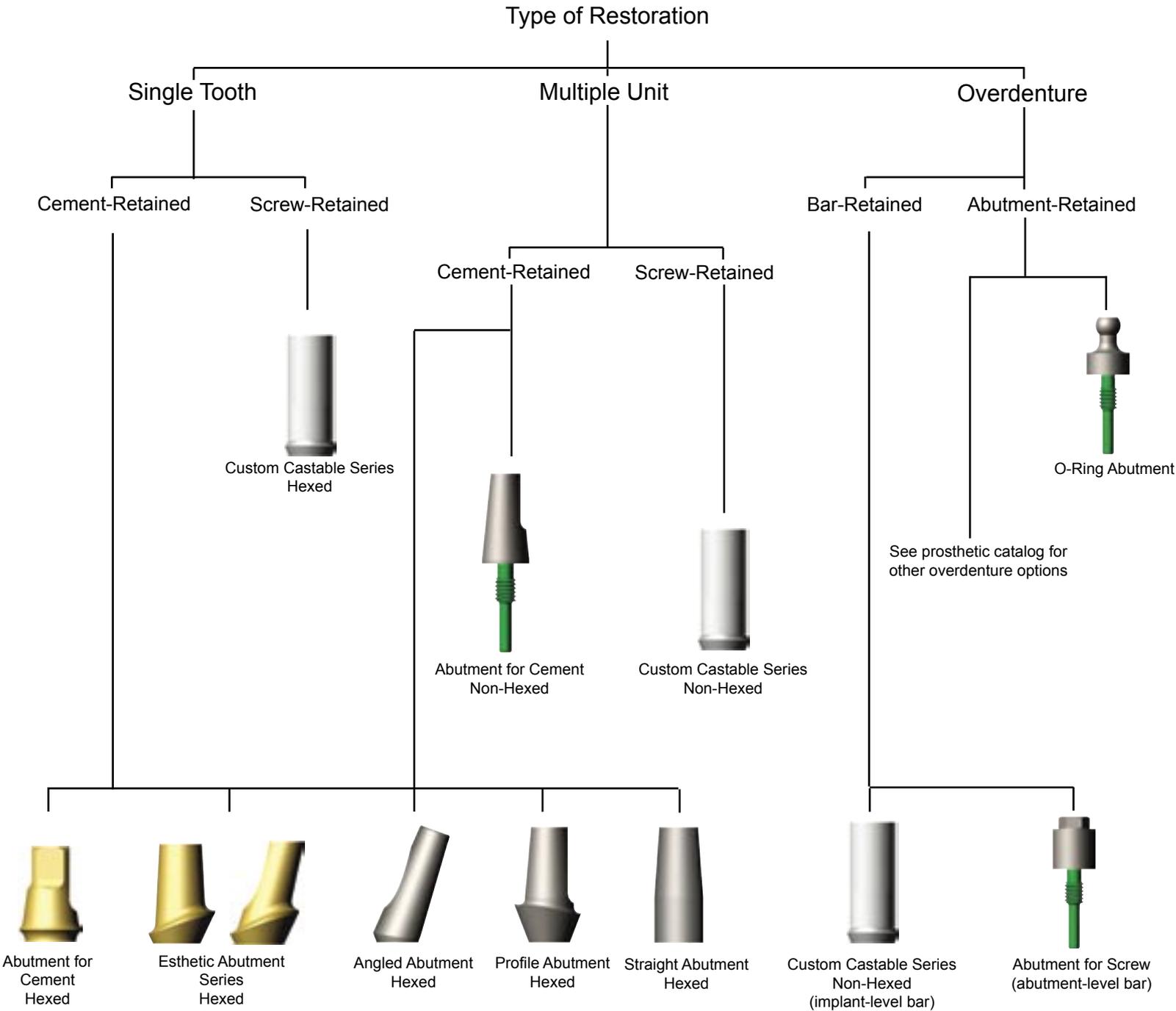


# Design

# Complete Prosthetic Versatility

Although most cases using the Maestro system are completed with the **3ONE™** abutment, a comprehensive selection of abutments is available to cover any situation you may encounter.

## Abutment Selection Flow Chart



The Only System You Need

# Impression Techniques for all indications

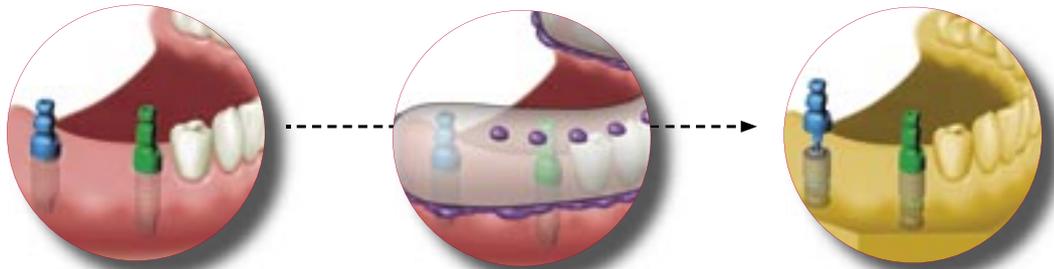
Prepared Abutment Impression



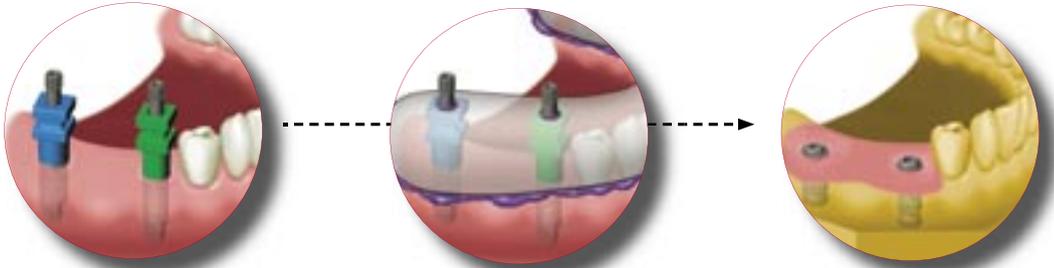
Closed-tray impression utilizing the ball-top screw



Closed-tray impression for multi-unit, non-hexed abutments



Open-tray impression



biz card slots

# MAESTRO™

One System. All Indications.

Two-Stage Protocol  
Time Proven, Predictable Modality

Single-Stage Protocol  
Less Surgery, Patient Friendly

Immediate Load Protocol  
Accelerated Treatment for Certain Indications

Lifetime Warranty



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The Maestro System™ dental implants, prosthetic components, and associated surgical instruments are cleared for distribution in the European Union under the Medical Device Directive 93/42/EEC. Additionally, BioHorizons Implant Systems, Inc. is registered to ISO 13485, assuring clinicians and patients alike that BioHorizons conforms to the highest international quality management standards for medical devices.

U.S. Patents 5,628,630; 5,823,777; 5,927,979; 5,954,504; 6,045,361; 6,083,004; 6,068,480; and 6,083,004; Patents Pending  
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