

ZANTEX™ **ENHANCED** PMMA Restorations

COMING
SOON!



Strength and Durability

*10x Elastic Modulus Characteristic &
7x The Traction Strength when
Compared to PMMA Alone!*

100% Digital Workflow

*Simple Delivery and Turn Around Time
Without Adding Burdening Costs.*

Splinting Stability

*Less Micro Movement & Stress on
Healing Implants.*

BIOFUNCTIONAL
MATERIALS

Temporary to **Longterm:** Stability of an Implant is a **Crucial Factor** in Osseointegration.

The more a bridge flexes the more micro movement is transferred to the bone implant interface.* The team at BioFunctional Materials™, with over 50 years' collective experience in the field of dental implant technology, recognized this dilemma and the potential benefit of a **digital and metal-free solution.**



PMMA Bridge Characteristics

PMMA Elastic Modulus	3.6 Gpa
PMMA Compression Strength	80 Mpa

The unique properties of **PMMA** (polymethyl methacrylate) – **biocompatibility, aesthetics, ease of manipulation, and cost effectiveness** – make this material a popular choice for large span temporary dental implant restorations.

However, a less advantageous characteristic of PMMA is its **poor mechanical properties**. More specifically low modulus of elasticity and flexion strength. Therefore, providing splinting stability to healing implants **may not be its strong virtue.**

ZANTEX™ ENHANCED

PMMA Bridge Characteristics**

ZANTEX Enhanced PMMA Elastic Modulus	35 Gpa
ZANTEX Enhanced PMMA Compression Strength	920 Mpa

ZANTEX™ upgrades the mechanical properties of the PMMA bridge without adding any burdening costs or fabrication complications.

By incorporating **ZANTEX™**, an **advanced polymer matrix material**, within the PMMA bridge structure, the resulting restoration can conceivably provide **10x the elastic modulus** characteristic and almost **7x the traction strength!**

Protocol Provides for **Digital Impression to Longterm Temporary Bridge.** Complete with an **Automated** and **100% Digital Workflow** (including cylinder abutments).

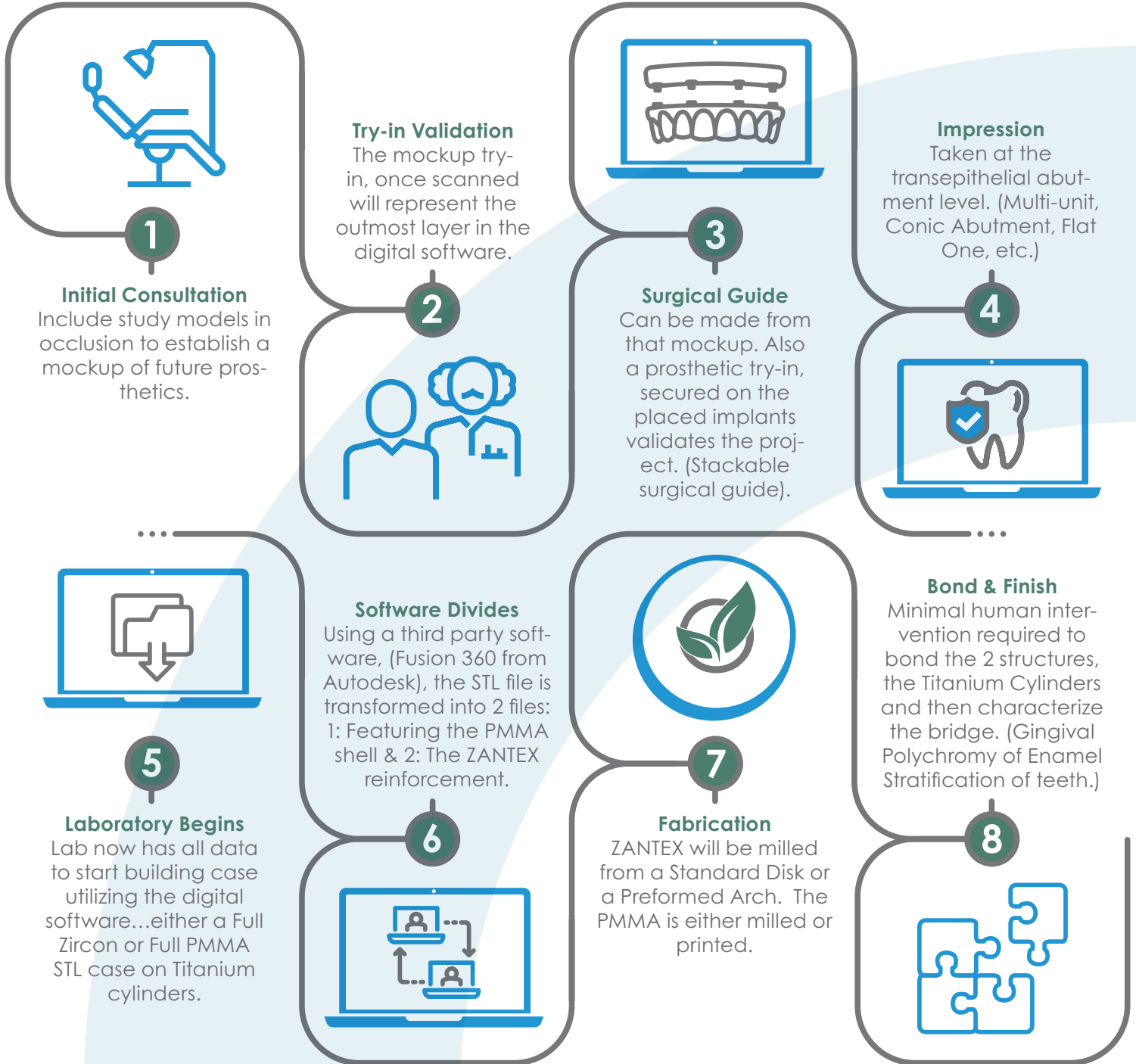


The clinician's and/or laboratory's customary CAD software (EXOCAD™, 3SHAPE™, DentalWings™, Nemodent™, etc.) is utilized to design the implant supported bridge. The process is then automated and 100% digital workflow. It will generate two STL files. The first structure is a modified bridge featuring a slot that will receive the second structure, that is a **ZANTEX™** wafer. It is bonded directly into that slot.

PMMA can be either machined from a disk or 3D printed. **ZANTEX™** is milled from a thin disk, optimizing machine time. Bonding strength of **ZANTEX™** to PMMA is extremely high and final assembly is simple, requiring minimal hands-on effort.

Aesthetics, fabrication, cost effectiveness, biocompatibility and other desirable characteristics of your PMMA bridge are left totally intact, and its mechanical properties are boosted.

A 100% Digital Workflow Starts on **Day One** of the Treatment Plan...



**Role of primary stability for successful osseointegration of dental implants: Factors of influence and evaluation. F. Javed, H. Ahmed, +1 author G. Romanos, Published 20 December 2013, Medicine, Interventional medicine & applied science*

****ZANTEX™ Specs:** www.zantexdental.com/zantex-specs



Axial Design

ZANTEX Axial reinforcement is inserted axially. This design leaves 3 PMMA walls, (an Occlusal wall, an Lingual wall and a Vestibular wall) allowing the ZANTEX to be virtually invisible.

The Ti Cylinders are bonded to the ZANTEX. In some cases they can extend occlusal to the PMMA.



Bi-Axial Design

If the Bucco Lineal width of the bridge is minimal, the **ZANTEX Bi-Axial Reinforcement** can extend Lingually. This leaves 2 PMMA walls, (Occlusal and Vestibular).

The Ti Cylinders are bonded to the ZANTEX and in some cases extend occlusal to the PMMA. The ZANTEX exposed surface can be covered with a free flow nano structured composite; ie, GC Optiglaze™.



Lateral Design

The **ZANTEX Lingual Reinforcement** is a simple design that maximizes the overall PMMA volume, and offers a 5mm thick ZANTEX reinforcement.

It can be milled from a pre-cut ZANTEX Arch (AR01), in a 4 axis milling machine, using our **Arch-to-Disk Adapter**. (See *next page*) The Ti Cylinders are bonded to the PMMA and extend to the ZANTEX.



Arch-to-Disk Adapter

An **Arch-to-Disk Adapter** accepts a pre-cut ZANTEX Arch (AR01) for economical fabrication in a four axis milling machine. The adaptor is a two-piece jig that simulates the size and shape of a ZANTEX Ø98X16MM Disk Form.

A ZANTEX Arch fits precisely into a precut section in the bottom half of the jig. The top half then mates securely with the bottom section providing an appropriate milling machine holder.

ZANTEX™ Can Also Serve as a
Framework for **Zirconia**...
Enhancing Strength and Durability



First Sintering of the
Zirconia Crowns

Lab Kyon, Sao Paulo, Brazil



Characterization of
Ceramic Crowns

Lab Kyon, Sao Paulo, Brazil





Finished Case

Pr Dario Adolfo, Sao Paulo, Brazil



ZANTEX / Zirconia

Pr Dario Adolfo, Sao Paulo, Brazil





Advanced Polymer
Network Suprastructure



Disk Form

Catalog Number	Description
DC01-10	Ø98X10MM
DC01-16	Ø98X16MM
DC01-20	Ø98X20MM
DC02-16	Ø98X16MM, Triangular
DC03-16	Ø95X16MM, Notches



Arch Form Reinforcement

Catalog Number	Description
AR01.....	Arch Form



www.zantexdental.com

The product images shown may represent the range of product, or be for illustration purposes only and may not be an exact representation of the product.

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