

BIOTECH DENTAL



Experts with more than 15 years of experience in ceramics

THE FUTURE:

Natural, white and digital

MORE THAN 15 YEARS

Tailored prosthetic solutions thanks to our comprehensive portofolio and digital workflow

Made in Switzerland - Since 2005



Uncompromising Patient satisfaction

Aesthetic rehabilitation and digital workflows are the dominant trends in dental implantology. Patients are looking for sustainable and healthy solutions. Thanks to modern, two-piece, reversibly screw-retained ceramic implants, these concepts can be implemented predictably, easily and quickly. Zeramex is one of the main innovators in the field of two-piece and 100% metal-free ceramic implants - with over 15 years of experience.

- > 98 % success rate: Zeramex implants have a high level of osseointegration, with a BIC comparable to titanium implants.⁵
- **Low risk of inflammation:** Thanks to the corrosion-resistance of ceramic and its low plaque affinity.^{4, 6, 7, 9}
- > Perfect red-white aesthetics: Ideal conditions for peri-implant soft tissue.^{1,2,10}
- **Biocompatible:** No inflammatory reactions to the material.¹¹
- Flexible: With a complete and innovative digital workflow.

87 % choose white¹⁷

We have carried out surveys: 87% of the 1000 respondents we spoke to would choose a white dental implant.¹⁷





Zeramex : the ceramic implant

Zeramex products are built on sintered high-performance ceramic material and years of Swiss tradition. Our metal-free screw-in internal connection has proven itself in a clinical setting since 2014.5

- implant and abutment.¹⁵
- fibre-reinforced high-performance PEEK.

- imaging before delivery.

Made in Switzerland - Since 2005

Zeramex Guarantee

We test all of our products before they are shipped. We offer a life-long guarantee for our implants and a 10 year guarantee for abutments and our unique Vicarbo screw.¹⁶



Carbon-ceramic technology: Strong and lasting connection between

Key component of this technology: Vicarbo screw made of carbon

Ideal connection: The specially designed internal geometry is a perfect match for the properties of the ceramic material.

70% higher strength: ATZ ceramic has a higher strength than TZP.¹⁸

> Committed to quality: Each implant is inspected with Micro-CT



ZERAMEX 3

Bone-friendly - thanks to biocompatible drill & tools

Zeradrill drills have an amorphous carbon coating. This only contains carbon and hydrogen and is therefore 100% metal-free and biocompatible. Zeradrill drills provide outstanding cutting performance and smoothness for atraumatic preparation of the bed while protecting the surrounding tissue.

 Gentle and precise ✓ Biocompatible



Impressive osseointegration⁸

The sand-blasted and acid-etched hydrophilic implant surface Zerafil encourages the accumultation of osteoblasts for unimpeded de novo bone formation.8

- Outstanding bone-to-implant contact (BIC)
- ✓ 98% success rate⁵



Zirconium oxide is superior to grey titanium due to the absence of grey edges and dark implant cores.¹ The natural look of ceramic implants is particularly effective with thin gingival tissue.¹

- No dark implant core \checkmark
- No grey edges



experienced users > find out more



Soft tissue in the vicinity of a zirconium oxide implant is comparable to tissue in the vicinity of natural teeth, particularly in terms of blood flow and the orientation of the collagen fibres.² The low level of plaque simplifies dental hygiene for the patient and eliminates inflammation in the tissue around the implant.⁶

Low plaque affinity and bacterial adhesion⁶

For soft tissue that stays stable and healthy over the long term²

ATZ BIO-HIP ceramic for higher strength

Zeramex implants

with Zerafil surface

> find out more

The Zeramex XT is made using hot isostatic post-compacted zirconium oxide ATZ (aluminium-toughened zirconia) blanks. No thermal process (sintering) or finishing takes place after the final shaping of the outer and inner geometry of the implant. This ensures a high degree of precision and further changes in the material structure are prevented.

Minimise inflammation risks¹²

Long-term studies show that peri-implantitis can pose a risk for restorations, including implant loss.³ The outstanding tissue-friendly properties of Zeramex implants minimise the risk of peri-implantitis.¹³

R10

ZERADRILLTM



Zeramex XT case documentation from

Improved blood flow²



Vicarbo - twice the tensile strength of grade 5 titanium¹⁴

Our experience with titanium does not transfer to ceramic implant systems on a one-to-one basis. A screwed and resilient zirconium to zirconium connection only works with a connector which helps the ceramic to absorb the forces that occur. The Vicarbo screw has a round thread as a traditional lag screw is not particularly suitable. Combining a soft PEEK matrix with unidirectional carbon fibre bundles causes the screw to get shorter and wider when tightened with its final torque. As a result, it adapts to the internal geometry of the implant.

- ✓ Tight fit with "stopper effect"
- Carbon fibre-reinforced high-performance PEEK



Bolt in tube connection with Vicarbo screw > find out more



Resilience that suits the characteristics of ceramics - thanks to "bolt in tube"

The Vicarbo screw is paired with the special inner geometry of the implant. In the bolt-in-tube system, the Vicarbo screw absorbs both tensile and shear forces. The interlocks are only used for positioning and preventing rotation.

- Protected against rotation & easy to position with precision
- No tensile and bending forces at the implant-abutment interface \checkmark

Comprehensive range - maximum prosthetic flexibility

Individual gingiva formers and abutments can be planned and produced by Zeramex Digital Solutions to provide a harmonious and aesthetically pleasing emergence profile. Zerabase X provides the advantages of a two-part fully ceramic adhesive base for tailored restorations - from the laboratory or mass-produced.

- Individual abutments
- Individual gingiva formers
- Two-part Zerabase X adhesive base







хт

Root-shaped with internal connection



The ceramic implant

The Zeramex XT implant: a mile stone in the family of two-piece, reversible screwin Zeramex ceramic implants. The root-shaped design of the Zeramex XT implant achieves high primary stability. Thanks to the new internal connection, maximum prosthetic flexibility is ensured.

Prosthetic flexibility

The Zeramex XT implant system offers a high degree of prosthetic flexibility thanks to straight, angled and fully customizable abutments.

« Bolt-in-Tube »

The "Bolt-in-Tube" connection prevents traction from being exerted on the ceramic. Forces are absorbed by the Vicarbo screw which functions as a bolt.

Hot isostatic post-compacted (HIP) zirconia dioxide ATZ

The Zeramex XT implant is manufactured from hard and hot isostatic postcompacted (HIP) zirconia dioxide ATZ blanks. No thermal process (sintering) or finishing takes place after the final shaping of the outer and inner geometry of the implant. This ensures a high degree of precision and further changes in the material structure are prevented. This manufacturing process is very complex and requires a great deal of experience and know-how.



"Bolt-in-Tube" – the simple and strong ceramic connection

The "Bolt-in-Tube" connection for Zeramex XT implants provides certainty when taking impressions and for temporary and permanent prosthetic restorations. The design elements of this connection have been selected to provide very high stability, while taking into account the typical material properties of ceramics.

The special geometry with the four interlocks and high precision enables fast and easy insertion and alignment of the abutment.

The core of the connection is the Vicarbo screw. It acts as a bolt, which anchors the abutment in the implant. The extremely hard ceramic is combined with a very stiff, carbon fibre-reinforced high-performance polymer. Similar to reinforced concrete, the ceramic absorbs the compressive forces, while the Vicarbo screw counteracts tensile and bending forces.

Internal connection

The four cross-shaped retaining elements provide the ideal torque on insertion so that the implant can be screwed in without stress peaks being exerted on the bone.

The slightly bevelled contact surface of the implant was developed to facilitate centring and placement of the abutment and auxiliary parts.

Zerafil surface

Excellent osseointegration with the hydrophilic, sandblasted and etched Zerafil surface. Surface treatment up to collar height of 0.6 mm.







Four interlocks

The four interlocks provide precise anti-rotation protection. The "Bolt-in Tube" connection prevents force from being transmitted via the interlocks. These four retaining elements help the abutment to be securely and quickly placed in the implant.

Vicarbo screw

The Vicarbo screw is a precision screw to optimally capture occlusal forces. When tightened, it grips the existing contour of the thread thanks to the significantly different hardnesses of the ceramic and screw.

Variable placement depth

The Zeramex XT implant is placed 1.6 mm supracrestal (optional 0.6mm) and offers high prosthetic flexibility.

High primary stability

The thread design and cylindrical-conical implant shape achieve high primary stability. The reservoir for bone grafts at the implant tip simplifies the placement of the implant.

Zirconia dioxide ATZ-HIP material

Innovative material for high stress and biocompatibility.

9

ХТ

The system for all common indications, particularly well suited for front tooth restorations.

Biocompatible tools

Colour coding and sizes

Example of implant

Regular ø 4.2 × 14 mm

Zeradrill The biocompatible reusable drill with carbon coating (DLC)





Imaging and

Connection Tools

Pick-up







Prosthetic Kit



XT48850

XT48860

Prosthetic

Healing cap

Implant

Surgery

12 mm

14 mm

SB = Small Base

RB = Regular Base WB = Wide Base





Prosthetic key



Implants (ø endosseous)	Zeramex XT ø 3,5 mm SB				
Malena. 210 ₂ Arz					
	XT15508	XT15510	XT15512		
Prosthetic platform		SB ø 3	,85 mm		
Healing caps					
Material: PEEK	SB35500				
Soft Tissue Management Gingiva former, provisional abutments Material PEEK, Vicarbo	P age			T	
	SB35503	SB35504	SB3	5530	
Taking an impression open/closed Material: PEEK-CW30, Aluminium	SB35510	SB35512	SB35513		
Digital impression taking Scanbody Material: PEEK, PEEK-CW30	SB3	5514			
Standard Abutments/					
Abutments Digital Workflow including screw				M	
Material: ZrO ₂ ATZ,	₩ ₹	(ii) T	₩ ₹		
Vicarbo	SB15501	SB15502	SB15515	SB15551*	
*Sample images: Differs from original! Material: ZrO2 TZP/Vicarbo	SB15535	SB15536			
Docklocs® Abutments (Locator® dental prosthesis) Material: ZrO ₂ ATZ, Vicarbo			Ť		
Suitable for all platforms SB/RB/WB			SB15542		
Laboratory auxiliary parts Material: Aluminium, PEEK green, PEEK-CW30	SB35522	RB36553	RB36521		
Screw Material: Vicarbo					





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