Zeramex XT

The future: natural, white & digital

Experts with **over 17 years of experience** in zirconia

The Zirconia Implant System

The two-piece zirconia implant made of high-performance alumina-toughened zirconia (ATZ) & connected with a unique metal-free Vicarbo® screw - Made in Switzerland

ZERAMEX
naturally, white implants

www.zeramex.com

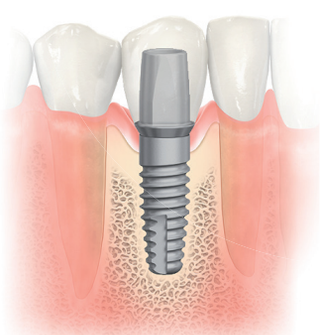
Uncompromising patient satisfaction

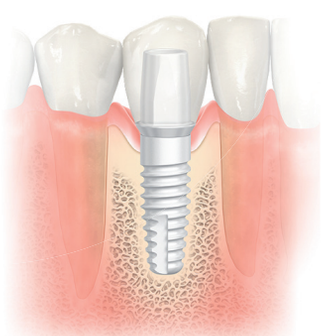
Aesthetic rehabilitation and digital workflows are the dominant trends in dental implantology. Patients are looking for sustainable and healthy solutions. Thanks to modern, two-piece, reversibly screw-retained ceramic implants, these concepts can be implemented predictably, easily and quickly. Zeramex is one of the main innovators in the field of two-piece and 100% metal-free ceramic implants - with over 17 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 white[17]

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





Zeramex XT – the zirconia implant system

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]

- **Carbon-ceramic technology:** Strong and lasting connection between implant and abutment.[15]
- **Key component of this technology:** Vicarbo screw made of carbon fibre-reinforced high-performance PEEK.
- **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 imaging before delivery.

Made in Switzerland

FDA cleared

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]

Implants

Secondary parts
Vicarbo screw

ZERAMEX
naturally, white implants

Bone-friendly - thanks to biocompatible drill & tools

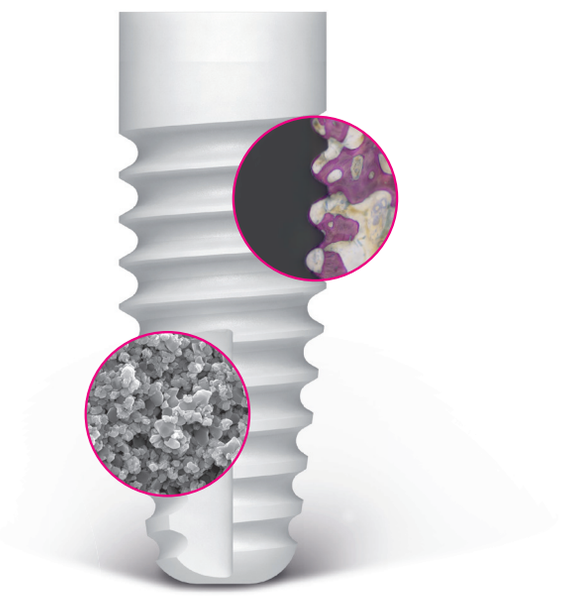
Zeradrill drills have an amorphous carbon coating. This only contains carbon and hydrogen and is therefore 100% metal-free and biocompatible. Zeradrill drills provide outstanding cutting performance and smoothness for atraumatic preparation of the bed while protecting the surrounding tissue.

- **Gentle and precise**
- **Biocompatible**

Impressive osseointegration[8]

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

- **Outstanding bone-to-implant contact (BIC)**
- **98 % success rate[5]**



Zeramex implants with Zerafil surface
> find out more

ATZ BIO-HIP ceramic for higher strength

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.

Natural aesthetics

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**
- **No grey edges**

Zeramex XT case documentation from experienced users
> find out more

Improved blood flow[2]

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 adhesion [6]**
- **For soft tissue that stays stable and healthy over the long term[2]**

Minimise inflammation risks[12]

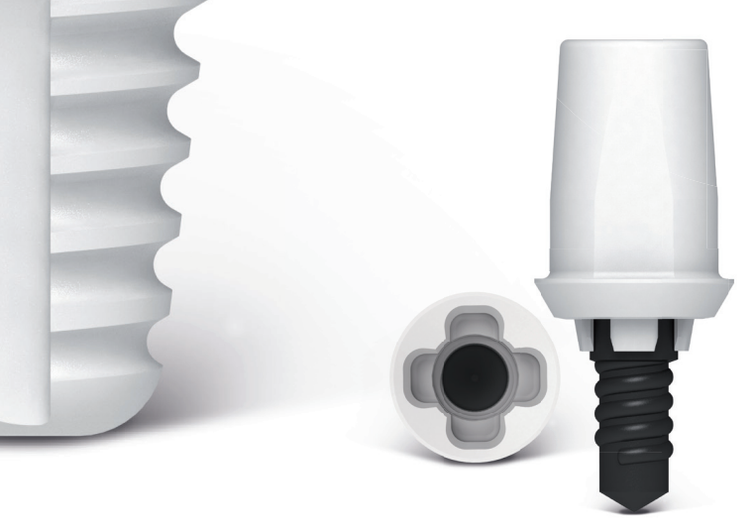
Long-term studies show that peri-implantitis can pose a risk for restorations, including implant loss.[3] The outstanding tissue-friendly properties of Zeramex implants minimise the risk of peri-implantitis.[13]

Vicarbo – twice the tensile strength of grade 5 titanium[14]

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**

References

1) Cosgarea R et al., Peri-implant soft tissue colour around titanium and zirconia abutments: a prospective randomized controlled clinical study. Clinical Oral Implant Research 26, 2015 / 537–544.
2) Kajiwara N et al., Soft tissue biological response to zirconia and metal implant abutments compared with natural tooth: Microcirculation Monitoring as a Novel Bioindicator., Implant Dentistry Volume 24, Number 1 2015.
3) Derks J et al., Effectiveness of Implant Therapy Analyzed in a Swedish Population: Prevalence of Peri-implantitis. J Dent Res. 2016 Jan; 95(1):43-9.
4) Wachi T et al., Release of titanium ions from an implant surface and their effect on cytokine production related to alveolar bone resorption. Toxicology. 2015 Jan 2; 327:1-9.
5) Jank S et al., Success Rate of Two-Piece Zirconia Implants: A Retrospective Statistical Analysis. Implant Dent. 2016 Feb 1.
6) Scarano A et al., Bacterial adhesion on commercially pure titanium and zirconium oxide disks: an in vivo human study. J Periodontol. 2004 Feb; 75(2):292-6.
7) Canullo L et al., Distinguishing predictive profiles for patient-based risk assessment and diagnostics of plaqueinduced, surgically and prosthetically triggered peri-implantitis. Clin Oral Implants Res. 2015 Nov 20.
8) Chappuis V et al., Osseointegration of zirconia and titanium implants in the presence of multinucleated giant cells. CIDRR, 2015 Sept. 17.
9) Sridhar S et al., In Vitro Investigation of the Effect of Oral Bacteria in the Surface Oxidation of Dental Implants. Clin Implant Dent Relat Res. 2015 Oct;17 Suppl 2:e562-75.
10) Kniha K, et al. Aesthetic aspects of adjacent maxillary single-crown implants-influence of zirconia and titanium as implant materials. Int J Oral Maxillofac Surg. 2020;49(11):1489-1496.
11) Hashim D, Ciocca N. A Comprehensive Review of Peri-implantitis Risk Factors. Curr Oral Health Rep (2020) 7:262–273.
12) Andrukhov O, et al. Effect of implant surface material and roughness to the susceptibility of primary gingival fibroblasts to inflammatory stimuli. Dent Mater. 2020;36(6):e194-e205.
13) Degidi M, et al. Inflammatory infiltrate, microvessel density, nitric oxide synthase expression, vascular endothelial growth factor expression, and proliferative activity in peri-implant soft tissues around titanium and zirconium oxide healing caps. J Periodontol. 2006;77(1):73–80. https://doi.org/10.1902/jop.2006.77.1.73
14) Boyer R et al., Materials Properties Handbook: Titanium Alloys, ASM International, 1994.
15) Fatigue tests according to ISO14801; Report Nr. 16010106-D-CS vom 31.3.2016 und Report Nr. 14070102-D-CS vom 21.4.2015; Study director: Nicolas Graf; Spineserv GmbH & Co. KG, Söflinger Straße 100, D-89077 Ulm
16) You can find the current warranty conditions on our website www.zeramex.com.
17) Online survey (German speaking regions) with 1,000 participants: The white or the grey implant? Which would you choose?
18) Metoxit Material overview / Oxide ceramic materials www.metoxit.com/assets/Downloads/Metoxit-Materialubersicht-de2.pdf

Other studies & references
www.zeramex.com/references

Contact

Europe

Order hotline for Germany, Austria and Switzerland:
T 00800 93 55 66 37
F 00800 93 55 63 77
order@zeramex.com

Office in Switzerland
CeramTec Switzerland LLC
Bodenäckerstrasse 5
8957 Spreitenbach/Switzerland
T 0041 44 388 36 36
F 0041 44 388 36 39
info@zeramex.com
www.zeramex.com

Office in Germany (EU sales)
CeramTec Dentalvertriebs GmbH
Wallbrunnstrasse 24
79539 Lörrach, Germany
Tel. +49 7621 1612 749
Fax +49 7621 1612 780
info@zeramex.com
www.zeramex.com

Distribution in the USA

Keystone Dental, Inc.
154 Middlesex Turnpike
Burlington, MA 01803
USA
T +1 781 328 3300
F +1 781 328 3400
customersupport@keystonedental.com
www.keystonedental.com

www.zeramex.com

P699911 2024-06