

Zeramex XT

The future: natural, white and digital



Experts with
over 17 years
of experience
in zirconia

The Ceramic Implant

Tailored prosthetic solutions thanks to our comprehensive portfolio and digital workflow

100% metal-free, reversibly screw-retained

Made in Switzerland – since 2005

ZERAMEX
naturally, white implants

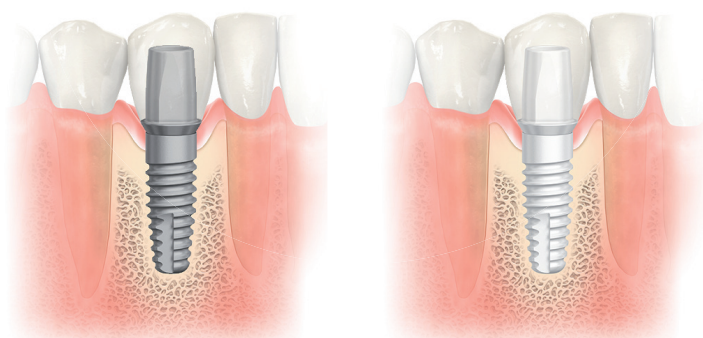
Uncompromising patient satisfaction

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 white¹⁷

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



Zeramex XT – 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

- **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 - since 2005

*Proof of CE conformity of Zeramex products can be found at ifu.zeramex.com.

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

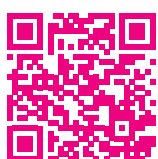
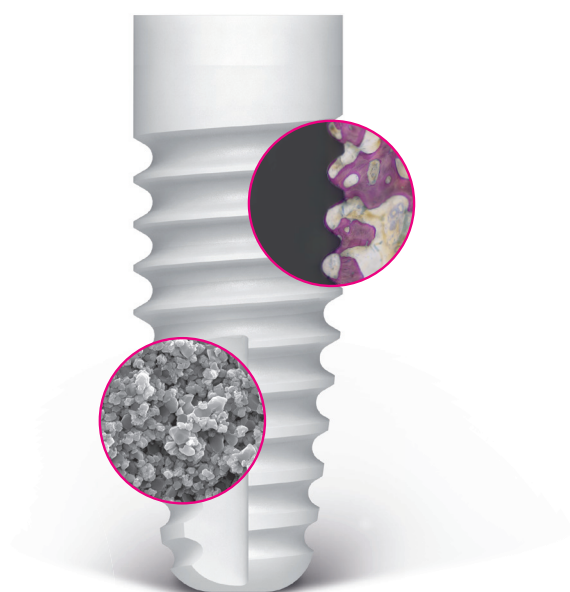
Zeradrill drills have an amorphous carbon coating. This only contains carbon and hydrogen and is therefore 100% metal-free and biocompatible. Zeradrill drills provide outstanding cutting performance and smoothness for atraumatic preparation of the bed while protecting the surrounding tissue.

- Gentle and precise
- Biocompatible

Impressive osseointegration⁸

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 rate⁵



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 flow²

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

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



Strong connection - developed for ceramic implants

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.

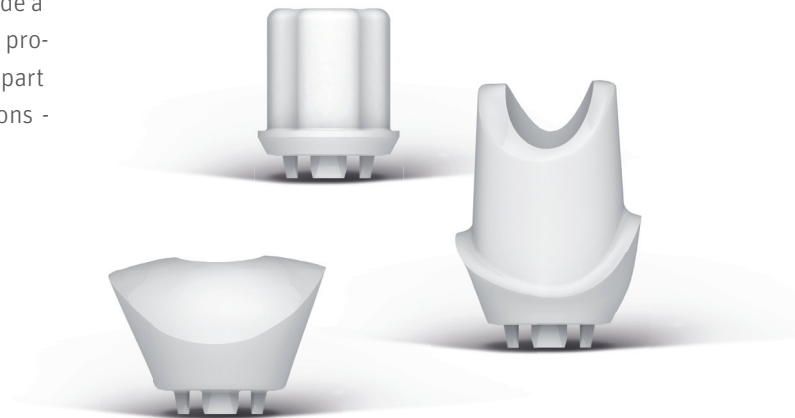
- Protected against rotation & easy to position with precision
- No tensile and bending forces at the implant-abutment interface



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.

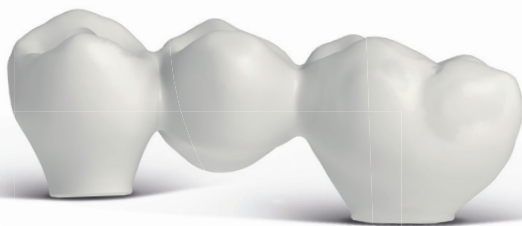
- Individual abutments
- Individual gingiva formers
- Two-part Zerabase X adhesive base



exocad
3shape 



Zeramex Digital Solutions
Your competence centre
> find out more



Monolithic crowns and bridges with no adhesive gaps

One-piece monolithic crowns and bridges without abutments can be ordered from Zeramex Digital Solutions. These remove the need for a lengthy adhesion process. Restorations can be ordered in a variety of VITA colours and with different translucency levels - including multilayers.

- Stable and aesthetically pleasing
- Precise and efficient
- Shorter treatment
- Cement-free

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

© 2024 CeramTec Switzerland LLC – All rights reserved.

Zeramex®, Zerafil™ and Vicarbo® are trademarks or registered trademarks of CeramTec Switzerland LLC.

Exocad is a registered trademark of Exocad GmbH, Germany.

3Shape is a registered trademark of 3Shape A/S, Denmark.

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

Zeramex Digital Solutions

T 00800 04 00 13 33

digitalsolutions@zeramex.com

Office in Switzerland

CeramTec Switzerland LLC

Bodenackerstrasse 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

Global

Contact information for all sales partners is available online at

www.zeramex.com/contact.