Zirkonzahn®

Human Zirconium Technology

IMPLANT PROSTHETICS

Components for individual zirconia structures

ENGLISH

STRONG ROOTS
MY LAND IS MY ANCHOR

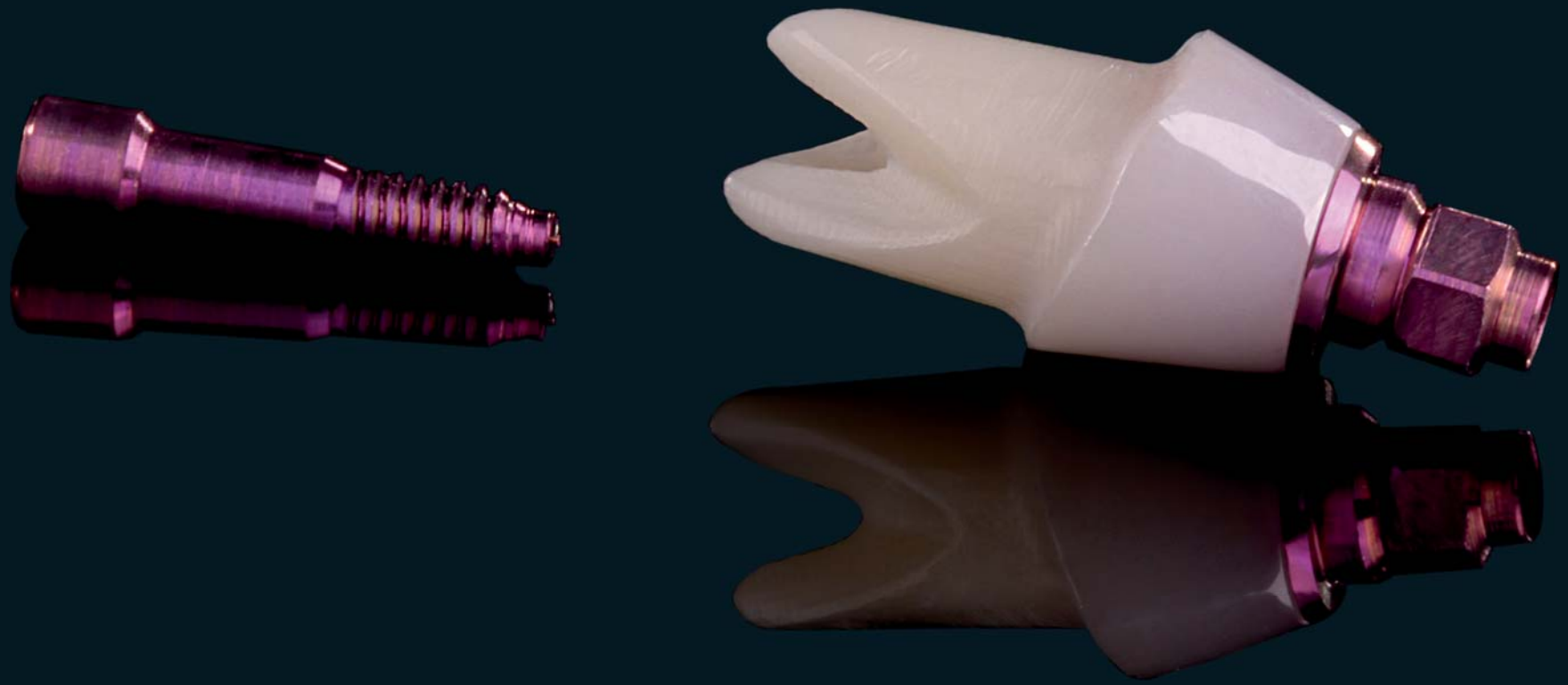
A tree with sick roots dies. A man without roots is a man without a homeland who lives in uncertainty.

Roots are the guideline that connects us to our land. They indicate where we come from and what is important to us.

They keep us connected with our land, but at the same time they give us the strength to evolve, to develop new ideas and to develop our plans.

Forgetting where you come from is comparable to closing your eyes and your mind, to losing sight of your objectives. The roots and attachment to my homeland are the values that drive me and encourage me to progress in my line of work; to fight tirelessly and to overcome the obstacles in my path.

Best regards!



EVERYTHING FROM A SINGLE SOURCE

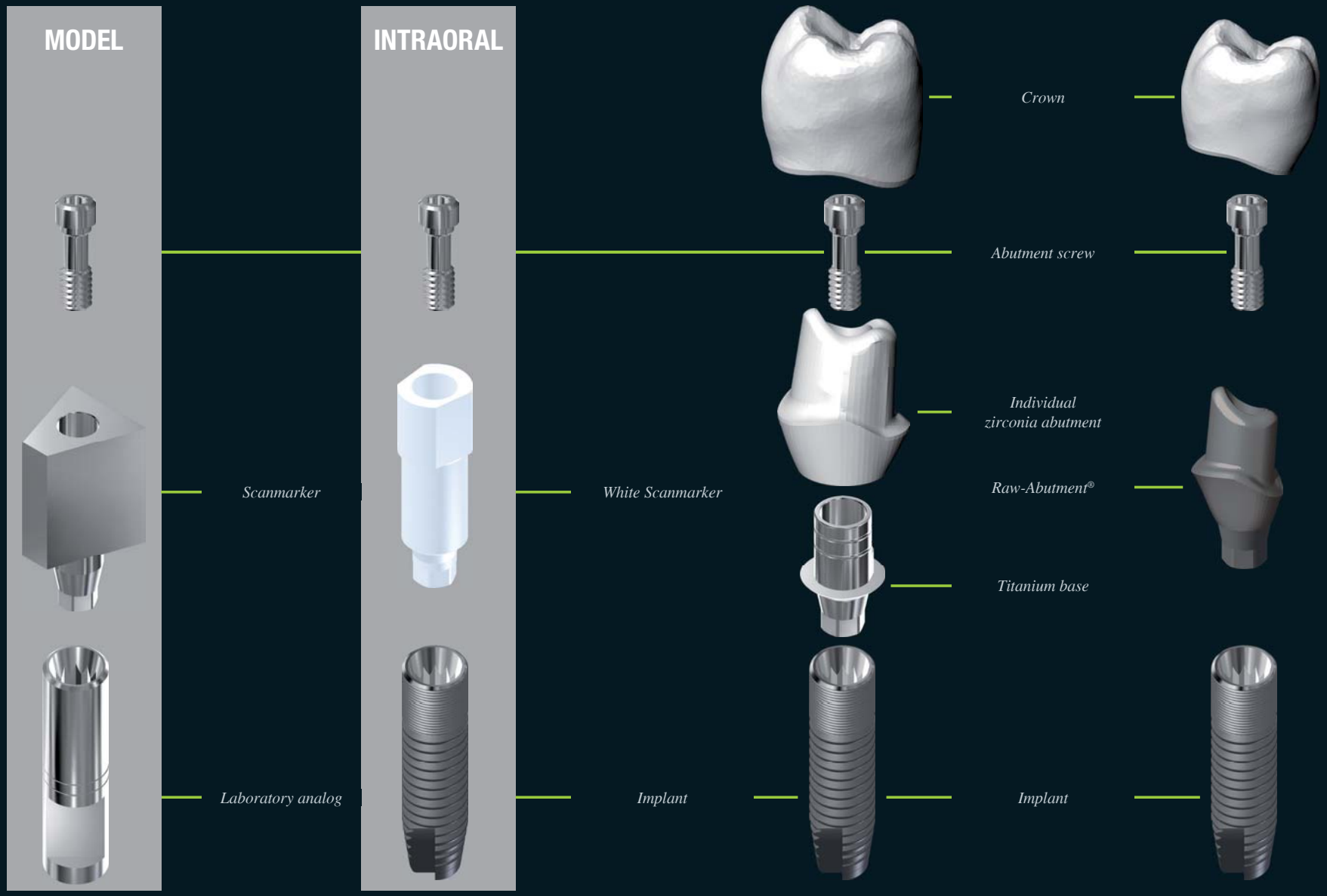
Titanium bases are widely used in implantology. With the Zirkonzahn 5-axis CAD/CAM milling units and the corresponding software modules it is possible to freely and individually design abutments and emergence profiles. Implant-based single tooth restorations or occlusally screwed full-arch zirconia bridges (Prettau® Bridge) can be made of the highest quality in one's own laboratory. Zirkonzahn manufactures all components and materials required for scanning, constructing and milling, e.g. scanmarkers, titanium bases, screws and zirconia, itself.

Over 500 different implant systems are available on the market, from which currently, more than 75 are implemented in our software and can be used free of charge. The scope is continuously being expanded.

Titanium implant systems have the advantage that the gingiva does not perceive the material as a foreign body. Due to this, the gingiva seals itself with the titanium, which prevents the penetration of acids or dirt particles.

The titanium bases manufactured by Zirkonzahn are offered in up to five different platform heights (normal, L10, L20, L30 or L40). Thus, the ideal solution can be found for different gingival heights. The bases are also available gold plated. The gold plating increases the bio-compatibility and the golden shade reduces the grey value of the entire restoration.

The very high biocompatibility of titanium and zirconia makes dental restorations made from these two materials a very healthy solution.


MODEL
INTRAORAL
Crown
Abutment screw
Individual zirconia abutment
Raw-Abutment®
Titanium base
Implant
Implant
Scanmarker
White Scanmarker
Laboratory analog
Implant

Zirkonzahn®

AVAILABLE IMPLANT SYSTEMS

Alpha-Bio TEC® SPI/DFI/ATID	Astra Tech Multi Unit Abutment	Astra Tech OsseoSpeed®	A-Z® VL	Bego Mini	Bego Semados® S/RI	BioHorizons® Multi Unit Abutment	BioHorizons® External
BioHorizons® Internal	Biomet 3i™ Certain®	Biomet 3i™ Low Profile Abutment	Biomet 3i™ OSSEOTITE®	Biotech Kontact®	Bredent SKY Classic/blueSKY	Bredent SKY fast & fixed	BTI® Conical Spacer
BTI® Externa®	BTI® Interna®	BTI® Multi-IM	BTI® Multi-IM Angled	BTI® Tiny®	Camlog® Bar Abutments	Camlog® Conelog®	Camlog® J-Type/K-Type
Camlog® Vario SR	Cowellmedi INNO®	Dentium Implantium®	Dentium Screw Abutment	Dentium SuperLine	Dyna® Octalock®/Helix®	Friadent DENTSPLY ANKYLOS®	Friadent DENTSPLY XiVE®
Friadent DENTSPLY XiVE® MP/TG	ICX® ICX®-templant®	Implant Direct Legacy™	Implant Direct Overdenture Abutment	K3®	KLOCKNER® Essential® Cone	KLOCKNER® NK2/SK2	MIS® C1

MIS® Multi Unit Abutment	MIS® Multi Unit System	MIS® Seven	Mozo Grau® Tapered Screw	Neobiotech IS	Neoss ProActive®	Nobel Biocare® Brånemark®	Nobel Biocare® Multi Unit Abutment
Nobel Biocare® Nobel Active®	Nobel Biocare® Nobel Replace®	Osstem Convertible Abutment	Osstem GS	Osstem US	SIC® SICace	Straumann® Bone Level®	Straumann® Multi-Base Abutment
Straumann® NNC	Straumann® Soft Tissue Level	SWEDEN & MARTINA Kohno/Premium	SWEDEN & MARTINA Multi Unit Abutment	SWEDEN & MARTINA Out-Link	Thommen SPI®	Thommen VARIOmulti	Warentec Oneplant
Zimmer® Tapered Screw-Vent®	Zimmer® Tapered Screw-Vent® Multi Unit Abutment	...	...	*The virtual archive is constantly updated with new implant systems. Overview of the systems deposited in the software: www.zirkonzahn.com/implant-systems*			

For information regarding torque („Torque table for Zirkonzahn screws“) and a table showing the compatibility between our titanium bases and original implant components („Compatibility of Zirkonzahn titanium bases and scanmarkers“), see www.zirkonzahn.com/en/download-section.
You can also contact our sales team (T +39 0474 066 680) which will be glad to give you the information or to send you to the required data.

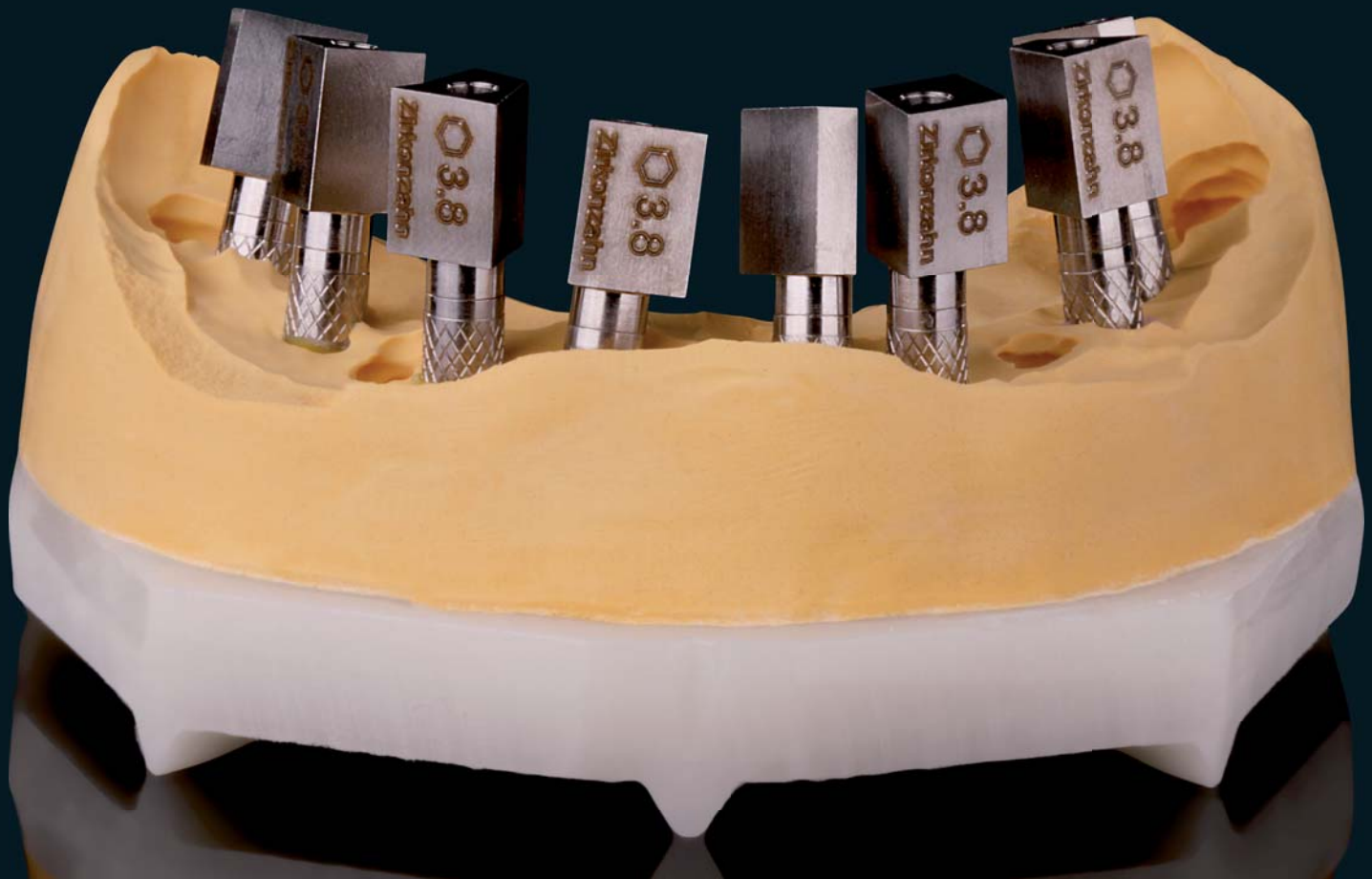
LABORATORY ANALOGUES

The laboratory analogues made from ASTM-approved titanium Grade 5 replicate the precise connection to the implant which enables checking of the fitting accuracy of the Raw-Abutments® and titanium bases directly on the model. The laboratory analogues are also available in a pre-coloured version or can be coloured in different colours through anodisation with the Titanium Spectral-Colouring Anodizer. In this way, laboratory analogues with different diameters can be distinguished very easily and rapidly.

Zirkonzahn®

SCANMARKER

Thanks to the extremely precise geometry of the scanmarkers and with the aid of the software, it is possible to accurately capture the implant's position and alignment and to calculate your restoration with very high precision. The scanmarkers are made from highly resistant stainless steel and can therefore be used several times.



WHITE SCANMARKER

The White Scanmarker are used for scans to capture the position and alignment of the implant. The white surface of the scanbody is not reflective so the White Scanmarker are especially suitable for an application in the patient‘s mouth. Since the geometry of the White Scanmarker is held extremely small, a scanmarker can be positioned for each implant, despite them being positioned very deeply in the gingiva or closely together.

Zirkonzahn®

CONICAL CEMENTED TITANIUM BASES NON HEX

The Conical Cemented Titanium Bases NON HEX without anti-rotation device are ideal for the manufacturing of bridges consisting of various elements. The external conical-shaped surface considerably facilitates the insertion of the restoration into the mouth. Spiral grooves located on the surface increase the contact area and ensure optimum adhesion of the cement.

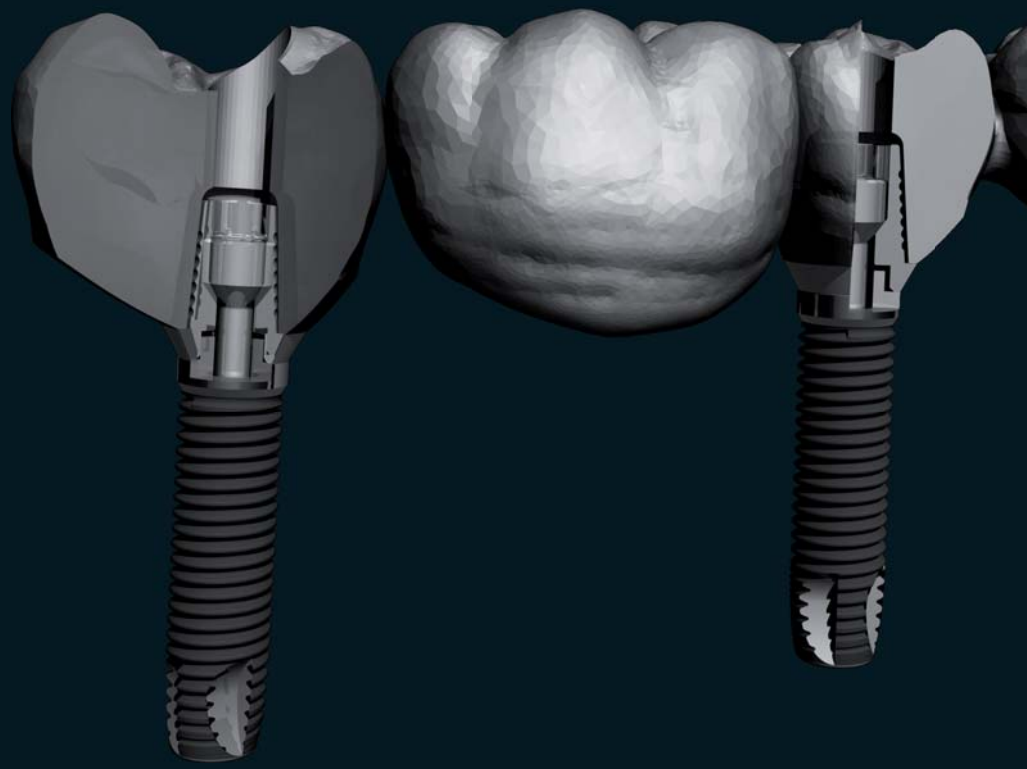
For bridges

Conical shape with spiral grooves

Without anti-rotation device for the zirconia abutment

Also available gold plated for increased biocompatibility and reducing the grey values

Available in different heights



PARALLEL CEMENTED TITANIUM BASE HEX

The Parallel Cemented Titanium Bases HEX are equipped with the required anti-rotation device depending on the implant system. This ensures that restorations can no longer be twisted once they are cemented. They are especially suitable for single crowns.

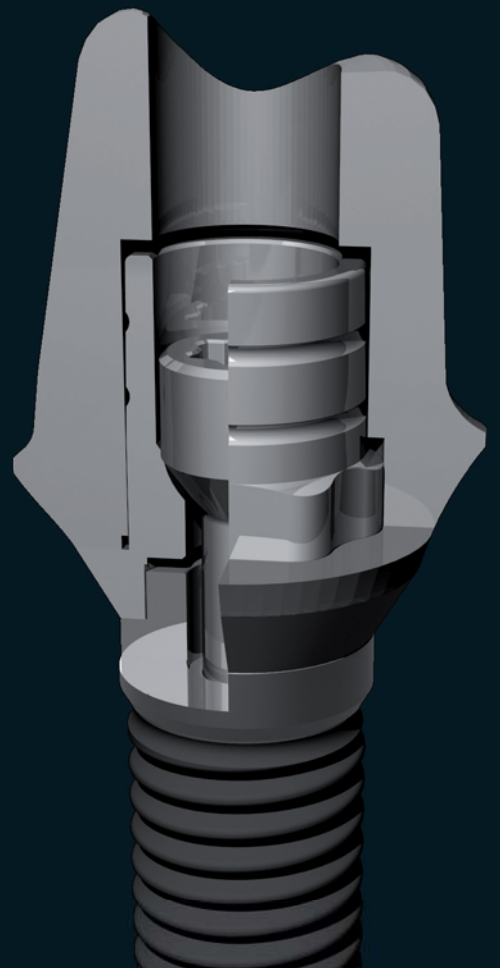
For single crowns

Parallel shape

With anti-rotation device for the zirconia abutment

Also available gold plated for increased biocompatibility and reducing the grey values

Available in different heights



NARROW TITANIUM BASE NON HEX

The Narrow Titanium Base NON HEX has no anti-rotation device. Since the diameter of the emergence profile is reduced to the minimum, this titanium base is especially suitable for thin, deep-seated implants.

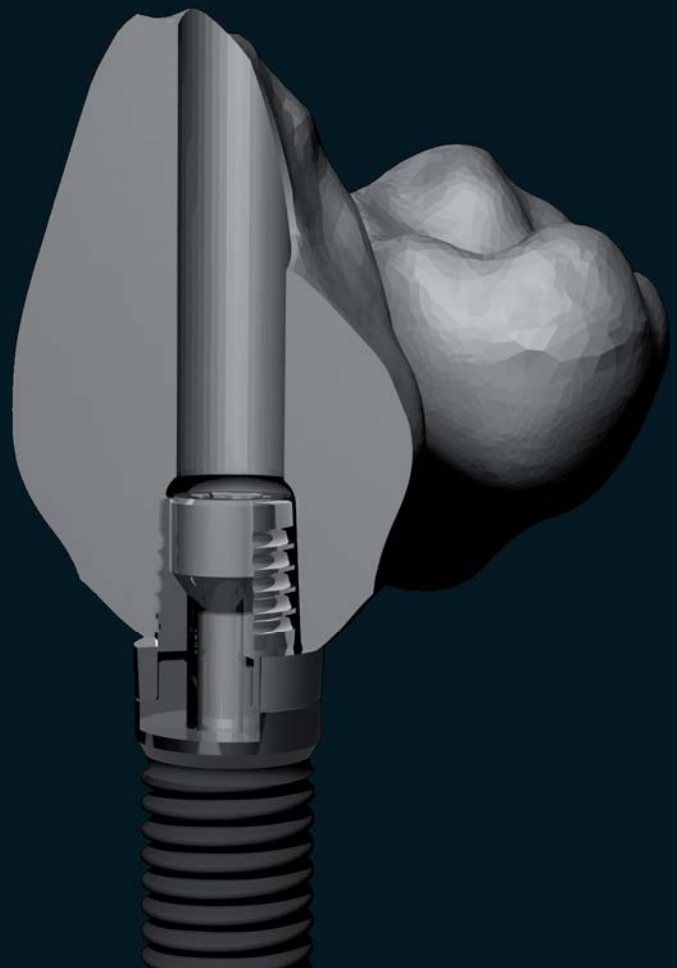
For bridges

Conical shape with spiral grooves

Without anti-rotation device for the zirconia abutment

Also available gold plated for increased biocompatibility and reducing the grey values

Available in different heights



NARROW TITANIUM BASE HEX

The Narrow Titanium Base HEX has an anti-rotation device. Since the diameter of the emergence profile is reduced to the minimum, this titanium base is especially suitable for thin, deep-seated implants.

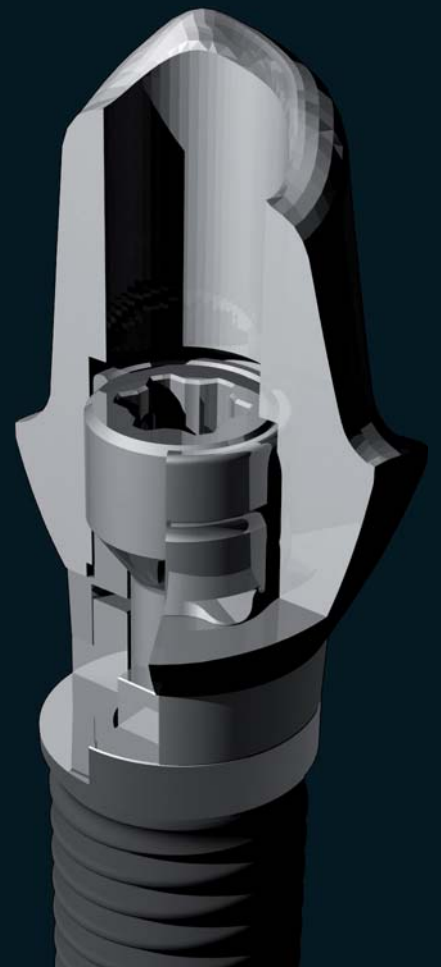
For single crowns

Parallel shape

With anti-rotation device for the zirconia abutment

Also available gold plated for increased biocompatibility and reducing the grey values

Available in different heights



Zirkonzahn®

MULTI UNIT ABUTMENT NON HEX

The Multi Unit Abutments NON HEX without anti-rotation device are suited for multi-unit restorations. They are designed in one piece to prevent the ingress of bacteria. The application of the Multi Unit Abutments NON HEX is extremely easy, because all types of implants have been adapted on a standard port. They are available in five different gingival heights to offer the best possible solution even for very complex cases.

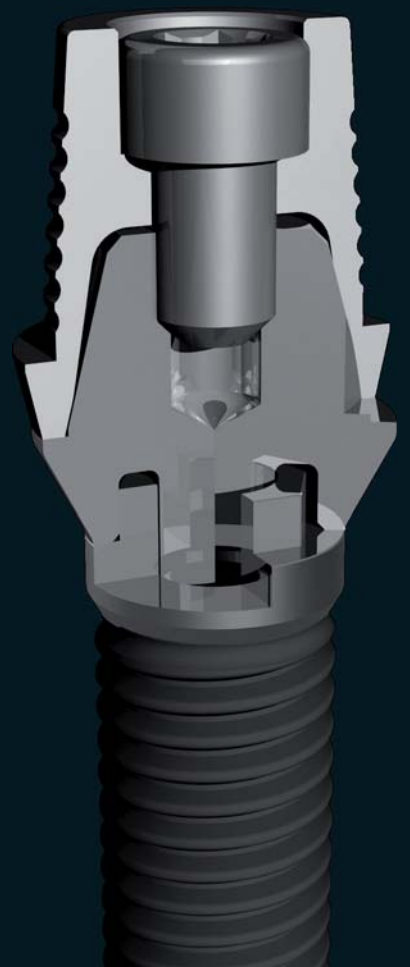
For bridges

For Conical Cemented Titanium Base NON HEX or directly on zirconia bridges

Without anti-rotation device for the zirconia abutment

Also available gold plated for increased biocompatibility and reducing the grey values

Available in different heights



RAW-ABUTMENT® HEX

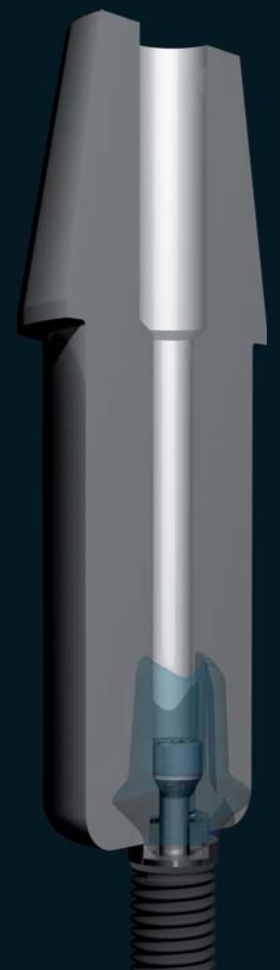
The Raw-Abutments® made from ASTM-approved titanium Grade 5 are used for the production of individual abutments. The industrially prefabricated implant connection guarantees highest precision and fitting accuracy. The special milling strategies and milling burs ensure a particularly smooth surface structure. The abutment geometry is freely and individually customisable. Depending on the implant system, different Raw-Abutment® blanks are required. The range is continually being extended.

For single crowns

Parallel shape – any form can be milled

With anti-rotation device for the zirconia abutment

Available in diameters 10 mm and 14 mm



Zirkonzahn®

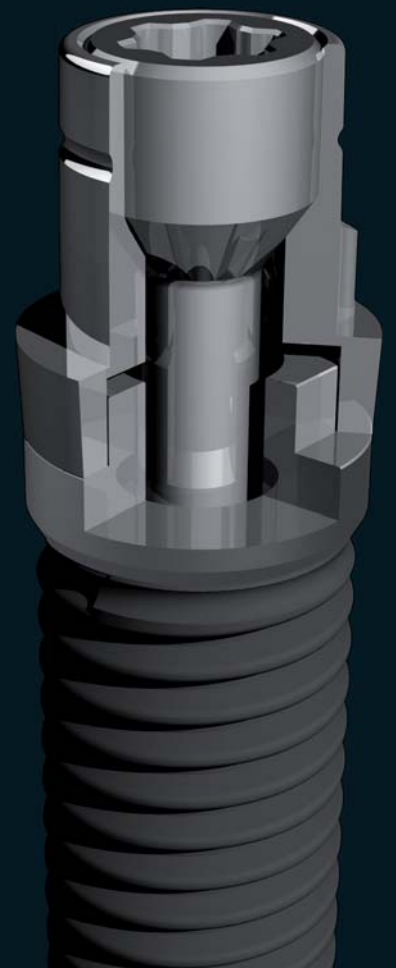
ABUTMENT SCREW METAL

This abutment screw is suitable for titanium bases and scanmarkers, but not for zirconia.

Only for titanium bases and scanmarkers,
not for zirconia abutments

With conical screw head

Also available gold plated for increased biocompatibility,
reducing the grey values as well as for preventing cold welding



ABUTMENT SCREW FULL-CONTOUR ZIRCONIA

This abutment screw is ideal for full-contour zirconia, resin and wax. The flat screw head guarantees an optimum force transmission of the screw‘s torque on the zirconia abutment thus protecting it against damage.

For individual abutments made from zirconia, resin and wax

With flat screw head

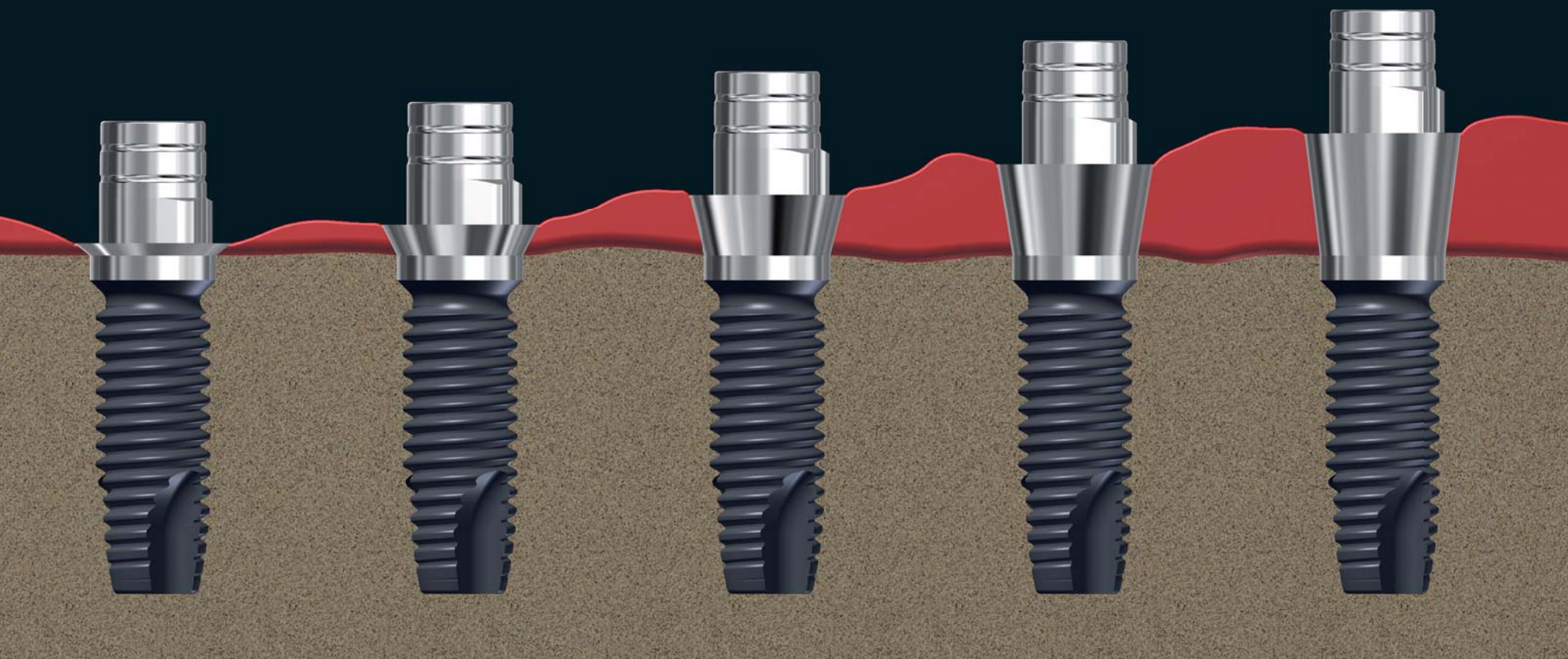
Also available as a long zirconia screw

Also available gold plated for increased biocompatibility and reducing the grey values

Zirkonzahn®

TITANIUM BASES IN 5 HEIGHTS ...

The Zirkonzahn titanium bases are available in up to five different platform heights, allowing it to bring the implant to the desired gingiva elevation.



... AND GOLD PLATED

All Zirkonzahn titanium bases are also available with a high quality gold plating. The gold coating increases the bio-compatibility and the golden shade reduces the grey value of the entire restoration.

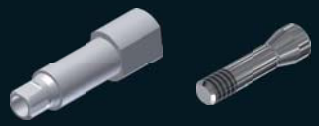
Furthermore the bases can also be coated in several shades with the Zirkonzahn Titanium Spectral-Colouring Anodizer.

Zirkonzahn®

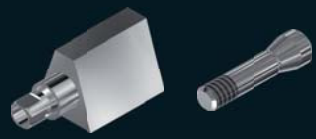
AVAILABLE SETS

Laboratory analog

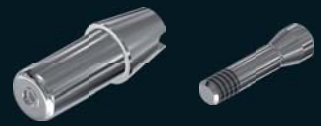
White Scanmarker +
Abutment Screw



Scanmarker +
Abutment Screw Metal



Raw-Abutment® HEX +
Abutment Screw Metal



Conical Cemented Titanium Base NON HEX +
Abutment Screw Metal

Conical Cemented Titanium Base NON HEX
Gold + Abutment Screw Metal Gold

Parallel Cemented Titanium Base HEX +
Abutment Screw Metal

Parallel Cemented Titanium Base HEX Gold +
Abutment Screw Metal Gold

Narrow Titanium Base NON HEX +
Abutment Screw Metal

Narrow Titanium Base NON HEX Gold +
Abutment Screw Metal Gold

Narrow Titanium Base HEX +
Abutment Screw Metal

Narrow Titanium Base HEX Gold +
Abutment Screw Metal Gold

Abutment Screw Metal

Abutment Screw Metal Gold

Abutment Screw Full-Contour Zirconia

Abutment Screw Full-Contour Zirconia Gold

Abutment Screw Full-Contour Zirconia long

Abutment Screw Full-Contour Zirconia Gold long

Multi Unit Abutment NON HEX

Multi Unit Abutment NON HEX Gold

APPLICATION

The Conical Cemented Titanium Bases, the Parallel Cemented Titanium Bases and the Scanmarkers can be fixed onto the implant using the original screw. On full-contour zirconia abutments, screws with flat seating must be used, in order to avoid tensions in the zirconia that can lead to fractures.

or

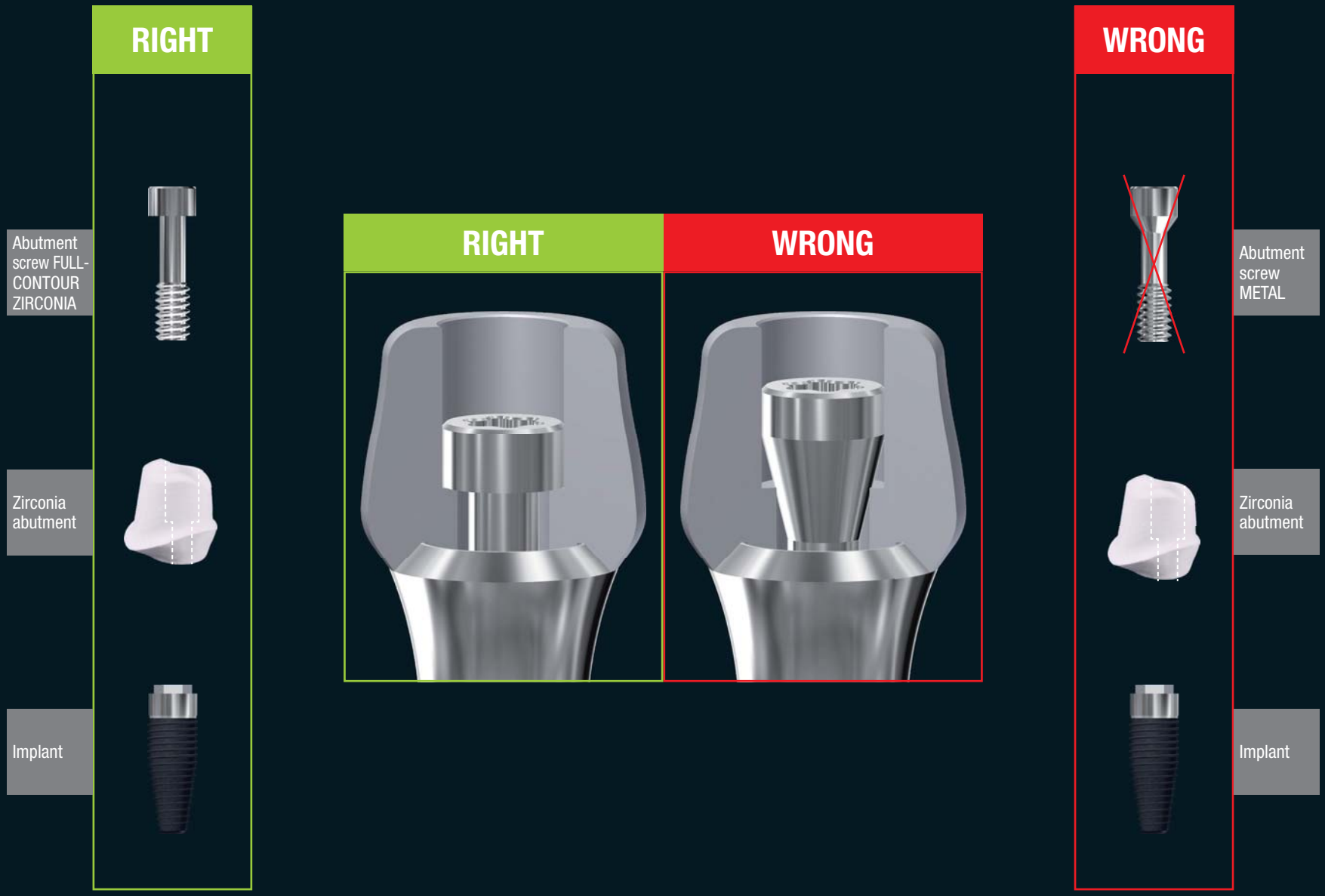
ABUTMENT SCREW METAL

According to the original system used, the screws can have a conical or a straight profile.

only

ABUTMENT SCREW INTEGRAL ZIRCONIA

Only with straight profile for full-contour zirconia, resin and wax.


RIGHT
WRONG
Abutment screw FULL-CONTOUR ZIRCONIA
Zirconia abutment
Implant
RIGHT
WRONG
Abutment screw METAL
Zirconia abutment
Implant

Zirkonzahn®

ZIRKONZAHN.MODELLIER

BENEFITS OF OUR SOFTWARE

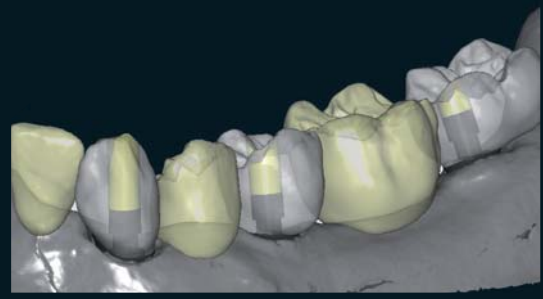
- *Flexibility and user-friendliness: it is a program developed by dental technicians*
- *Scanning, modelling and milling operations can be performed simultaneously*
- *Expandable with future technologies – also for still unknown technologies*
- *Constant system updating according to new developments*

ZIRKONZAHN.MODELLIER

SOFTWARE MODULES FOR THE CONSTRUCTION OF INDIVIDUAL ABUTMENTS

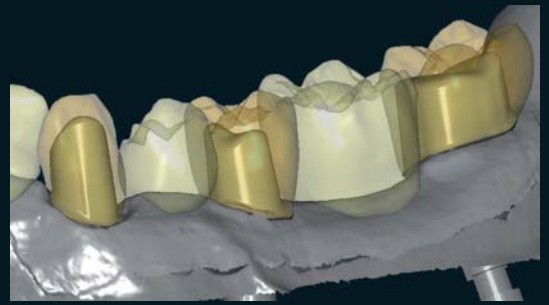
CAD/CAM Software-Module Occlusally Screwed Bridges

- *Creation of screw-retained bridges and of bars with individual profiles*
- *Freedom in modelling of the emergence profile in consideration of the tooth's anatomical shape*
- *Virtual archives constantly updated with new implant systems and with teeth of various shapes*
- *Screw-retained bridges can be milled directly in your own laboratory thanks to the 5+1 axes milling technology of our CAD/CAM system*



CAD/CAM Software-Module Abutments

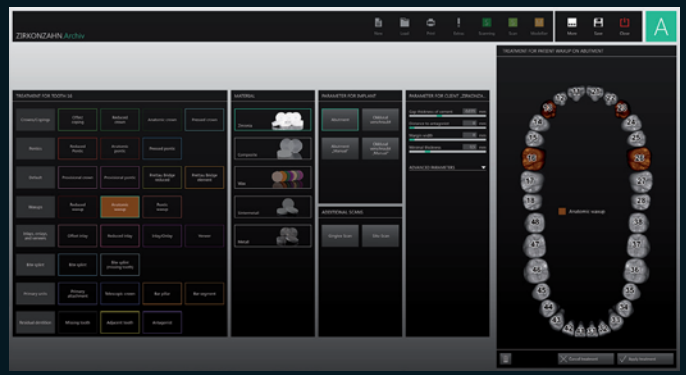
- *Single abutments with their relating emergence profiles can be made*
- *Implementation of the most diverse implant systems*
- *Creation of abutments in consideration of the secondary structure. Once the work is finished it is possible to mill the abutment and the secondary structure simultaneously*
- *Graphic overlay of the bridge elements with semi-transparent effect during abutment construction, so as to keep track of the ideal external shape of the tooth*



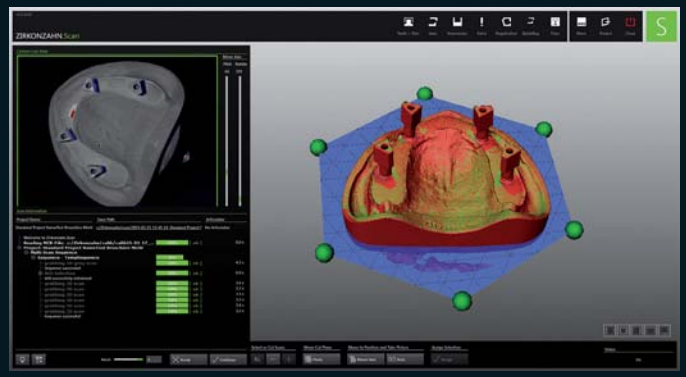
SOFTWARE APPLICATION

Our software supports various implant systems and always designs the abutments in relation to the secondary structure in order to mill the two simultaneously. The two software modules "Abutments" and "Occlusally Screwed Bridges" complement each other impeccably, giving technicians extensive operational freedom. Any kind of restoration from simple copings to 14-unit occlusally screw-retained full-contour zirconia bridges is possible. With our innovative 5+1 axes milling technique it is furthermore possible to mill the entire restoration quickly and without problems directly in one's own laboratory. This way you add even more value to your laboratory and you are able to guarantee the highest quality of your products.

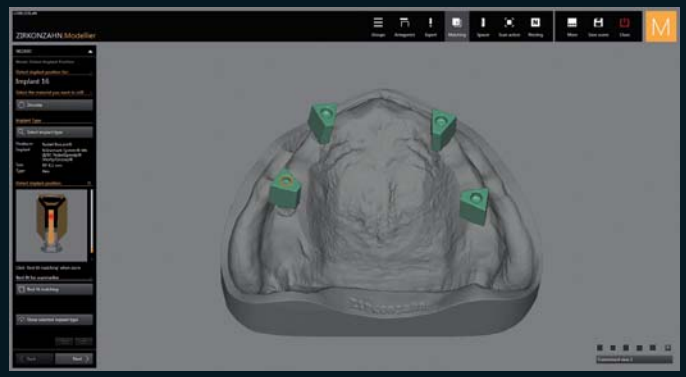
Prepare the master cast for the digitization, by attaching the appropriate scanmarker with the appropriate abutment screw on it.



Create the patient case in the Zirkonzahn.Archiv archive software.



Follow the instructions of the Zirkonzahn.Scan scanning software and digitize the master cast including the attached scanmarker with the S600 ARTI scanner.

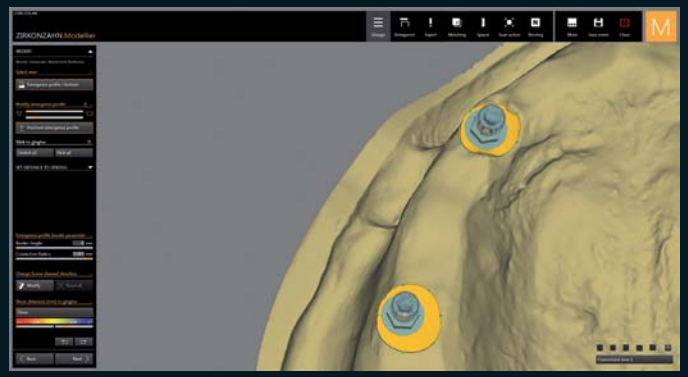


Once the scan has been completed, the virtual cast is automatically uploaded into the Zirkonzahn.Modellier modelling software.

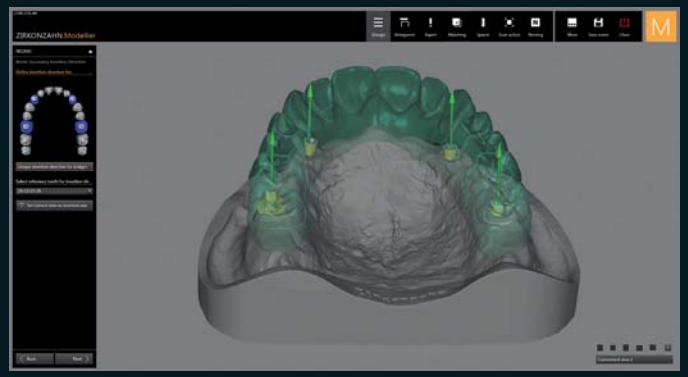
At this point, select the implant system to be used as well as the titanium bases, if required.

Then highlight the margins around the implants so as to identify the emergence profiles. To this end, create four points according to a pre-defined sequence.

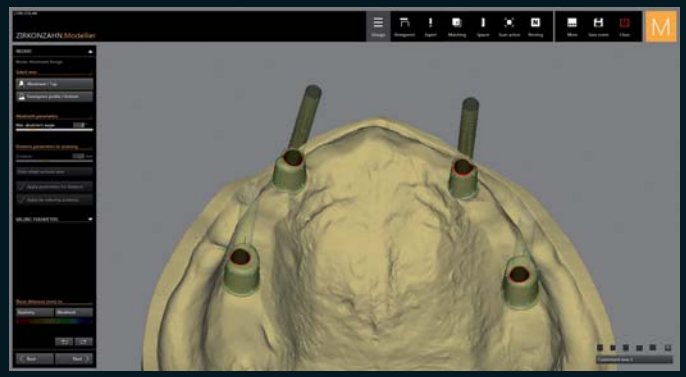
With the help of the scanmarker it is now possible to precisely transfer the position of the master cast implants to the virtual cast. Now the screw channels are being calculated and displayed.



At this point the emergence profile can be modelled.



Now, define the insertion direction of the secondary structure.

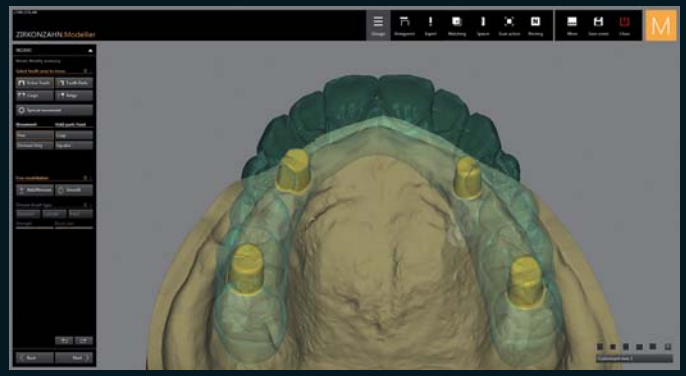


Bring the abutments to the required length.

Define the parameters required and design the individual abutments.

It is possible to define a number of degrees each for the exterior or to use the parallel setting for telescopes.

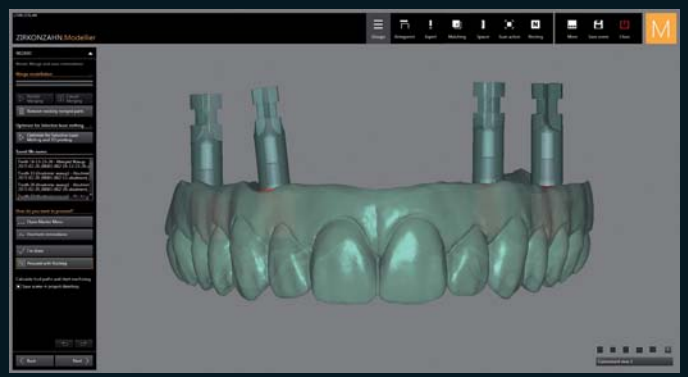
In this stage it is still possible to smooth the abutments and/or modify them at occlusal level.



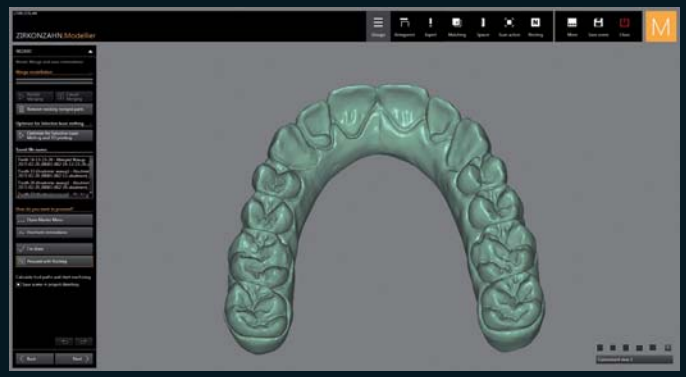
In this stage it is possible to decide whether to memorize and mill only the abutments or to create the secondary structure simultaneously.

Define the parameters for the elaboration of the secondary structure (cement space, etc.).

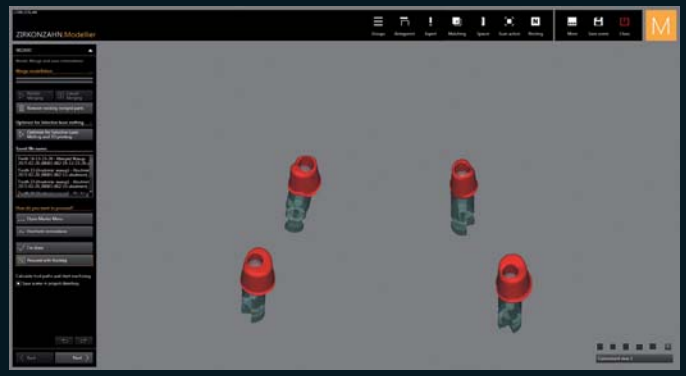
The scanned wax-up is automatically adapted to the individual abutments and can be changed further, if necessary.



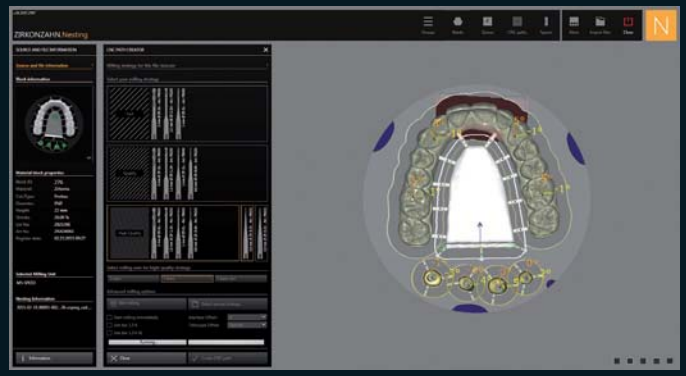
Individual modelled abutments and personalized secondary structure based on the needs of the specific clinical case.



For control purposes, it is possible to display either the complete bridge ...



... or only the abutments.



With the Zirkonzahn.Nesting nesting software it is possible to position your modellation in an optimal way in the virtual material block.

Select the desired milling strategy and let the Zirkonzahn.CAM CAM-software calculate the parameters for the CNC file.

Then press “start” to launch the calculation phase.

SEGMENTED MAXILLARY PRETTAU® BRIDGE ON IMPLANTS AND CUSTOM ZIRCONIA ABUTMENTS

Due to challenges related to the existing bone supply, the implants placed in the maxillary anterior region had to be inclined unfavourably far vestibularly. This in turn resulted in the screw holes being oriented labially, which is why we decided, after consultations with the dentist, to provide custom zirconia abutments. These were adhesively connected to Zirkonzahn titanium bases and anodised in gum colour to ensure a smooth transition to the gingiva. Once these were completed, the superstructures were planned. Two monolithic occlusally screw-retained bridges were designed for the posterior teeth 15–16 and 25–26, while the anterior region was restored with a ceramically veneered framework bonded onto the custom abutments intraorally. After milling, the zirconia frameworks were customised with Colour Liquid Prettau® Aquarell, then sintered and finalised using ICE Zirkon Ceramics and ICE Zirkon 3D Stains by Enrico Steger.

Prof. Dr. Wael Att – University Hospital Freiburg, Germany
Manfred Pörnbacher – Zirkonzahn Education Center Brunico, South Tyrol/Italy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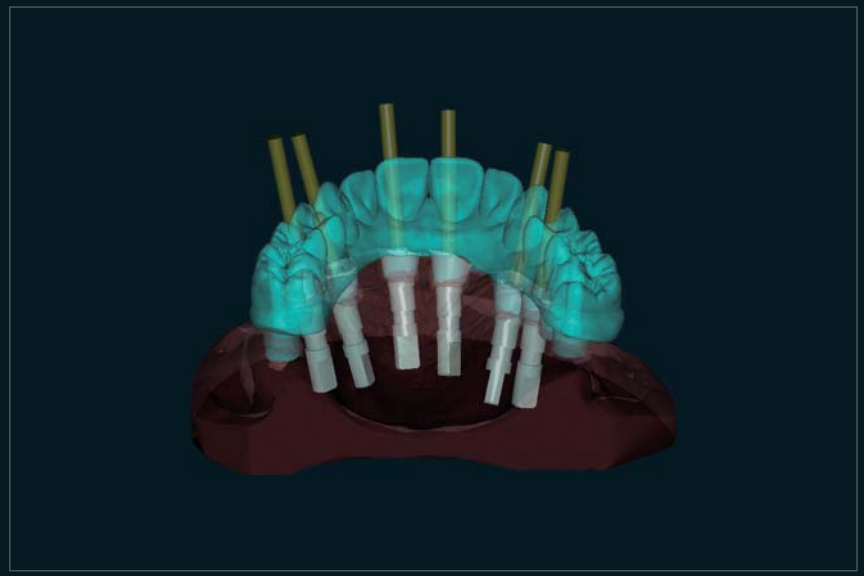

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IMPLANT PROSTHETICS

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