

**REVOIS®**  
Dental Implant System

Surgical and prosthetic care  
with the product variants

**REVOIS® : PRO**

**REVOIS® : compact**

**CAD / CAM**



**User Manual**

# **REVOIS® Dental Implant System**



[www.aurosan.de](http://www.aurosan.de)

[www.revois-dental.com](http://www.revois-dental.com)

### **Legal Disclaimer**

- This manual has been compiled with great care and the ambition to provide a thorough knowledge base for the user of the REVOIS® Dental Implant System.
- Nevertheless, AUROSAN does not take liability for any mistakes or incompleteness as this manual is subject to regular update.
- We appreciate any feedback of the reader for constant improvements.

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**User Manual**

# **REVOIS® Dental Implant System**

**CAD / CAM**

## CAD/CAM – Standard of tomorrow in modern dental prosthetics

CAD/CAM technology has become a strong trend in the world of dental implantology. Digital processing continues to increase the quality and quality demand of prosthetic restorations for patients, at the same time being a great challenge for implantologists, dental technicians as well as the dental industry realizing these changes to work and qualification requirements as well as to product specifications. Applying CAD/CAM technology with the REVOIS® Dental Implantat System is of course possible. In addition CAD/CAM with REVOIS® provides you the option to closely work with a world-leading central CAD/CAM center. Please carefully read the following pages to learn about this opportunity.

### Predictable and reproducible quality standards

The goal of applying the CAD/CAM technology in dental implantology is the simplification of manufacturing processes chair- and labside. This is ensured through an integrated digital process, from digital data collection (scanning), use of a restoration planning software as well as customized milling chair- or labside, or for best quality and highest precision prostheses, in specialized milling centers such as the manufacturers of implants and abutments.



Applying CAD/CAM technology permits the manufacturing of long-term stable, aesthetically and functionally optimized, most precise supraconstructions. The starting point can be digital data from intraoral scanning as well as labside scanning from impression models.

**CAD: Computer Aided Design**

**CAM: Computer Aided Manufacturing**



# Invitation to join the precious partnership between AUROSAN and Cendres & Métaux

The **REVOIS® Dental Implantat System** from **AUROSAN** is an excellent basis for computer-aided manufacturing of tooth restorations. We offer an individual service, seek flexible solutions fitting dentists' and patients' needs, and we convince with our products - excellent by any means of functionality, aesthetics, manufacturing quality, and price. Long-term results with REVOIS® convince and built trust.

Through the development, manufacturing and service partnership between **AUROSAN** and Cendres & Métaux, the **REVOIS® Dental Implantat System** stands for *made in Germany* and *made in Switzerland*: An excellent breed of know how, modern design and quality, and highest manufacturing precision. This starts with the REVOIS® implants and the compatible prosthetic lines Dalbo®, SFI-Bar®, and CM LOC®. It continues to modern customized milling for complex CAM-generated prostheses.

**Take advantage and consider our partnerships are yours.**

## **Flexibility**

As our customer you interact with well-trained, experienced dental technicians, dedicated to fulfil your CAM-requirements.

## **Individuality**

Together with our partner Cendres & Métaux, we can offer you the entire CAD/CAM process as a service or as individual steps, only (scanning, designing or milling).

## **Longevity**

Design- and manufacturing experience for decades are our basis for a long-term, successful partnership.

## **Quality at its best**

Most precise industrial milling guarantees the stress-free pass-fit of a CAM-product on each of the anchoring implants – beyond REVOIS®. Multi-implant type CAM is no problem.

## **Liability and guarantee**

Our CAM partner Cendres & Métaux offers 10 years warranty for the CAM prosthesis, and even for the implant system components derisking the liability of a dentist towards his patient.

## Precision of CAD/CAM with REVOIS® PRO

To avoid pass-misfits, CAM with **REVOIS®** starts with the quality standard of the material for the CAM product and its mechanical stability. The implants of the variant **REVOIS® PRO** of the **REVOIS® Dental Implantat System** form an excellent base for modern CAD/CAM prosthetics.

Following the principle of simplicity, the design and manufacturing of **REVOIS®** is optimized for precision and surface cleanliness, primary stability, prosthetic multi-compatibility as well as safety in combination with user-friendliness. The high, 45° sealing cone of **REVOIS® PRO** in combination with the inner hex interface create a reliable and as required, rotation-safe press-fit connection between implant and prosthetic part. "Two become one" for an optimal force transmission, and for the avoidance of retention screw overloads.

For more information about the REVOIS® Dental Implantat System or one of its product variants, please request the corresponding manual or visit [www.revois-dental.com](http://www.revois-dental.com).



### Digital data collection and virtual design of removable or fixed restorations.

#### CAD

For the Scanning we offer you scanbodies made from titanium, and with or without hex anti-rotation lock.

#### CAM

The respective material and manufacturing strategy will be evaluated and implemented based on the individual requirements of patient and dentist.

Titanium-made abutments for press ceramics are available, as well.

#### Production and Finish

Subject to the individual material and manufacturing strategy chosen the different manufacturing steps will be optimally combined: twisting, milling, drilling, polishing, and anodising.



## Warranty

With the products made by **AUROSAN** and made by **Cendres & Métaux** you minimize the risk for yourself as well as for your patient:

For our CAD/CAM products, you receive a 10 years guarantee.

The warranty includes the free-of-charge replacement of products (CAD/CAM restoration or components of third parties such as implants, screws).



Keep copies of the product labels. With the information contained on the labels AUROSAN and Cendres & Métaux can easily track back the product in case of questions regarding material or design.



## Our partner Cendres+Métaux

After having stably inserted the REVOIS® PRO implants, and after the impression cast has been digitalized with the **REVOIS®** scanbodies mounted, the digital data can be easily uploaded directly to the CAM-server of Cendres & Métaux to be processed shortly after. Cendres & Métaux has established smoothly running CAM-processes well-serving your and your **REVOIS®** patients' needs.

*Intraoral Scanning will be available for REVOIS® soon.*

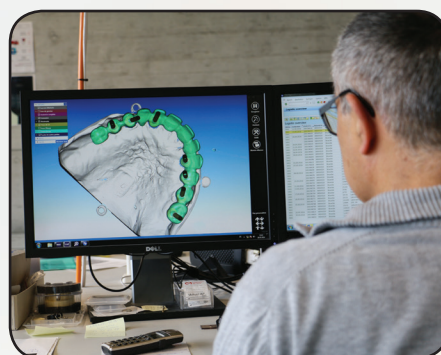


Upload your data to the Cendres+Métaux Server via **[www.cmsa.ch/cadcam-order](http://www.cmsa.ch/cadcam-order)**.

A login is not required.



It doesn't matter which scanner or which software you may use. Cendres & Métaux can fabricate directly screwable restorations from most data formats.



For additional REVOIS® PRO Scanbodies, or information on the titanium basis for press ceramics the REVOIS® CAD-library access, please contact the **AUROSAN** customer center.

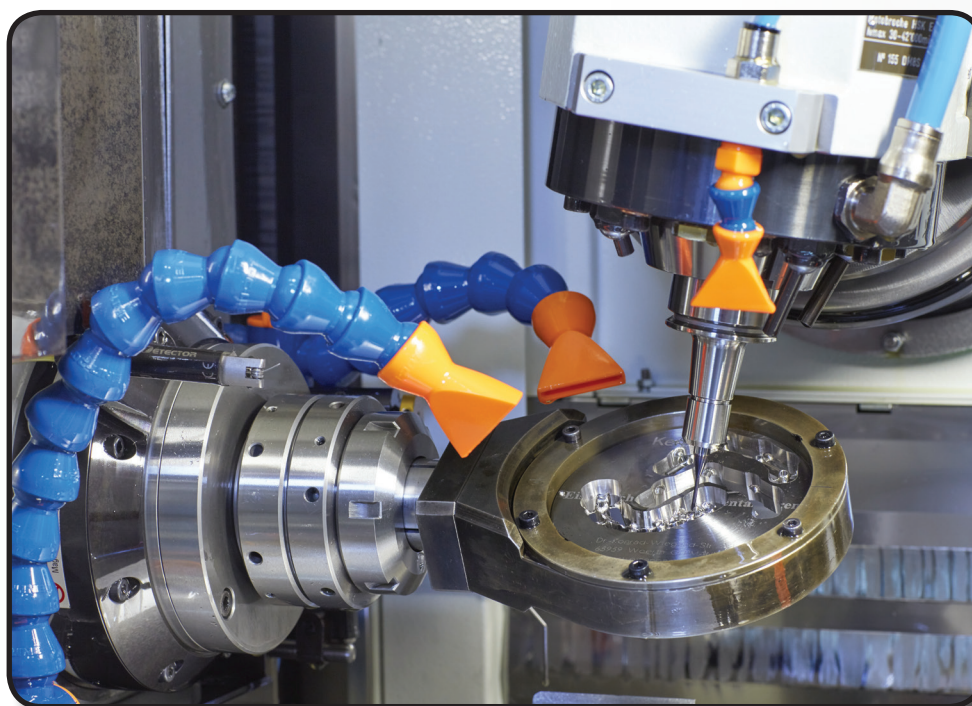
Products	time to delivery of the ready-to-screw-CAM product*
Abutments, caps, telescope crowns etc.	1 – 2 working days
Screwable bridges, bars etc.	2 – 3 working days

\*The time to delivery terms the period from design approval (12h) to the shipment of the product (16h) to customers. We refer to working days, not to weekends or holidays.

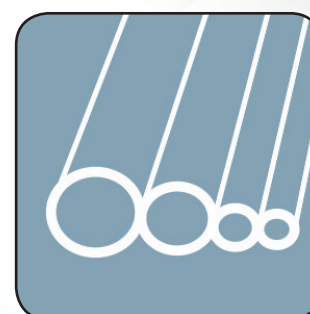


## Quality and Warranty has reasons

In the Scan- and Design-Center, as well as in the Milling Center of Cendres & Métaux, dental technicians, designer and CNC-engineers with many years of experience with CAD/CAM technology work hand-in-hand along a fully integrated process chain, and with the same ambition as the team of AUROSAN, to provide a best-quality CAD/CAM product for the REVOIS® community.



The Scan- and Design-Center Team supports dental technicians in the CAD-modelling and the selection of the right materials. We share our knowledge to provide solutions. Multiple languages permit us to serve customers from around the globe.



Highly-qualified CNC-engineers are responsible for the integration of the customer data uploaded, for the respective CAM-programming and the milling of the corresponding parts using the heavy, 7.5 T, 5-axis-milling towers.

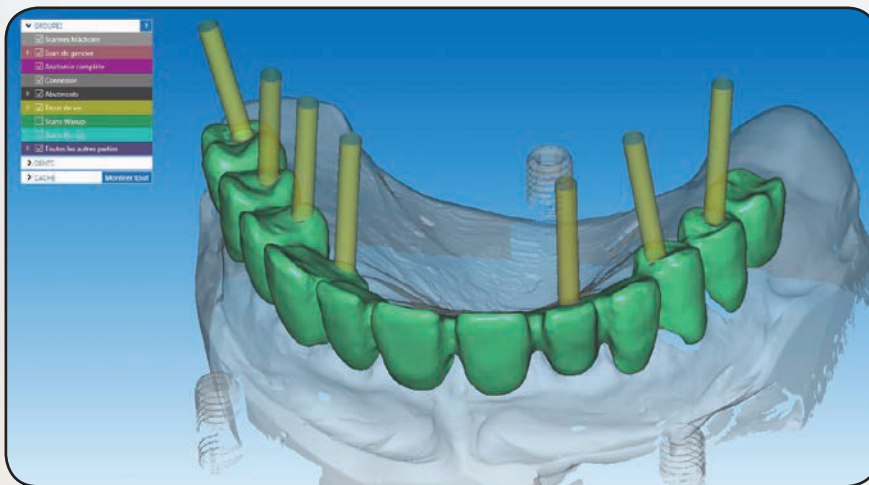
Engineers are also responsible for the safe design and CAM interpretation of the implant interface, the process validation, and the reliability of the entire CAD/CAM service.



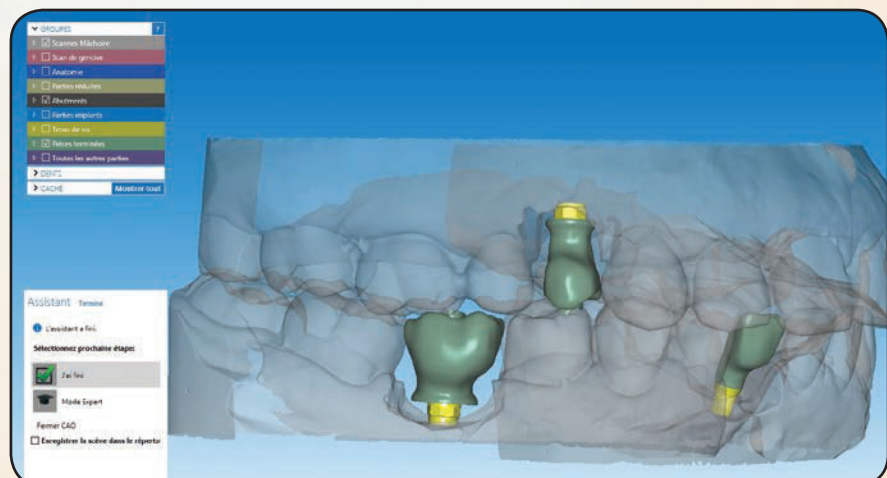
## CAD/CAM with AUROSAN and Cendres & Métaux beyond REVOIOS®

### Future starts now – open access to innovation as standard

Translating this to CAD/CAM with **REVOIS®** it means that with **REVOIS®** you do not only get access to our partnership with Cendres & Métaux, but you also increase your freedom to operate across implant systems in one patient. The service we offer to you is not limited to **REVOIS®** but extending to individualized CAM-production for many other implant systems.



Assuming your patient carries **REVOIS® implants**, but also implants from another manufacturer, the Scan- and Design-Center of Cendres & Métaux may also fabricate the individual CAM-restoration fitting to different implant systems at the same time. In such situations please contact the AUROSAN customer center prior to uploading any data.



# Material

Our CAD/CAM restorations are only made from high-quality materials, such as Cobalt-Chrom (CoCr), Titanium, or high-performance polymers. Gold-alloy restorations are also available as individual solutions.

## CoCr-alloy

- type-5-alloy (following ISO 22674)
- highly stable; best for full arch prosthesis; superior to type-3 or type-4 alloys
- excellent veneers due to low thermal expansion: 14.0-14.1 / 106 °C
- no oxidation step needed
- stress resistance:

1120 MPa (CoCr 1406)

1365 MPa (CoCr 1370)



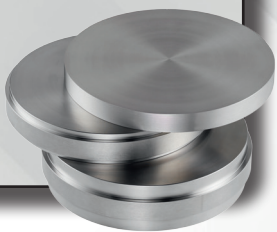
## Pekkton®

- the PEKK family of polymers has a pressure resistance that is up to 80% higher compared to the PEEK family of polymers
- comparable to dentin or bone
- shock absorbent
- excellent ratio of weight / stability
- extremely low water uptake
- sheering stress resistance: 200 MPa
- pressure stress resistance: 246 MPa



## Titanium-alloy

- grade-5-extra-low-interstitial-alloy (following ISO 22674)
- significantly higher pressure and stress resistance compared to grade-4-alloys
- thermal expansion: 10.1 / 106 °C
- stress resistance: > 860 MPa



# Indications

Material	On natural teeth	On titanium base	On implants
Co-Cr and titanium	Cap, crown, bridge	Abutment, bridge	Abutment, bar, bridge, wrap around
Pekkton®	Cap, crown, bridge	Cap, crown, bridge	-

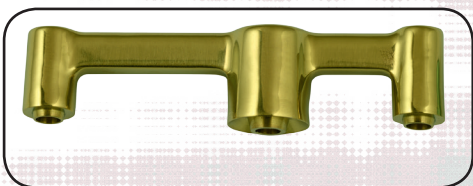


# Surface enhancement

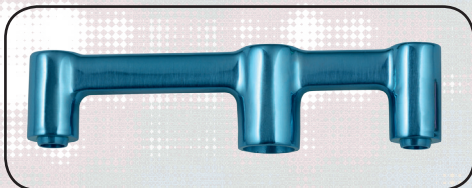
Aesthetic concerns are a central aspect of prosthetics and a particular opportunity of highly customized CAM-restaurations.

Through a proprietary surface enhancement step, titanium-made CAM products can be offered in 4 different colors, and after aniodization, make these products kind of perfect:

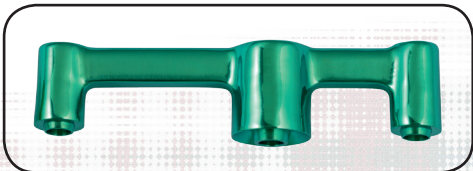
- higher quality due to a thin titaniumoxid layer, protecting of damaging and reducing in elution;
- higher aesthetics through natural coloring (e.g. color ruby mimicing gingiva);
- time saving chair- and labside.



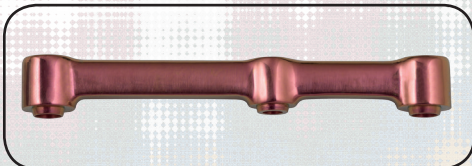
Bar (color: gold)



Bar (color: sapphire)



Bar (color: emerald)



Bar (Color: ruby)

According to individual preferences 2 different surface qualities are offered:

Surface quality	Roughness (following DIN 4760 / ISO 25178)	Surface finishing by customer required
★ ★ ★ ★ ★	RA 1.6	No
★ ★ ★	RA 12.5	Recommended (not the interface to the implants which ist always 5★)





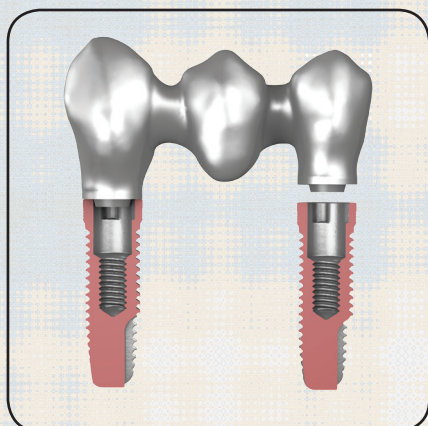
## Sharing Know-how means creating safety and advantages

In modern implantology, quality and stress-free pass-fit of supraconstructions are essential for successful long-term results. CAD/CAM technology with **REVOIS®** expressly means not taking any compromises in this respect, but putting patient safety and product quality first.

### Supported by scientific data

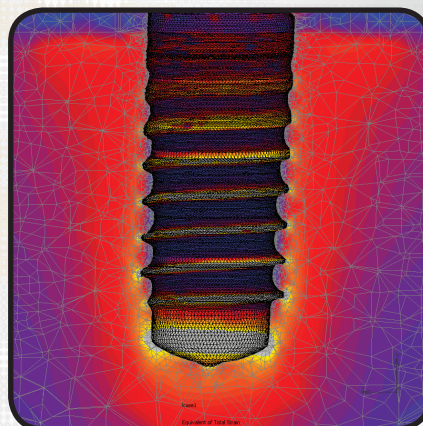
The impact of CAM-manufactured bars and bridges on underlying implants, when manufactured with low precision, has been examined by the University of Bonn (Prof. Dr. Ch. Bourauel\*). The results clearly document that pass-misfits cause an unfavorable force transmission, leading to pathologic stress to the implant-surrounding bone, and secondarily to bone necrosis and bone height reduction.

### Offset

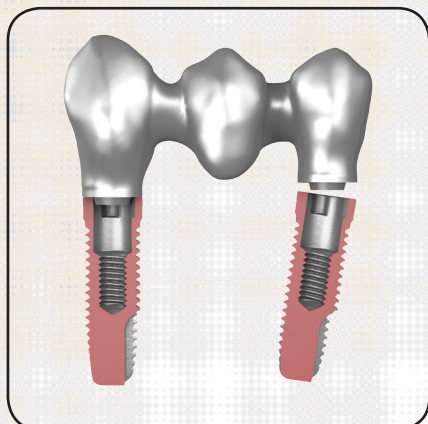


1. Incorrect position because of too high manufacturing tolerance
2. FEM-simulation in the cortical and spongiform bone

Result: distortion of the bone all around the implant.

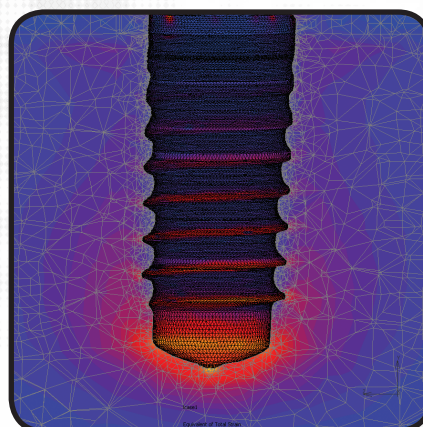


### Side-twist



1. Incorrect position because of too high manufacturing tolerance
2. FEM-simulation in the cortical and spongiform bone

Result: distortion of the bone, at the apex of the implant



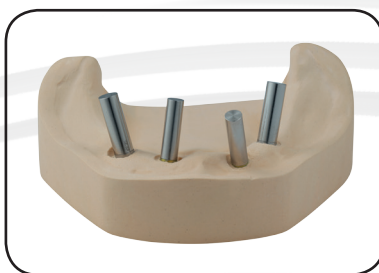
\*Endowment professorship in oral medical technology - center for dental, oral and orthodontic medicine - Prof. Dr. Christoph Bourauel



## Examples for individualized CAM products



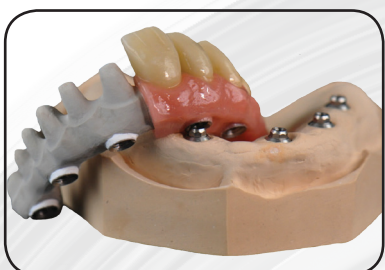
**Model with implant analogue**



**Model with scanbodies**



**Bridge made from CoCr  
(milling quality ★ ★ ★ ★ ★)**



**Anatomic, reduced bridge  
made from Pekkton® on tita-  
nium base**



**Bar made from titanium  
(★ ★ ★ ★ ★)**



**Wrap around made from CoCr  
(★ ★ ★ ★ ★)**



**Wrap around made from tita-  
nium (★ ★ ★)**



**Anodized samples**



**Bridge made from CoCr  
(★ ★ ★ ★ ★)**

Please visit us online:

- Website: **[www.revois-dental.com](http://www.revois-dental.com)**
- Webshop: **[www.revois-shop.com](http://www.revois-shop.com)**

For other parts of the REVOIS® Dental Implantat System product monography and for the instructions for use, please refer to

**[www.revois-dental.com](http://www.revois-dental.com)** and  
**[www.revois-dental.co/gba](http://www.revois-dental.co/gba)**, respectively,

or contact the AUROSAN customer center:  
**[service@aurosan.de](mailto:service@aurosan.de) / +49 (0)201-50658151.**



## Have we drawn your interest and attention?

Get known to the advantages of CAD/CAM with REVOIS® to offer your patients the full range of modern implantology and prosthetics.

Understanding your needs and preferences will enable us, the Team of AUROSAN Dental, to provide you with (only) what you need, and to become an industry partner of choice to you. We accompany you and your patients during the journey with REVOIS®. We guarantee the safety stock needed according to current legal requirements for many years.

### **Our Team is qualified and used to customer-specific, always ethical action!**

This manual consists of different modular parts. If except from this REVOIS® PRO Manual, you wish to receive the other parts, please let us know. Also, if you like to receive new moduls such as case studies, new REVOIS®-related publications or other educational series published under AUROSAN Dental or REVOIS®, we will happily include you in the distribution list.

**Any feedback, ideas for product development or improvements, patient safety etc. is highly welcome. We define our actions and focus through the input and feedbacks we receive from our customers & partners.**

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Aurosan GmbH**

Our service partner



# REVOIS<sup>®</sup>

Dental Implantat System



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