

**CEREC 3/  
CEREC Chairline**



CEREC

**CEREC 3 – a safe  
bet clinically  
and economically.**



The Dental Company

**sirona.**

## CEREC 3 – the computer-aided procedure for ceramic restorations.

## CEREC 3D adds a new dimension to dentistry.



> The clinical results of the CEREC inlay and crown studies\* caught my attention. I then sat down, did some calculations – and opted for CEREC. <

*A convincing method.* CEREC puts you in a position to create all-ceramic inlays, onlays, partial crowns, veneers and crowns for the anterior, premolar and molar regions – either in your practice or in your dental laboratory. CEREC is the right choice regardless of whether you want to produce all-ceramic crowns or prefer to concentrate on inlays and onlays. The clinically proven CEREC procedure is now deployed in more than 15,000 dental practices worldwide. A procedure that you can rely on implicitly. In combination with adhesive bonding techniques, CEREC creates biocompatible, non-metallic, natural-looking restorations from durable high-quality ceramic materials. With the help of CEREC you're in a position to create and place ceramic restorations in a single treatment session without the need for temporaries.

The fabrication of CEREC crowns couldn't be easier. After taking an optical impression of the preparation and the antagonist you specify the positions of the preparation margin and the proximal contacts. CEREC then takes care of all the rest, including the automatic computation of the occlusal contacts with reference to the antagonists. This process is biomimetic – i.e. is based on natural dentition processes.

*Clear benefits.* With the help of CEREC you can create long-lasting chairside ceramic restorations and place them right away. Your patients receive restorations which are entirely convincing in terms of aesthetics, compatibility and durability. What's more, CEREC adds potential earning power to your dental practice.

*Fast and efficient.* CEREC 3 and CEREC Chairline are a convenient means of fulfilling your patients' wishes. They have the option of watching the production process "live". And they receive superior final results that are indistinguishable from their natural healthy teeth.

*20 years of practical experience.* The CEREC procedure has been deployed in dental practices for more than 20 years. CEREC laid the technical foundations for all-ceramic chairside restorations, created and placed in a single treatment session. More than 100 clinical studies testify to the success of the CEREC procedure. Over 15,000 dentists worldwide now use the CEREC system day in, day out. Every few seconds a new CEREC restoration is created somewhere in the world.

*Consistent product development.* CEREC 3D is the new software package for CEREC 3 and CEREC Chairline. You, your assistant or your dental technician can create the restoration in three dimensions on the computer screen. The software is self-explanatory and easy to learn. Working on the screen is exactly like working on a model or inside the patient's mouth. And CEREC 3D ensures that the final result corresponds exactly to your design ("what you see is what you get").



## CEREC 3D

**CEREC 3D:**  
10 million restorations testify to the clinical success of the CEREC procedure.

### The CEREC procedure – the benefits in brief:

- Clinically proven all-ceramic restorations suited to a broad spectrum of indications
- Treatment in a single session
- Reduced laboratory costs
- Patients are willing to pay more for high-quality services
- Enhanced job satisfaction and positive patient feedback

### CEREC in practice – the benefits in brief:

- More than 15,000 CEREC users worldwide
- More than 10 million restorations
- Backed up by numerous clinical studies
- Inlays/onlays: 90–95 % survival rate after ten years
- Crowns: 95–97 % survival rate after five years

\*N. Martin, N. M. Jedyakiewicz; Clinical performance of CEREC ceramic inlays; Dent.Mat., Jan 1999, Vol. 15, 1: 54–61  
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T. Otto, S. De-Nisco; Computer-aided Direct Ceramic Restorations ...; Int-J-Prosth.; 2002 Mar-Apr; 15(2): 122–128.  
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A. Posselt, T. Kerschbaum; Langzeitverweildauer von 2328 chairside hergestellten CEREC-Inlays und -Onlays; IJCD, 2003; 6: 231–248.  
A. Bindl, W. Mörmann; Überlebensraten von mit CEREC chairside gefertigten Kronen; im Druck  
T. Kerschbaum, K. Wiedhahn; Langzeitverhalten von Veneers; im Druck

# CEREC ceramic restorations – conservative, biocompatible, clinically tested.



> Believe me, when it comes to my patients, I'm rather conservative. That's why I looked at the long-term clinical studies. I'm totally convinced. <

*CEREC – the clinically tested method.* You want the best for your patients. You want to conserve as much natural tooth structure as possible and use durable, biocompatible materials. CEREC expands your spectrum of clinically tested treatment options. Decide in favour of an advanced restoration concept that enables you to master all foreseeable challenges and complies totally with your patients' wishes.

*Ceramic restorations – clear clinical benefits.* Ceramic material is tooth-coloured, translucent and biocompatible. It is non-metallic and can thus be combined with existing metal restorations in the patient's mouth. The adhesive bonding technique enables you to conserve more of the natural tooth structure than is the case with conventional metal res-

torations. Heavily damaged teeth do not always require full crowns. Instead, you can deploy adhesively bonded onlays, which have the added effect of stabilizing the existing tooth. In cases where full crowns are indicated these can be created and placed in a single treatment session – quickly and conveniently.



**Inlays**  
A typical field of application for ceramic restorations (e.g. replacement of defective fillings).



**Onlays/overlays/partial crowns**  
The ideal clinical treatment for extensive defects. Adhesively bonded ceramic onlays and partial crowns offer a convincing alternative to conventional full crowns.



**Posterior crowns**  
Thanks to CEREC you can design, manufacture and fit crowns in a single treatment session.



**Veneers/partial anterior crowns**  
From a simple coping fitted for aesthetic corrections to a complete anterior crown – the list of possibilities is virtually endless.

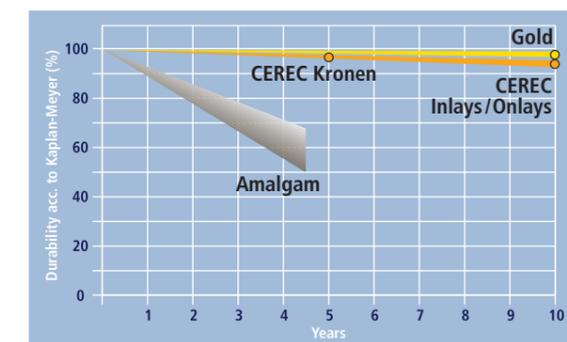


**Anterior crowns**  
CEREC also enables you to create full anterior crowns. Individual characterization can be achieved with the help of ceramic stains and subsequent glazing.

The CEREC ceramic materials fulfil stringent requirements in terms of breakage resistance, abrasion resistance, aesthetics and overall durability. The industrially produced CEREC ceramic blocks have a more homogenous distribution of particles than their laboratory-made equivalents. The CEREC ceramic materials also boast a pronounced "chameleon effect". They lend themselves to high-gloss polishing or to treatment with ceramic stains and subsequent glazing. We work closely with our partner companies VITA Zahnfabrik and Ivoclar Vivadent in order to ensure the highest possible quality.

*CEREC – as good as gold.* CEREC restorations have proved themselves not only in over 20 years of practical application, but also in numerous exhaustive scientific studies carried out with sample sizes of up to 2,500 restorations. These surveys indicate that CEREC restorations have a survival rate that is easily on a par with gold.

Long-term studies show that CEREC is as durable as gold.



If you require further information about the long-term CEREC durability studies, go to [www.sirona.com](http://www.sirona.com) or send a fax to +49 (0)6251-163399.

**CEREC ceramic materials – the benefits in brief:**

- Physical properties which are very similar to natural tooth enamel
- Chameleon effect
- Wide range of different colour shades
- Easy to polish
- Individual characterization and glazing of the restoration
- High strength (≥ conventional compressed ceramics)

**All-ceramic CEREC restorations – the benefits in brief:**

- No exposed metal edges
- No irritation or gingival retraction
- No corrosion problems caused by incompatibility between different metals
- No unsightly opaque metal structures
- Adhesive bonding technique paves the way for defect-oriented, "conservative" preparations



## CEREC 3/CEREC Chairline – the benefits in detail.



> My initial scepticism about new techniques has been completely dispelled. Today, I couldn't imagine working without CEREC. <

*CEREC – directly integrated into the treatment centre!*

The new CEREC Chairline module is designed for direct integration into the M1+ und C2+ treatment centres. This enhances efficiency as well as ergonomics. Manual tasks are reduced to an absolute minimum. You save valuable time and are free to concentrate on the essentials. What's more, CEREC Chairline creates extra space in the treatment room. Of course, you can also opt for the tried-and-tested CEREC 3 system consisting of a mobile, stand-alone imaging unit and separate milling unit.

*CEREC – a truly systematic concept.* The modular CEREC 3 CAD/CAM system comprises an imaging unit and a milling unit, connected via wireless link. Hence the system adapts flexibly to your individual practice requirements. Simultaneous designing and milling saves valuable time. You can design and create the restoration directly (chairside method) or indirectly from a model in one or more treatment sessions. The choice is yours.

*CEREC or CEREC Chairline – fast and flexible.* You begin by showing the patient the defect in his or her tooth. Then you create an optical impression (which takes only a few seconds) and design the restoration chairside. The restoration is created from a ceramic block by the milling unit, which is installed at a location of your choice in your dental practice.

*CEREC – high-precision machining.* The cylindrical and conical diamond-tipped milling tools are designed for the shortest possible machining times as well as for optimum precision. The conical milling tool creates highly detailed occlusal surfaces. The milling process is rapid, yet ensures that the ceramic material is machined with the utmost care.



CEREC Chairline: Perfect workflows, superior ergonomics, easy operation



CEREC 3 imaging unit: Mobile und flexible

*CEREC – action, camera!* Irrespective of whether you choose CEREC Chairline or the stand-alone CEREC 3, the package includes a PC, a flat-panel monitor, a high-precision 3-D measuring camera and a microprocessor-

controlled capture card that allows you to view the camera images in real time. The CEREC 3 software is Windows-based. The intuitive user interface has been optimized for dental applications and does not require any specialist computer skills.



The CEREC 3 imaging unit generates an optical impression directly in the patient's mouth. In combination with the optional SIROCAM 3 camera and SIDEXIS X-ray software the imaging unit functions as a fully featured chairside diagnosis and communication centre.



The CEREC 3 milling unit can be installed in a wide variety of different locations: in the treatment room itself (for easy access), in a cabinet (reduces noise), in an unused corner or niche (saves space), in your practice lab – or as a fascinating eye-catcher in the waiting room.

### The CEREC milling unit – the benefits in brief:

- Simultaneous milling of the occlusal surface and fitting surface saves valuable time
- Tools are recalibrated prior to each milling process to compensate for wear
- Sophisticated control system ensures the careful machining of the ceramic material
- Various options for integrating the milling unit into the dental practice

### The imaging unit – the benefits in brief:

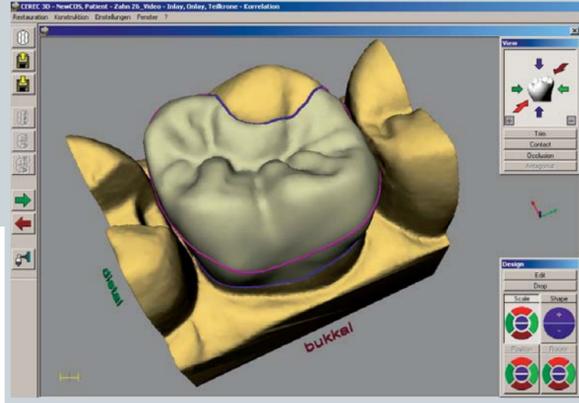
- Patient-friendly intraoral measuring camera means that you can dispense with conventional impressions, as well as temporary fillings and crowns
- Option of integrating the SIROCAM intraoral camera and/or the SIDEXIS digital X-ray system (either in a networked or stand-alone configuration)
- Time savings and enhanced communication with patients, e.g. via CDs and DVDs

### CEREC Chairline – the benefits in brief:

- Enhances workflow
- Superior ergonomics
- Easy operation
- High-tech image
- Minimal space requirements

There are many good reasons for choosing CEREC 3D.

# Simple design process



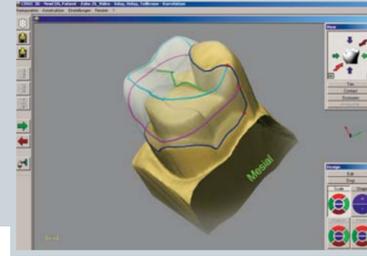
*Simple design process.* CEREC 3D brings your inlays, onlays, crowns and veneers to life. The three-dimensional screen image is highly realistic and easy to understand. The design proposal can be rotated and viewed from all directions. Moreover, CEREC 3D allows you to evaluate the outcome of your design modifications instantaneously – also with regard to the adjacent teeth and antagonists.

- CEREC 3D automatically detects the preparation margin.
- The realistic image of the preparation and the restoration provides an ideal basis for assessing shape and fit.
- CEREC 3D is faster and more precise. You save valuable time – also during the placement phase.

The design proposals generated by CEREC 3D can be adapted to your individual requirements:

- You can edit the design lines and immediately assess the impact of these modifications on the restoration surface.
- You can select and move whole areas of the restoration.
- You can “wax-up” the restoration on the screen (mark or encircle a chosen area, remove/add material, apply minute drops of ceramic).

# Perfect marginal fit



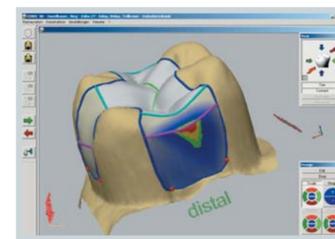
*Superior marginal fit.* CEREC 3D allows you to view, verify and modify every detail of your design until you are absolutely satisfied with the final result. CEREC now appeals to dentists for whom precision is an important quality criterion, especially with regard to adhesively bonded inlays. The new software boasts enhanced image processing functions (e.g. superimposed images). The design steps and the milling control parameters have also been optimized.

This not only boosts your confidence in the clinical performance of CEREC, but also leads to significant time savings when the finished restoration is placed in the patient’s mouth.

- CEREC 3D allows you to verify the proximal margin – just like a dental technician working on a cross-sectional model.
- You can verify the shape and fit of the restoration from four sides in 20 x magnification.
- You can rely on the built-in intelligence of the world’s most advanced margin detection system.

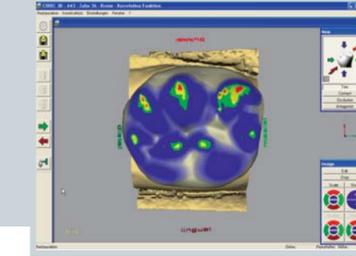
## Precise proximal contacts

*Precise proximal contacts.* CEREC 3D also offers decisive benefits with regard to the proximal contacts. With the help of the new colour-coding function the dentist can assess at a single glance the tightness and extent of the contacts and then carry out any necessary adjustments at the click of a mouse. Compared with the previous CEREC software, the number of manual steps has been significantly reduced. The outcome: clinically correct and precise proximal contacts every time.



- CEREC 3D ensures precise proximal contacts.
- Various design tools allow you to adapt the CEREC 3D design proposal to your specific requirements.
- You can redefine the contour of the equator in all three dimensions. What’s more, you can move the entire proximal surface, add and remove ceramic (whole areas, line by line or drop by drop), and smooth the contours of the restoration.

# Anatomically designed occlusal surfaces



*Anatomically designed occlusal surfaces.* With the help of an optical impression of a bite registration or an FGP you’re in a position to adapt the restoration to the individual situation in the patient’s mouth. As in the case of the proximal contacts, the colour-coded occlusal contacts are visible at a single glance and can be modified in line with your specific requirements. Here as well, CEREC 3D

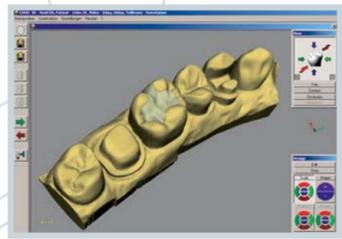
shows the effects of each modification – in three dimensions – thus allowing you to fine-tune the restoration.

- When you create inlays for single teeth CEREC 3D extrapolates the occlusal surface design from the existing tooth substance with such accuracy that you can normally do without a bite registration.

- If extensive fillings require renewal, you can make an optical impression of the intact occlusal surface prior to the preparation and incorporate the data directly in your design. You are still free to make detailed modifications. For nearly all CEREC 3D users this has become the standard method for creating onlays and partial crowns.

*Quadrant restorations.* CEREC 3D fulfils all the conditions for efficient quadrant restorations. By juxtaposing several optical impressions and taking account of the antagonists you can produce multiple restorations in the same quadrant in one continuous process.

- CEREC 3D allows you to register the entire quadrants by means of overlapping optical impressions.
- During the design phase you can determine the insertion path for each preparation in turn.
- You can place the finished restoration virtually and use it immediately to design the proximal contacts of the adjacent restoration.



# Quadrant restorations

# CEREC 3D – superb all-ceramic crowns.



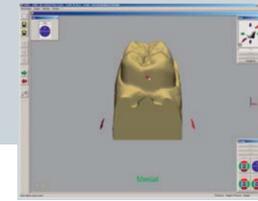
*The world's fastest crowns!*  
With the help of this CEREC 3D Crown upgrade you can create crowns as easily and cost-effectively as you can inlays. The crowns are adapted automatically to the adjacent teeth and the antagonists using a biomimetic technique modelled on natural dentition process. You can count on receiving high-quality results.

- Easy and fast**
- Precise positioning of the proximal contacts
  - Superior results due to extensive tooth database resources
  - Reducing milling time (by up to 40%)

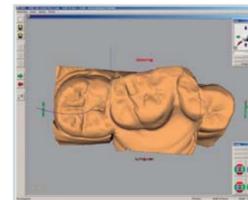
- Time-saving features**
- Manual correlation
  - Replication design
  - Improved ergonomic camera positioning when crossing the middle line

Clinical studies carried out at Zurich University confirm the outstanding longevity of CEREC crowns. More than 200 adhesively bonded CEREC crowns were re-examined after 7 years. The survival rate\* was 95% for molar crowns, and 97% for pre-molar crowns. This performance is easily on a par with conventional metal crowns.

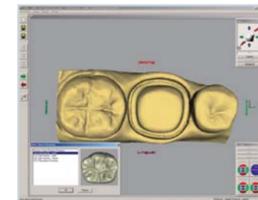
\*according to Kaplan Meier



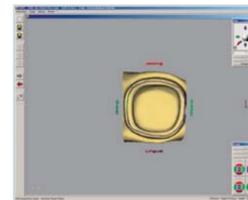
**Step 3: Positioning the proximal contacts!**  
You have a clear idea of where the proximal contacts should be located? Then simply mark the spot with a double click and CEREC will automatically adapt the crown to your requirements.



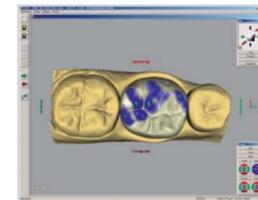
**Step 1: Trim the antagonists!**  
CEREC software allows you to trim the bite registration on the monitor. This is fast, easy and precise.



**Step 4: Selection of the database crown!**  
You browse through the available tooth databases and choose the crown that is best suited to your requirements.



**Step 2: Mark the preparation margin!**  
You show the CEREC where the preparation margin is located and the system detects the margin automatically and precisely.



**Step 5: Automatic computation of the occlusion!**  
Using a biomimetic technique (i.e. one based on natural dentition processes) the new CEREC 3D Crown software moves the occlusal surface of the database crown in all directions until the best possible fit has been achieved – with regard to the adjacent teeth as well as the antagonists. The CEREC software then adjusts each cusp individually in order to generate further contact points. Any premature contacts are removed using the virtual grinding function. You can either accept the restoration proposal "as given" or else carry out individual modifications using the CEREC 3D editing tools. The high-precision milling process takes only a few minutes.

# CEREC – fast, convincing, cost-effective.



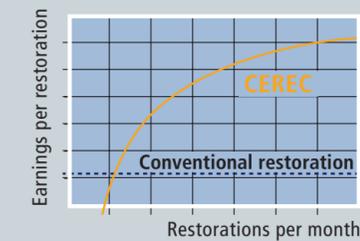
> You know as well as I do: insourcing is the key to success. CEREC transfers additional earnings power to my dental practice. <

*CEREC – exactly what patients want.* There are many reasons why more and more patients are opting for ceramic restorations. A patient study carried out by the German Society of Computerized Dentistry (DGZ) revealed the following key motives for choosing CEREC: the deployment of non-metallic materials; conservation of natural tooth tissue; naturally coloured restorations; and treatment in a single session.

**CEREC 3 – the practical benefits:**

- CEREC 3 reduces time pressures in your day-to-day work
- The 3-D design functions of CEREC 3 are fun to use and boost your job satisfaction
- The high earnings potential of CEREC 3 allows you to adopt a more relaxed treatment approach
- Recommendations from satisfied patients help to secure the long-term prosperity of your dental practice

**CEREC vs. conventional ceramic restorations.**



*CEREC – reap the benefits of insourcing.* Transfer a new source of earnings potential to your dental practice. The in-house design and manufacture of ceramic restorations does not necessitate any significant additional input of time and effort on your part and can be delegated to a large extent to your assistants. The modular CEREC system pays for itself even if you perform only a few ceramic restorations per month. Satisfied patients and the additional revenues generated by CEREC will make a major contribution to bolstering the long-term success of your dental practice.

**The most important reasons why patients choose CEREC:**

Ceramic material as opposed to metal	2.5
Conserves natural tooth tissue	2.0
Natural-looking	1.8
Recommended by dentist	1.5
Complete treatment in a single session	1.5
No impressions required	1.5
No temporary fillings/crowns required	1.5
Cheaper than lab-produced ceramic restorations	1.5
Fascinating computer technology	1.5
No need to replace adjacent fillings	1.5
Recommended by dental assistant	1.5



# Sirona – creating and maintaining value.

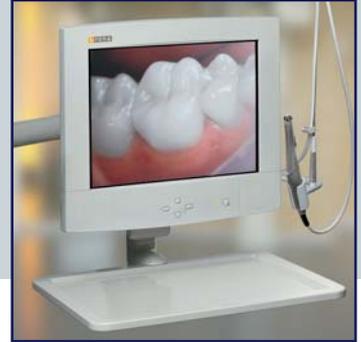
Treatment centers
Handpieces
Hygiene systems
X-ray systems
CEREC

*Logical.* You are right to expect a great deal from the world's only full-range supplier of dental equipment – in particular, an extensive product portfolio, first-class service, outstanding quality and tremendous value for money. Sirona covers the entire dental equipment spectrum: treatment centres, handpieces, X-ray systems, hygiene systems and – last but not least – CEREC ceramic restoration systems. Building products that stand the test of time, Sirona is the professional partner for the dental profession.

Treatment centers



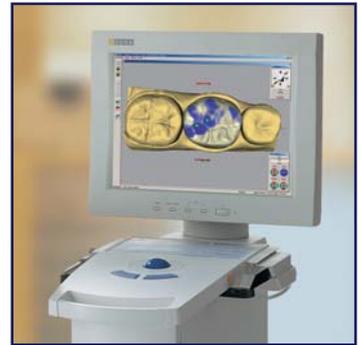
Patient communication



X-ray systems



CEREC



Handpieces



Hygiene systems



Dealer's stamp

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