Press Release

Milestones in the Development of CEREC

It is a long way from a brilliant idea to a mature product, especially when this product is to become a generally recognized standard. In the past 30 years, CEREC has continuously developed. Today, thanks to its high clinical reliability and intuitive operation, it is an established CAD/CAM system. It is the only system on the market that facilitates final dental restorations in a single session, and gives users high added value for applications in implantology and orthodontics.

1980  Werner H. Mörmann, Professor of Dentistry and Marco Brandestini, Doctor of Technical Science started the development of CEREC at the University of Zurich in Switzerland. They patented their method.

1985  Supported by a software developer Dr. Alain Ferru (Zurich, Switzerland), they created the first CEREC prototype ("Lemon"). On September 19, they conducted their first treatment in the Dental Clinic of the University of Zurich with CEREC using VITABLOCS Mark I ceramic made by Vita Zahnfabrik.

1986  Upon conclusion of a licensing agreement, Siemens Dental, which would become Sirona 11 years later, started a serial production of CEREC.

1987  Official market launch of CEREC 1 serial units.

1988  At the International Dental Show (IDS), CEREC 1 celebrated its world unveiling.

1994  CEREC 2 market launch: the software enabled the production of inlays.

1996  International Society of Computerized Dentistry was founded. By that time, German Society of Computerized Dentistry (DGCZ) had already existed for five years.

1997  New CEREC 2 Software Module enabled the production of veneers.

1998  New CEREC 2 Software Module enabled the production of crowns in the posterior and later in the anterior area.

2000  Sirona presented CEREC 3 with separate scanning and milling units (on the summit of the Zugspitze, Germany's highest mountain) 3M Espe became the company's third partner for materials, alongside Vita Zahnfabrik and Ivoclar Vivadent.

2001  The CEREC method found its way into dental laboratories in the form of the inLab system.
2002  Sirona announced the sale of the ten thousandth CEREC unit.
2003  The new CEREC 3D software allowed models and restorations to be assessed from all sides on the screen.
2005  New crown software (automatic calculation of the occlusal contact points of the crowns taken the antagonist into consideration).
2005  CEREC Chairline: Integration of CEREC in the M1+ and C2 treatment centers.
2006  CEREC Blocs: Feldspar ceramics for chairside restorations.
2007  CEREC MC XL milling machine was unveiled to the public.
2007  Biogeneric tooth model for inlays and partial crowns.
2008  A combination of a prosthetic proposal created with CEREC and cone beam data sent from GALILEOS 3D X-ray unit enabled a simultaneous clinical and esthetic planning of implants and the possibility to order surgical guides for a secure treatment.
2009  Sirona introduced CEREC AC imaging unit with a higher precision and blue imaging technology (CEREC Bluecam). Sirona Connect internet platform could be used to transmit digital impression data to a dental laboratory.
2010  The original tooth morphology (now also for crowns) is reconstructed on the basis of fully automated biogeneric software and individual patient characteristics.
2010  inCoris TZI market launch: first translucent zirconium dioxide became available to dentists.
2011  CEREC SW 4.0: New software generation with new user-friendly interface and innovative design allowed for the production of multiple restorations.
2011  CEREC Guide 1 (first CEREC surgical guide)
2012  CEREC Omnicam is optimized for powder-free scanning of natural tooth structures in one continuous color imaging process.
2012  CEREC SW 4.2 with chairside treatment of implants, virtual articulator, smile design, and translucent zirconium oxide
2013  New CEREC milling machines: CEREC MC XL Premium Package (as facelift), CEREC MC X, and CEREC MC
2013  CEREC Blocs C In: ceramic blocks with ceramic dentin
core covered with a highly translucent enamel layer to treat anterior teeth

2014  CEREC SW 4.3: First time milling was used during chairside treatment.

2014  Introduction of inCoris TZI C: the first pre-colored translucent zirconium dioxide in VITA Classical Colors A1 to D3

2015  At its 30th anniversary celebration, Sirona introduced a flexible tabletop version (CEREC AF) and the integrated ergonomic version (CEREC AI) alongside the mobile cart version (CEREC AC).


2015  CEREC meets Invisalign: Sirona and Align Technology agree to a partnership for ordering transparent Invisalign treatment appliances for the correction of malocclusions.

2015  CEREC Ortho SW 1.1: Digital impressions with the patented "guided scan" for orthodontics. Scanned data can be sent to laboratories to produce orthodontic appliances.

2015  CEREC SW 4.4 offers user friendly operation and supports even more precise machining of restorations thanks to the Biojaw algorithms with excellent initial proposals and improved grinding algorithms. Four-motor milling machine CEREC MC XL Premium Package was fitted with extra-fine grinding tools.

2015  Two further material suppliers were added: SHOFU and Coltène.

2016  CEREC Zirconia: full-contour zirconia for chairside fabrication of crowns and small bridges for a single visit treatment using:

a) CEREC SW 4.4.1 or CEREC Premium SW 4.4.1 for the design of full-contour zirconia restorations;

b) Dry milling of CEREC MC, MC X and MC XL Premium Package milling and grinding units

c) CEREC SpeedFire sintering furnace: fast sintering and fast glazing in an extremely compact, user-friendly device;

d) CEREC SpeedGlaze: speed-drying glaze spray for high-gloss restorations.
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IMAGES

Fig. 1: 30 years of dental technology development: treatment room in 1986 with CEREC 1 and M1 treatment center

Fig. 2: CEREC AF with CEREC Omnicam: The small powder-free color video camera is now also available in a tabletop version as CEREC AF.

Fig. 3: The product family for the chairside production of CEREC Zirconia in the practice (from right): CEREC AC with Omnicam, CEREC milling and grinding unit as well as the new CEREC SpeedFire sintering furnace.