

CEREC® + KATANA™ CASE STUDY SPOTLIGHT

4-Unit Anterior Maxillary Bridge

Featuring Katana™ Zirconia Blocks*



PATIENT PRESENTATION AND TREATMENT PLAN

A 44-year-old female presented with missing central incisors (tooth #s 8 & 9) after an accident she suffered 23 years ago. The patient's chief complaint was tissue recession on teeth #s 7 & 10 around her existing PFM bridge, which created a dark appearance. Patient was not happy with the looks of her bridge and wanted to replace it. Single crowns on 7 & 10 were recommended and implants for 8 & 9. Patient did not wish to have implants, instead choosing a new 4-unit fixed bridge.* Gingivoplasty was performed on teeth 7 & 10 to correct and balance the zenith (tissue height).



PREPARATION

The existing preps for 7 & 10 were modified with a medium chamfer with smooth, rounded edges, which is very important to ensure an excellent fit for a CAD/CAM restoration. These preparations would serve as abutments upon which the 4-unit bridge* would be held in place. I believe that a good preparation is the foundation of a long-lasting restoration.

DIGITAL IMPRESSION & RESTORATION DESIGN PROPOSAL

A digital impression of the upper arch was performed using CEREC® Primescan, and a 4-unit bridge* proposal was generated by the CEREC® software 5.1.1. Only minor adjustments were necessary to the automatic design proposal using the Biogeneric Copy design mode.

MILLING

A KATANA™ Zirconia block 14Z L/STML A1 bridge block was selected for this bridge due to its high strength and translucency. Using the Touch Process, the block was loaded into CEREC® Primemill running the process for ~2 minutes. The Mill ZrO2 Extra Fine Milling Strategy was selected for this job, and the entire bridge was milled in just 43 minutes using the CEREC® Primemill unit.



MILLED BRIDGE: CERVICAL VIEW

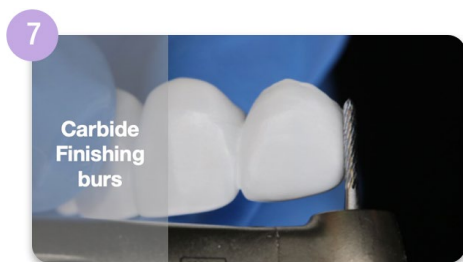
Cervical view of the margins and intaglio surface of the milled bridge. CEREC® Primemill produces impressive restorations with precise margins and very smooth surfaces.

MILLED BRIDGE: INCISAL VIEW

The Extra Fine Milling Strategy takes about 20 minutes longer in comparison with the Fine Milling, however, it is worth it! As shown in this incisal view, you can admire the smoothness and beautiful embrasures of the KATANA™ milled bridge.

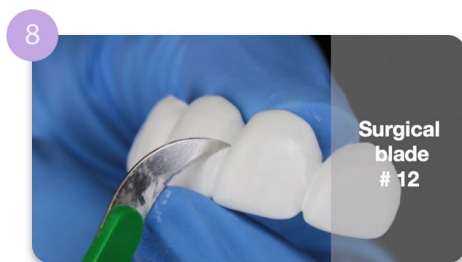
FINE VS EXTRA FINE MILLING

Comparison of milled bridge surface detail using the MC XL Fine Mill mode and the CEREC® Primemill ZrO2 Extra Fine mode. Notice the increased definition, smoothness, and superior surface detail obtained with CEREC® Primemill Extra Fine mode.



FINISHING (STAGE 1)

A carbide finishing bur was utilized to remove the sprue and fine-tune the labial surfaces (Komet 30-blade Ultra Fine burs H375RUF.)



FINISHING (STAGE 2)

A disposable size 12 surgical blade was used to add depth and define embrasures.



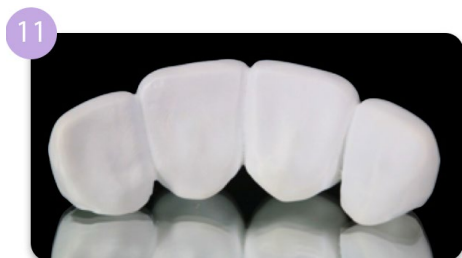
FINISHING (STAGE 3)

A Meisinger Blue Twister Medium Elastic Polisher was used to increase the surface smoothness in preparation for crystallization firing. After finishing, the restoration was fired in the VITA ZIRCOMAT 6000 MS for 90 minutes. Due to its size, the KATANA™ bridge was not able to be crystallized in the CEREC® SpeedFire.



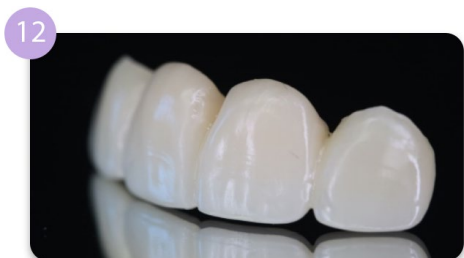
FACIAL VIEW (POST-SINTERING)

Facial view of restoration, ready to be sintered.



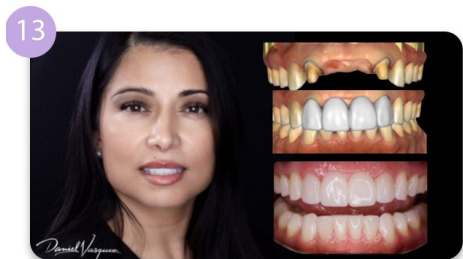
LINGUAL VIEW (POST-SINTERING)

Lingual view of restoration (pre-glazing).



GLAZING

View of glazed restoration. Kuraray Noritake CZR CERABIEN ZR Clear Glaze was used to impart a natural "wet look" and lifelike shine. You can admire the natural look and multilayer color of KATANA™ Zirconia STML by adding glaze only.



SEATED RESTORATION

View of final restoration after seating. Kuraray Noritake PANA VIA™ SA Cement Universal was used for final cementation of the KATANA™ Zirconia Bridge.