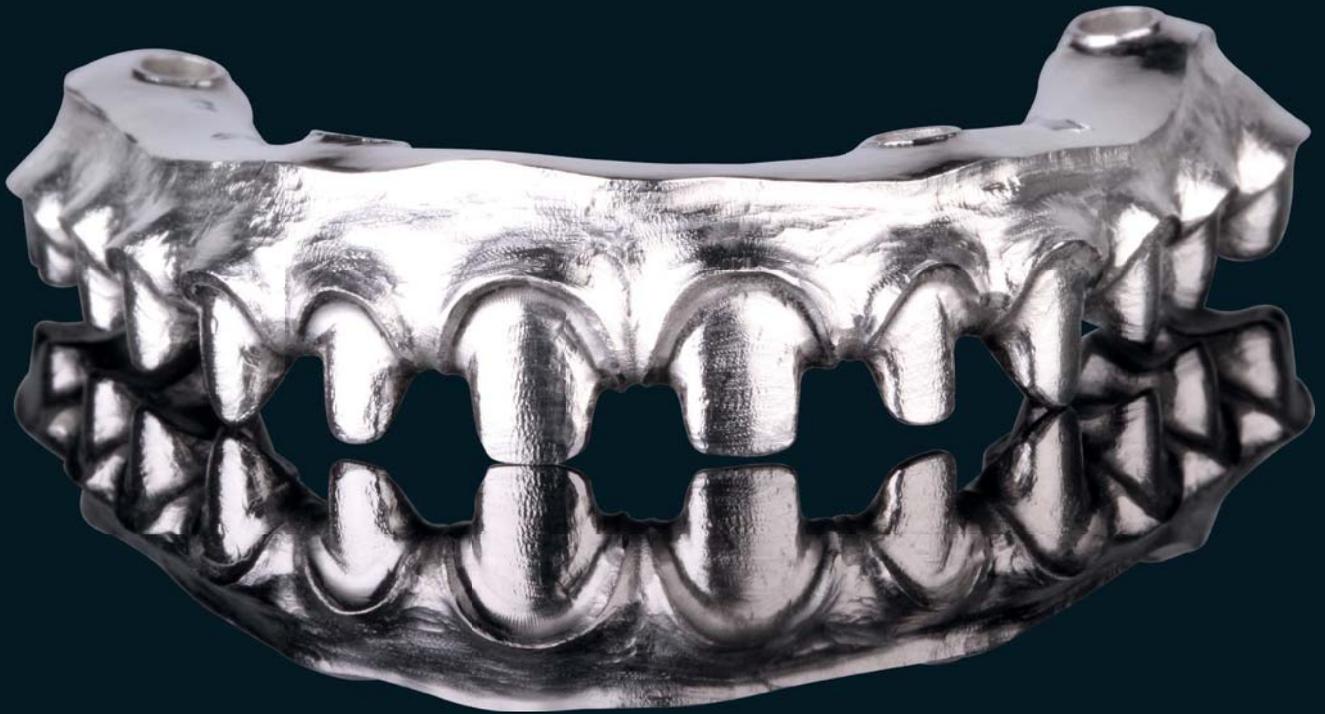


Zirkonzahn[®]

Human Zirconium Technology



ZIRKONZAHN SINTERMETALL

The 100 % dimensionally stable material milled in your own lab

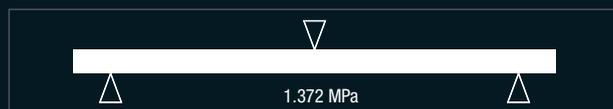


SINTERMETALL

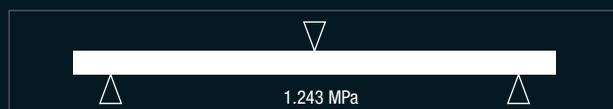
The cobalt-chrome blanks (non-precious metal) are highly pre-compressed and slightly sintered, which enables the milling of all dental restorations in this state. Thanks to the fact that the material has a shrinkage factor of just 7%, its torsional stability during the sintering process is very high. Like this, all milled dental restorations (full arch bridges, single crowns, metal structures, telescopes, bars, attachments) can be sintered with a total lack of stresses in the metal.

Properties at a glance

- High performance cobalt-chromium alloy
- 100% dimensionally stable – no distortions or stresses in the metal structures
- No impurities in the metal structure
- High flexural strength through seamless material bond and smooth surfaces (final density > 98%)
- High edge stability
- Your CAD/CAM system does not have to be upgraded
- Oxygen-free sintering in the Zirkonofen 700 Ultra-Vakuum sintering furnace with high vacuum and special sintering adapter (no additional furnace is required) or in the Sinterofen 300S sintering furnace
- Sintering without shielding gas
- Due to perfect temperature distribution in the furnace, manufacturing up to 14-unit restorations is possible
- Milling time depending on milling unit: ca. 15 minutes
- Electroplating to reduce the grey value of zirconia secondary structures
- Faster than casting techniques

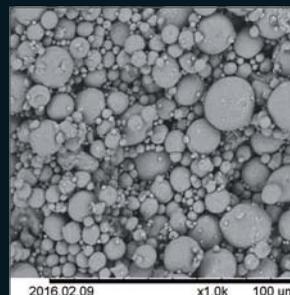


Flexural strength of Zirkonzahn's solid metal (Chrome-Cobalt) after 2-point flexural test

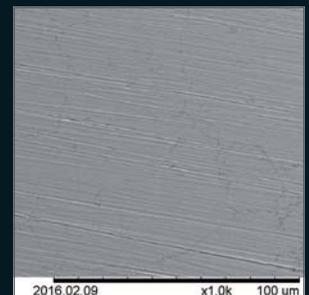


Flexural strength of Zirkonzahn's Sintermetall after 2-point flexural test

Surface image made with a scanning electron microscope



slightly sintered



densely sintered

SINTERING PROCESS

There are two different sintering furnaces available:

- *combination furnace for both zirconia and Sintermetall (Zirkonofen 700 Ultra-Vakuum)*
- *a furnace only for Sintermetall (Sinterofen 300S)*



Combustion chamber Zirkonofen 700 Ultra-Vakuum sintering furnace for up to 120 zirconia and 25 sinter metal elements



Combustion chamber Sinterofen 300S sintering furnace for approx. 50 Sintermetall elements; 2 full arch bridges or 6 bars in one process

By mounting the sintering adapter with the sintering tube on the Zirkonofen 700 Ultra-Vakuum combination furnace, a high vacuum is created which permits the sintering of Sintermetall without shielding gas. The furnace reaches a temperature of 1700 °C and can easily be upgraded for the sintering of zirconia.

Also with the Sinterofen 300S furnace, which has exclusively been developed for the sintering of Sintermetall, the sinter tube is used to create a high vacuum. Using the Sintering Tray, up to 50 elements (small bridges and single crowns) can be sintered. With the especially developed Sintering Holder, it is possible to sinter two full arch bridges or up to six bars in one sintering process.

The Sintering Tray, as well as the Sintering Holder are included in the scope of delivery.



Milled 14-unit Sintermetall structure



Sintermetall 95H10 bar

SINTEROFEN 300S SINTERING FURNACE – FOR SINTERMETALL



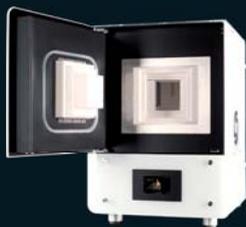
- Equipped with a high vacuum pump for oxygen-free sintering
- Sintering without shielding gas
- Large combustion chamber for around 50 Sintermetall elements
- With the special Sintering Holder it is possible to sinter two full arch bridges or six bars in just one sintering cycle
- Modern high quality full glazing
- 4,3" colour touchscreen control panel which shows the sintering process and remaining time
- Milling unit's ports: USB port for updates
- Low maintenance, very robust

HUMAN ZIRCONIUM TECHNOLOGY

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ZIRKONOFEN 700 ULTRA-VAKUUM

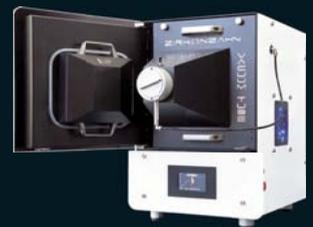
FOR ZIRCONIA AND SINTERMETALL



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Zirkonofen 700 Ultra-Vakuum sintering furnace

Sinter Metal Furnace Adapter

Zirkonofen 700 Ultra-Vakuum with Sinter Metal Furnace Adapter



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