

# Ceramosonic S

Fast and gentle porcelain condensation  
with ultrasound



# CONCENTRATING ON THE ESSENTIALS

Reproducing natural tooth colors with porcelain powders is one of the most sophisticated challenges in dentistry, since the pigmented components and the inorganic structure differ from the composition of natural teeth.

Various working procedures for layering, vacuum control during the firing process and the condensation before firing as well as air inclusions affect the aesthetic impression and the quality of the ceramics. By using controlled condensation these properties can be significantly optimized.

The CERAMOSONIC S generates high-frequency vibrations thereby providing a directed condensation of moist porcelain particles.

Compared to a manual or mechanical condensation a considerably more homogeneous structure in the porcelain material can be achieved by using the ultrasonic condenser. It provides a better control during the build-up phase and allows concentrating on the essentials while building up the layers.

## Multifunctional, simple, rational

- Better control during the build-up phase and condensation of the porcelain material
- More brilliant colors by reduction of air inclusions
- Identical thermal transmission of porcelain layers to the all-ceramic framework
- Higher bonding strength on metal-ceramic and all-ceramic frameworks
- Time saving by less shrinkage and fewer correction firings
- Higher internal firmness of the porcelain layers

## Manual condensation



Before condensation the porcelain beads were positioned specifically as a build-up indicator



After manual condensation the single layers as well as the contour are deformed

## Ultrasonic condensation



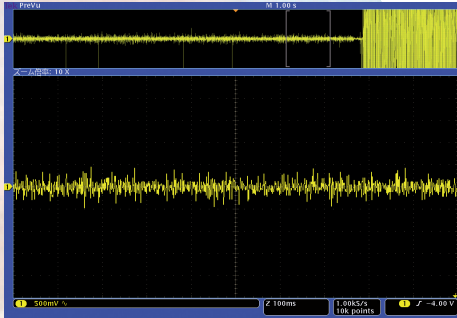
Before condensation



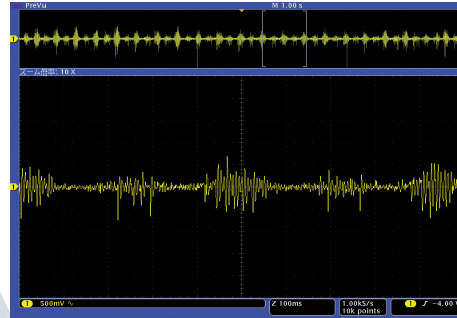
After condensation with CERAMOSONIC S the single layers as well as the contour keep their shape



## 28,000 Hz for an accurate layering



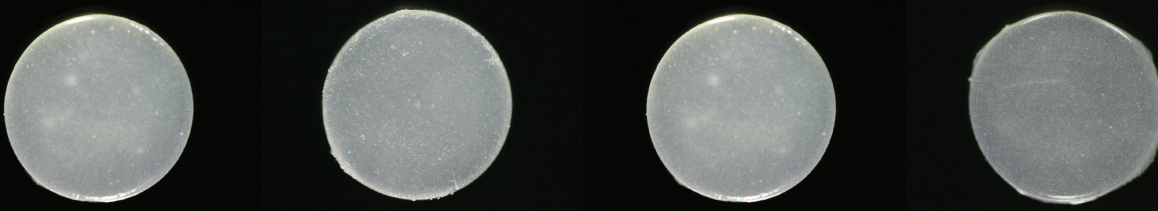
The generated ultrasonic vibrations (28,000 vibrations/sec.) provoke the firm particles in the layered ceramics to sag. The contained moisture gets to the surface, while the created layering with all details stays unchanged.



Due to their low frequency the classic ripple technique causes the layering to melt, since the vibrations are insufficient of causing the heavy ceramic particles of the layering to sag. This effect may lead to a dislocation or even the destruction of the layering structure.

## Higher translucency

By using a directed condensation of the layering a significant decrease of gas inclusions in the porcelain material is achieved. An advantage clearly visible after the first firing already, since the index of light refraction inside the ceramics is reduced.

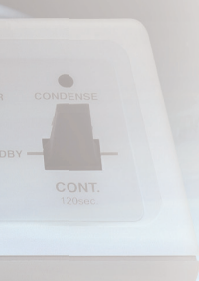
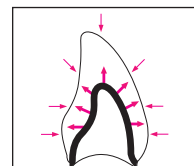
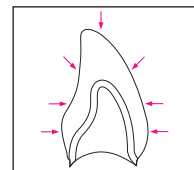


With increasing condensation the translucency of the firing samples enhances. (VINTAGE ZR T-Glass from left to right: without condensation, manual condensation, ultrasonic condensation low, ultrasonic condensation intensive)

## Less shrinkage and homogeneous density

Resulting from the higher density of the porcelain layers a similar thermal conductivity to the metal-free framework materials made of structural ceramics like zirconium dioxide is achieved.

When applying the Opaque-Liner on metal-free systems or Opaque on metal-ceramic restorations the ultrasonic vibrations of the CERAMOSONIC S increase the bonding strength to the framework.



## Sensor technology

The CERAMOSONIC S ultrasonic condenser has a built-in touch sensor. Condensation starts easily by touching the vibrating platform with a pair of tweezers. The intensity of the vibrations can be adjusted infinitely.



## Three operating modes for any needs

- **Automatic mode**  
Vibration continues for 5 sec. after touching the vibrating platform
- **Standby mode**  
Standby for 60 min.
- **Continuous mode**  
Vibration continues for 120 sec.



## Compact and efficient

The condensation with ultrasound using the CERAMOSONIC S Condenser offers an efficient technology to lower significantly the moisture fraction of the layered ceramic material before firing and to control shrinkage.

The compact construction as well as multiple application possibilities make the CERAMOSONIC S a very useful aid for daily work.



**CERAMOSONIC S**  
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