



# **VARIO** 200 / 200zR

**CERAMIC FURNACES  
REVOLUTIONARY FIRING TECHNOLOGY**



[www.zubler.de](http://www.zubler.de)

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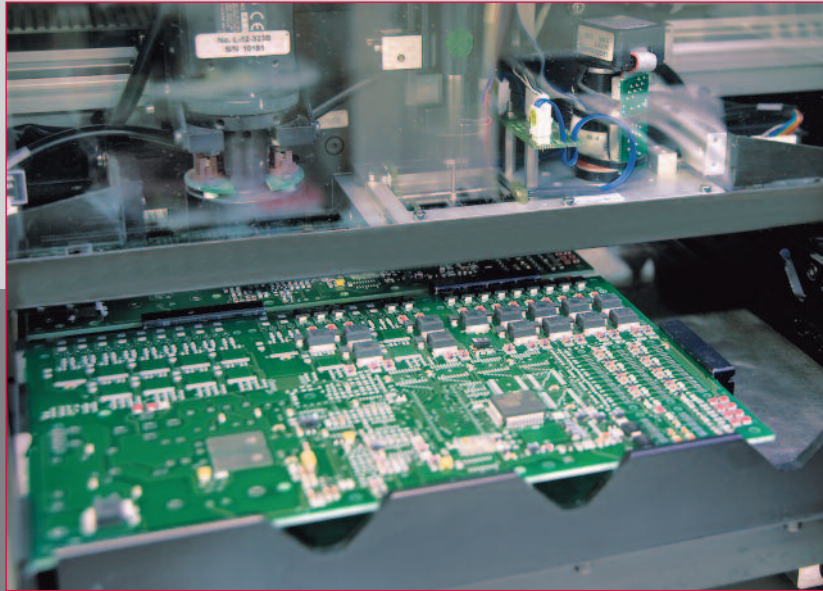


# Made in Germany

Precision, innovation, durability and exceptional quality; these are the defining words that portray the outstanding technology developed and produced in Germany. We view this as an individual responsibility and are motivated to meet this expectation every day.

Our industrial electronics and machine experience outside the dental industry allows us to respond very quickly to even the smallest of changes and implement those changes seamlessly into our current production and support processes. The creativity and expertise of our engineers form a solid foundation for our products. Our responsible, experienced manufacturing staff ensure a precise, consistent, high quality and durable finished product.

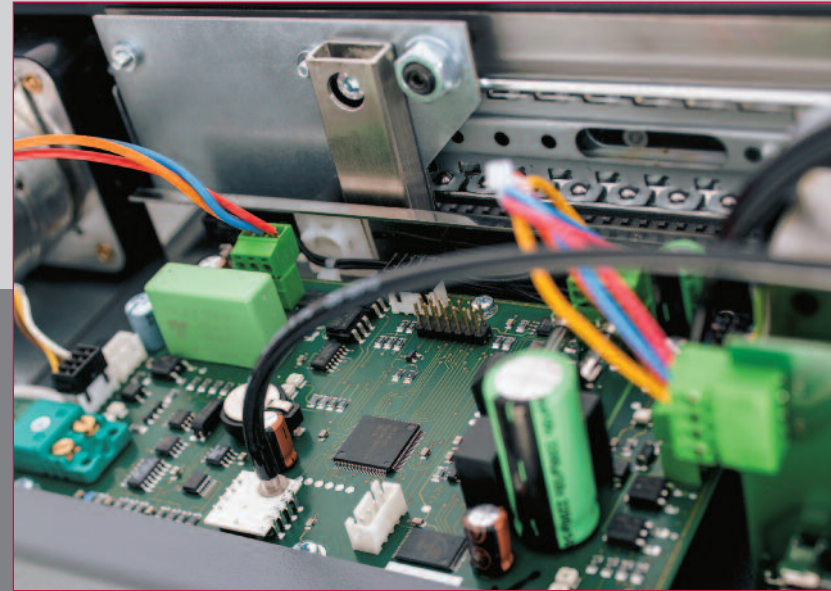
With the new VARIO 200 series we present unrivaled ceramic furnaces. Innovation together with proven technology provides a unit that delivers exquisite results, even in a production environment. You will experience the next step in the evolution of furnace technology for the consistent, high quality production of dental ceramics.



### **Electronics produced by Zubler**

The electronics are often referred to as the brain and heart of any machine. As a global manufacturer of ceramic ovens, we design, manufacture and equip our furnaces with electronics suited to meet the demands of a global dental community.

The software that drives our ovens also comes from within the Zubler company and can therefore be precisely adapted to our oven to meet the high expectations of the dental technician. Not only internal software updates, but program and process updates are available promptly and can be installed by the technician without delay.



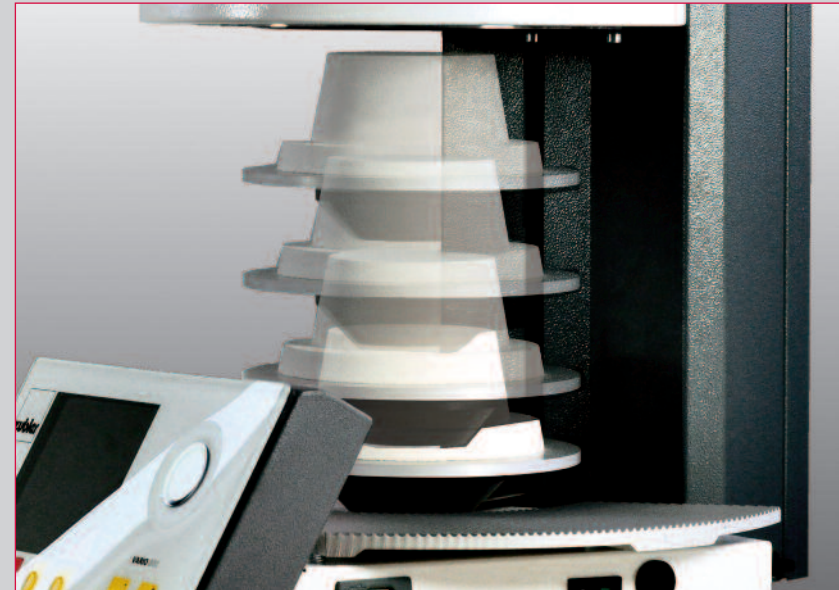
### **An investment for the future**

You will experience the benefit of this expertise very quickly. As processes develop and evolve, the furnace will be able to address those changes. Our team will be there with updates for the latest processes and materials, as well as upgrades for your oven, increasing the usability of your device.

For more than 20 years, clients have appreciated this advantage and realized it's rewards. Buying equipment from Zubler will prove to be rewarding for years to come.



## Z-Dry Mode



### Pre-drying at a constant temperature and a defined time

The intelligent way to dry ceramic objects prior to firing.

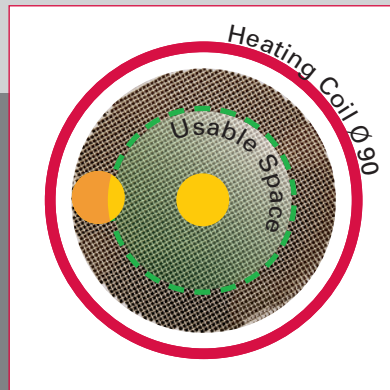
During the Z-Dry portion of a program, the electronics determine the ideal distance between the firing platform and the chamber as a function of the prevailing chamber temperature and the resulting radiant heat. Due to this unique control capability, mixed liquids are extracted uniformly from opaques and dental ceramics alike.

Any temperature changes during heating or cooling phases are compensated for the electronically controlled lift mechanism throughout the entire drying phase. Cracks and blisters caused by uncontrolled drying and standard pre-dry processes are a thing of the past thanks to the Z-Dry system.

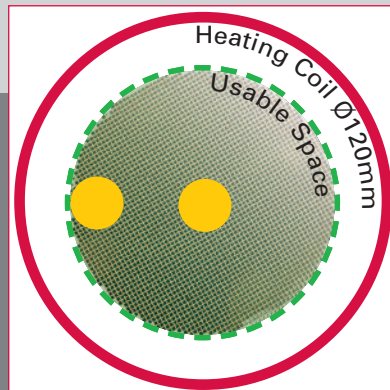
The Z-Dry system eliminates wait time. The start temperature for subsequent firing steps is reached more quickly. The vertical lift mechanism ensures that all objects are pre-dried uniformly at all times.

# The Usable Space

Traditional Heating Coil



**VARIO 200** Heating Coil



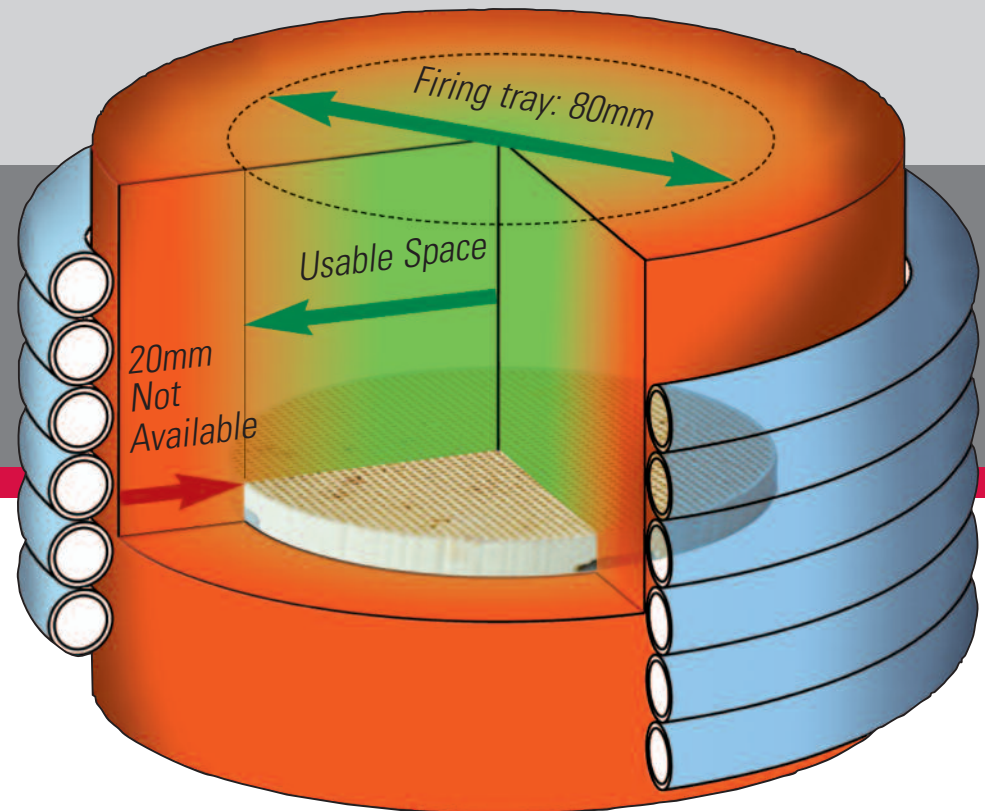
## As of yet unattained homogeneous temperatures

The difference between the available and usable space of a furnace is significant. The usable space, however, includes the thermal conditions of the firing chamber during a cycle.

The heating coils used in many dental ceramic ovens develop a glow during the hold time stage indicating temperatures in excess of 1000°C close to the coil. Such high temperatures occurring in this area are considered “useless” for processing dental ceramics. It is only at a distance of 20mm from the heating elements that it can be assumed the temperature distribution for dental ceramics fire with a deviation of less than 5°C.

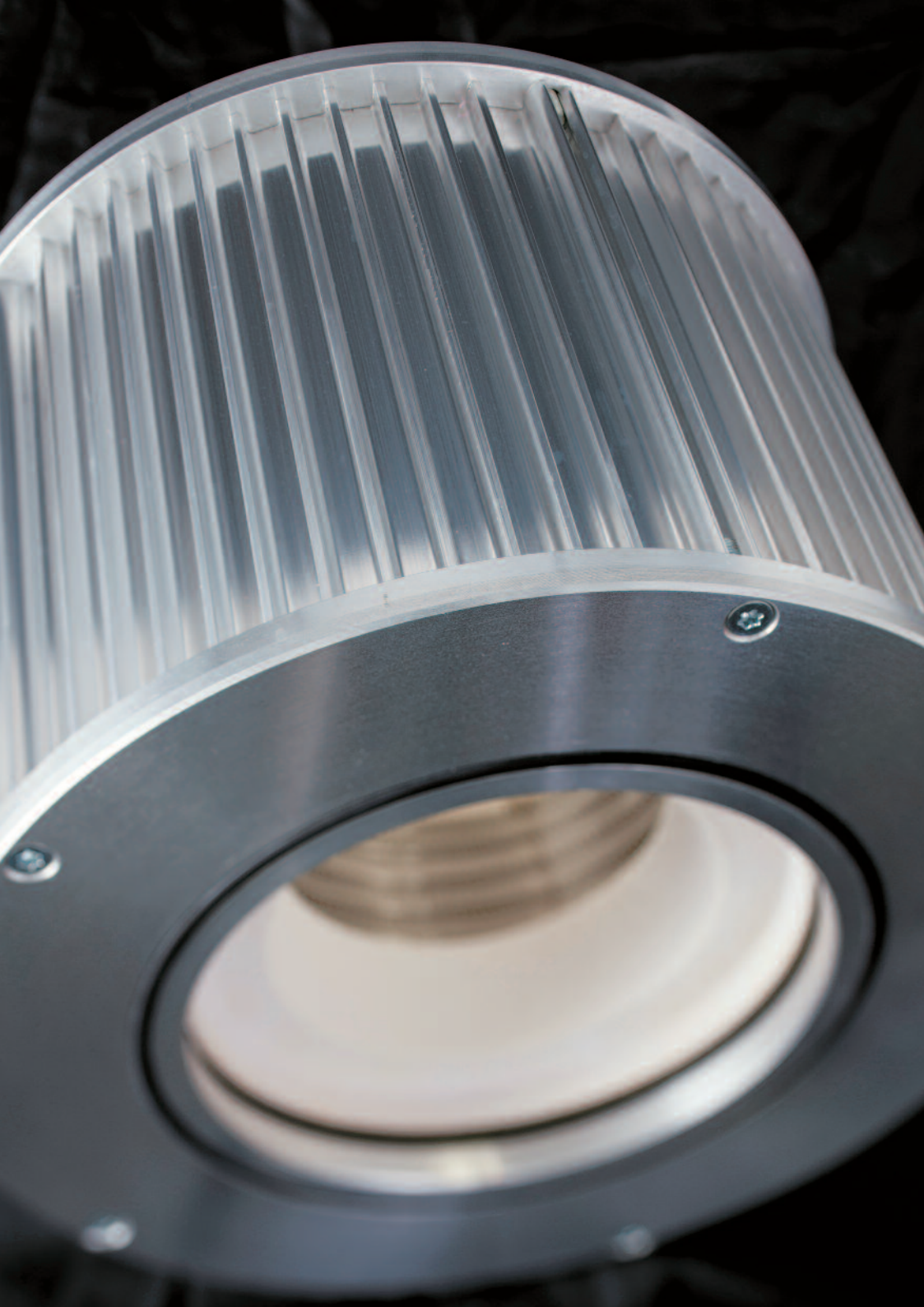
The usable space for these findings are as follows: The field on the firing tray where the temperature difference from the centre of the firing table is a maximum of 5°C.

To ensure uniform ceramic sintering, the objects to be processed should be positioned only in the usable space of the ceramic furnace.



This is calculated from the inner diameter of the heating coil minus 40mm. The Vario 200 & Vario 200ZR both feature the new, larger 120mm inner diameter x 60mm high heating coil.

This new design increases the usable space. Now, your ceramics will be uniformly processed to the highest quality standards regardless of their placement on the tray.



## Linear Cooling with TTC - Mode

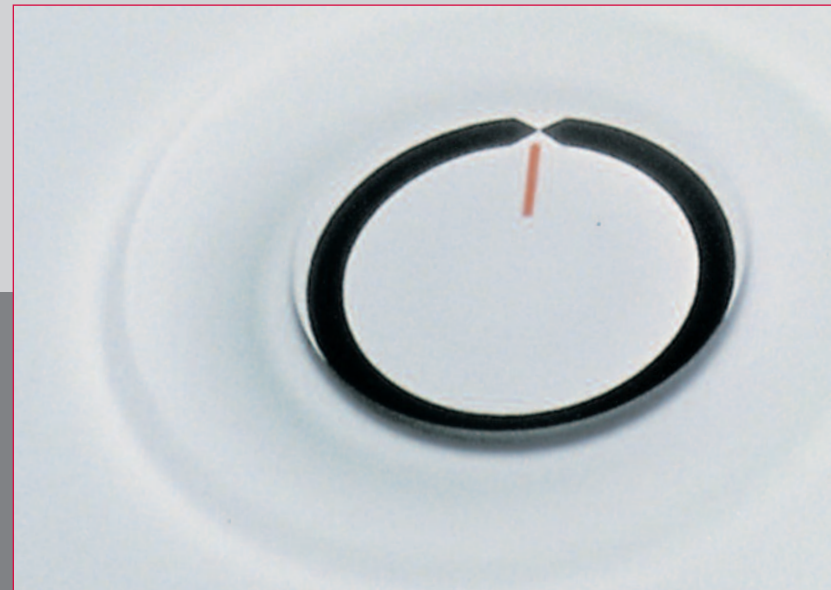
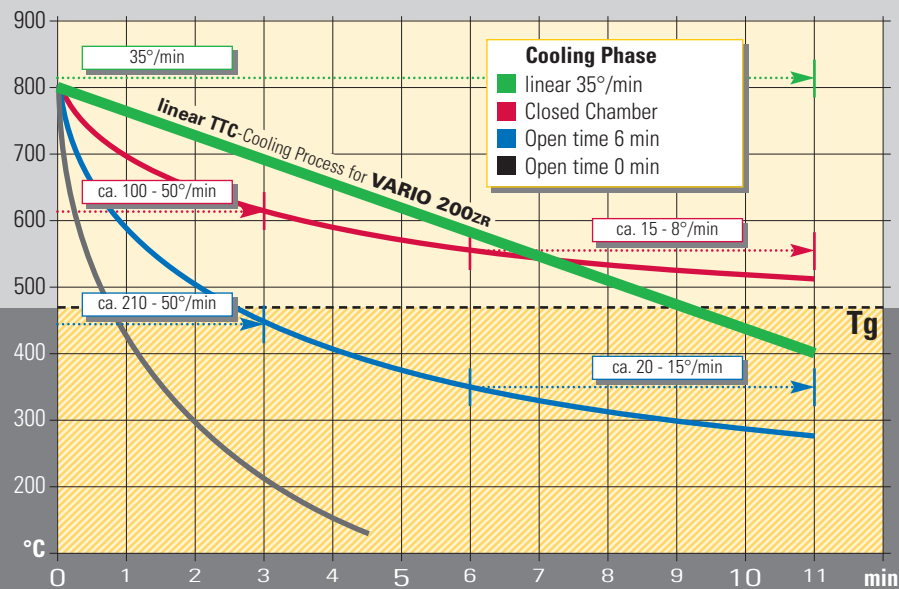
### **TTC** (Time-Temperature-Cooling) **only in the VARIO 200ZR**

The firing of dental ceramic framework materials with low thermal conductivity, such as zirconium oxide, poses a risk of crack formation when cooling. A controlled linear descent in temperatures at a range below that of the transition temperature of a ceramic reduces this risk several times.

The VARIO 200ZR offers to you the new TTC technology, which makes it possible to actively control the linear rate of cooling, by setting a temperature gradient per minute as parameter within a firing program. In the upper temperature range, the electronic balances the high temperature loss at the beginning by activating the heating.

The second phase of TTC utilizes the Z-Dry function technology and places the lift to the appropriate position for the desired temperature. As the temperature decreases further, the special unique design of the aluminum heating chamber and the lift work together to maintain the desired rate of temperature decrease.





Of course the ability to open the chamber rapidly or temper still exists as programmable options. However, if you choose to use the TTC mode, the fired objects will be returned to a non-critical temperature to avoid crack formation in a controlled descent of between 5°C / min and 50°C / min.

#### Graphic above:

The illustration above shows a comparison between traditional cooling and the new TTC method.

### Protected by PFC

Unforeseen interruptions of the firing process due to power failure can lead to loss of work. In this case, our equipment features the new PFC (Power-Fail-Control). In the event of a power loss or power failure, once power is restored to the unit, the electronics return the program to the point of interruption to complete the program.

### USB Connection

A USB connection is now available, making access to programs and updates easier. Programs and updates can be emailed and installed with a standard USB memory stick.

### Glass Touch Display

The shock and heat resistant glass touch display (now a well-known trademark of the Zubler furnace line) is quick and easy to use. From a standpoint of hygiene and durability, this panel is far superior. We are so confident in this component that we offer a lifetime warranty.



VARIO 300

VARIO 200

VARIO 200ZR

Ceramic oven / 500 programs	●	●	●
Z-Dry System	●	●	●
Individual Programming	●	●	●
Standard / Professional / Special Program	●	●	●
TTC program for active linear cooling from 5°C/min to 50°C/min.	○	○	●
USB connection	○	●	●
CF card technology	●	○	○
Long infiltration firing	●	○	○
Shock and heat resistant Glass-Touch-Screen	●	●	●
PFC (Power-Fail-Control)	●	●	●
Firing set (honey comb tray, pins)	●	○	●
Pre-programmed: Authentic, Pulse MC / ZR	●	●	●
Custom pre-programming prior to shipment	●	○*	●
Industrial USB stick	○	○*	●
Glass Touch Display	●	●	●
Lifetime Warranty (Glass only)	●	●	●
2 year warranty	●	●	●

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○\* surcharge

# Zubler Dental Ceramic Oven

230 V~ 50/60Hz, 1250 W

W x D x H 320 x 460 x 540mm

Weight: 23kg

## Scope of supply:

1 Vacuum pump P3

1 Power cord

1 Firing tray

1 Inline filter for vacuum hose

1 Vacuum hose

1 Power cord for P3 vacuum pump

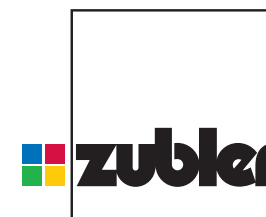
1 Spare fuse

1 Warranty Certificate

1 Manual

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Distributed by:



**www.zubler.de**

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