

Firing Chart VITA OMEGA 900

Recommended firing cycle	Preh. Temp. °C	 min.	 min.	 °C/min.	Temp. approx. °C	 min.	VAC min.
Oxidation	Please follow manufacturer's instructions						
Wash opaque firing (powder)	600	2.00	4.00	75	900	2.00	4.00
Wash opaque firing (paste)	500	6.00	6.00	67	900	3.00	6.00
Opaque firing (powder)	600	2.00	4.00	75	900	1.00	4.00
Opaque firing (paste)	500	6.00	6.00	67	900	2.00	6.00
Shoulder porcelain firing with MARGIN	600	6.00	6.00	50	900	2.00	6.00
Dentine firing	600	6.00	6.00	50	900	1.00	6.00
1st corrective firing	600	6.00	6.00	48	890	1.00	6.00
Correction firing with COR	600	4.00	6.00	33	800	1.00	6.00
Glaze firing with glaze Akz 25	600	4.00	4.00	75	900	1.00	—
Glaze firing	600	—	4.00	75	900	2.00	—
Glaze firing with Akzent fluid	600	4.00	4.00	75	900	2.00	—

The firing result of dental ceramics depends to a great extent on the individual firing cycle of the user, i.e. on the type of furnace, the position of the temperature sensor, the firing tray as well as the size of the object to be fired.

Our recommendations for the firing temperatures (irrespective of whether these are given orally, in writing or by means of partial instruction) are based on our own numerous experiences and tests.

Nevertheless, the values indicated here can only be seen as a guideline for the user. Should the surface characteristics, transparency or the degree of lustre not correspond to the result expected under optimum conditions, the firing cycle should be adjusted accordingly. The decisive factor for the firing cycle is not the firing temperature displayed by the furnace, but the appearance and surface quality of the object after firing.

To obtain an optimum metal/ceramic bond the ceramic should be under slight compressive strain. A good result depends also on the size of the workpiece, the type, hardness and heat conducting properties of the alloy used, and particularly in the way each individual technician carries out the firing. Our practical experience has shown that good results can be achieved when the thermal expansion coefficient of the alloy – measured between 25 °C and 600 °C – lies in the range of $14,0 - 14,4 \times 10^{-6} \text{ K}^{-1}$ and that of the VITA OMEGA 900 Metal Ceramics – measured between 25 °C and 500 °C – in the range of $13,4 - 13,9 \times 10^{-6} \text{ K}^{-1}$. With higher thermal expansion coefficients of the alloy slow cooling is required from the 1st dentine firing onwards as the cooling period from 900 °C - 700 °C should not take less than 3 minutes.