

Zirconia Block

Instructions for Use

The product is casted by cold isostatic pressing and pre-sintering process with ZrO_2 as the main composition, used for making the crowns, bridges (AT ≤ 3 units), inlays and veneers of the fixed partial denture.

1. Product Information

Type: Type II

2. Technical Parameters

Number	Type	Classes	Color	Dimension(mm)
1	HT (High Translucency)	1-5	White, A1, A2, A3, A3.5, A4, B1, B2, B3, B4, C1, C2, C3, C4, D2, D3, D4	98×10; 98×12; 98×14; 98×16; 98×18; 98×20; 98×22; 98×25. 89×71×10; 89×71×12; 89×71×14; 89×71×16; 89×71×18; 89×71×20.
2	AT (Anterior Translucency)	1-4	White, A1, A2, A3, A3.5, A4, B1, B2, B3, B4, C1, C2, C3, C4, D2, D3, D4	95×10; 95×12; 95×14; 95×16; 95×18; 95×20; 95×22; 95×25.
3	HS (High Strength)	1-5	White	76×38×16; 76×40×16; 76×42×16; 76×38×18; 76×40×18; 76×42×18; 76×38×20; 76×40×20; 76×42×20; 76×38×22; 76×40×22; 76×42×22.
4	MHT (Multi-layered High Translucency)	1-5	A Dark, A Light, B Light	Customized shapes and sizes are also available
5	HT PLUS (High Translucency Plus)	1-5	White	

Technical Data

Number	Type	Coefficient of Thermal Expansion(CTE)(25-500°C)
1	HT	$10.5 \times 10^{-6} K^{-1}$
2	AT	$10.0 \times 10^{-6} K^{-1}$
3	HS	$10.5 \times 10^{-6} K^{-1}$
4	MHT	$10.5 \times 10^{-6} K^{-1}$
5	HT PLUS	$10.5 \times 10^{-6} K^{-1}$

3. Operation

Place the Zirconia Block in CAD/CAM machine by following the machine manufacturer's instructions.

When milling is completed, remove block from CAD/CAM machine. Detach framework from the zirconia block with a diamond bur. Clean the framework (Only white shade zirconia block needs to be colored. Pre-shaded zirconia block doesn't need coloring). Dry the framework fully and then place the framework with a sintering tray into the oven to sinter.

Program the furnace according to the instruction manual and follow the sintering chart.

Do not remove sintered framework until it completely cools down. Examine wall thickness, margin fit and seat fit of the sintered framework. If necessary, make minor adjustments with a water-cooling diamond tool.

Wall thickness should be no less than 0.7mm and connectors no thinner than 9mm².

Rinse sintered framework with water and dry completely. The framework is now ready for veneering.

Zirconia Block Sintering Chart

Chart 1. Crowns and bridges (≤ 5 units) (HS,HT PLUS)

STEP	Start temperature (°C)	End temperature (°C)	Time (min)	Rate of Climb (°C/min)
Step 1	0	300	30	10
Step 2	300	1000	40	17.5
Step 3	1000	1500	125	4
Step 4	1500	1500	120	Holding
Step 5	1500	720	60	13
Step 6	720	Room temperature	Cool naturally	—

Chart 2. Bridges (> 5 units) (HS,HT PLUS)

STEP	Start temperature (°C)	End temperature (°C)	Time (min)	Rate of Climb (/min)
Step 1	0	300	30	10
Step 2	300	1000	100	7
Step 3	1000	1500	250	2
Step 4	1500	1500	150	Holding
Step 5	1500	800	140	5
Step 6	800	Room temperature	Cool naturally	—

Chart 3. Crowns and bridges (≤ 5 units) (HT, AT, MHT)

STEP	Start temperature (°C)	End temperature (°C)	Time (min)	Rate of Climb (°C/min)
Step 1	0	300	30	10
Step 2	300	1000	40	17.5
Step 3	1000	1450	112.5	4
Step 4	1450	1450	120	Holding
Step 5	1450	700	60	12.5
Step 6	700	Room temperature	Cool naturally	—

Chart 4. Bridges (> 5 units) (HT, MHT)

STEP	Start temperature (°C)	End temperature (°C)	Time (min)	Rate of Climb (°C/min)
Step 1	0	300	30	10
Step 2	300	1000	100	7
Step 3	1000	1450	225	2
Step 4	1450	1450	150	Holding
Step 5	1450	800	130	5
Step 6	800	Room temperature	Cool naturally	—

4.Storage

Store blocks at room temperature. For storage, please put it in a clean and dry room. In transportation, moving

and storage, please avoid violent extrusion, vibration and hard collision.

5.Warnings

The product is a dedicated ceramic material for dentistry and shall be placed out of the reach of children. Do not inhale dust. Do not get dust into eyes or have prolonged contact directly with the skin. Personal Protective Equipment (PPE) such as gloves, masks, and lab coats are recommended in order to avoid possible contact and irritation to skin or eyes during processing.

No toxic side effect and no radiation. Silicosis may be incurred when mass dust is inhaled.

6.Symbols



Batch code



Manufacturer



Consult instructions for use



Keep dry



Caution



Authorized representative in the European Community



Recycling



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