

3D pro·zir®

— More than nature —



Find **natural shade gradient,**  
**translucency and strength**  
in 3D Pro zir



# 100% Tosoh

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Aidite has over 25 years of experience in Zirconia R&D and production. In the 3D Pro zir range, we use only 100% TOSOH yttria-stabilized nano-zirconia powder, which is medical grade of the finest quality raw material.



Using this finest quality TOSOH powder in combination with Aidite's advanced production processes, ensures that every customer receives a consistent high-quality product. Dental Technicians, Dentists and their Patients all benefit from highly aesthetic restorations fabricated in 3D Pro zir. The added value of these materials is in the simplified workflow, saving time and uplifting production. No time is required for colouring to match the shade guide.



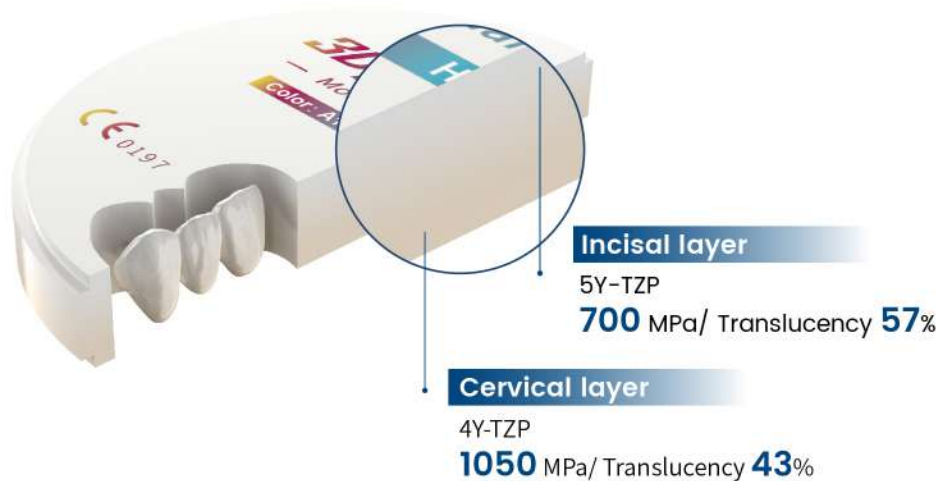
**Aidite**<sup>®</sup>

Aidite and TOSOH are strategic partners, who will continue to collaborate, develop and cooperate, to bring more innovations to our customers.

## Strength and Translucency »

3D Pro zir is fabricated with the most advanced production processes at Aidite, producing a layerless, natural shade gradient, with optimal strength and translucency, transitioning from Cervical to Incisal areas of the restoration.

With a 3-point test flexural strength of >1050 MPa, 3D Pro zir ensures aesthetic results while being suitable for all indications from single crowns to 14-unit bridge structures.



## Properties »

### Physical properties

Sintered Density	$\geq 6.0 \text{g/cm}^3$
Coefficient of thermal expansion $\text{K}^{-1}(25\sim 500^\circ\text{C})$	$(10.5 \pm 1.0) \times 10^{-6}$
Surface monoclinic phase content after accelerated aging	<5%
Chemical solubility	$\leq 100 \mu\text{g/cm}^2$

## Chemical properties

ZrO <sub>2</sub>	90%~95%
Y <sub>2</sub> O <sub>3</sub>	4%~10%
Al <sub>2</sub> O <sub>3</sub>	≤0.5%
Other oxides	<0.5%

## Sintering Cycles »



The 3D Pro zir range allows fast high-performance sintering, with 2-hour sintering or more conventional cycles for larger spans.

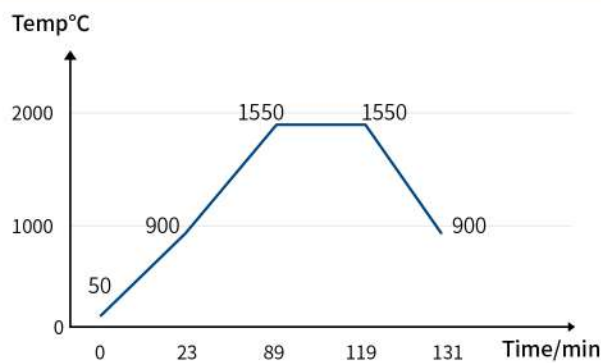
Enabling shorter production time, reduced costs and faster delivery times.

### 2 hours fast sintering cycle

Single unit & Bridge up to 3 units



Start temp	Phase 1 heating rate	Phase 1 Maximum temp	Phase 2 heating rate	Phase 2 Maximum temp	Holding time	Cooling rate	Cooling to
20°C	52°C/min	1200°C	6°C/min	1550°C	30min	55°C/min	900°C

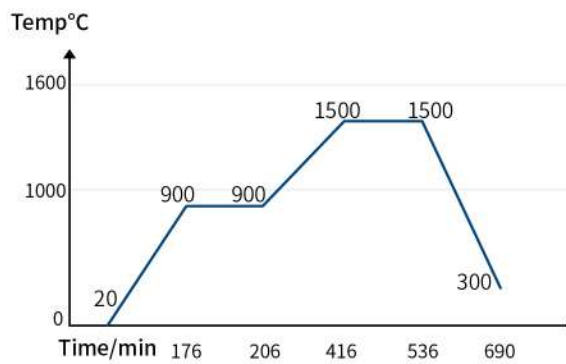


3D Pro zir also support sintering cycle for long span bridge.

4-6 units



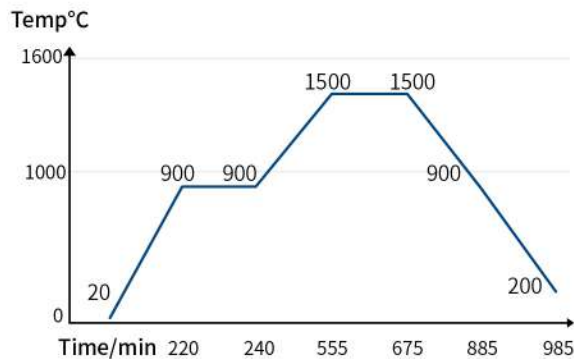
Start temp	Phase 1 heating rate	Phase 1 Maximum temp	Holding time	Phase 2 heating rate	Phase 2 Maximum temp	Holding time	Cooling rate	Cooling to
20°C	5°C/min	900°C	30min	3°C/min	1500°C	120min	8°C/min	300°C



7 units and above



Start temp	Phase 1 heating rate	Phase 1 Maximum temp	Holding time	Phase 2 heating rate	Phase 2 Maximum temp	Holding time	Cooling rate	Cooling to	Cooling rate	Cooling to
20°C	5°C/min	900°C	20min	2°C/min	1500°C	120min	3°C/min	900°C	7°C/min	200°C



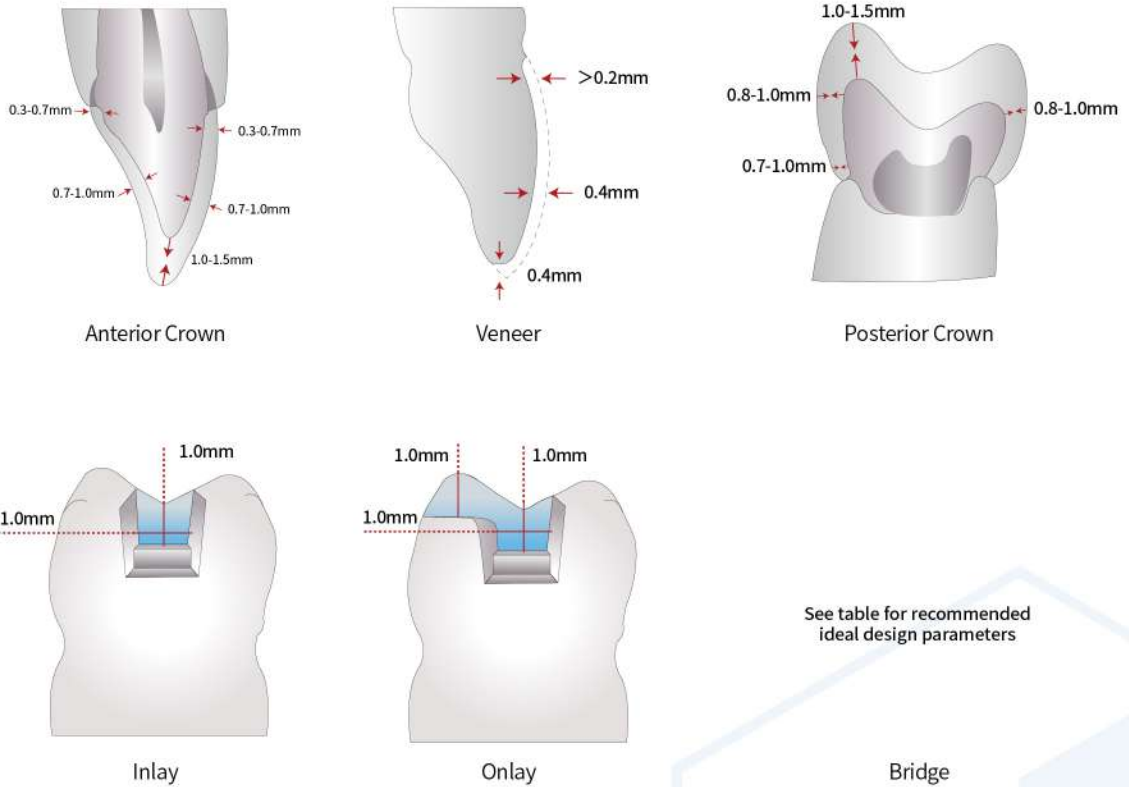
\*As always, the firing temperatures and times indicated are guidelines only and for different sintering furnaces, depending on their condition and calibration, these cycles will need to be adjusted accordingly. We recommend you run a trial firing to find the right temperature for your furnace.



## Indications for use »



## Ideal design and preparation guidance »



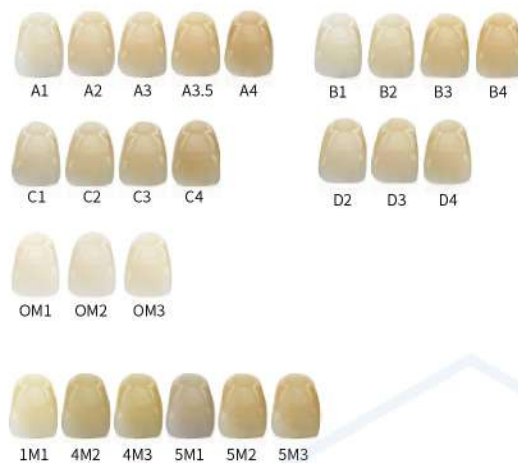
## Recommended ideal design parameters

Type of restoration		Crown	Bridge
Anterior	Axial wall thickness	≥0.7 mm	≥0.8 mm
	Occlusal thickness	≥1.0 mm	≥1.0 mm
Anterior	Bridge connectors up to 3 units	-	≥9mm <sup>2</sup>
	4 units and above	-	≥9mm <sup>2</sup>
Posterior	Axial wall thickness	≥0.8 mm	≥1.0 mm
	Occlusal thickness	≥1.0 mm	≥1.0 mm
Posterior	Bridge connectors up to 3 units	-	≥12mm <sup>2</sup>
	4 units and above	-	≥20mm <sup>2</sup>

## Shade and dimension »»

3D Pro zir is available in 16 shades of the classical VITA® shade guide and 3 bleach shades OM1/OM2/OM3. For individual further characterisation, Biomic Stain& Glaze can be used. 3D Pro zir simplifies the whole process in achieving highly aesthetic results.

\*Additional popular shades of the VITA® 3D master shade guide, will also be available 1M1/4M2/4M3/5M1/5M2/5M3.



## Disc system options

Standard open system	Girrbach system	Zirkonzahn system
D98*12 (H)	AG71*12 (H)	D95*12 (H)
D98*14 (H)	AG71*14 (H)	D95*14 (H)
D98*16 (H)	AG71*16 (H)	D95*16 (H)
D98*18 (H)	AG71*18 (H)	D95*18 (H)
D98*20 (H)	AG71*20 (H)	D95*20 (H)
D98*22 (H)	***	D95*22 (H)
D98*25 (H)	AG71*25 (H)	D95*25 (H)

## Block for chairside

Sirona system					
20*15*14	20*15*19	40*15*14	40*15*19	55*15.5*19	65*25*22

\*Other sizes can be customised to meet your special requirements.

## Digital work flow »»

3D Pro zir is one incredible material, which can be used in the above systems, but it is also part of an entire digital workflow. From the initial intraoral scan right through to the final restoration, Aidite have validated workflows with equipment and materials for the whole process. Faster production times, higher quality, full technical and engineering support, through our dealers and ourselves, 24/7 worldwide. With 3D Pro zir, you are not just purchasing any ordinary zirconia disc, but investing in a part of a wider dedicated system, benefitting the whole dental team and their patients. Dentists are requesting a 3D Pro zir restoration, once they see the difference.





## [Clinical case »



**Kleantis Manolakis** 

PhD, Albert-Ludwigs-University Freiburg, Germany / Department of Oral and Maxillofacial Surgery (Head: Prof. Dr. Dr. W. Schilli)



## [Clinical case »



**Roberto Cabreriza** 

Laboratory World For Dentist

3D Pro Zir implant case



*Roberto Cabrerizo*  
World for dentist

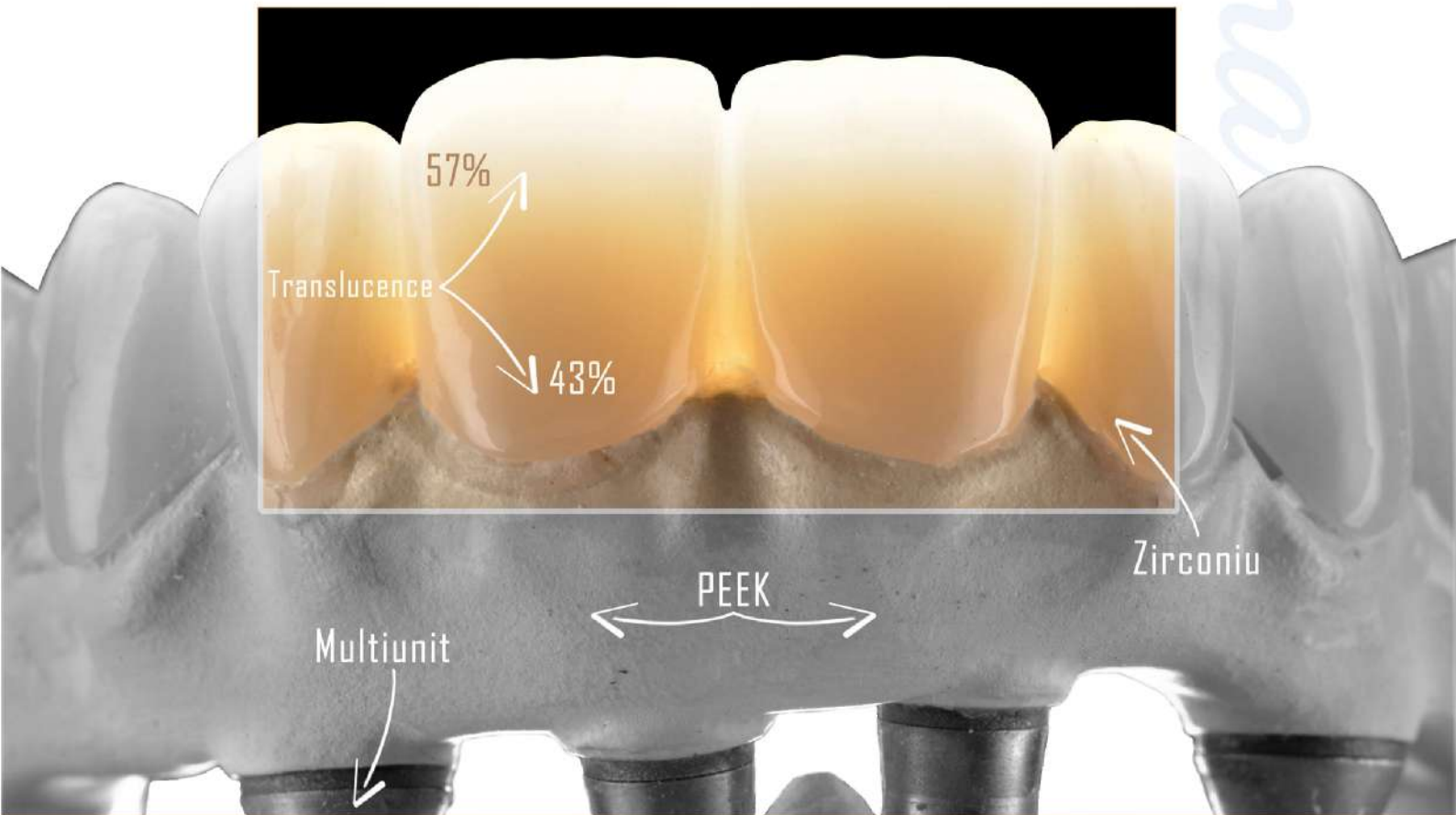
## Clinical case »



**Gabriel Ticulescu** 

Dental Tehnician, Lucian Blaga University Sibiu | 2006 - 2009

Dental Tehnician and Co-Owner, 3DSmartDent Sibiu | 2009 - Present



**3Dpro-zir**<sup>®</sup> x  **Biomic**<sup>™</sup>  
— More than nature —



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