

# **KATANA™ Zirconia Block**

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Consistent strength of 763 MPa  
Color gradient  
For CEREC

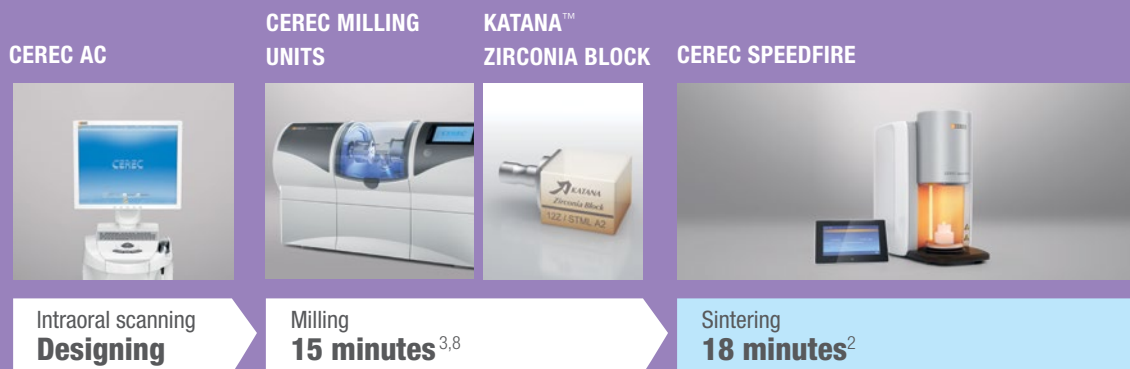


  
MULTI  
LAYERED

# SUPER TRANSLUCENT MULTI LAYERED ZIRCONIA FOR CEREC

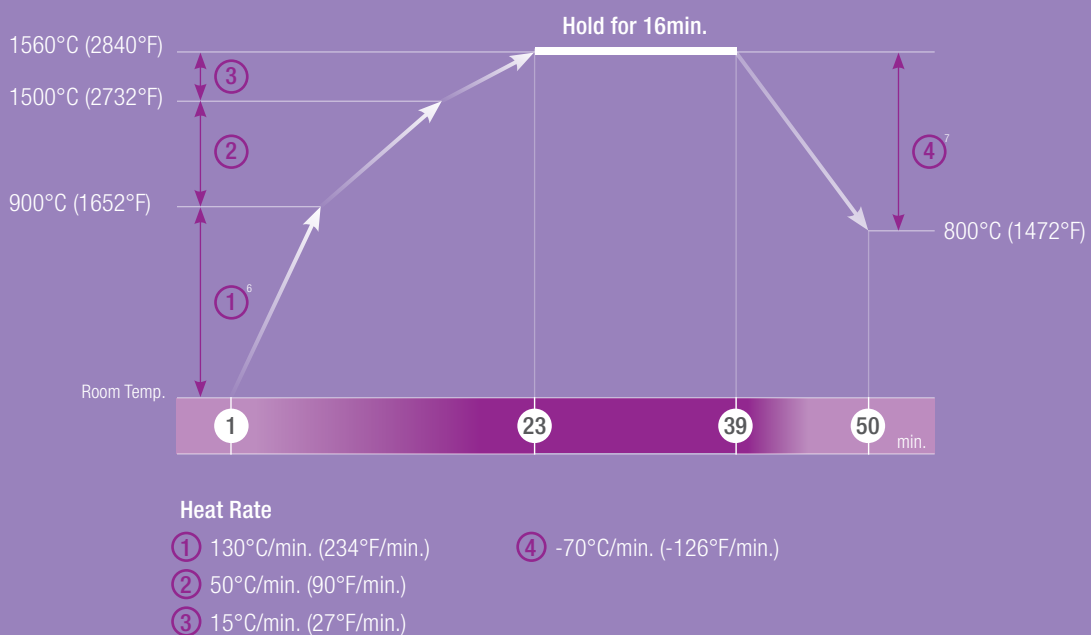
## 18-MINUTE SINTERING WITH SPEEDFIRE

KATANA™ Zirconia Block, the innovative multi layered zirconia block, can be used with Dentsply Sirona's CEREC system<sup>1</sup>. A new 18-minute sintering program<sup>2</sup> has been developed and is now ready to install. The new technology makes it possible to fabricate a full zirconia prosthetic in approx. 35 minutes.



## NOW ADAPTED FOR OTHER SINTERING FURNACES

A new sintering schedule is available for using KATANA™ Zirconia Block with other sintering furnaces than the CEREC SpeedFire such as Programat CS4<sup>4</sup> among others. Optimal translucency can be achieved by sintering the block for approximately 50 minutes.<sup>5</sup>



<sup>1</sup> When using this product, use the following guidelines: CEREC software 4.5.2 or later is required. For 18-minute sintering, CEREC software 4.6.1 or later is required. In the US, CEREC software 4.6 or later is required. <sup>2</sup> For cases where the wall thickness is less than 6mm using dry milling. <sup>3</sup> Dry milling is recommended. If wet milling/grinding is performed by using cooling water contaminated by silica-based glass ceramics (lithium disilicate glass, etc.), the translucency of the zirconia may be reduced after sintering. Before wet milling/grinding, clean the milling/grinding chamber, cooling water tank and filter insert. The cooling water must be changed in order to assure optimum results. <sup>4</sup> Not a trademark of Kuraray Co., Ltd. <sup>5</sup> In case of performing the milling process under dry conditions. <sup>6</sup> In case of performing the milling process under wet conditions, dry the restoration at 200°C (392°F) for 10 minutes in sintering furnace before process step 1. <sup>7</sup> When using Programat CS4, program to open the furnace head at 800°C (1472°F). Take out the prosthetic two minutes after the start of opening. <sup>8</sup> For Single-unit prosthetic.

# POWERFUL, NATURAL, FAST SINTERING.

KATANA™ ZIRCONIA BLOCK



KATANA™ Zirconia Block  
14Z L / STML A2



KATANA™ Zirconia Block  
14Z / STML A2



KATANA™ Zirconia Block  
12Z / STML A2

## COLOR GRADIENT

The multi layered KATANA™ Zirconia Block consists of four layers of zirconia in gradated shades. This product allows the chair side fabrication of natural-tooth-colored prosthetic — eliminating the time-consuming and difficult process of staining the prosthetic.



## POWERFUL

Delivers better mechanical properties than lithium disilicate glass ceramics

## NATURAL

Aesthetic quality mimics natural teeth through enhanced translucency

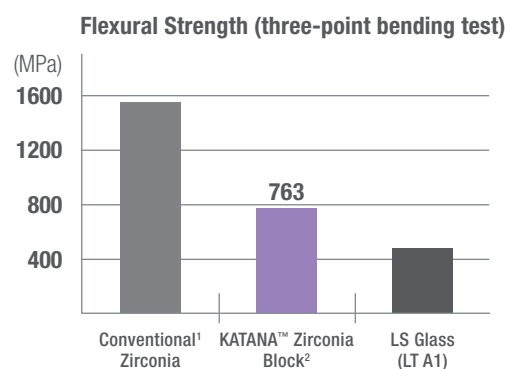
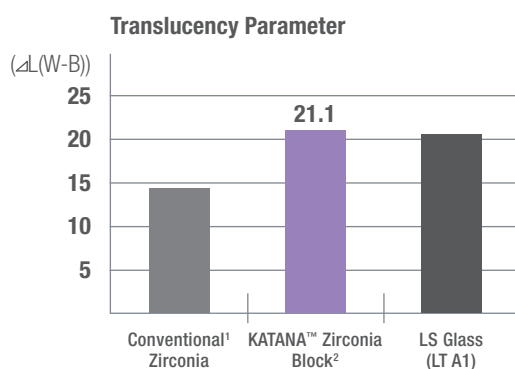
## FAST

Single-visit chairside prosthetics.  
15 min. Milling<sup>4,5</sup> + 18 min.<sup>3</sup> Sintering

With its Superb Mechanical Properties and aesthetic qualities mimicing natural teeth, KATANA™ Zirconia Block brings in the best of both worlds. Super Translucent and high Flexural Strength. Resulting in exceptional aesthetics and better mechanical properties than lithium disilicate glass ceramics.

## NEW COLOR GRADIENT SOLUTION FOR CHAIR SIDE

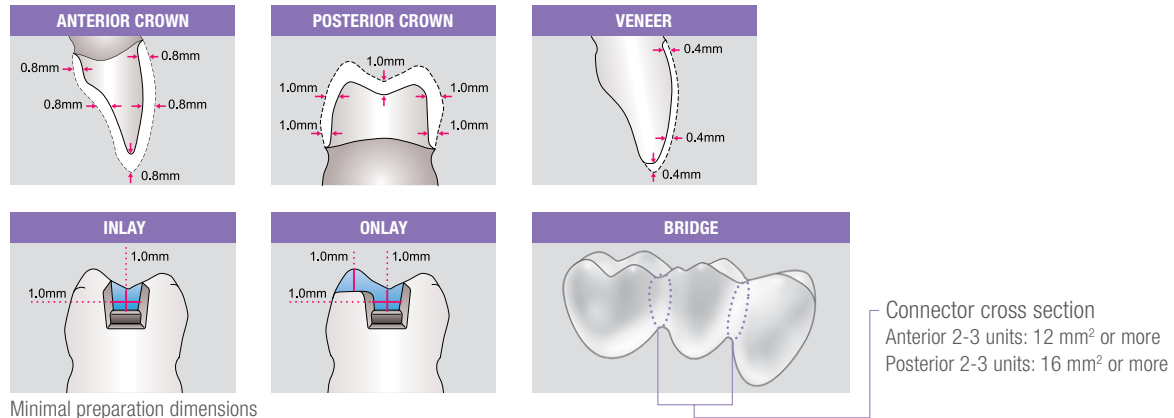
Dentists in the clinical setting often ask themselves to decide which is more important, the mechanical or the esthetic qualities of prosthetics. With its superb mechanical properties and aesthetic qualities that mimic natural teeth, KATANA™ Zirconia Block resolves this dilemma. It provides new solutions to a variety of clinical problems that cannot be addressed by lithium disilicate glass (LS glass) or conventional zirconia.



<sup>1</sup> 3 mol% yttria stabilized zirconia <sup>2</sup> Evaluated by base material (white color) <sup>3</sup> For cases where the wall thickness is less than 6 mm using dry milling. <sup>4</sup> Dry milling is recommended. If wet milling/grinding is performed by using cooling water contaminated by silica-based glass ceramics (lithium disilicate glass, etc.), the translucency of the zirconia may be reduced after sintering. Before wet milling/grinding, clean the milling/grinding chamber, cooling water tank and filter insert. The cooling water must be changed in order to assure optimum results. <sup>5</sup> For Single-unit prosthetics.  
Data source: Kuraray Noritake Dental Inc.

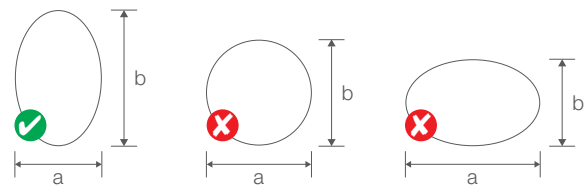
## MINIMIZING TEETH PREPARATION

As an all-ceramic option, zirconia has excellent mechanical properties. KATANA™ Zirconia Block, a highly translucent zirconia, has better mechanical properties than LS glass. This means that it is possible when using KATANA™ Zirconia Block to design a thinner prosthetic than those that can be fabricated using LS glass. This results in both great mechanical properties and beautiful esthetics and less invasive preparations with no conflict!



## THE IMPORTANCE OF CONNECTOR SHAPE AND SIZE

To ensure a long lasting, reliable and strong bridge prosthetic it is essential to have the correct shape and size of connector. The highest force applied to a connector is vertically, from top to bottom. The following diagram shows the best and safest shape to design in order to avoid fractures or chipping.



## MARGINAL FIT

To evaluate the margins of different all-ceramic prosthetics, KATANA™ Zirconia Block and Lithium disilicate glass ceramic crowns were milled (wet milling and wet grinding, respectively) following real clinical conditions. Below figure shows smooth margins in KATANA™ Zirconia Block, whereas irregular and rough margins were visible on the LS glass ceramic.

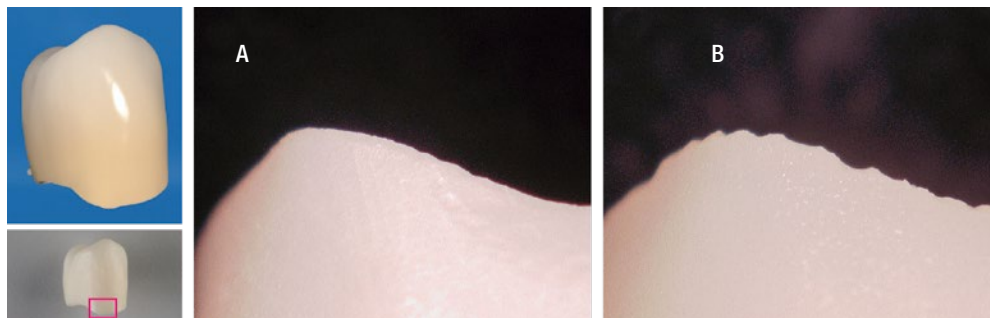


Fig. 1: KATANA™ Zirconia Block (A) shows smooth margins. LS glass ceramic (B) shows irregular margins.

Picture source:  
Kuraray Noritake Dental Inc.

Accurate marginal fit is crucial for the long-term clinical success of a prosthetic. KATANA™ Zirconia Block shows better margins and less chipping than LS glass ceramic, thereby leading to better marginal fit.

## WIDE SHADE SELECTION

### STML

Super Translucent Multi Layered

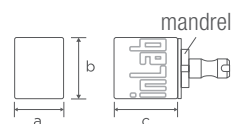


## BLOCK SIZE

		a (height)	b (width)	c (length)
12Z	Before sintering	15.3 mm	19.2 mm	20.2 mm
	After sintering	12.2 mm	15.4 mm	16.2 mm
14Z	Before sintering	17.8 mm	19.2 mm	20.2 mm
	After sintering	14.2 mm	15.4 mm	16.2 mm
14Z L	Before sintering	17.8 mm	19.2 mm	40.0 mm
	After sintering	14.2 mm	15.4 mm	32.0 mm

## OTHER INFORMATION

Composition :  $ZrO_2, Y_2O_3$   
 Thermal expansion coefficient :  $9.8(\pm 0.2) \times 10^{-6}/K$



## RELIABLE ADHESION FOR KATANA™

Our original MDP monomer adheres especially well to zirconia. Reliable bonding of KATANA™ Zirconia Block to the tooth structure can be attained by using PANA VIA™ SA Cement Universal or PANA VIA™ V5, both utilizing MDP monomer technology.



## PANA VIA™ V5

PANA VIA™ V5 is a dual-cure resin cement, which utilizes two primers, one for the tooth and one for the prosthetic. Due to its high bond strength, PANA VIA™ V5 can be used for wide range of indications.

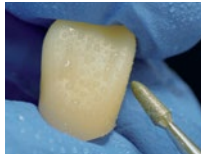


## PANA VIA™ SA Cement Universal

PANA VIA™ SA Cement Universal is a breakthrough in self-adhesive resin cementation. Incorporating both MDP and a unique silane coupling agent - LCSi monomer – PANA VIA™ SA Cement Universal delivers strong, durable chemical adhesion to virtually all materials: porcelain, lithium disilicate, composite resin and even glass ceramics, without the need for a separate primer.



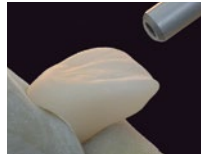
## FINISHING WITH CERABIEN™ ZR FC PASTE STAIN



Create a surface texture over the entire crown



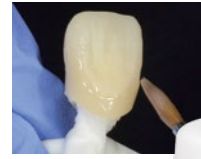
Polish areas which are in contact with opposing tooth\*



Sandblast the surface of the crown (50-70 µm, 0.2 MPa/2 bar)



Clean the prosthetic in alcohol or acetone using an ultrasonic cleaner



Apply glaze and bake



## POLISHING WITH KATANA™ ZIRCONIA TWIST DIA

KATANA™ Zirconia TWIST DIA has an innovative shape with flexible polishing spirals offering various application benefits to the dentist for excellent polishing results.



● **COARSE**  
PRE-POLISHING



● **MEDIUM**  
POLISHING



● **FINE**  
HIGHSHINE POLISHING

## STAINING METHOD

With the help of the 4 shades: Clear Glaze, A+, Value and Grayish Blue, you can reproduce almost all clinical cases in terms of individualization.

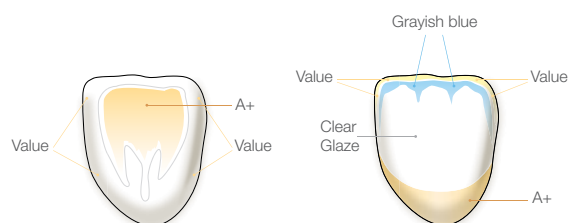
### Working prodedure

At the beginning, Clear Glaze should be applied over the entire surface of the prosthetic. All remaining shades should be brushed gently into the glaze material. The shade A+ has a dual function: on one hand, it is used to increase the chroma content in the cervical area and, on the other hand, it is used to re-trace or darken the fissures. The right combination of Value on the cusp tips and Grayish Blue on the cusp slopes creates an excellent opalescence and translucency effect. The baking should take place only after both - glazing and adding colored paste stains has been done.

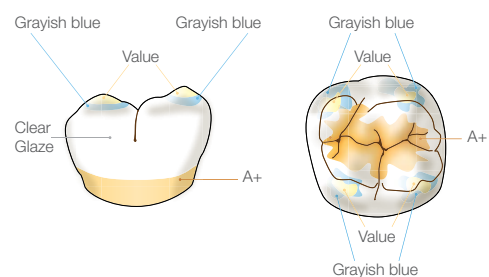
If you use another staining material, please check the suitability of the staining method.

### Example of staining using CERABIEN™ ZR FC Paste Stain

#### Anterior



#### Posterior



\* In case of finishing restoration by polishing only: polish the entire surface. Select KATANA™ Zirconia Block shade one level brighter than the target shade.

## PRODUCT ASSORTMENT

### KATANA™ ZIRCONIA BLOCK 12Z

5 blocks		2 blocks	
#125-5961-EU	NW	#125-5841-EU	B3
#125-5701-EU	A1	#125-5861-EU	C1
#125-5721-EU	A2	#125-5881-EU	C2
#125-5741-EU	A3	#125-5901-EU	C3
#125-5761-EU	A3.5	#125-5921-EU	D2
#125-5781-EU	A4	#125-5941-EU	D3
#125-5801-EU	B1		
#125-5821-EU	B2		
#125-5821-EU	Basic Kit: A1, A2, A3, A3.5, B2		

### KATANA™ ZIRCONIA BLOCK 14Z

5 blocks		2 blocks	
#125-5972-EU	NW	#125-5852-EU	B3
#125-5712-EU	A1	#125-5872-EU	C1
#125-5732-EU	A2	#125-5892-EU	C2
#125-5752-EU	A3	#125-5912-EU	C3
#125-5772-EU	A3.5	#125-5932-EU	D2
#125-5792-EU	A4	#125-5952-EU	D3
#125-5812-EU	B1		
#125-5832-EU	B2		

### KATANA™ ZIRCONIA BLOCK 14Z L

3 blocks		2 blocks	
#125-6592-EU	A1	#125-6722-EU	NW
#125-6602-EU	A2	#125-6632-EU	A4
#125-6612-EU	A3	#125-6652-EU	B2
#125-6622-EU	A3.5	#125-6662-EU	B3
#125-6642-EU	B1	#125-6672-EU	C1
		#125-6682-EU	C2
		#125-6692-EU	C3
		#125-6702-EU	D2
		#125-6712-EU	D3

## YOUR CONTACT

### Kuraray Europe GmbH

BU Medical Products      Phone +49 (0)69 305 35 835  
Philipp-Reis-Strasse 4      E-Mail [centralmarketing@kuraray.com](mailto:centralmarketing@kuraray.com)  
65795 Hattersheim am Main  
Germany  
Website [www.kuraraynoritake.eu](http://www.kuraraynoritake.eu)

- Before using this product, be sure to read the Instructions for Use supplied with the product.
- The specifications and appearance of the product are subject to change without notice.
- Printed color can be slightly different from actual color.

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“CEREC” and “SpeedFire” are trademarks of Dentsply Sirona Inc.



**Kuraray Noritake Dental Inc.**  
1621 Sakazu, Kurashiki, Okayama 710-0801, Japan  
Website [www.kuraraynoritake.com](http://www.kuraraynoritake.com)

