



# Instruction for use

State of the technically instructions: 07/2017

1. **General information:** The K2 Zircon Blanks from Yeti are medical devices for application of dental restaurations. The present documents contains instructions which must be followed to assure a correct use and to ensure the compliance of the conditions. It is necessary to read this document before the first use of the K2 Zircon Blanks.

	Diam.	Color	Item No.	10mm	12mm	14mm	16mm	18mm	20mm	25mm
1.1. Product:	98,5mm	white classic	396.....	-0010	-0012	-0014	-0016	-0018	-0020	-0025
	98,5mm	translucent	397.....	-0010	-0012	-0014	-0016	-0018	-0020	-0025
	98,5mm	extreme translucent	397....	-2010	-2012	-2014	-2016	-2018	-2020	-2025
	95mm	white classic	396....	-1010	-1012	-1014	-1016	-1018	-1020	-1025
	95mm	transparent	397....	-1010	-1012	-1014	-1016	-1018	-1020	-1025
	95mm	extreme translucent	397....	-3010	-3012	-3014	-3016	-3018	-3020	-3025

Diam./mm	Colour	Item No.	A-light	A-dark	B-light	B-dark	C-light	D-light
98,5x14mm	layered	396...	-2014	-3014	-4014	-5014	-6014	-7014
98,5x18mm	layered	396...	-2018	-3018	-4018	-5018	-6018	-7018
98,5x22mm	layered	396...	-2022	-3022	-4022	-5022	-6022	-7022
95x14mm	layered	396...	-2114	-3114	-4114	-5114	-6114	-7114
95x18mm	layered	396...	-2118	-3118	-4118	-5118	-6118	-7118
95x22mm	layered	396...	-2122	-3122	-4122	-5122	-6122	-7122

1.2. **Manufacturer adress:** YETI Dentalprodukte GmbH, Industriestraße 3, 78234 Engen, Germany  
**Phone :** +49 7733-94100 **Fax:** +49 7733-941022 **e-mail-address:** info@yeti-dental.com

## 2. General Instructions

Yttrium stabilized Zircon oxide. The factors of the enlargements are indicated on the Zircon Blank. This information can be varied depending on the lot and should be followed by dental qualified personnel for the dental restoration and requirements in the mouth of the patient. It is a ceramic and from this ceramic will be produced zircon constructions made to measure according to the processing rules of the dentist. This must be machined by a manual or CNC-controlled processing system and comply with the significant requirements of the EU-Directive 93/42. Store frost proof, keep away from impurities and protect from shocks and impacts. After use put the remaining Zircon Blank back to the original packaging.

## 3. Indication for use

Zircon Blanks are used for Milling of digital stl-files to produce Crowns, Bridges and monolithic works. We propose the K2 Zircon Blanks for anterior and posterior restaurations.

Table 1: Indication of use and maximum intermediate elements

	Einzellkronen/Single Crown		Brücken/Bridges	
	Front/Anterior	Seite/Posterior	Front/Anterior	Seite/Posterior
K2 Zircon Blank white classic	X	X	2	2
K2 Zircon Blank translucent	X	X	2	2
K2 Zircon Blank extreme translucent	X	X	1	1
K2 Zircon Blank extr. transl. layered	X	X	1	1

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All K2 Zircon Blanks (except the K2 extr.transl.layered zirconium blanks, which must not be coloured with colouring liquid) are indicated to be colored with Dip & Brush K2 CAD CAM Zircon Liquids. K2 Zircon Blanks should be not used by the General public or over-the-counter.

## 3.1 Operating instructions

The processing of the Zircon Blank requires sufficient experience in the area of dental technology.

Only trained dental technicians with experience have the prerequisites for the appropriate use of this medical device.

The product K2 Zircon Blank is a semi-finished product and must be further professionally processed by approved methods. In case of constructions of bridges, it is recommended to strengthen the connection points with a modeling support (garland).

Please always pay attention to the thickness of the wall.

Extreme translucent und extreme translucent layered K2 zirconium is a highly-translucent zirconium, which is particularly suitable for monolithic works.

We recommend for the processing of the Blank the use of a milling bur with 3 cutting sizes and a diameter of 3 mm. For the finishing use a ball cutter with two cutters and a diameter of 1 mm. Please always enter the correct shrinkage factor.

The K2 Zirconium Blanks extreme translucent layered are particularly suitable for monolithic works. The vertical positioning of the work's height plays a key role regarding the reproduction of the colour. This way, for example, You can reach the colour A3, A2, A1 with a A-Light blank moving from the bottom up. The gradational layer (interlining) allows reaching the smooth colour transition.

The thickness of the blank (14, 18 or 22 mm) provides enough space for the vertical displacement of the work

The thicker the blank You chose is, the easier it will be to position the work in lighter oder darker area .The colour gradient is displayed on the side of the blank.

	A-light	A-dark	B-light	B-dark	C-light	D-light
33% Enamel Layer	A1	A2	B1	B2	C1	D1
33% Gradational Layer	A2	A3	B2	B3	C2	D2
33% Dentin Layer	A3	A4	B3	B4	C3	D3

A1-D4 Vita classical, is a registered trademark of the company Vita Zahnfabrik H. Rauter GmbH & Co. KG

## 3.2 Coloring

Dipping the milled Zircon element depending on the original Instruction with a plastic holder in the color Dip & Brush K2 CAD CAM Zircon Liquid or paint it (infiltration technique). **Never use a metal holding device.** After dipping carefully blow with compressed air on a absorbing paper to remove excess liquid. Let the color surface dry under infrared lamps or with an open door in the oven for 30 minutes. After that, place the Zircon elements in the sinter furnace.

The K2 zirconium blanks extreme translucent layered must not be coloured with the colouring liquid.

## 3.3 Sintering process

Place the colored zirconium elements at room temperature in the sintering bowl filled with sinterballs, than place the bowl in the sintering furnace and follow the parameters. Please consider the following table. The information regarding the speed-sintering is not available at the moment.

Table 2: Recommended Sinter Parameters

White classic	Crown	Heating rate 600°C/h	Temp. max	Settings	Cooling
			1500°C	1h	
	Bridge	300°C/h	1500°C	1h	Furnace Cooling
			1450°C	2h	
translucent & extreme translucent extr. Transl. layered	Crown	600°C/h	1450°C	2h	
	Bridge	300°C/h	1450°C	2h	

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Dental reconstructions produced in this way can not be changed or corrected. The thickness of produced dental frameworks must be at least 0.5 mm. It can be used only in combination with dental ceramic powder suitable for Zircon. Zircon as all other mineral elements is a slightly radioactive material, this radioactivity with 0.3 Bq / tooth is so small that it practically cannot be measured. By comparison, the radioactivity of an adult person is about 6000 Bq.

## 4. Storage and Application information

You can produce dental reconstructions from K2 Zircon Blanks until the product is completely used.

In case of use, impact K2 Zircon Blank can get cracks or breaks, therefore it is recommended to

- store and transport the blanks in original package
- handle with care, avoid banging and knocking
- make visual inspection of complete surface to check if cracks are available. In case of doubt do not use especially after impact (risk of cracks during sintering).

K2 Zircon Blank is porous and has a white color. The K2 Zircon Blank based on Yttrium stabilized Zircon powder.

Unpack the product with care. Take care that it will not be impacted. Avoid shocks. Fix K2 Zircon Blank carefully in the machine, do not clamp to tightly. In this point follow exactly the instructions of the machine producer. Set the values in accordance with processing instructions of K2 Zircon Blank and process the material as mentioned. After sintering cool down to room temperature before continue the process.

Clean Zircon reconstructions with 50 µm aluminium oxide, sand blasting and steamer. Ceramic powder can be now applied. Before application of reconstructions into the patients mouth take care with common clinical practice.

## 5. Contraindications

Are all applications not indicated in Table 1 (Maximum intermediate elements)

## 6. Warning and Precautions

It's important not to exceed 20 000 UPM during the milling process. The processing must be slow and soft to ensure a precise edging.

## 7. Warranty

K2 Zircon Blank has the warranty of 1 year on manufacturing defaults caused by material problems.

The warranty is not applicable in following cases

- in case of improper use or in case of non observance of this instruction for use
- non appropriate usage of K2 Zircon Blank, negligence during production of reconstructions from blank or in case of mistakes during the CAD construction.
- shipment damage during forwarding which was not covered by the forwarding company.

In warranty case Yeti delivers the replacement for the raw (not processed) product free of charge. The replacement takes place only after the damaged item is forwarded to Yeti for detailed examination. No other compensations are possible.

### 7.1 Customer service

In case of possible problems during processing or improvement suggestions, we advise you to note the batch code and to contact Yeti as soon as possible.

### 7.2 Disposal

After the usage of the dental restorations in the patient mouth, the product should be disposed according to local regulations as medical hazardous waste.

## 8. Caution

Federal (USA) law restricts this device to sale by or on the order of a physician or dentist

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## 9. Symbols

	MANUFACTURER
	CE MARK WITH THE NUMBER OF THE NOTIFIED BODY
	OBSERVE THE INSTRUCTION FOR USE
	FOR DENTAL PROFESSIONALS ONLY (USA)
	NON STERILIE PRODUKT
	ITEM NUMBER
	BATCH CODE
	PRODUCTION DATE
	EXPIRE DATE

## Technical specifications:

Form	Size (mm)	Strongness (mm)	Weight (g)
Disk	95.0 or 98.5	10 -12 -14 - 16 -18 -20-25	250 bis 635