Instructions for use

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## Zircut<sup>®</sup> crown cutter

Rev. 12/19

ΕN



Date of issue: 09.09.2013 Last revision date: 17.12.2019



\*Example

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### 1. User group

The instruments may only be used by appropriately qualified personnel in dental surgery or clinics.

- Maxillo-facial surgeons / dental/oral surgeons
- Dentist

### 2. Target patient group

Patients with dental medical indications in the area of the described indications and applications.

#### 3. Materials / Components

Medical grade steel instruments (corrosion-resistant steel, martensitic / CrS) with diamond coating
Even two-layer coating with natural diamond

Additional coating: gold plated working piece and shank

#### 4. Product description

Zircut<sup>®</sup> crown cutters are intended for separating all full-ceramic crowns and bridges, especially zirconia. They offer extremely high cutting efficiency and are suitable for multiple-use. Shape and diamond coating are designed for optimized cooling which can prevent the risk of pulp damage due to heat development during the cutting process.

#### 5. Indication

> Removal of dental restorations (crowns and bridges) made of zirconia or full-ceramics, e.g. lithium disilicate

#### 6. Contraindication

- > The instruments may not be used for any other than the described indication or application area.
- > Excessive temperatures due to insufficient water cooling must be avoided (possible damage of pulp)
- > The indicated speed may not be exceeded (risk of fracture/injury)
- > Jamming or using the instrument as a lever must be avoided (risk of fracture/injury)
- > Contact with soft tissue must be avoided (high risk of injury)

#### 7. Application mode

- > For best results observe the recommended speeds as per the attached chart
- Insert the instrument into the mouth prior to rotation to avoid risk of injury
- Instrument must be rotating before touching the tooth or the dental material
- ▶ We recommend water cooling of min. 150ml/min as the disc diameter is larger than 3,1 mm
- Contact pressure and speed (rpm) depend on the material (tooth hardness, etc.) and the drive unit. Contact pressure and speed (rpm) are inversely related, i.e. the higher the speed the lower the pressure. Please observe the instructions for use and recommendations of the handpiece or turbine manufacturer.
- > Once crown/bridge structures are cut to app. 50% the structures can easily be removed by cracking the crown.

## 8. Speed specification

#### Maximum speed for Softy-longlife crown cutters

Connection type	Instrument	C Speed
RA / CA / HP	Zircut <sup>®</sup> crown cutter	15' – 25.000 rpm

### 9. Frequency benchmark for the application of rotary instruments

The following values serve as a reference only; the actual service life may differ depending on the application, usage and material but must not exceed the maximum number of reprocessing cycles.

Diamond instruments 30x

#### 10. Reprocessing

For reprocessing (cleaning, disinfection and sterilization) see the separate instructions for reprocessing.

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## 11. Storage

- Do not store instruments in plastic pouches (damaged pouches can cause contamination of the instruments)
- Store in dry conditions

## 12. Protective measures / Warnings

Protect yourself by wearing appropriate protective gear (gloves, goggles, mask)

### 13. Residual risks

Possible residual risks are fracture or deformation due to gross faulty handling or contamination due to inappropriate sterilization which may lead to harm of the patient, user or third persons.

The diamonds of the Zircut<sup>®</sup> crown cutters are embedded into a nickel layer. Using diamond instruments whose diamond coating has already been used up or disappeared may result in an intro-oral nickel contamination resulting in possible sensitive reactions of the patient. No allergic reactions have been reported when instruments are used correctly.

In addition, there are the following further residual risks with regard to possible foreseeable application errors, which may result in harm to the patient:

- Incorrect use of speed (too low/too high)
- Contraindicated applications
- Missing / insufficient water cooling

These residual risks are highly unlikely and are not expected in case of appropriate use and handling over the lifecycle of the instrument.

### 14. Traceability

We recommend keeping the original packaging over the entire lifetime of the instrument in order to ensure traceability via the lot number.

### 15. Disposal

Used and/or defective instruments need to be sterilized before disposal to avoid transmission of germs. Please be careful with sharp edges or tips.

After sterilization instruments can be discarded with general clinical waste.

### 16. Notification to competent authorities

Competent national authorities and the manufacturer need to be notified about all serious incidents occurring in the context of the product without delay.



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17. Explanation of symbols					
Pictogram	Standard / Directive	Explanation			
<b>CE</b> 0297	EU RL 93/42/EWG (MDD)	Proof of product conformity with the mentioned European directive/regulation and the identification number of the notified body having confirmed this product conformity.			
	DIN EN ISO 15223-1 (Reference number 5.1.1)	Manufacturer			
	DIN EN ISO 15223-1 (Reference number 5.1.3)	Date of manufacture			
	DIN EN ISO 15223-1 (Reference number 5.4.3)	Observe instructions for use			
	DIN EN ISO 15223-1 (Reference number 5.3.4)	Keep dry			
	DIN EN ISO 15223-1 (Reference number 5.4.4)	Caution!			
	DIN EN ISO 15223-1 (Reference number 5.1.6)	Article number			
	DIN EN ISO 15223-1 (Reference number 5.1.5)	Batch code			
MD	-	Medical device			