

PITT-EASY®

Zirconium Abutment Instructions





| For a naturally perfect result

Introduction

The Zirconium Abutment is a partially standardized zirconium abutment for the Pitt Easy implant system.

This prosthetic construction puts the user in a position to satisfy high esthetic demands placed on implant-borne dentures.

The abutment is constructed in two parts so that the modified zirconium part is bonded with the titanium base in processing.

Important:

The instructions in this brochure and the instructions for use must be read completely prior to processing the product!

We expressly refer to the restrictions for indication of this abutment. These may be found at the end of these instructions on page 6.



| Processing of the Zirconium Abutment

Please read carefully!

The patented Zirconium Abutment consists of the following parts:

- **Abutment base made of titanium** (grade 4) with internal thread for captivity of the screw (*see Fig. 1*)
- **Abutment blank made of highly stable TZP-A zirconium oxide ceramic** (*see Fig. 2*)
- **Retaining Screw for processing the abutment** in the lab or in the practice (Marking: groove on screw shaft) (*see Fig. 3*)
- **Retaining Screw for final insertion** into the patient's mouth (*see Fig. 4*)

The abutment is designed such that the zirconium blank and abutment base are bonded together.

This bonding can be performed depending on processing or individualization (modification) of the abutment blank. The square connection of these two parts to one another makes it possible for them to be bonded together in the versions "A" and "B" (*see Fig. 5, 13, 14*).

Bonding following processing of the zirconium blank offers two decisive advantages:

1. The user is in a position to measure the wall thickness of the blank in the region of the subsequent bond during processing using the relevant measuring tool (caliper) in order to avoid the wall thickness dropping below the minimal wall thickness of 0.5 mm.
2. It is possible to fire the abutment in the ceramic

furnace by applying the suitable ceramic compounds (CTE value of the blank: $10 \times 10^{-6} \text{ K}^{-1}$) – especially in the cervical region in this case – or also by applying shade characterizations.

"Heat treatment" in the ceramic furnace following bonding is not possible, as the recommended adhesive is not sufficiently heat resistant.

The abutment blank must only be grinded with a diamond grinding tool with a turbine under water cooling.

Excessive pressure is to be avoided in this process. Handling is significantly easier if the titanium base is screwed on a model implant with the lab screw or also on the "H.U.G.O." auxiliary tool and the blank is attached onto this (*see Fig. 8*).



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5

(If grinding of the zirconium blank is performed after bonding, it is particularly important to avoid overheating the bonded connection.)

Only the original lab screw (Item No.:90278) is used to fix the abutment during individualization and fabrication of the full ceramic crown (*see Fig. 3*).

The shape of the zirconium blank allows versatile modifications. This means it is possible to produce all angulations between 0° and 25° from the predefined basic shape (*see Fig. 7*).

The circular groove has to be adapted to the patient's individual gingiva contour.

Through reduction or the fusion of suitable ceramic

compounds, it is possible to achieve the required root analog cross section of the abutment. Individual shade adaption is achieved by applying and firing the relevant staining (see Fig. 9). The formation of sharp edges (incisal/occlusal) must be avoided.

For processing, we recommend the "ZrO₂ processing set according to master dental technician Jan-Holger Bellmann"; Komet/Brasseler.

Bonding:

Generally, both of the surfaces to be bonded firstly have to be carefully blasted with 50 µm aluminum oxide. Particularly the hex connection of the titanium base has to be protected against damage in this process. It should be screwed onto a model analog (*see Fig. 10*) or onto the

"H.U.G.O." auxiliary tool for bonding.

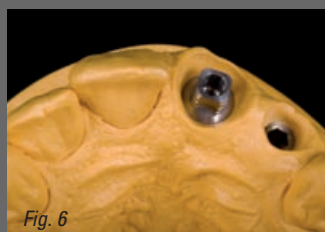
After cleaning with a steam blaster and being left to dry, these surfaces are prepared for bonding with metal/ceramic primer according to the processing instructions. Only opaque adhesives should be used for bonding, as only these are able to prevent the titanium base shining through zirconium abutments when reduced to a minimum thickness.

We recommend the following adhesives, which have been tested by us and by experienced users:

- Panavia F 2.0 OP (opaque); Kuraray (manufacturer approval when used together with the alloy primer and the ceramic primer)

- RelyX™ Unicem white opaque; 3M Espe (manufacturer approval only for lava zirconium oxide to date)
- Multilink® Automix colour opaque; Ivoclar Vivadent (manufacturer approval when used together with metal/zirconia primer)

The specifications for processing the adhesive from the respective manufacturers must be observed here of course.





| Bonding and restrictions for indication

Additional light curing must always be performed!

Only use the lab screw and close off the screw access of the titanium base with wax prior to bonding (*see Fig. 11*).

When bonding, pay attention to the position in "Version A" or "Version B" you previously selected. (*see Fig. 5, 6, 13, 14*).

Cautiously remove all excess adhesive in the screw channel with the aid of a microscope.

After possibly trial fitting the modified abutment, fabrication of the full ceramic crown now follows.

For permanent fixation of the abutment in the patient's mouth, the (intact) original Retaining Screw (Item No.

90276) (*see Fig. 4*) is used and tightened to 25 Ncm with the Torque Wrench (Item No. 90239).

Prior to cementing the full ceramic crown, the screw head should be protected from penetration of cement by suitable means.

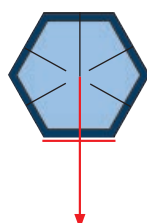
If inadvertent damage to the product should occur while processing the abutment, please contact the manufacturer without delay.

Restrictions for indication:

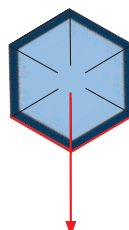
In order to avoid incorrect or excessive loading of the implant-abutment connection, the abutment and the entire prosthetic construction, important aspects of presurgical planning should be considered for an implant restoration to be subsequently provided with a zirconium abutment:

Particularly the implant positions, implant diameter, number of implants and the desired prosthetic design of the suprastructure, in addition to the patient's bite situation, all have to be considered. Please also observe the additional general restrictions for indication of the Pitt Easy implants with 3.25 mm diameter. (refer to the Pitt Easy insertion instructions)

Version „A“



Version „B“



| Zirconium Abutment

Zirconium abutment	Item No.	Impl. Ø mm
The Zirconium Abutment is a partially standardized zirconium abutment for the Pitt-Easy implant system. This prosthetic construction puts the user in a position to satisfy the highest esthetic demands placed on implant-borne dentures.	32579	3.25 mm
	37579	3.75 mm
	40079	4.00 mm
	49079	4.90 mm

Delivery incl. lab screw and retaining screw.



Screws	Item No.	Length mm
Retaining screw	90276	10 mm
Laboratory screw	90278	10 mm

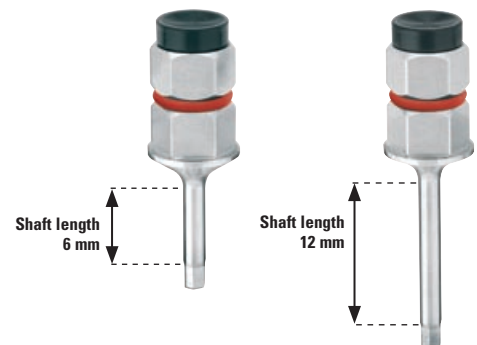


Retaining screw



Laboratory screw
(Marking: groove on screw shaft)

Instruments	Item No.
Hex Driver for torque wrench, shaft length 6 mm	90625
for torque wrench, shaft length 12 mm	90623
for contra-angle	90323



Torque Wrench
adjustable torque

90239



Zirconium Abutment



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The dental implant platform of Sybron Dental Specialties (SDS) brings together three organizations (INNOVA – ORALTRONICS – ATTACHMENTS) that have been leaders in implant manufacturing, design and development since the inception of implant dentistry.

Delivering two of the most respected, leading-edge dental implants on the market – ENDOPORE® and PITT-EASY® – we are giving you access to a world of implant solutions.

Sybron Implant Solutions GmbH

Julius-Bamberger-Straße 8a · 28279 Bremen · Germany
Phone +49 421 43939-0 · Fax +49 421 443936
www.sybronimplants.de · info@sybronimplants.de

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