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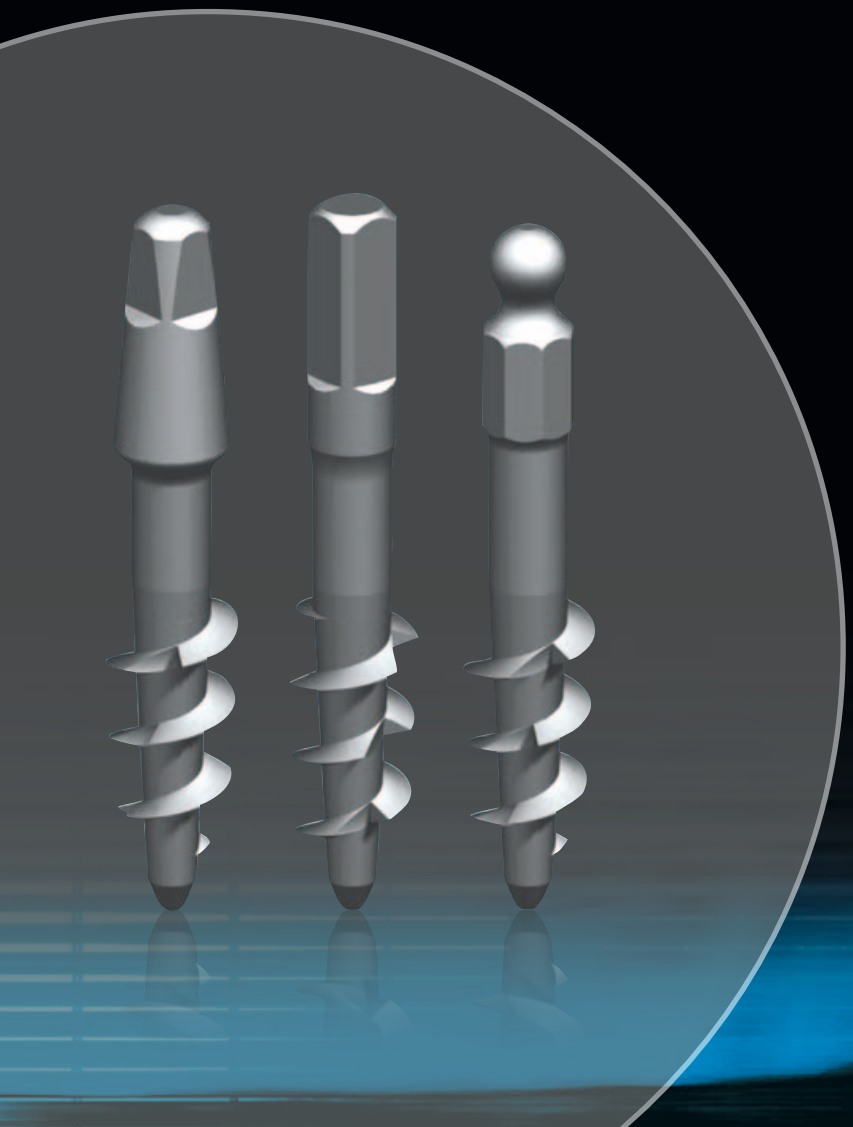

BICORTIC®
Prosthetic Manual

Innovative Präzision
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BICORTIC®-Implant System

The selftapping one-phase implant BICORTIC® made from titanium grade 4, combines diversity and economics.

With three different implant head variations, three diameters and various implant lengths, the BICORTIC® implants allows the user flexibility to react to each prosthetic and implant indication, in order to guarantee an optimal treatment. Listed below please find an overview of treatment possibilities for different standard indications.

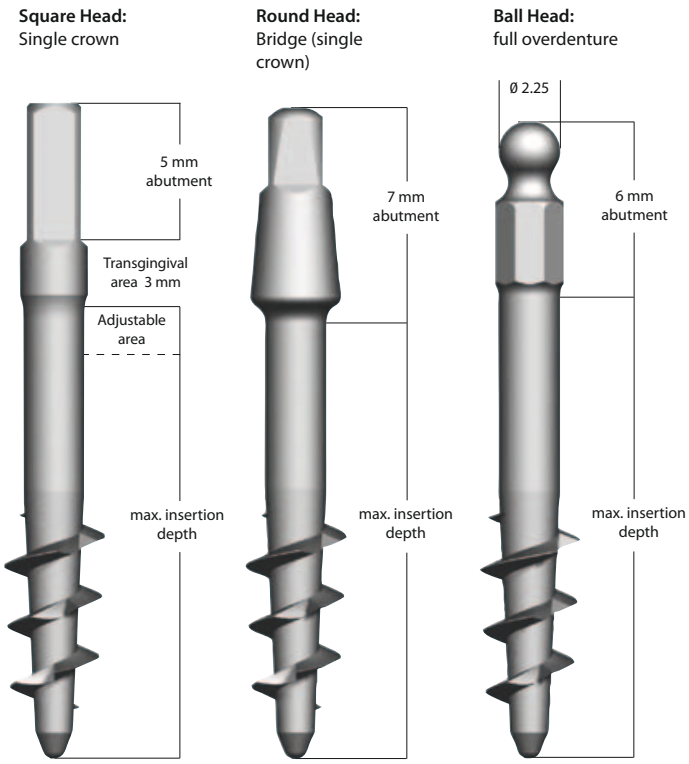
Indications

Three implant head variations are available, according to the application like single crown restaurations, bridges or fixation of full dentures.

Square Head:
Especially designed for narrow interdental gaps, ideally in the small inter-proximal area to the adjacent teeth such as the lower incisors and the upper lateral incisors, the adjustable BICORTIC® implant with Square Head is recommended. Since only the Square Head implant can be adjusted after insertion below the Square Head, the use of this implant type is indicated if there are severe deviations between implant and crown axis. Using the Implant Driver and a suitable holding tool for fixation of the implant, the implant head can be readjusted in the mouth according to the requirements.

Round Head:
The Round Head implant can be used for a normal space situation as single tooth replacement or especially as bridge abutment which facilitates the insertion of the bridge due to the conical shape. The Round Head can be trimmed after the impression is taken in the laboratory. The BICORTIC® implant with Round Head is not adjustable.

Ball Head:
BICORTIC® implants with Ball Head can be inserted as an economic variation after final healing to stabilize a full denture on preferably 4 (interforaminal) implants in conjunction with the Retention Cap Dalbo® Plus elliptic or the O-ring Housing incl. O-ring. The BICORTIC® implant with Ball Head cannot be adjusted.



Prosthetic restoration

Step by Step instruction for prosthetic restoration

Step 1: Impression taking

For the impression taking of the BICORTIC® implants with Square and Round Head corresponding impression copings are available. Due to their retention in removal of the impression tray, they remain in the impression material (Fig. 2+3).
The impression of the BICORTIC® implants with Ball Head is taken directly from the original implant and without using an impression coping.

Note:
The impression coping out of castable acrylic is suitable also as wax up base for the dental laboratory.

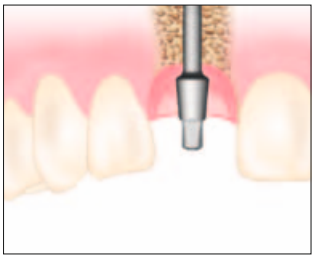


Fig. 1: Single tooth replacement with BICORTIC® implant (Round Head)

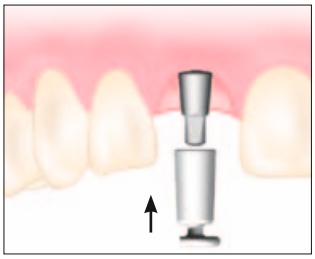


Fig. 2: Insert the impression coping on the head of the BICORTIC® implant

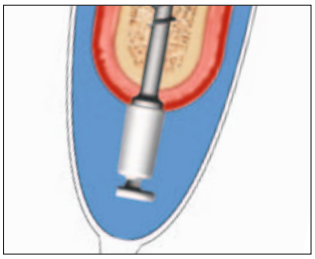


Fig. 3: Impression of the impression coping

Step 2: Model production

The engaging implant analog is positioned in the impression coping sticking in the impression (Fig. 4).

After making a gingiva mask the impression is poured with a class 4 plaster. Once it has set, the impression tray can be removed (Fig. 5). For further usage as a modeling cap, the impression coping is excised with a scalpel from the impression material and prepared for modeling.

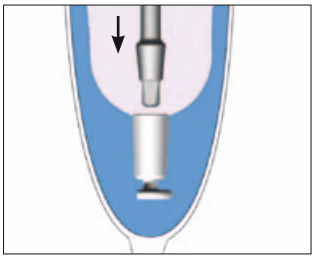


Fig. 4: Positioning of the implant analog into the impression coping sticking in the impression

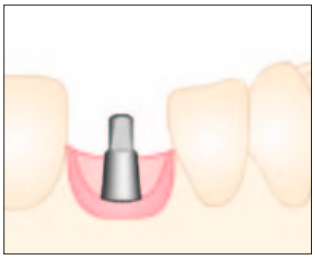


Fig. 5: Exact positioned implant analog in the model

Prosthetic restoration

Step by Step instruction for prosthetic restoration

Step 3: Wax Up

Separated out of the impression material the impression coping is used as a wax up cap set up to implant analog which is in the plaster model (Fig. 6). The retention part can now be removed (Fig. 7).

After the individualization of the gingiva mask, the full wax up (full contouring) of the crown or bridge can be done directly on the modeling cap (Fig. 8). A silicone key should be made completely over the completed wax-up (Fig. 9).

The wax-up is now reduced for ceramic veneering. The silicone key acts as a guide for the desired shape of the framework (Fig. 10).

Note:
As the cap for the Square Head is just beyond the actual length of the square post, this should be reduced accordingly, provided that the crown margin is expected to complete directly with the square head.

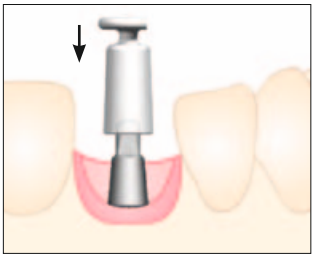


Fig. 6: Setting up the impression coping on the implant analog

Fig. 7: Separating the retention. It now serves as a wax up cap

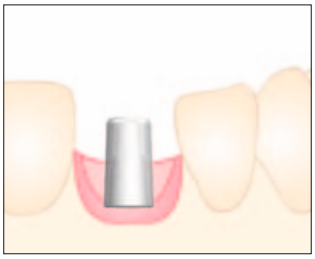


Fig. 8: Cap without retention

Step 4: Investing, casting and finishing

When embedding the reduced wax-up with precision investment, it is particularly important to ensure the careful and bubble-free filling of the inner contour of the wax up cap. After casting and sand blasting, possible small casting pellets are to be removed. In the ensuing try-fit of the casting, especially for single crown the rotation lock has to be considered.

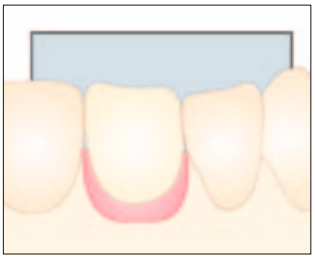


Fig. 9: Silicone key with complete wax-up

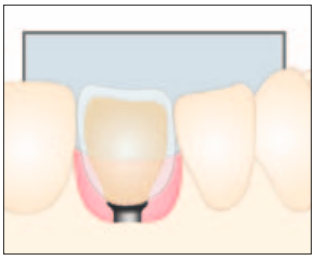


Fig. 10: Reduced wax-up with silicone key before investing, casting and finishing

Prosthetic restoration

Step by Step instruction for prosthetic restoration

Step 5: Ceramic veneering

After the framework try-in the ceramic veneer takes place on the metal framework (Fig. 11 + 12). The gingiva mask facilitates the creation of an aesthetically optimal crown emergence profile.

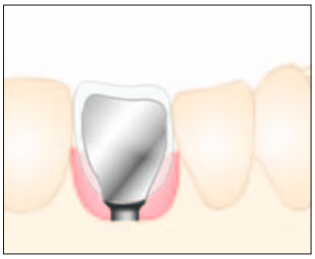


Fig. 11: Metal framework and the veneer ceramic

Fig. 12: Ceramic veneered crown (PFM) on the model

Step 6: Installion

A positioning aid made of acrylic simplifies the definitive incorporating and ensures precise final positioning of the crown (Fig. 13 + 14).

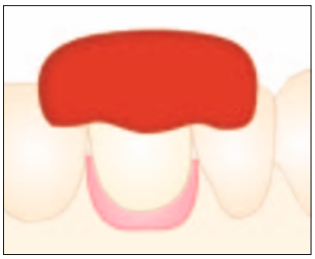


Fig. 13: Positioning aid fixed on the model

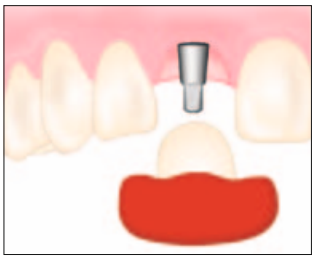


Fig. 14: Integration of the crown with positioning aid

Prosthetic restoration

Modification of the implant abutment

Step 1: Preparation

In the laboratory, a rotation locked transfer coping made of acrylic (eg. GC Pattern Resin LS®) will be prepared and placed on the unprocessed implant analog and on the adjacent teeth (fig. 5). To optimize space the abutment is gradually reduced through the use of the transfer coping (Fig. 16).

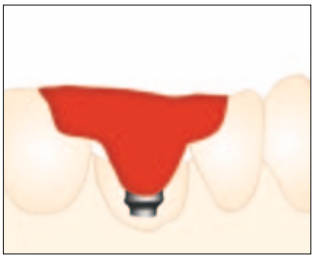


Fig. 15: Individual transfer cap on the unprocessed model implant

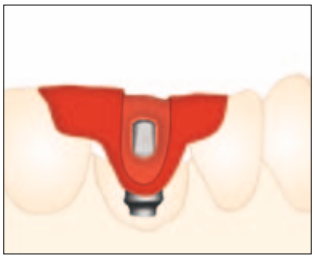


Fig. 16: Reduction of the post including the transfer cap

Step 2:

If necessary, the wax up cap can be individually modified.

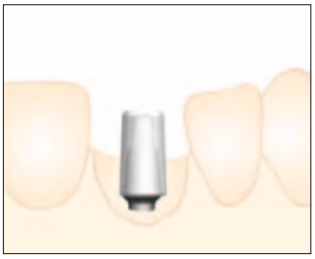


Fig. 17: Modified modeling cap

Step 3:

Using the individual transfer coping modifications of the implant analog abutments can track exactly and be made directly on the original implant abutment which can correspondingly reduced in the patient's mouth by the dentist.
The customized crown can now be cemented.

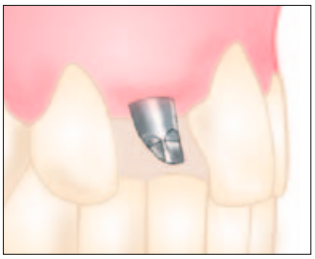


Fig. 18: Modified original implant post

Prosthetic restoration

BICORTIC® implant with Ball Head

Step 1: Impression taking

The impression of the BICORTIC® implants wit Ball Head (Fig. 19) is taken directly from the original implant without using an impression coping (Fig. 20).

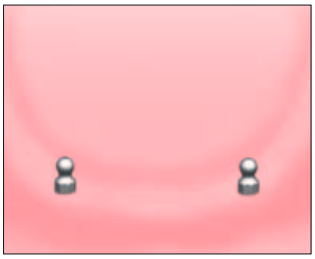


Fig. 19: Two implants with Ball Head for anchoring a full lower jaw overdenture

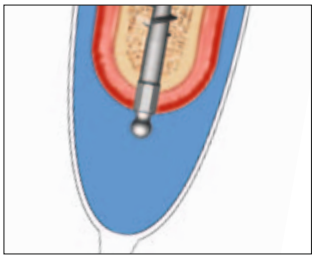


Fig. 20: Direct impression with an individual impression tray

Step 2: Model production

Following the impression, the BICORTIC® implant with Ball Head positioned directly in the impression (Fig. 21).
If necessary a gingiva mask can be created. The impression is casted with plaster (class 4). Once it has set, the impression tray is removed from the model (Fig. 22).

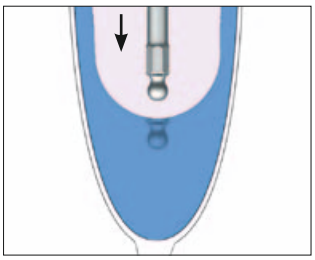


Fig. 21: Positioning the Ball Head implant analog in the impression

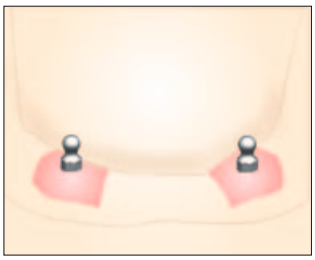


Fig. 22: Model situation after removal of the impression tray

Step 3: Installation

The overdenture is now set in wax and checked in the patients mouth for fit and occlusion.

Step 4: Construction

On the basis of the wax-up construction the overdenture in acrylic is completed step by step according to usual procedures.

Note:
Two different versions are available for overdenture anchoring on BICORTIC implants with Ball Head, whose matrices are fixed by copolymerization of the corresponding implant position:
- The O-Ring Housing incl. O-rings (Fig. 23)
- The Retention Cap Dalbo®-PLUS elliptic with Lamellae Retention Insert (Fig. 24)

Fig. 23: The O-Ring Housing incl. O-ring

Fig. 24: The Retentions Cap Dalbo®-PLUS elliptic with Lamellae Retention Insert

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