



# Actinia<sup>®</sup>





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**Nota Bene:** The described surgical technique is the suggested treatment for the uncomplicated procedure. In the final analysis the preferred treatment is that which addresses the needs of the individual patient.

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## **PREOPERATIVE PLANNING**

Pre-operative planning and precise surgical techniques are mandatory for optimal results. The instructions and the procedure given in the surgical technique to the system must be adhered to. Familiarity with the recommended surgical technique and its careful application is essential to achieve the best possible outcome.

Before surgery a surgical planning with regard to the dimensions of the prosthetic model and the positioning of the implant components in the bone has to be carried out by the surgeon. For this purpose, x-ray templates are available from implantcast GmbH.

## SURGICAL TECHNIQUE

### Femoral neck osteotomy

Due to the preoperative planning the neck of the femur is resected (fig.1).

### Preparation of the acetabular bone

If the preparation of the acetabular bone is necessary, please consider the surgical technique provided in conjunction with the preferred implant.

### Opening of the femoral canal

Please use the special awl to open the intramedullary canal (fig. 2a).

#### Notice:

Start to use the straight awl to open the canal laterally, so the canal is prepared in the length axis of the femur. Alternatively the special box chisel can be used (fig. 2b).

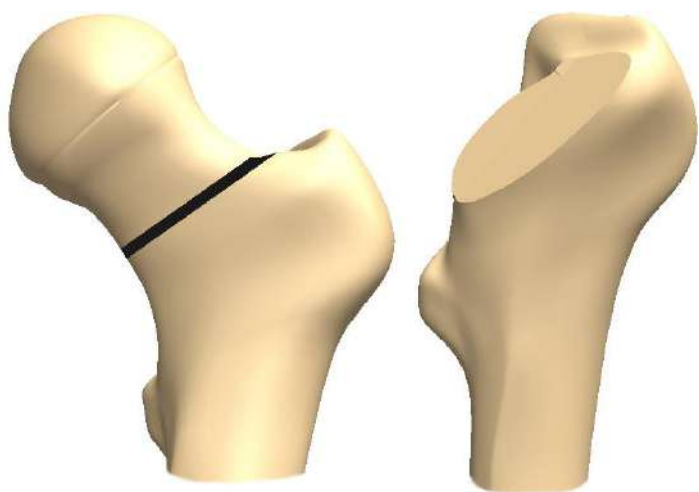


Figure 1



Figure 2a



Figure 2b

## Broaching of the femoral canal

Begin with the smallest broach to prepare the intramedullary bone. If a large sized stem has been planned please begin with a broach which is 3 to 4 sizes smaller than the implant size. Enlarge the bone preparation with the broaches of increasing sizes until you reach the preoperatively chosen stem size (fig. 3a).

### Notice:

The broaches should be impacted until the depth marking on the handle corresponds to the rotational centre of the hip joint (regularly the marking corresponds to the tip of the greater trochanter) (fig. 3b).

If the mark reaches the tip of the greater trochanter a head of the neck length medium will meet the centre of rotation.



Figure 3a

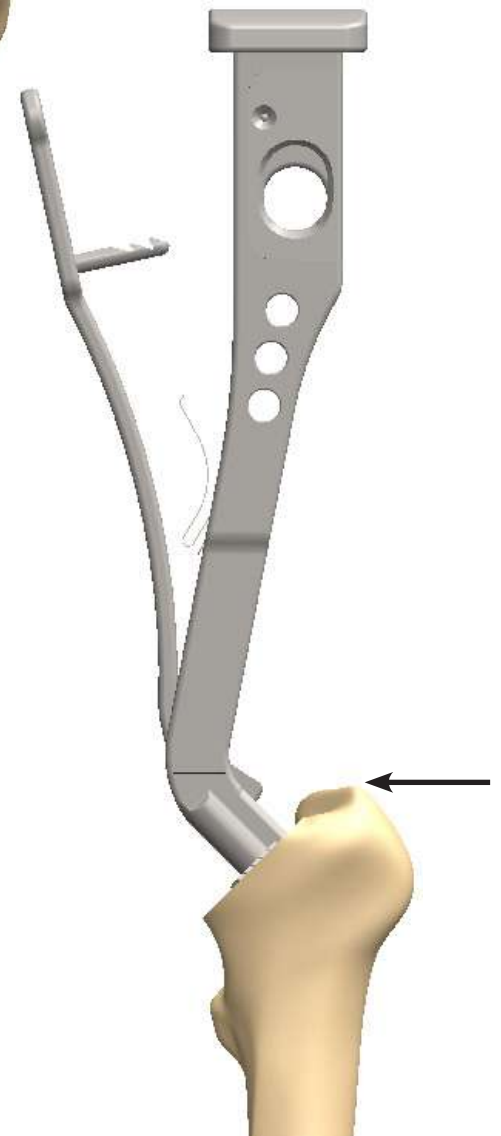


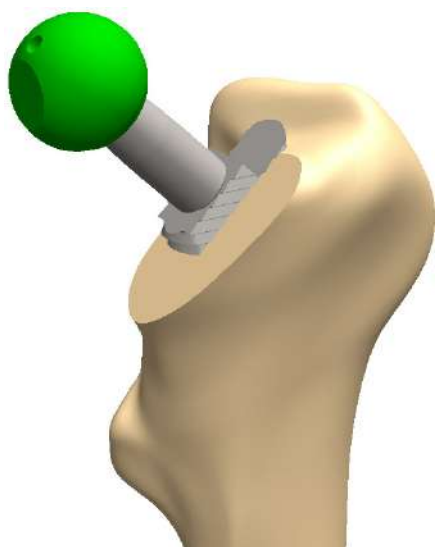
Figure 3b



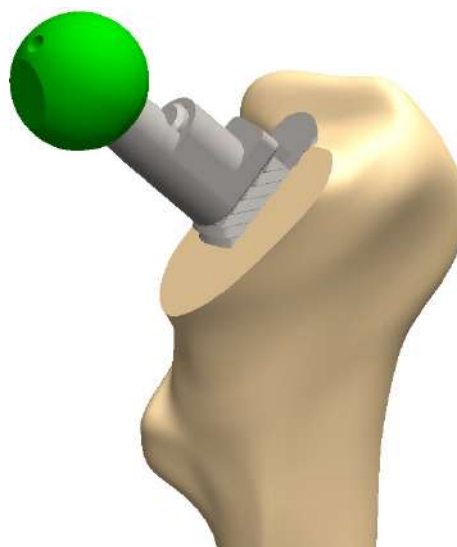
**Figure 4a**



**Figure 4b**



**Figure 4c**



**Figure 4d**

## **Trial reduction**

Remove the broach handle (fig. 4a). Attach the trial neck 'standard' (fig. 4b) and the trial head (28 mm or 32 mm) of the length 'medium' (fig. 4c).

Reduce the joint and check the range of motion as well as the stability of the joint.

If necessary replace the trial neck by the trial neck 'lateralised' or a head of a different neck length and check again the range of motion. If sufficient stabilization is achieved, remove all instruments and trial components (fig. 4d).

## Implantation of the Actinia<sup>®</sup> stem

### Cementless implantation

Choose the stem of the same size as the last broach. Use the stem impactor to insert the cementless Actinia<sup>®</sup> stem (fig. 5a and 5b).

### Cemented implantation

Please also use the same size as the last broach.

Clean and dry the intramedullary canal. Insert the bone cement and impact the cemented stem by using the impactor.

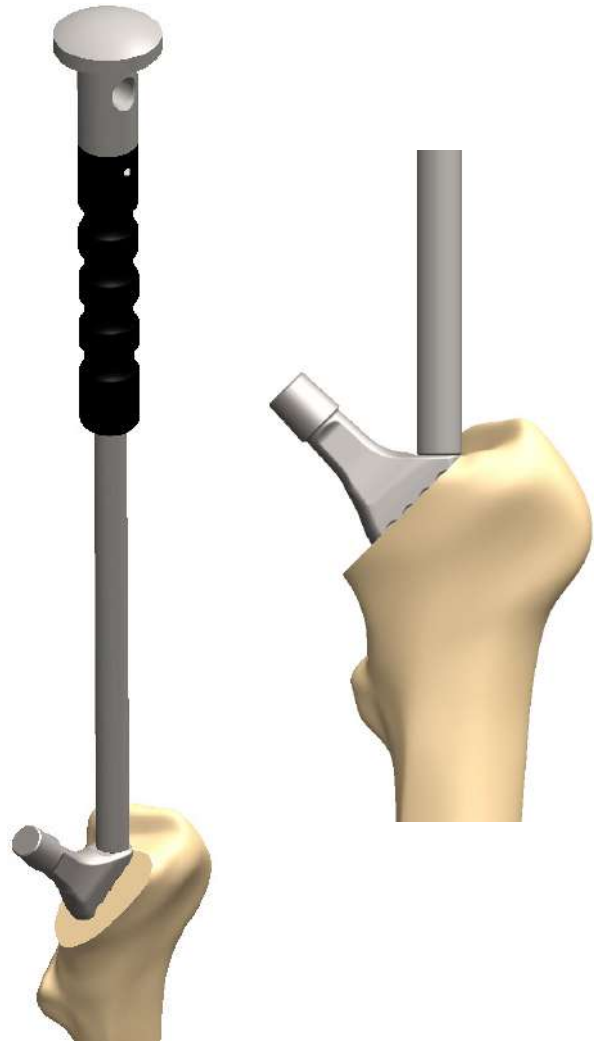


Figure 5a



Figure 5b



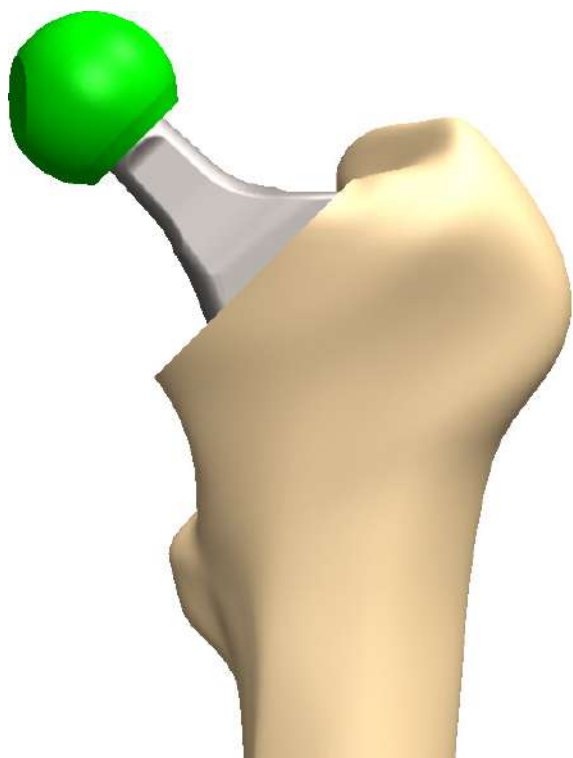


Figure 6

## Impaction of the head

It is optional to perform a final stability and range of motion test (fig 6). Therefore insert a trial head of the formally used neck length. Clean and dry the taper (12/14) and add the original head to the taper of the stem.

Fix the head with the head impactor (fig. 7).

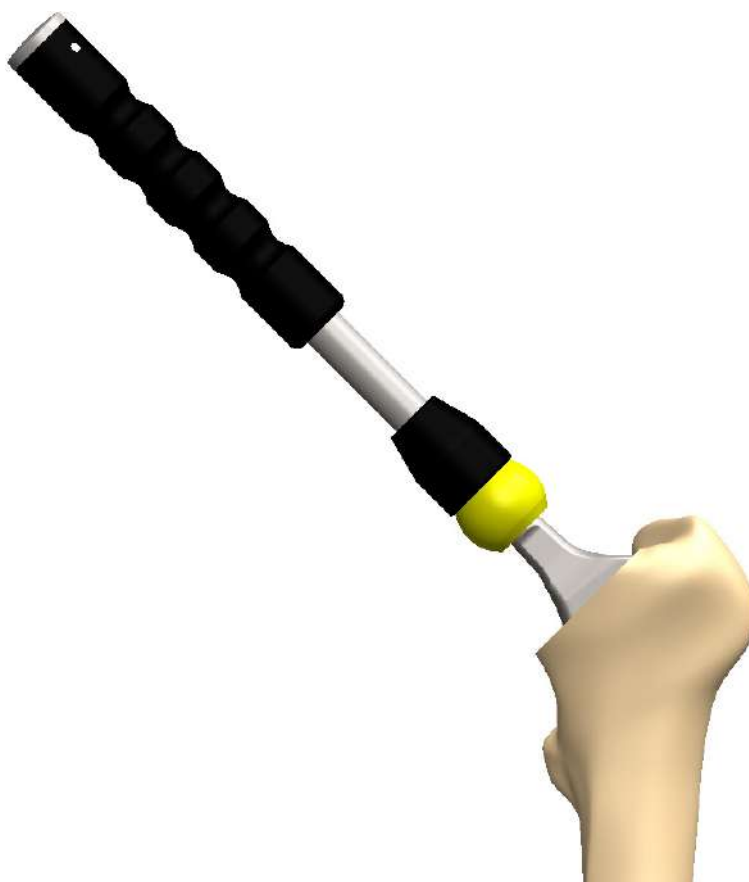


Figure 7



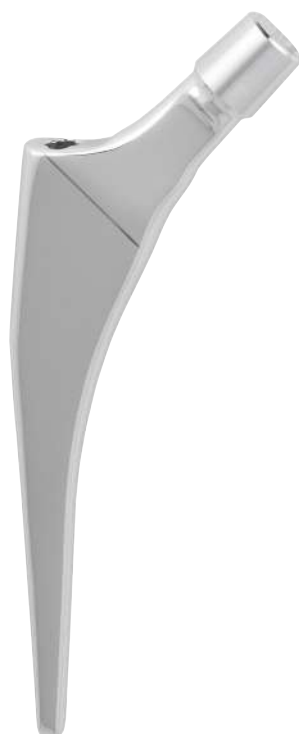
## IMPLANTS



### Actinia® stem, cementless, implaFix® HA-coating

implatan® TiAl<sub>6</sub>V<sub>4</sub>-forged alloy acc. to DIN ISO 5832/3,  
(HA-coating acc. to DIN ISO 5832/2)

standard	size	lateralised
8004-0008	8	-
8004-0009	9	8004-0109
8004-0010	10	8004-0110
8004-0011	11	8004-0111
8004-0012	12	8004-0112
8004-0013	13	8004-0113
8004-0014	14	8004-0114
8004-0015	15	8004-0115
8004-0016	16	8004-0116
8004-0018	18	8004-0118
8004-0020	20	8004-0120



### Actinia® stem, cemented,

implavit® CoCrMo-casting alloy acc. to DIN ISO 5832/4

standard	size	lateralised
8004-0208	8	-
8004-0209	9	8004-0309
8004-0210	10	8004-0310
8004-0211	11	8004-0311
8004-0212	12	8004-0312
8004-0213	13	8004-0313
8004-0214	14	8004-0314
8004-0215	15	8004-0315
8004-0216	16	8004-0316
8004-0218	18	8004-0318
8004-0220	20	8004-0320



## IMPLANTS

**BIOLOX® forte**  
Al<sub>2</sub>O<sub>3</sub> acc. to ISO 6474-1

**ic-head**

**BIOLOX® delta**  
Al<sub>2</sub>O<sub>3</sub> and ZrO<sub>2</sub>

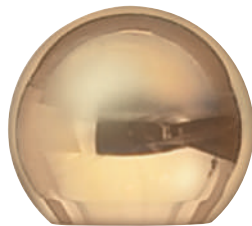


REF	Size	REF
2587-2800	28mm, S	2586-2800
2587-2805	28mm, M	2586-2805
2587-2810	28mm, L	2586-2810
2587-3200	32mm, S	2586-3200
2587-3205	32mm, M	2586-3205
2587-3210	32mm, L	2586-3210
2587-3600	36mm, S	2586-3600
2587-3605	36mm, M	2586-3605
2587-3610	36mm, L	2586-3610

**CoCrMo**  
implavit® CoCrMo-  
wrought alloy  
acc. to DIN 5832/12

**ic-head**

**Titanium**  
implatan® TiAl<sub>6</sub>V<sub>4</sub>  
acc. to DIN/ISO 5832/3  
with TiN-coating

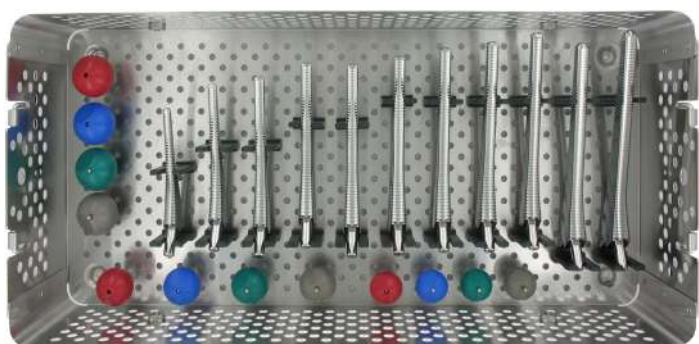


REF	Size	REF
2387-2800	28mm, S	2787-2800
2387-2805	28mm, M	2787-2805
2387-2810	28mm, L	2787-2810
2387-2815	28mm, XL	2787-2815
2387-3200	32mm, S	2787-3200
2387-3205	32mm, M	2787-3205
2387-3210	32mm, L	2787-3210
2387-3215	32mm, XL	2787-3215
-	36mm, S	2787-3600
-	36mm, M	2787-3605
-	36mm, L	2787-3610
-	36mm, XL	2787-3615

## INSTRUMENTS



**8004-9000  
Actinia® container  
top**



**8004-9000  
Actinia® container  
bottom**



## INSTRUMENTS

### Actinia® broach

8004-9008	Size 8
8004-9009	Size 9
8004-9010	Size 10
8004-9011	Size 11
8004-9012	Size 12
8004-9013	Size 13
8004-9014	Size 14
8004-9015	Size 15
8004-9016	Size 16
8004-9018	Size 18
8004-9020	Size 20



### Actinia® broach handle easy lock 8004-9034



### Actinia® broach handle easy lock GIS® 8004-9030 right 8004-9035 left



### cross bar tapered 10mm 7513-9999



### Actinia® coupled impactor 8004-9032



## INSTRUMENTS



**ic T-handle Zimmer-Jakobs**  
4223-0023



**Femoral reamer**  
7516-0005



**box chisel**  
7512-1099



**Actinia® trial neck**  
8004-9028 standard  
8004-9029 lateralised



**trial head snap  
taper 12/14**

7962-2800	28mm short
7962-2805	28mm medium
7962-2810	28mm large
7962-2815	28mm extra large
7962-3200	32mm short
7962-3205	32mm medium
7962-3210	32mm large
7962-3215	32mm extra large



**head impactor**  
7512-4444



**stem impactor**  
3039-0103



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