walk with us

ACTINIA®
Hip Stem

Surgical Technique

implantcast

Actinia®
Hip Stem

Surgical Technique

Table of Content

Note: The surgical technique described herein reflects the author's suggested treatment for uncomplicated procedures. Ultimately, however, the surgeon must decide which procedure is most appropriate and effective for the patient in question. The treatment described must be performed according to the current state of the art. The instruments shown and described with the catalog number in the surgical technique refer to an example size. Further sizes and instrument variants can be found in the appendix to the surgical technique.

Pre-operative planning

Pre-operative planning and precise surgical techniques are mandatory to achieve optimal results. The instructions and the procedure given in the surgical technique for the system must be adhered to. Familiarity with the surgical technique recommended for this system and its careful application are essential to achieve the best possible outcome. Before surgery, the surgeon must conduct surgical planning in terms of the dimensions of the prosthetic model and the positioning of the implant components in the bone.

Implant templates are made available for this purpose:

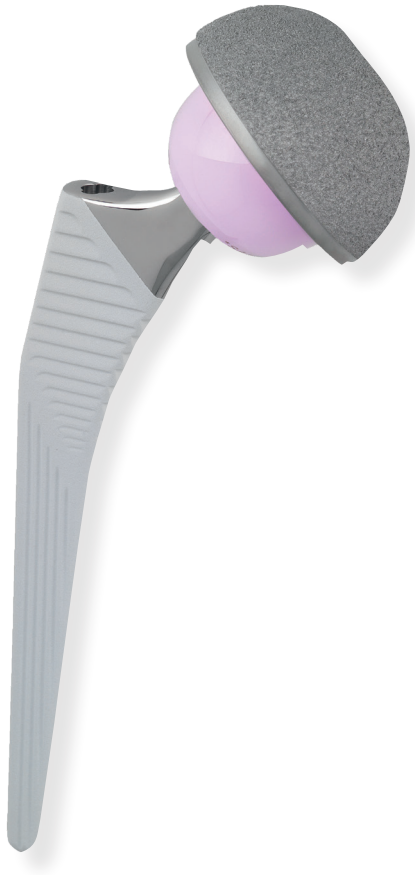
Digital templates: Digital templates are included in the databases of common planning tools. If the desired templates are not included in the software, please request them from the planning tool supplier. **Radiographic templates:** Alternatively, radiographic templates are available in various scale factors, which can be obtained from your local sales partner upon request.

In addition, before surgery it must be ensured that:

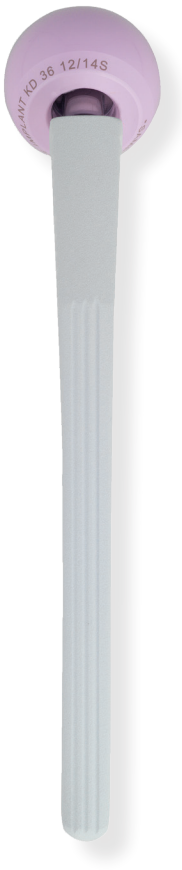
- All necessary components are available. An adequate number of all necessary implant sizes should be available during surgery. It must be determined whether the implantation will be performed with or without cement.
- All instruments necessary are present for surgery. Implants may only be used with the corresponding instrument set of implantcast GmbH. The only exception to this are those instruments that are standardized for surgery.
- the correct surgical instrument sizes are used during surgery, in order to prevent damage to the implant.

Attention: Please note that in the case of sales on approval, the volume of implants and instruments may deviate from the information in the catalog annex of this brochure.

Note: Further information can be found in the last section of this surgical technique or the instructions for use:
09300028GB Cementless Femoral Hip Stems
09300029GB Cemented Femoral Hip Stems



A/P view



M/L view

Surgical Technique

Femoral neck osteotomy

The resection plane is determined in accordance with the OP planning and the femoral neck is osteotomized (**Fig. 1**).

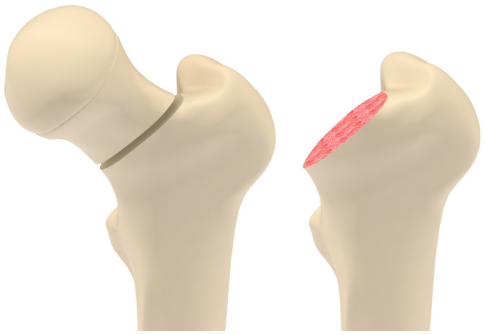


Fig. 1

Preparation of the acetabulum

If preparation of the acetabulum is required, this must be performed in accordance with the surgical instructions for the selected acetabulum components.

Opening of the femoral canal

The medullary space is opened with the reamer (**Fig. 2**).

Note: It is important to start with the reamer from a lateral direction. This ensures that the femoral canal is opened lengthwise along the femoral axis. The special box chisel can be used alternatively (**Fig. 3**).

Fig. 2

Fig. 3

Preparation of the femoral canal

Preparation of the femoral canal starts with the smallest broach or with the broach that is 3 to 4 sizes smaller than the selected implant size (**Fig. 4**). The preparation is performed with broaches of ascending sizes, until the broach conforms to the implant size determined pre-operatively.

Note: The broaches must be introduced until the central point marking on the broach handle is located at the height of the desired position (normally, the central point marking should point toward the tip of the greater trochanter) (**Fig. 5**). In this case, the central point of the medium head is level with the tip of the greater trochanter.

Trial reduction

Remove the broach handle (**Fig. 6**). Next, attach the standard trial neck (**Fig. 7**) and the trial head of medium neck length (**Fig. 8**). Perform a trial reduction and check the leg length and the stability of the joint.

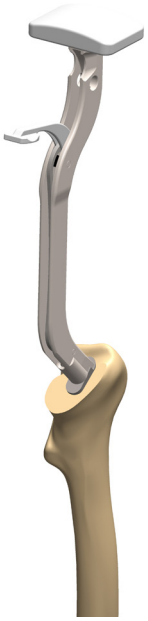


Fig. 4

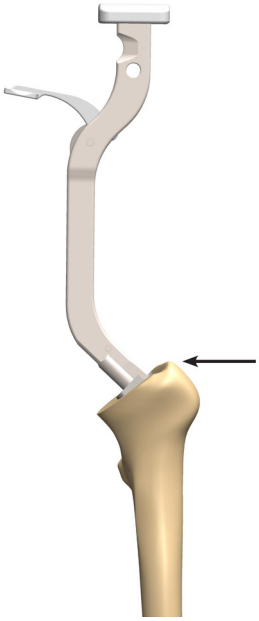


Fig. 5

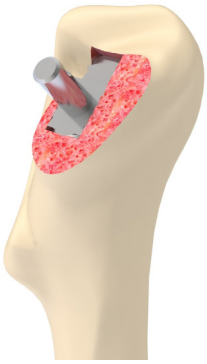


Fig. 6

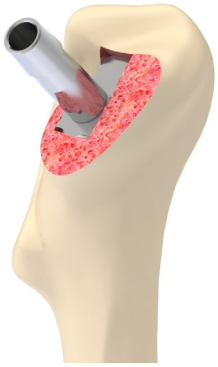


Fig. 7

Fig. 8

If necessary, exchange the trial neck for the lateralized version and exchange the trial head for one of different neck length, to ensure the ideal joint stability (**Fig. 9**).

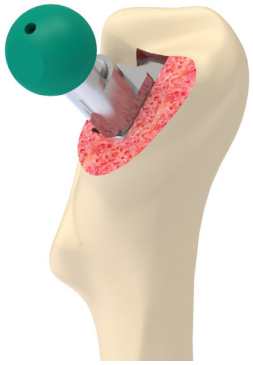


Fig. 9

Implantation of the cementless stem

Select a stem that conforms to the size of the most recently used stem broach and strike the stem with the stem impactor (**Fig. 10**).

Implantation of the cemented stem

For the cemented implantation, use the stem that conforms to the most recently used broach. Flush the medullary space and introduce the bone cement into the previously dried medullary space. Next, impact the cemented stem with the stem impactor.

Note: The guided stem impactor may not be used as a stem extractor.

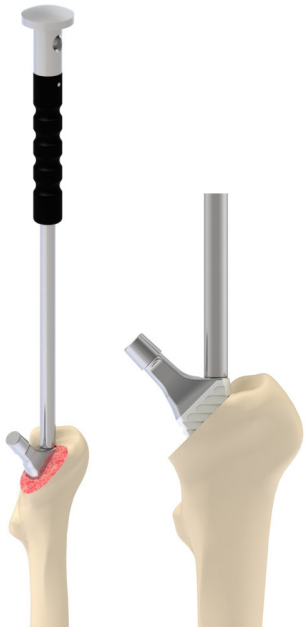


Fig. 10

Insertion of the head

Optionally, a trial reduction can be performed with the trial head once again, to recheck the luxation stability and leg length (**Fig. 11**). Next, the taper (12/14 mm) is carefully cleaned, dried, and fitted with the selected head. The head is fixed on the taper using the head impactor and a few light hammer strikes (**Fig. 12**).

Fig. 11

Fig. 12

Implants

Actinia® hip stem cemented

Material: implavit®; CoCrMo acc. to ISO 5832-4

article number	*length*	*size*
8004-0208	112 mm	sz. 8 standard
8004-0209	123.4 mm	sz. 9 standard
8004-0309	123.4 mm	sz. 9 lateralized
8004-0210	132.9 mm	sz. 10 standard
8004-0310	132.9 mm	sz. 10 lateralized
8004-0211	137.7 mm	sz. 11 standard
8004-0311	137.7 mm	sz. 11 lateralized
8004-0212	142.4 mm	sz. 12 standard
8004-0312	142.4 mm	sz. 12 lateralized
8004-0213	147.1 mm	sz. 13 standard
8004-0313	147.1 mm	sz. 13 lateralized
8004-0214	152 mm	sz. 14 standard
8004-0314	152 mm	sz. 14 lateralized
8004-0215	156.8 mm	sz. 15 standard
8004-0315	156.8 mm	sz. 15 lateralized
8004-0216	161.5 mm	sz. 16 standard
8004-0316	161.5 mm	sz. 16 lateralized
8004-0218	171.1 mm	sz. 18 standard
8004-0318	171.1 mm	sz. 18 lateralized
8004-0220	180.6 mm	sz. 20 standard
8004-0320	180.6 mm	sz. 20 lateralized

Attention: The combination of the Actinia® hip stem with ic heads with neck lengths XXL and XXXL is not authorized. Detailed information regarding combination possibilities are arranged in the instructions for use of the ic heads.

Actinia® hip stem cementless

Material: implatan®; $TiAl_6V_4$ acc. to ISO 5832-3
Coating: implaFix® HA; HA-coating acc. to ISO 13779-2

article number	*length*	*size*
8004-0008	114.5 mm	sz. 8 standard
8004-0009	129.5 mm	sz. 9 standard
8004-0109	129.5 mm	sz. 9 lateralized
8004-0010	139.4 mm	sz. 10 standard
8004-0110	139.4 mm	sz. 10 lateralized
8004-0011	144.4 mm	sz. 11 standard
8004-0111	144.4 mm	sz. 11 lateralized
8004-0012	149.4 mm	sz. 12 standard
8004-0112	149.4 mm	sz. 12 lateralized
8004-0013	154.3 mm	sz. 13 standard
8004-0113	154.3 mm	sz. 13 lateralized
8004-0014	159.4 mm	sz. 14 standard
8004-0114	159.4 mm	sz. 14 lateralized
8004-0015	164.4 mm	sz. 15 standard
8004-0115	164.4 mm	sz. 15 lateralized
8004-0016	169.4 mm	sz. 16 standard
8004-0116	169.4 mm	sz. 16 lateralized
8004-0018	179.4 mm	sz. 18 standard
8004-0118	179.4 mm	sz. 18 lateralized
8004-0020	189.4 mm	sz. 20 standard
8004-0120	189.4 mm	sz. 20 lateralized

Actinia® hip stem coxa vara with collar cementless

Material: implatan®; $TiAl_6V_4$ acc. to ISO 5832-3
Coating: implaFix® HA; HA-coating acc. to ISO 13779-2

article number	*length*	*size*
8004-0909*	129.5 mm	sz. 9 standard
8004-0910*	139.4 mm	sz. 10 standard
8004-0911*	144.4 mm	sz. 11 standard
8004-0912*	149.4 mm	sz. 12 standard
8004-0913*	154.3 mm	sz. 13 standard
8004-0914*	159.4 mm	sz. 14 standard
8004-0915*	164.4 mm	sz. 15 standard
8004-0916*	169.4 mm	sz. 16 standard
8004-0918*	179.4 mm	sz. 18 standard
8004-0920*	189.4 mm	sz. 20 standard

** The marked Actinia® hip stems are not part of the standard and must be ordered separately with appropriate lead time.*

Actinia® hip stem coxa vara cementless

Material: implatan®; $TiAl_6V_4$ acc. to ISO 5832-3
Coating: implaFix® HA; HA-coating acc. to ISO 13779-2

article number	*length*	*size*
8004-0709*	129.5 mm	sz. 9 standard
8004-0710*	139.4 mm	sz. 10 standard
8004-0711*	144.4 mm	sz. 11 standard
8004-0712*	149.4 mm	sz. 12 standard
8004-0713*	154.3 mm	sz. 13 standard
8004-0714*	159.4 mm	sz. 14 standard
8004-0715*	164.4 mm	sz. 15 standard
8004-0716*	169.4 mm	sz. 16 standard
8004-0718*	179.4 mm	sz. 18 standard
8004-0720*	189.4 mm	sz. 20 standard

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Actinia® hip stem with collar cementless

Material: implatan®; $TiAl_6V_4$ acc. to ISO 5832-3
Coating: implaFix® HA; HA-coating acc. to ISO 13779-2

article number	*length*	*size*
8004-0408*	114.5 mm	sz. 8 standard
8004-0409*	129.5 mm	sz. 9 standard
8004-0509*	129.5 mm	sz. 9 lateralized
8004-0410*	139.4 mm	sz. 10 standard
8004-0510*	139.4 mm	sz. 10 lateralized
8004-0411*	144.4 mm	sz. 11 standard
8004-0511*	144.4 mm	sz. 11 lateralized
8004-0412*	149.4 mm	sz. 12 standard
8004-0512*	149.4 mm	sz. 12 lateralized
8004-0413*	154.3 mm	sz. 13 standard
8004-0513*	154.3 mm	sz. 13 lateralized
8004-0414*	159.4 mm	sz. 14 standard
8004-0514*	159.4 mm	sz. 14 lateralized
8004-0415*	164.4 mm	sz. 15 standard
8004-0515*	164.4 mm	sz. 15 lateralized
8004-0416*	169.4 mm	sz. 16 standard
8004-0516*	169.4 mm	sz. 16 lateralized
8004-0418*	179.4 mm	sz. 18 standard
8004-0518*	179.4 mm	sz. 18 lateralized
8004-0420*	189.4 mm	sz. 20 standard
8004-0520*	189.4 mm	sz. 20 lateralized

** The marked Actinia® hip stems are not part of the standard and must be ordered separately with appropriate lead time.*

Actinia® hip stem prox. mod. cementless

Material: implatan®; $TiAl_6V_4$ acc. to ISO 5832-3
Coating: implaFix® HA; HA-coating acc. to ISO 13779-2

article number	*length*	*size*
8005-0009*	129.5 mm	sz. 9 standard
8005-0109*	129.5 mm	sz. 9 lateralized
8005-0010*	139.4 mm	sz. 10 standard
8005-0110*	139.4 mm	sz. 10 lateralized
8005-0011*	144.4 mm	sz. 11 standard
8005-0111*	144.4 mm	sz. 11 lateralized
8005-0012*	149.4 mm	sz. 12 standard
8005-0112*	149.4 mm	sz. 12 lateralized
8005-0013*	154.3 mm	sz. 13 standard
8005-0113*	154.3 mm	sz. 13 lateralized
8005-0014*	159.4 mm	sz. 14 standard
8005-0114*	159.4 mm	sz. 14 lateralized
8005-0015*	164.4 mm	sz. 15 standard
8005-0115*	164.4 mm	sz. 15 lateralized
8005-0016*	169.4 mm	sz. 16 standard
8005-0116*	169.4 mm	sz. 16 lateralized
8005-0018*	179.4 mm	sz. 18 standard
8005-0118*	179.4 mm	sz. 18 lateralized
8005-0020*	189.4 mm	sz. 20 standard
8005-0120*	189.4 mm	sz. 20 lateralized

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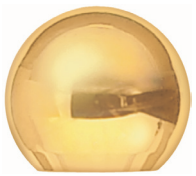
ic-head CoCrMo

Material: implavit®; CoCrMo acc. to ISO 5832-12

article number	*diameter*	*size*	*taper*
2312-2200	22 mm	S	12/14 mm
2312-2205	22 mm	M	12/14 mm
2312-2210	22 mm	L	12/14 mm
2387-2800	28 mm	S	12/14 mm
2387-2805	28 mm	M	12/14 mm
2387-2810	28 mm	L	12/14 mm
2387-2815	28 mm	XL	12/14 mm
2387-3200	32 mm	S	12/14 mm
2387-3205	32 mm	M	12/14 mm
2387-3210	32 mm	L	12/14 mm
2387-3215	32 mm	XL	12/14 mm
2387-3600	36 mm	S	12/14 mm
2387-3605	36 mm	M	12/14 mm
2387-3610	36 mm	L	12/14 mm
2387-3615	36 mm	XL	12/14 mm

ic-head titanium

Material: implatan®; $TiAl_6V_4$ acc. to ISO 5832-3
Coating: TiN-coating



article number	*diameter*	*size*	*taper*
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2787-2805	28 mm	M	12/14 mm
2787-2810	28 mm	L	12/14 mm
2787-2815	28 mm	XL	12/14 mm
2787-3200	32 mm	S	12/14 mm
2787-3205	32 mm	M	12/14 mm
2787-3210	32 mm	L	12/14 mm
2787-3215	32 mm	XL	12/14 mm
2787-3600	36 mm	S	12/14 mm
2787-3605	36 mm	M	12/14 mm
2787-3610	36 mm	L	12/14 mm
2787-3615	36 mm	XL	12/14 mm

ic-head CoCrMo TiN

Material: implavit®; CoCrMo acc. to ISO 5832-12
Coating: TiN-coating

article number	*diameter*	*size*	*taper*
2322-2200	22 mm	S	12/14 mm
2322-2205	22 mm	M	12/14 mm
2322-2210	22 mm	L	12/14 mm

ic-head BIOLOX® forte

Material: Al_2O_3 acc. to ISO 6474-1

article number	*diameter*	*size*	*taper*
2587-2800	28 mm	S	12/14 mm
2587-2805	28 mm	M	12/14 mm
2587-2810	28 mm	L	12/14 mm
2587-3200	32 mm	S	12/14 mm
2587-3205	32 mm	M	12/14 mm
2587-3210	32 mm	L	12/14 mm
2587-3600	36 mm	S	12/14 mm
2587-3605	36 mm	M	12/14 mm
2587-3610	36 mm	L	12/14 mm

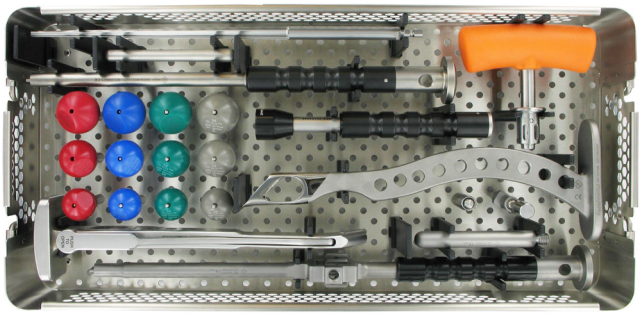
ic-head BIOLOX® delta

Material: Al_2O_3 and ZrO_2 acc. to ISO 6474-2

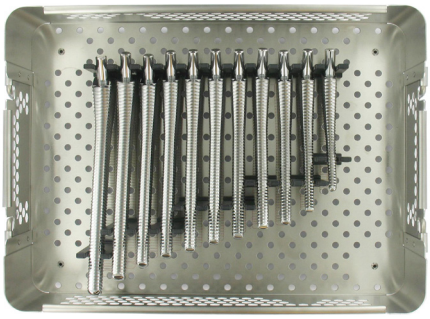
article number	*diameter*	*size*	*taper*
2586-2800	28 mm	S	12/14 mm
2586-2805	28 mm	M	12/14 mm
2586-2810	28 mm	L	12/14 mm
2586-3200	32 mm	S	12/14 mm
2586-3205	32 mm	M	12/14 mm
2586-3210	32 mm	L	12/14 mm
2586-3215	32 mm	XL	12/14 mm
2586-3600	36 mm	S	12/14 mm
2586-3605	36 mm	M	12/14 mm
2586-3610	36 mm	L	12/14 mm
2586-3615	36 mm	XL	12/14 mm
2586-4000	40 mm	S	12/14 mm
2586-4005	40 mm	M	12/14 mm
2586-4010	40 mm	L	12/14 mm
2586-4015	40 mm	XL	12/14 mm

Container

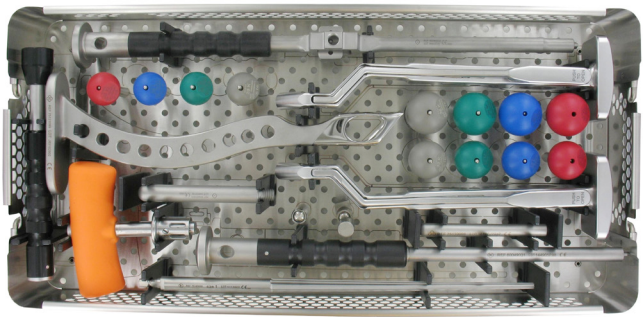
Actinia® container
8004-9000



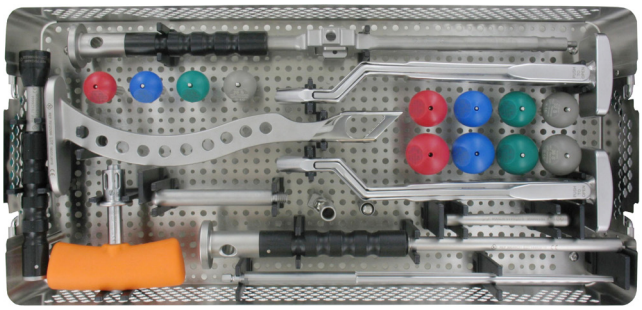
Actinia® broach container
8004-9002



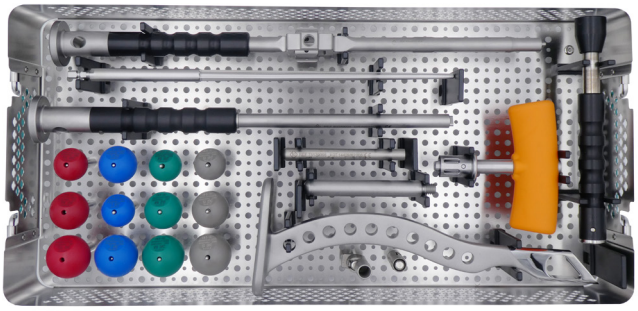
Actinia® container GIS®
8004-9001



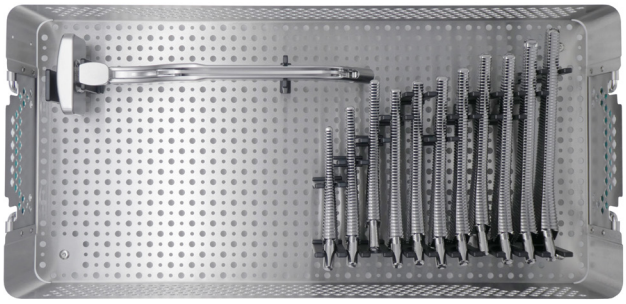
Actinia® GIS® container II
8004-9007



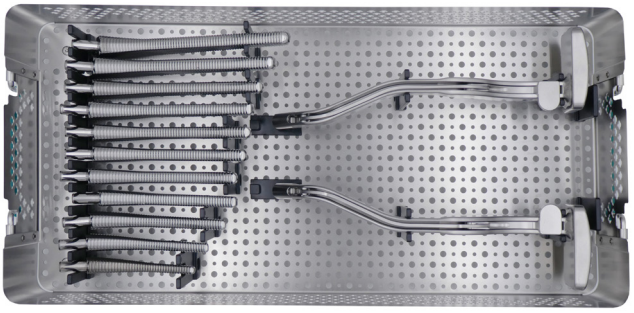
Actinia® container III
8004-9072



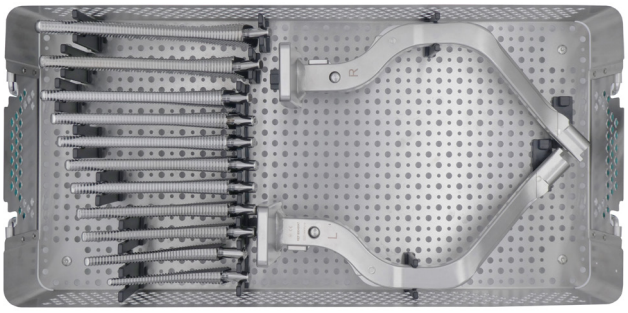
Actinia® broach/broach handle straight container
8004-9074



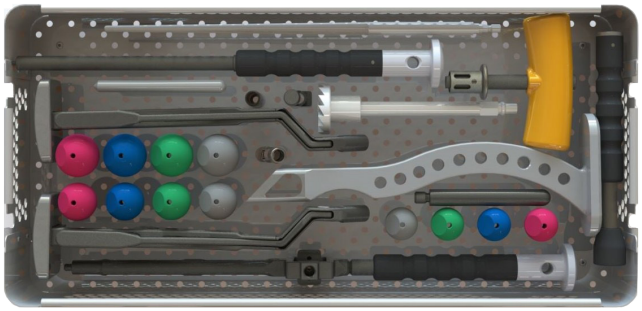
Actinia® broach/broach handle GIS® left/right container
8004-9073



Actinia® broach/broach handle double offset left/right container
8004-9075



Actinia® GIS® container III*
8004-9042



Actinia® broach container prox. mod.*
8004-9025

** The marked container are not part of the standard and must be ordered separately with appropriate lead time.*

Attention: Instruments are delivered non-sterile. The relevant information on processing must be observed.

Instruments

Actinia® container
8004-9000

Actinia® trial neck lateralized
8004-9029

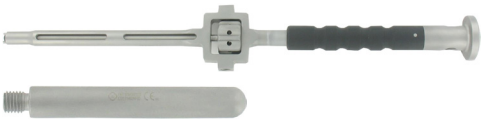
Actinia® broach handle easy lock
8004-9034

alternative instrument:
Actinia® broach handle easy lock straight
8004-9060

Actinia® trial neck standard
8004-9028

femoral reamer
7516-0005 sz. 1 straight

coupled stem impactor
8004-9032
8004-903205 part 5



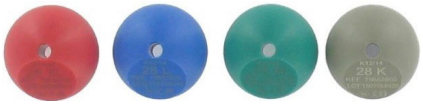
ic-T-handle Zimmer-Jakobs
4223-0023

box chisel
7512-1099

head impactor
7512-4444

trial head

article number	diameter	size	taper
7965-2800	28 mm	S	12/14 mm
7965-2805	28 mm	M	12/14 mm
7965-2810	28 mm	L	12/14 mm
7965-2815	28 mm	XL	12/14 mm
7965-3200	32 mm	S	12/14 mm
7965-3205	32 mm	M	12/14 mm
7965-3210	32 mm	L	12/14 mm
7965-3215	32 mm	XL	12/14 mm
7965-3600	36 mm	S	12/14 mm
7965-3605	36 mm	M	12/14 mm
7965-3610	36 mm	L	12/14 mm
7965-3615	36 mm	XL	12/14 mm



alternative instrument:
trial head snap

article number	diameter	size	taper
7962-2800	28 mm	S	12/14 mm
7962-2805	28 mm	M	12/14 mm
7962-2810	28 mm	L	12/14 mm
7962-2815	28 mm	XL	12/14 mm
7962-3200	32 mm	S	12/14 mm
7962-3205	32 mm	M	12/14 mm
7962-3210	32 mm	L	12/14 mm
7962-3215	32 mm	XL	12/14 mm
7962-3600	36 mm	S	12/14 mm
7962-3605	36 mm	M	12/14 mm
7962-3610	36 mm	L	12/14 mm
7962-3615	36 mm	XL	12/14 mm

cross bar tapered

article number	length
7513-9998	10 mm

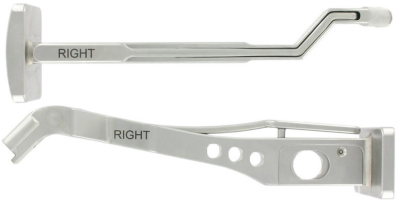
universal stem impactor
8004-9031

Actinia® container GIS®
8004-9001

Actinia® trial neck lateralized
8004-9029

Actinia® broach handle easy lock GIS®

8004-9030	right	
8004-9035	left	
8004-9062	left	*alternative*
8004-9063	right	*alternative*



Actinia® trial neck standard

8004-9028

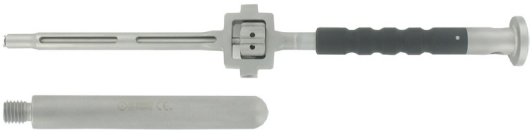
femoral reamer

7516-0005 sz. 1 straight

coupled stem impactor

8004-9032

8004-903205 part 5



ic-T-handle Zimmer-Jakobs

4223-0023

box chisel

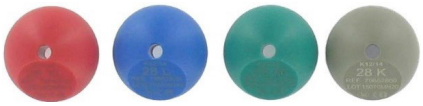
7512-1099

head impactor

7512-4444

trial head

article number	diameter	size	taper
7965-2800	28 mm	S	12/14 mm
7965-2805	28 mm	M	12/14 mm
7965-2810	28 mm	L	12/14 mm
7965-2815	28 mm	XL	12/14 mm
7965-3200	32 mm	S	12/14 mm
7965-3205	32 mm	M	12/14 mm
7965-3210	32 mm	L	12/14 mm
7965-3215	32 mm	XL	12/14 mm
7965-3600	36 mm	S	12/14 mm
7965-3605	36 mm	M	12/14 mm
7965-3610	36 mm	L	12/14 mm
7965-3615	36 mm	XL	12/14 mm



alternative instrument:

trial head snap

article number	diameter	size	taper
7962-2800	28 mm	S	12/14 mm
7962-2805	28 mm	M	12/14 mm
7962-2810	28 mm	L	12/14 mm
7962-2815	28 mm	XL	12/14 mm
7962-3200	32 mm	S	12/14 mm
7962-3205	32 mm	M	12/14 mm
7962-3210	32 mm	L	12/14 mm
7962-3215	32 mm	XL	12/14 mm
7962-3600	36 mm	S	12/14 mm
7962-3605	36 mm	M	12/14 mm
7962-3610	36 mm	L	12/14 mm
7962-3615	36 mm	XL	12/14 mm

cross bar tapered

article number	length
7513-9998	10 mm

universal stem impactor

8004-9031

Actinia® GIS® container II

8004-9007

Actinia® broach handle easy lock GIS®

8004-9030	right	
8004-9035	left	
8004-9062	left	*alternative*
8004-9063	right	*alternative*

Actinia® trial neck snap lateralized
8004-9022
8004-9024 *alternative*

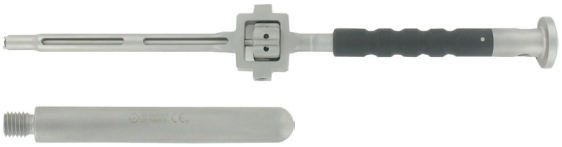
alternative instrument:
Actinia® trial neck lateralized
8004-9029

Actinia® trial neck snap standard
8004-9021
8004-9023 *alternative*

alternative instrument:
Actinia® trial neck standard
8004-9028

femoral reamer
7516-0005 sz. 1 straight

coupled stem impactor
8004-9032
8004-903205 part 5



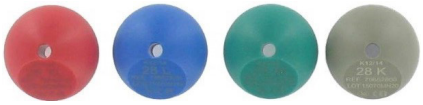
ic-T-handle Zimmer-Jakobs
4223-0023

box chisel
7512-1099

head impactor
7512-4444

trial head

article number	diameter	size	taper
7965-2800	28 mm	S	12/14 mm
7965-2805	28 mm	M	12/14 mm
7965-2810	28 mm	L	12/14 mm
7965-2815	28 mm	XL	12/14 mm
7965-3200	32 mm	S	12/14 mm
7965-3205	32 mm	M	12/14 mm
7965-3210	32 mm	L	12/14 mm
7965-3215	32 mm	XL	12/14 mm
7965-3600	36 mm	S	12/14 mm
7965-3605	36 mm	M	12/14 mm
7965-3610	36 mm	L	12/14 mm
7965-3615	36 mm	XL	12/14 mm



alternative instrument:
trial head snap

article number	diameter	size	taper
7962-2800	28 mm	S	12/14 mm
7962-2805	28 mm	M	12/14 mm
7962-2810	28 mm	L	12/14 mm
7962-2815	28 mm	XL	12/14 mm
7962-3200	32 mm	S	12/14 mm
7962-3205	32 mm	M	12/14 mm
7962-3210	32 mm	L	12/14 mm
7962-3215	32 mm	XL	12/14 mm
7962-3600	36 mm	S	12/14 mm
7962-3605	36 mm	M	12/14 mm
7962-3610	36 mm	L	12/14 mm
7962-3615	36 mm	XL	12/14 mm

cross bar tapered

article number	length
7513-9998	10 mm

universal stem impactor
8004-9031

Actinia® broach container
8004-9002

Actinia® broach

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

Actinia® container III
8004-9072

Actinia® trial neck snap lateralized
8004-9022
8004-9024 *alternative*

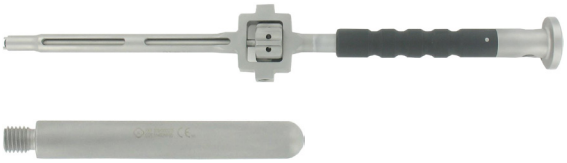
alternative instrument:
Actinia® trial neck lateralized
8004-9029

alternative instrument:
Actinia® trial neck snap standard
8004-9021
8004-9023 *alternative*

alternative instrument:
Actinia® trial neck standard
8004-9028

femoral reamer
7516-0005 sz. 1 straight

coupled stem impactor
8004-9032
8004-903205 part 5



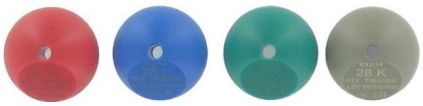
ic-T-handle Zimmer-Jakobs
4223-0023

box chisel
7512-1099

head impactor
7512-4444

trial head

article number	diameter	size	taper
7965-2800	28 mm	S	12/14 mm
7965-2805	28 mm	M	12/14 mm
7965-2810	28 mm	L	12/14 mm
7965-2815	28 mm	XL	12/14 mm
7965-3200	32 mm	S	12/14 mm
7965-3205	32 mm	M	12/14 mm
7965-3210	32 mm	L	12/14 mm
7965-3215	32 mm	XL	12/14 mm
7965-3600	36 mm	S	12/14 mm
7965-3605	36 mm	M	12/14 mm
7965-3610	36 mm	L	12/14 mm
7965-3615	36 mm	XL	12/14 mm



cross bar tapered

article number	length
7513-9998	10 mm

universal stem impactor
8004-9031

Actinia® broach/broach handle straight container
8004-9074

Actinia® broach

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

Actinia® broach handle easy lock straight
8004-9044

Actinia® broach/broach handle GIS® left/right container

8004-9073

Actinia® broach

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

Actinia® broach handle easy lock GIS®

8004-9130 right
8004-9135 left

Actinia® broach/broach handle double offset left/right container

8004-9075

Actinia® broach

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

Actinia® broach handle easy lock double offset

8004-9046 right
8004-9047 left

Actinia® GIS® container III

8004-9042

femoral neck reamer AO

7512-0020

Actinia® broach handle easy lock GIS®

8004-9130 right
8004-9135 left

Actinia® trial neck snap lateralized

8004-9024

Actinia® trial neck snap standard

8004-9023

Actinia® trial neck snap coxa vara

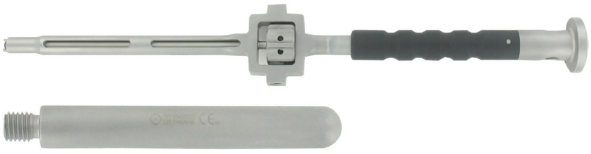
8005-1214

femoral reamer

7516-0005 sz. 1 straight

coupled stem impactor

8004-9032
8004-903205 part 5



ic-T-handle Zimmer-Jakobs

4223-0023

box chisel

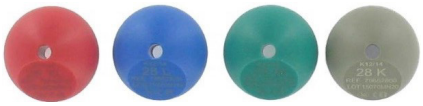
7512-1099

head impactor

7512-4444

trial head

article number	diameter	size	taper
7965-2800	28 mm	S	12/14 mm
7965-2805	28 mm	M	12/14 mm
7965-2810	28 mm	L	12/14 mm
7965-2815	28 mm	XL	12/14 mm
7965-3200	32 mm	S	12/14 mm
7965-3205	32 mm	M	12/14 mm
7965-3210	32 mm	L	12/14 mm
7965-3215	32 mm	XL	12/14 mm
7965-3600	36 mm	S	12/14 mm
7965-3605	36 mm	M	12/14 mm
7965-3610	36 mm	L	12/14 mm
7965-3615	36 mm	XL	12/14 mm



cross bar tapered

article number	length
7513-9998	10 mm

universal stem impactor

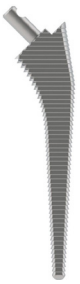
8004-9031

Actinia® broach container prox. mod.

8004-9025

Actinia® prox. mod. broach

article number	size
8004-3009	9
8004-3010	10
8004-3011	11
8004-3012	12
8004-3013	13
8004-3014	14
8004-3015	15
8004-3016	16
8004-3018	18
8004-3020	20



Instructions for Use

Intended purpose

The **Actinia® hip stems cementless** are femoral stems for total hip arthroplasty or hip hemiarthroplasty. They are intended for cementless meta-diaphyseal press-fit anchorage.
The **Actinia® hip stems cemented** are femoral stems for total hip arthroplasty or hip hemiarthroplasty. They are intended for cemented anchoring.

Preoperative Instructions

A preoperative planning is mandatory for optimal results. 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, two kinds of implant templates are available:
Digital templates: Digital templates are included in the databases of common planning tools. For desired templates that aren't in the software, please contact the provider of the planning tool and request these templates.
Radiographic templates: Alternatively, radiographic templates are available in various scale factors, which can be obtained from your local sales partner upon request.
In addition, before surgery it must be ensured that:

- All necessary components are available. An adequate number of all necessary implant sizes should be available during surgery.
- All instruments necessary are present for surgery. The insertion instruments must match the implant being used. Only instruments designed for use with the implant system by implantcast GmbH may be used. An exclusive exception are the standardized instruments used during surgery.
- The surgeon must ensure that the correct surgical instrument sizes are used during the operation, in order to prevent damages to the implant.

Intraoperative Instructions

When removing the implant from the packaging, it must be checked if it matches the description on the packaging (REF, LOT and size).
When removing the implant from the packaging, the corresponding hygiene rules must be adhered to. The user undertakes full responsibility for this. Implants should be implanted immediately after removal from the original packaging.
The surfaces of the implants are extremely sensitive. Implants must not come into contact with objects that could damage the surfaces. Before implantation, the implant must be visually inspected by the user for possible damage. Damaged implants must not be used.
The implant must not be modified in any way! Modifications to the implant may lead to impairment of its function and early failure of the prosthesis. In case of changes or manipulation, the regulatory responsibility is transferred to the person changing or manipulating the components and the manufacturer is no longer liable for the product.
When acrylic bone cement is used, the instructions for use from the cement manufacturer must be followed.
Bone cement must not come into or remain in contact with the articulating surfaces of the implant during or after the surgery.
Bone cement residues that could dislodge over time and get between the articulation surfaces must be removed. Bone cement fragments and residues may lead to increased wear and damage of the implant components.
In cementless applications, a firm fixation of the implant at the time of surgery is essential for the success of the implantation. The cementless components are to be seated in the bone by pressfit, which requires precise surgery and the use of the instruments provided for this purpose.
A reliable fit of taper connections is only possible with completely intact surfaces of the tapers. The taper of the stem must be cleaned and dried before being connected to the taper of the head. Both tapers must be of matching size.
Prior to wound closure, the surgical area including the articulation surfaces of the implant must be thoroughly cleaned to remove any foreign bodies such as bone splinters, bone cement residues and any remaining fragments of a previously revised component or instrument.
It is also recommended that an intraoperative X-ray image be taken and examined for remaining particles, and that they be removed before wound closure.

Postoperative Instructions

Postoperative patient care, patient instructions, and warnings from the attending medical doctor are of the utmost importance. The use of external support of the limb operated on for a limited period is recommended.
Take special care during active and passive movements of the patient's affected limb.
The postoperative therapy should be structured to prevent overloading of the limb operated on, and stimulate the healing process. Regular monitoring of the position and condition of the prosthetic components and the surrounding bone is recommended.

Indications

The decision for joint replacement should be based on careful evaluation. The indication for this type of surgery should only be made when all other conservative or surgical alternatives are less promising than artificial joint replacement.
Risk of postoperative complications can be limited by careful evaluation of the individual anatomical and load conditions, the condition of the soft tissues, and the condition of the bone bed for the implants.
The provision of a hip joint replacement is generally only indicated in patients whose skeleton is fully grown.
The necessary preoperative examinations should be performed by the attending medical doctor before intervention. The examinations depend on the patient's medical history.
Under consideration of these conditions, the following indications apply for hip joint replacement:

- Non-inflammatory degenerative joint disease including osteoarthritis and avascular necrosis
- Post-traumatic osteoarthritis
- Femoral head and femoral neck fractures
- Rheumatoid arthritis

The surgeon decides which prosthesis design is used for the individual patient. This decision depends on several factors, such as the patient's age and weight, bone quality, shape of the bone and deformation of the joint.

Contraindications

The durability of an implant can be limited by biological, material, and biomechanical factors. Therefore, a careful examination of the indications is recommended in overweight patients, in patients with very high joint loads due to high physical activity, and patients under the age of 60.
The hip joint replacement is contraindicated in cases of:

- Allergy to one of the implant materials (the label on the secondary packaging of the respective component indicates the materials used. It is strongly recommended that an allergy test be performed)
- Active infection
- Physiological or anatomic conditions, which preclude or are not expected to maintain an adequate bony support of the implant, or do not allow the implantation of a sufficiently large prosthesis

- Bone tumors in the implant fixation area
- Untreated vascular diseases of the affected limb
- Metabolic disorders that may impair bone formation.
- Severe neuromuscular diseases that strongly influence the affected limb
- For revision stems: one-time septic change

In case of insufficient quantity and quality of bone stock, an alternative prosthetic treatment allowing for sufficient bony fixation should be considered.

Risk Factors

The following risk factors may affect the success of the hip joint replacement:

- Excessive strain on the joint due to strenuous manual labor and/or unsuitable physical activities
- Severe deformities that interfere with the anchoring or with the exact positioning or function of the implant
- Therapies that degrade bone quality
- Muscular insufficiency
- Neuromuscular diseases in the affected extremity
- States which interfere with the patient's ability or willingness to follow the physician's instructions, especially during the healing phase
- Obesity
- Nicotine and/or drug abuse
- Alcoholism
- Prior surgeries on the affected extremity
- Diabetes
- Psoriasis
- Intra-articular injection of corticosteroids
- Condition after an infection

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