

 **Artrosa**

EcoFit[®]

hip stem system




implantcast

SURGICAL TECHNIQUE



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Nota Bene: The author of this technique has outlined the procedure for the uncomplicated surgical scenario. Ultimately however it is the operating surgeon who is best placed to assess and address the individual needs of each patient.

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INDICATIONS/CONTRAINDICATIONS

Indicaciones

La decisión de la sustitución de la articulación debe basarse en una evaluación cuidadosa. La indicación de este tipo de cirugía sólo debe hacerse cuando todas las demás alternativas conservadoras o quirúrgicas son menos prometedoras. El peligro de complicaciones postoperatorias puede limitarse mediante una cuidadosa evaluación del hueso, las condiciones anatómicas y de carga individuales, las condiciones de los tejidos blandos y el estado del hueso malo para los implantes.

La provisión de prótesis es generalmente indicador sólo en pacientes cuyo esqueleto está completamente crecido antes de la intervención, se deben realizar exámenes preoperatorios. Los exámenes dependen del historial del paciente.

Bajo la consideración de esas condiciones el reemplazo de la articulación de la cadera se aplica a las siguientes indicaciones:

- Enfermedad articular degenerativa no inflamatoria, incluida la artrosis y la necrosis avascular,
- Osteoartrosis postraumáticos,
- Fracturas.
- Artritis Reumatoide.

El cirujano decide qué versión de prótesis se utiliza para cada paciente. Esta decisión depende de varios factores, como la edad y el peso del paciente, la calidad del hueso, la forma del hueso y la deformación de la articulación.

Contraindicaciones

La longevidad de un dispositivo ortopédico de reemplazo articular puede verse reducida por aspectos biológicos, características del material y factores biomecánicos. La selección e indicación de los implantes debe controlarse cuidadosamente, especialmente en pacientes con sobrepeso, pacientes con altos niveles de actividad física y pacientes menores de 60 años.

Una contraindicación absoluta es una alergia conocida a cualquiera de los materiales de los implantes utilizados. En la etiqueta del embalaje secundario de cada componente se especifica el material utilizado. Indicación de las pruebas, se recomienda encarecidamente realizar una alergia perdida. Otras contraindicaciones absolutas son la infección y la osteomielitis.

Las contraindicaciones relativas son:

1. Condiciones anatómicas, que impiden o no se espera que mantengan un soporte óseo adecuado del implante o no permiten la implantación de una prótesis suficientemente grande.

Insuficiente cantidad y calidad del reserva óseo, por ejemplo, como resultado de osteoporosis u osteomalacia .

Enfermedad vascular de la extremidad afectada.

2. Trastornos metabólicos que pueden afectar a un anclaje estable del implante

3. Tumores óseos en la zona de fijación del implante.

4. Enfermedades neuromusculares que puedan afectar a esa extremidad afectada.

5. Falta de cumplimiento del paciente

6. Afecciones mentales o neurológicas que afecten a la capacidad o voluntad de los pacientes para cumplir con las instrucciones médicas, especialmente durante la fase de curación.

7. Obesidad

Factores de riesgo

Los siguientes factores de riesgo pueden afectar al éxito de la sustitución articular:

- Abuso de nicotina y/o drogas
- Alcoholismo
- Insuficiencia muscular
- Deformidades severas, que conllevan una alteración del anclaje, de la posición exacta o de la función del implante.
- Carga excesiva de la articulación operada por los trabajos físicos fuertes y/o deportes inadecuados.
- Terapias que puedan afectar a la calidad del hueso.

Instrucciones postoperatorias

Las instrucciones y advertencias postoperatorias son de suma importancia.

Se recomienda el uso de un soporte externo de la extremidad operada durante un periodo de tiempo limitado.

For more information, please refer to the instructions for use.

Item Number: 09300029GB „Cemented Femoral HipStems“

Item Number: 09300028GB „Cementless Femoral HipStems“

PREOPERATIVE PLANNING

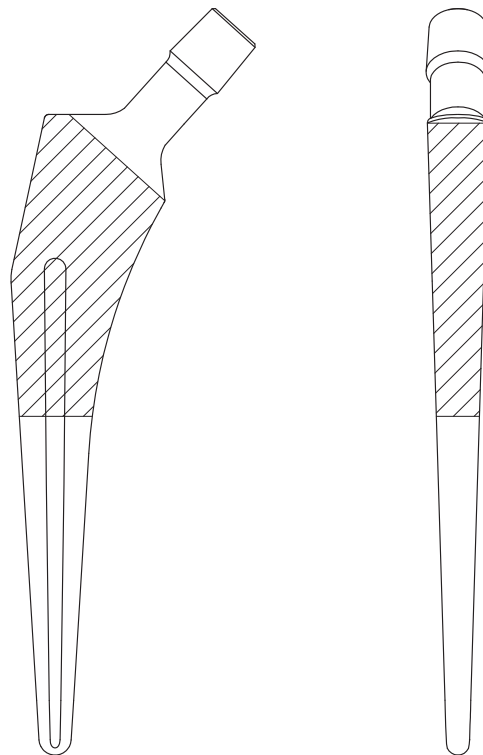
Preoperative planning and precise surgical techniques are mandatory for optimal results. The instructions and the procedure given in the surgical technique to the system must be adhered to. Familiarity with the recommended surgical technique and its careful application is essential to achieve the best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

Digital templates: Digital templates are included in the data base of the common planning systems. For missing templates, please contact the provider of the planning software and request for these templates.

Radiographic templates: Alternatively radiographic templates are available in various scale factors, which can be obtained from your local representative.



view A/P and M/L

EcoFit® hip stem cementless cpTi std.

Further prior to surgery the following should be ensured:

- all needed components are available during surgery. An adequate number of various implant components should be available for surgery. It should be determined whether the implantation should be done with or without the use of bone cement.
- all instruments for the implantation are present and are matching the corresponding implants. The insertion instruments must be adapted to the implant. The implants may only be used with the instruments provided by implantcast GmbH. An exception are exclusively the standardized instruments used during surgery.

The correct sized instruments are used during surgery to prevent damage to the implants.

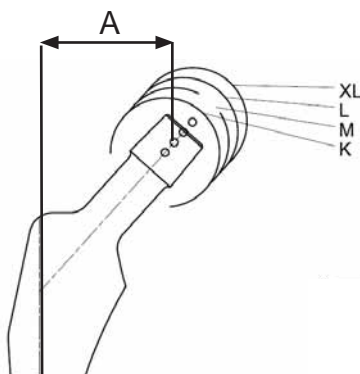
DESIGN CHARACTERISTICS



standard and lateralised version



postoperative X-Ray EcoFit® stem



Offset measurement (A) EcoFit® stem in mm

size	6,25	7,5	8,75	10	11,25	12,5	13,75	15	17,5	20
standard	34,5	35,2	35,8	36,5	37,1	37,7	38,3	39	40,2	41,5
lateral	42,3	43	43,6	44,3	44,9	45,5	46,1	46,8	48	49,3

El sistema de cadera EcoFit-total incluye una completa variedad de vástagos de cadera cementados y no cementados para el tratamiento primario de la articulación de la cadera.

Además del vástago estándar, también están disponibles vástagos lateralizados (ángulo CCD: 138°). El instrumental modular permite la adaptación a la anatomía de los pacientes y permite al cirujano personalizar el tratamiento a las necesidades del paciente. El sistema incluye 10 tamaños de vástagos no cementados y 6 tamaños de vástagos cementados.

Los vástagos no cementados están disponibles con recubrimiento Implafix cpTi y con recubrimiento Implafix HA (hidroxiapatita). Los vástagos cementados están disponibles en versión mate y altamente pulida.

La elección del material para cada versión se basa en el resultado científico de la artroplastia de cadera real. Por ello, los vástagos no cementados están hechos de implatan TIAI,V, los vástagos cementados están hechos de implavit® CoCrMo. En cuanto a la variedad, la modularidad y el precio, se han tenido en cuenta aspectos económicos.

SURGICAL TECHNIQUE

Femoral neck osteotomy

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

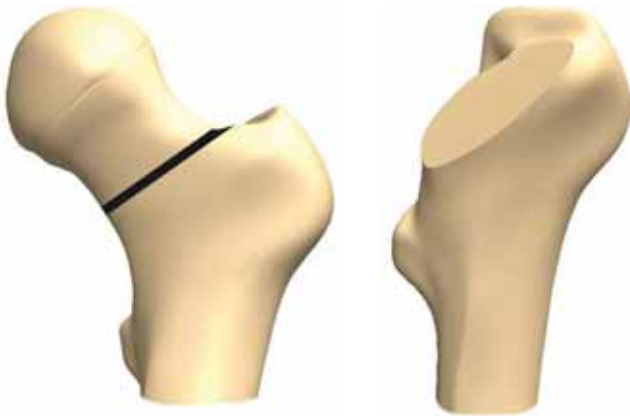


Figure 1

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).



Figure 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 2b

SURGICAL TECHNIQUE

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.

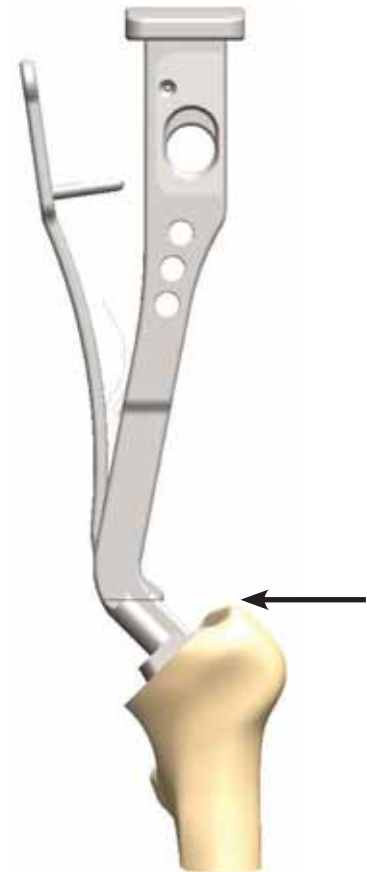


Figure 3b



Figure 3a

Old design



New design

SURGICAL TECHNIQUE

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).



Figure 4a



Figure 4b



Figure 4c



Figure 4d

SURGICAL TECHNIQUE

Implantation of the EcoFit® stem

Cementless implantation

Choose the stem of the same size as the last broach. Use the stem impactor to insert the cementless EcoFit® stem (Fig. 5a and 5b).

Cemented implantation

Please use the stem which is one size smaller than the last broach.

Please consider the table below to choose the cemented stem of the appropriated size.

broach	cemented stem
7,50mm	6,25mm
8,75mm	7,50mm
10,00mm	7,50mm
11,25mm	10,00mm
12,50mm	10,00mm
13,75mm	12,50mm
15,00mm	12,50mm
17,50mm	15,00mm
20,00mm	17,50mm

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

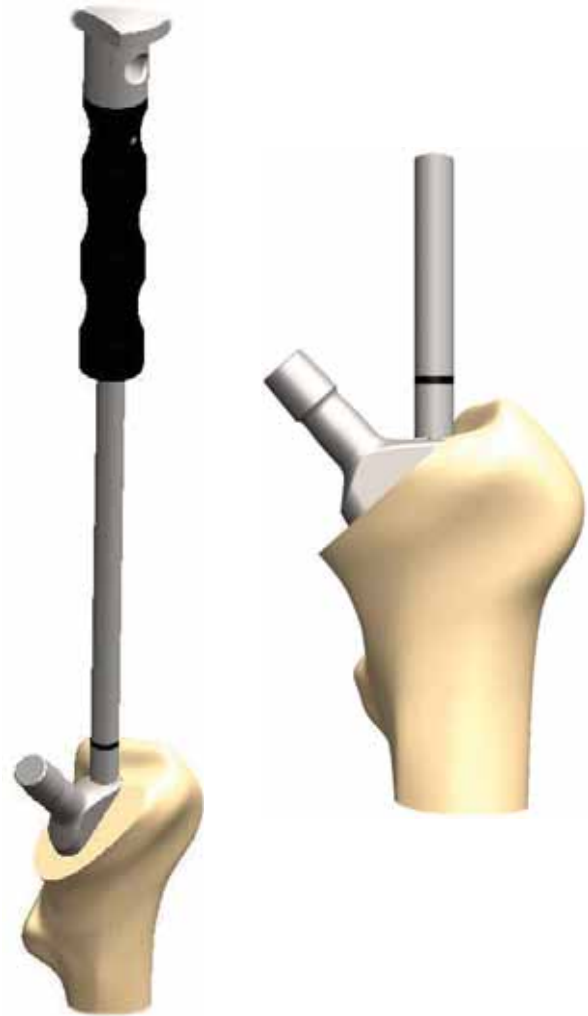


Figure 5a



Figure 5b

SURGICAL TECHNIQUE



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 tester of the stem.

Use the head implants with a few strokes of a mallet to secure the taper connection (Fig. 7).

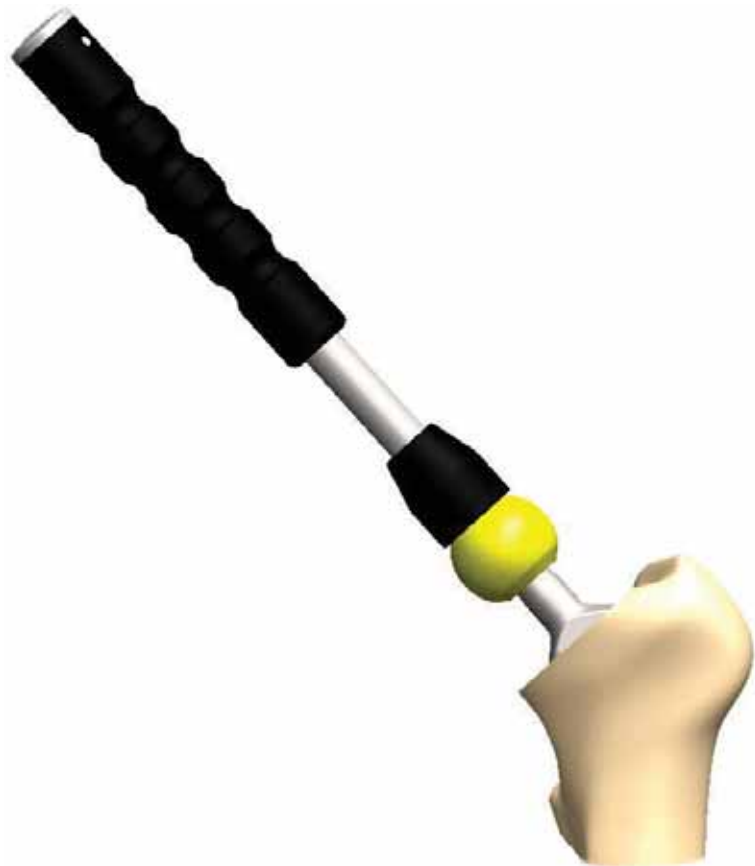
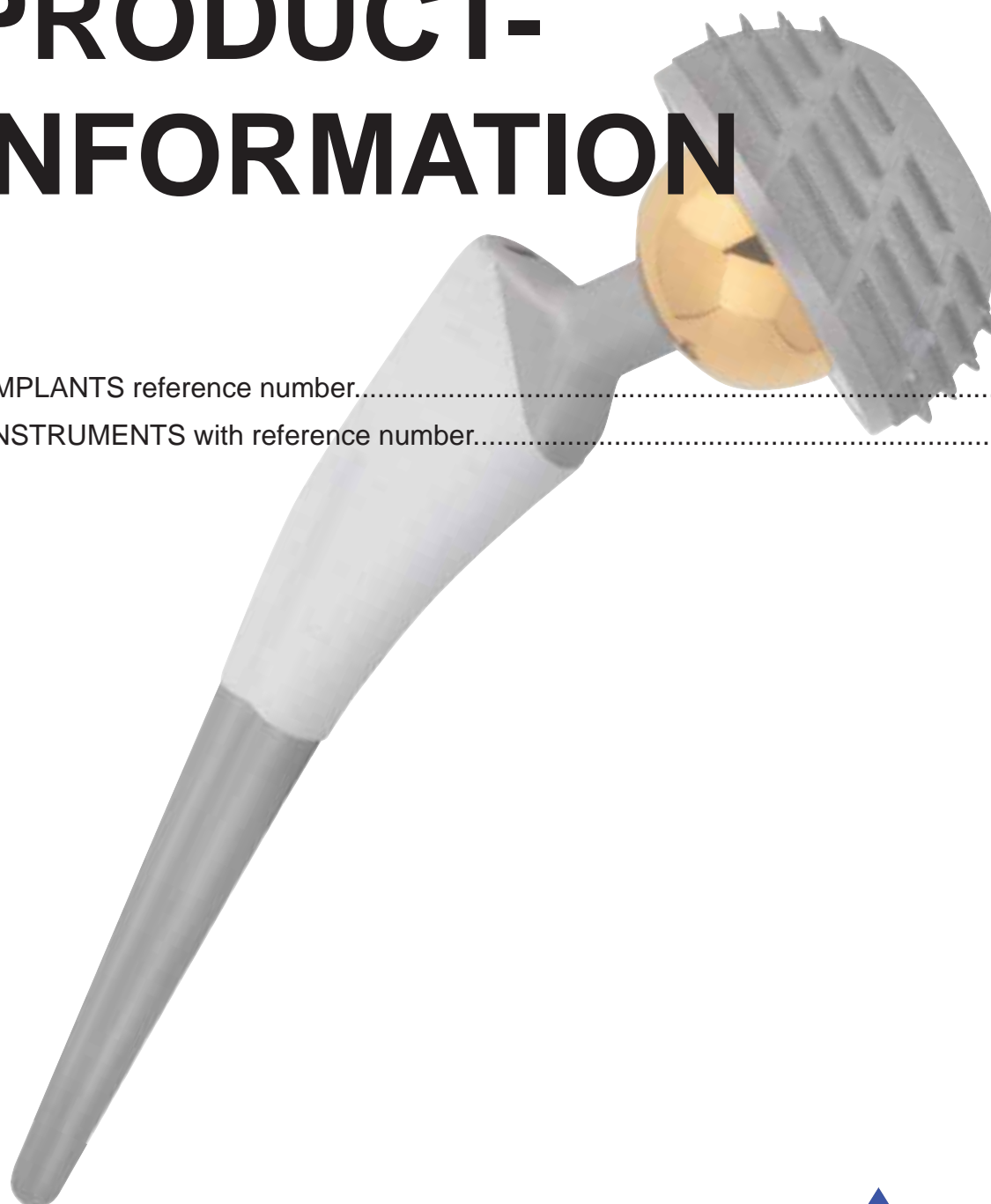


Figure 7

EcoFit®

PRODUCT- INFORMATION

IMPLANTS reference number.....	14
INSTRUMENTS with reference number.....	18



IMPLANTS



**EcoFit® stem, cementless,
implaFix® cpTi-coating**
implatan® TiAl₆V₄ acc. to ISO 5832-3
with implaFix® cpTi-coating

REF standard	size	length	REF lateralised
3039-3062	6,25mm	132,1mm	3039-4062
3039-3075	7,5mm	134,6mm	3039-4075
3039-3087	8,75mm	137,1mm	3039-4087
3039-3100	10mm	139,6mm	3039-4100
3039-3112	11,25mm	142,1mm	3039-4112
3039-3125	12,5mm	144,6mm	3039-4125
3039-3137	13,75mm	147,1mm	3039-4137
3039-3150	15mm	149,6mm	3039-4150
3039-3175	17,5mm	154,6mm	3039-4175
3039-3200	20mm	159,6mm	3039-4200



**EcoFit® stem, cementless,
implaFix® HA-coating**
implatan® TiAl₆V₄ acc. to ISO 5832-3
with implaFix® cpTi-coating and hydroxyapatite coating
acc. to ISO 13779-2

REF standard	size	length	REF lateralised
3038-3062	6,25mm	132,1mm	3038-4062
3038-3075	7,5mm	134,6mm	3038-4075
3038-3087	8,75mm	137,1mm	3038-4087
3038-3100	10mm	139,6mm	3038-4100
3038-3112	11,25mm	142,1mm	3038-4112
3038-3125	12,5mm	144,6mm	3038-4125
3038-3137	13,75mm	147,1mm	3038-4137
3038-3150	15mm	149,6mm	3038-4150
3038-3175	17,5mm	154,6mm	3038-4175
3038-3200	20mm	159,6mm	3038-4200

IMPLANTS

EcoFit® stem, cementless, implaFix® total HA-coating

implatan® TiAl₆V₄ acc. to ISO 5832-3 with cpTi-coating
and hydroxyapatite coating acc. to ISO 13779-2

REF standard	size	length	REF lateralised
3038-6062	6,25mm	132,1mm	3038-7062
3038-6075	7,5mm	134,6mm	3038-7075
3038-6087	8,75mm	137,1mm	3038-7087
3038-6100	10mm	139,6mm	3038-7100
3038-6112	11,25mm	142,1mm	3038-7112
3038-6125	12,5mm	144,6mm	3038-7125
3038-6137	13,75mm	147,1mm	3038-7137
3038-6150	15mm	149,6mm	3038-7150
3038-6175	17,5mm	154,6mm	3038-7175
3038-6200	20mm	159,6mm	3038-7200



IMPLANTS

EcoFit® stem, cemented

implavit® CoCrMo acc. to ISO 5832-4



REF standard	size	length	REF lateralised
3039-6062	6,25mm	132,1mm	3039-8062
3039-6075	7,5mm	134,6mm	3039-8075
3039-6100	10mm	139,6mm	3039-8100
3039-6125	12,5mm	144,6mm	3039-8125
3039-6150	15mm	149,6mm	3039-8150
3039-6175	17,5mm	154,6mm	3039-8175

The EcoFit® stem cemented is available with TiN-coating on request (*N).



EcoFit® stem, cemented, highly polished

implavit® CoCrMo acc. to ISO 5832-4

REF standard	size	length	REF lateralised
3038-0062	6,25mm	132,1mm	3038-1062
3038-0075	7,5mm	134,6mm	3038-1075
3038-0100	10mm	139,6mm	3038-1100
3038-0125	12,5mm	144,6mm	3038-1125
3038-0150	15mm	149,6mm	3038-1150
3038-0175	17,5mm	154,6mm	3038-1175

EcoFit® Subsider

for the use in conjunction with highly polished cemented EcoFit® stems
material: PMMA (polymethylmethacrylate)



REF	size	combinable with stem size
0299-0750	2	6,25mm
0299-1000	3	7,5mm
0299-1250	4	10,0mm
0299-1500	5	12,5mm
0299-1650	6	15mm und 17,5mm

IMPLANTS

BIOLOX® forte

Al₂O₃ acc. to
ISO 6474-1

ic-head

BIOLOX® delta

Al₂O₃ und ZrO₂
acc. to ISO 6474-2

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
-	32mm, XL	2586-3215
2587-3600	36mm, S	2586-3600
2587-3605	36mm, M	2586-3605
2587-3610	36mm, L	2586-3610
-	36mm, XL	2586-3615
-	40mm, S	2586-4000
-	40mm, M	2586-4005
-	40mm, L	2586-4010
-	40mm, XL	2586-4015



CoCrMo

implavit® CoCrMo
acc. to ISO 5832-12

ic-head

Titan

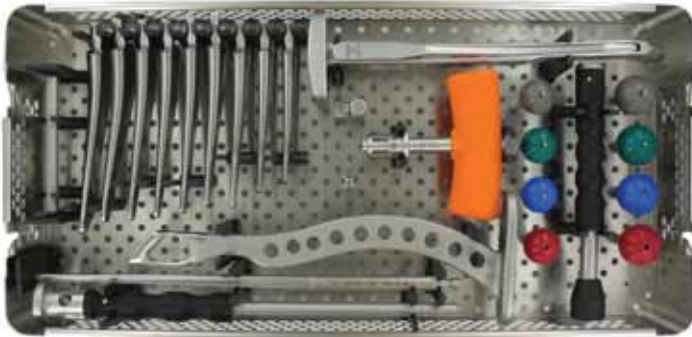
implatan® TiAl₆V₄
acc. to ISO 5832-3
with TiN-coating

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
2387-2820*	28mm, XXL	2787-2820*
2387-2825*	28mm, XXXL	2787-2825*
2387-3200	32mm, S	2787-3200
2387-3205	32mm, M	2787-3205
2387-3210	32mm, L	2787-3210
2387-3215	32mm, XL	2787-3215
2387-3220*	32mm, XXL	2787-3220*
2387-3225*	32mm, XXXL	2787-3225*
2387-3600	36mm, S	2787-3600
2387-3605	36mm, M	2787-3605
2387-3610	36mm, L	2787-3610
2387-3615	36mm, XL	2787-3615
2387-3620*	36mm, XXL	2787-3620*
2387-3625*	36mm, XXXL	2787-3625*

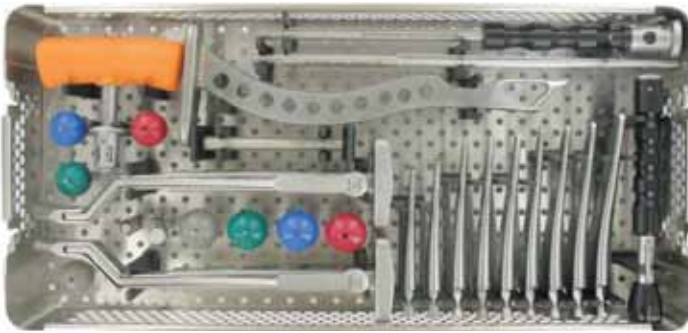


NOTE: The reference numbers marked with * can be only combined with the EcoFit® stem cementless (cpTi, HA, T-HA coating). Detailed information with regard to the combination possibilities can be removed from the IFU.

INSTRUMENTS



**7999-7043
EcoFit® easy lock
Container**



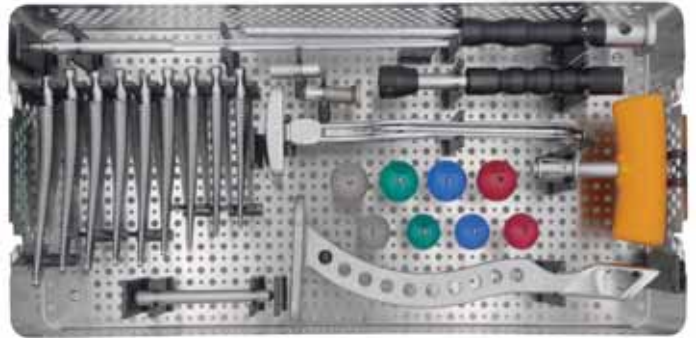
**7999-7049
EcoFit® easy lock
GIS® Container**



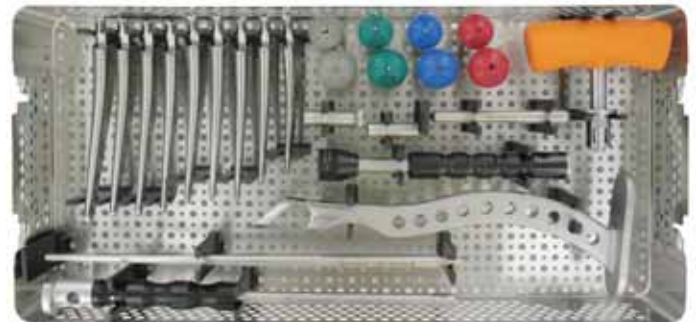
**7999-7966
trial head container 22mm S-L**

INSTRUMENTS

7999-7074
EcoFit® Container II



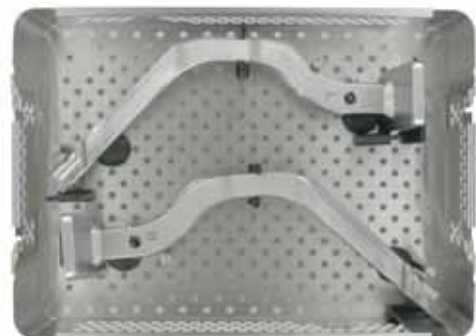
7999-7075
EcoFit® Container III
Note: to combine with the
broach handle containers



7999-7076
EcoFit® broach handle GIS®
left/right container



0220-1201
EcoFit® broach handle with double
offset left/right container



INSTRUMENTS

CONTAINER 7999-7043 / 7999-7049 / 7999-7075 / 7999-7074



cross bar tapered 10mm

7513-9999

7513-9998 alternatively



ic T-handle Zimmer-Jakobs

4223-0023



femoral reamer straight size 1

7516-0005



box chisel

7512-1099



EcoFit® trial neck

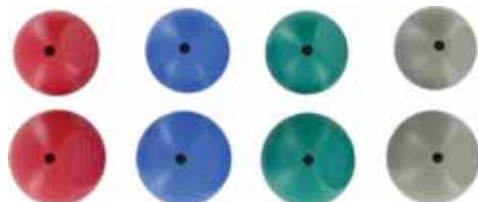
7039-1214 standard

7040-1214 lateralized



EcoFit® stem impactor

3039-0109



trial head snap taper 12/14mm

7962-2800 / 7965-2800 Ø 28mm short

7962-2805 / 7965-2805 Ø 28mm medium

7962-2810 / 7965-2810 Ø 28mm long

7962-2815 / 7965-2815 Ø 28mm extra long

7962-3200 / 7965-3200 Ø 32mm short

7962-3205 / 7965-3205 Ø 32mm medium

7962-3210 / 7965-3210 Ø 32mm long

7962-3215 / 7965-3215 Ø 32mm extra long



head impactor

7512-4444

INSTRUMENTS

EcoFit® broach

7039-3062	6,25mm
7039-3075	7,50mm
7039-3087	8,75mm
7039-3100	10,00mm
7039-3112	11,25mm
7039-3125	12,50mm
7039-3137	13,75mm
7039-3150	15,00mm
7039-3175	17,50mm

(The EcoFit® broach 20mm (REF 7039-3200)
is only available on request)



EcoFit® broach handle easy lock

(only in container 7999-7043)

7512-0040

alternative: 7512-0076 incl. screw



EcoFit® broach handle easy lock GIS®

(only in container 7999-7049)

7512-0048 right

7512-0049 left

alternative: 7512-0077 left incl. screw

7512-0078 right incl. screw



EcoFit® broach handle

(only in Container 7999-7074)

7512-0112



INSTRUMENTS

CONTAINER 7999-7076



EcoFit® broach handle GIS®

REF 7512-0067 left

REF 7512-0068 right

CONTAINER 0220-1201



EcoFit® broach handle with double offset

REF 7512-0073 left

REF 7512-0074 right

CONTAINER 7999-7966



head impactor

7512-4444



trial head snap taper 12/14mm

7962-2200 / 7965-2200 Ø 22mm short

7962-2205 / 7965-2205 Ø 22mm medium

7962-2210 / 7965-2210 Ø 22mm long

SEPARATE INSTRUMENTS



trial head snap taper 12/14mm

7962-2820 / 7965-2820 Ø 28mm XX long

7962-2825 / 7965-2825 Ø 28mm XXX long

7962-3220 / 7965-3220 Ø 32mm XX long

7962-3225 / 7965-3225 Ø 32mm XXX long

7962-3620 / 7965-3620 Ø 36mm XX long

7962-3625 / 7965-3625 Ø 36mm XXX long



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