

INDIVIDUAL HIP™

Personalized femoral stem



Surgical technique



 **symbios**
custom-made for you

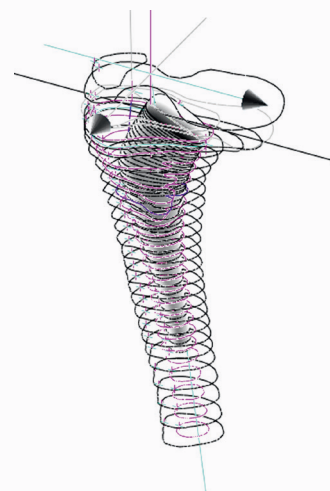
INTRODUCTION

Personalized stem concept

The INDIVIDUAL HIP™ prosthesis is designed to fit the hip anatomy of each individual patient. Leg length adjustment, muscle function and stability can thereby be optimized during the operation.

INDIVIDUAL HIP™

Personalized femoral stem, delivered together with personalized smooth compactor or rasp and the specific patient's file.



Process

1. Symbios Connect order: definition of the specifications for the patient and the surgeon preferences.
2. Acquisition of the patient's anatomical data thanks to a CT scan, in accordance with the Symbios HIP-PLAN® CT scan protocol.
3. 3D reconstruction of the joint.
4. Precise preoperative planning: design of the INDIVIDUAL HIP™ stem and its associated specified ancillary.
5. Manufacture of a single unit, specified for the patient. Delivery of the INDIVIDUAL HIP™ stem together with its ancillary and the patient's report.

Intended use

- The INDIVIDUAL HIP™ stem is intended to be used for a primary and revision total hip arthroplasty.
- The INDIVIDUAL HIP™ stem is particularly indicated for young and active patients^{[1][2]}.

Indications

- Primary or secondary coxarthrosis
- Femoral head fracture or necrosis
- Femoral neck fracture
- Inflammatory arthritis
- Congenital or acquired dysplasia
- Extreme varus / valgus morphotypes
- Atypical morphology (dwarfism, gigantism)
- Post-traumatic sequelae, large bone crash
- For revision products: loosening, dislocation, periprosthetic fracture, implant rupture

Contraindications

- Acute, chronic, local or systemic infection
- Muscular, neurological, psychological or vascular deficits
- Bone destruction or poor bone quality likely to affect implant stability
- Any concomitant condition likely to affect implant integration or function
- Allergy or hypersensitivity to any of the materials used

Cup compatibility

- System of APRIL® cementless pressfit cups
- System of HILOCK cementless cups
- System of SERENITY® dual-mobility cups



APRIL®



HILOCK



SERENITY®

Head compatibility

- All Symbios heads compatible with 12/14 5°40' taper.



**BIOLOX®
Delta Head**
Ø 28 – Ø 36



**Cobalt-Chrome
Head**
Ø 22,2 – Ø 36



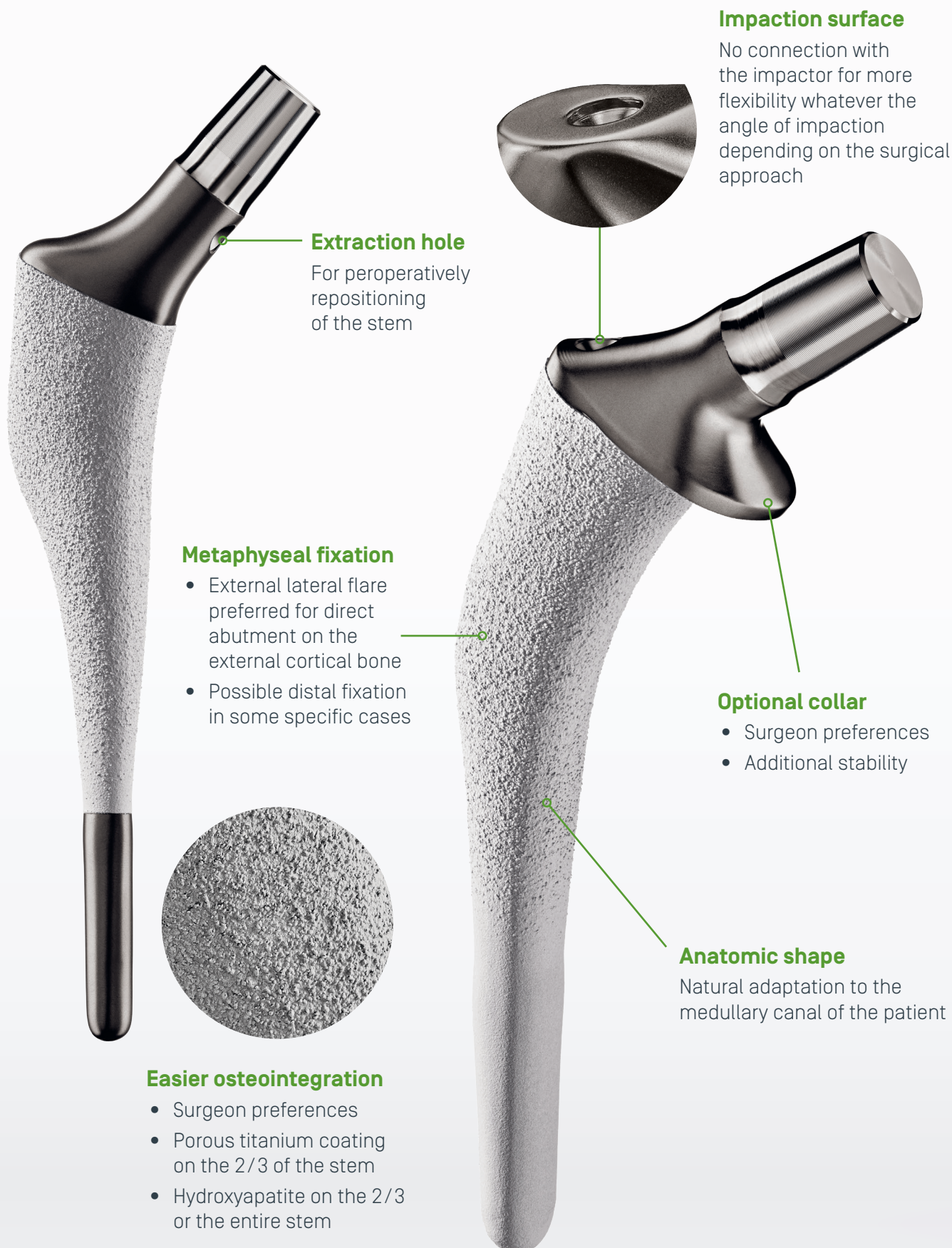
**Stainless Steel
Head**
Ø 28 – Ø 32

- > **Caution:** Control the specific compatibilities and use restrictions [head, cup] with INDIVIDUAL HIP™ stem before implantation. Please refer to the IFU for more details.

- > **Additional information:** All INDIVIDUAL HIP™ orders must be passed through the website portal www.symbios.ch/connect/ and require the transferring of a CT scan to Symbios according to the specific HIP-PLAN® protocol.

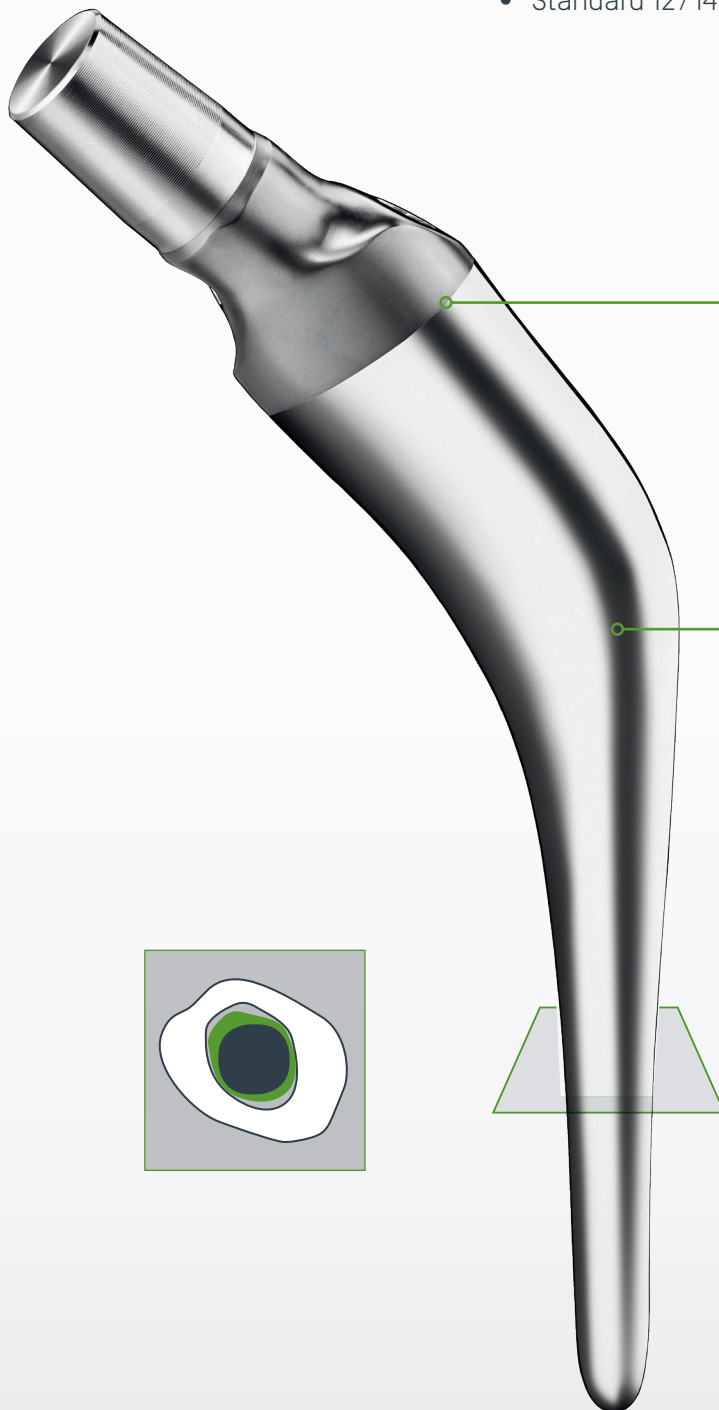
All personalized components are designed following preoperative planning approval by the surgeon through the website www.symbios.ch/connect/.

The components are delivered to the hospital within the time specified when placing an order on **Symbios Connect** and at the condition of receiving the CT Images at Symbios on the due date. For more information, contact your Symbios Account Manager.



PERSONALIZED reconstruction

- Neck-shaft angle specific to the patient between 120° and 140°
- Neck anteversion or retroversion specific to the patient
- Standard 12/14 5°40' taper



Osteotomy level

Easier identification of blocking level

Mirror polishing

Smooth surface for optimal cement/implant interface performance

Cementation

Surgeon preferences in terms of cement thickness

Adapted rasp/compactor

For a thin cement coat:
























the compactor/rasp is identical to the planned INDIVIDUAL HIP™ stem.

For a thick cement coat:

the compactor/rasp is oversized compared to the planned INDIVIDUAL HIP™ stem.

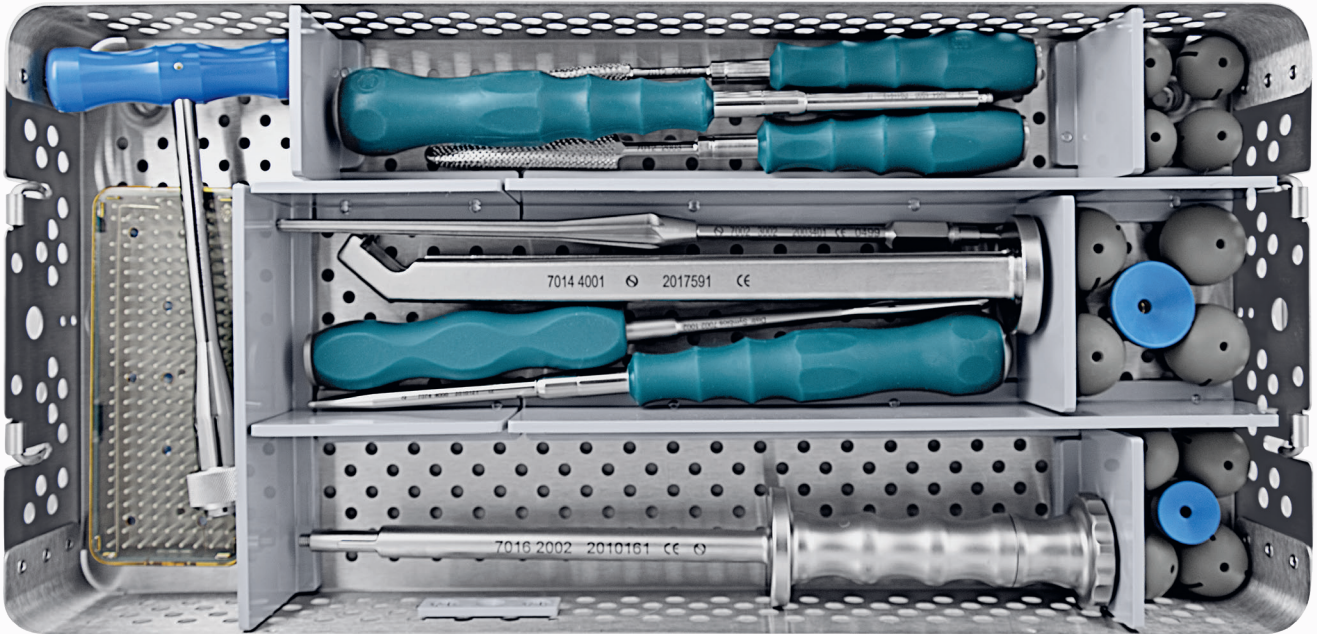
Opening the INDIVIDUAL HIP™ packaging

- Before the procedure, please check in Symbios Connect that the implant has been delivered. In case of specific surgeon preferences concerning the instrumentation, please refer to the order or to your sales representative to have the correct instrumentation.
- Cross references of the INDIVIDUAL HIP™ labels on the packaging (rasp or compactor and stem) against the patient's details. All the planned INDIVIDUAL HIP™ products are described in the appendix of the INDIVIDUAL HIP™ report.
- Open all the sets (rasp or compactor and stem) and place the rasp or compactor on the instrument table. Prepare the re-sterilisable INDIVIDUAL HIP™ instrumentation which you will need to implant the stem.

INDIVIDUAL HIP™		HIP FEMORAL STEM	
	RIGHT	CEMENTLESS	12/14 TAPER
PATIENT: DOE John			
BIRTH DATE: 09.01.1940		CASE ID: 115993	
SURGEON: DR. Marc Smith			
CLINIQUE DE LA RESSOURCE			
			
REF 3000 0201	CFG G7T1	SN 12345678	STERILE R
GTIN 07630013660521			
MATERIAL: Ti6Al4V (ISO 5832-3) COATING: Ti + HA CE 1014                     			

PREPARING THE INSTRUMENTS

7011 0000 INDIVIDUAL HIP™ Instrumentation



INDIVIDUAL HIP™ Rasp handle 7016 2002

Straight rasp handle for impaction and extraction of **personalized rasps and/or compactors with an impaction hole** [specified during the Symbios Connect order].



INDIVIDUAL HIP™ Stem impactor 7014 4000

- Stem impactor for lowering the **personalized rasp and/or compactor with an impaction surface** [specified during the Symbios Connect order], as well as the INDIVIDUAL HIP™ stem.
- This impactor is not connected with any component, making it more flexible in terms of impaction angle depending on the approach used.
- Using this impactor for femoral preparation is combined with the use of the INDIVIDUAL HIP™ compactor extractor (7014 4001) to extract the compactor or rasp in place.

SURGICAL TECHNIQUE

SURGICAL STEPS

In the surgical technique of the INDIVIDUAL HIP™ femoral stem, some steps depend on the surgeon preferences for the implant and the instrumentation. As the product is personalized, each surgery is specific to a single patient. For reference, surgery parameters are noted in the patient file, which is delivered with the product to the attention of the surgeon.

The beginning of the surgery [STEP 1 to STEP 5] is independent of the type of instrumentation.

Next, if the INDIVIDUAL HIP™ stem is delivered with a compactor NT [3000 0511] or a rasp NT [3000 0711], the trials [STEP 6] cannot be performed on the compactor / rasp without neck and so this step must be performed on the final implant.

INDIVIDUAL HIP™ Surgical technique

1.	Examination of the patient's file	STEP 1	P. 10-12
2.	Incision and exposure	STEP 2	P. 13
3.	Preparation of the femur	STEP 3	P. 14-15
4.	Compactor/Rasp insertion	STEP 4	P. 16
5.	Compactor/Rasp position control	STEP 5	P. 17
6.	Reduction and trials	STEP 6	P. 18
7.	Compactor/Rasp withdrawal	STEP 7	P. 19
8.	Implantation	STEP 8	P. 20-21
9.	INDIVIDUAL HIP™ Stem extraction	STEP 9	P. 22

Appendices

1.	Head compatibility	APPENDIX 1	P. 24
2.	Implant references	APPENDIX 2	P. 25
3.	Instrument references	APPENDIX 3	P. 26-27

STEP 1

EXAMINATION OF THE PATIENT'S FILE

The patient's file is the preoperative link between the surgeon and the Symbios engineer. This file is created by the INDIVIDUAL HIP™ design department and must be studied carefully by the surgeon before the operation. The information contained within the documents, particularly canal preparation and implant positioning within the intramedullary canal must be strictly adhered too.

Approval - Complete form
Personalized Stem

Patient specific data

Name: DOE John
Side: Left (L) 01.1940
Date of birth: 77 kg (BMI: 26.0)
Weight / BMI:

Intervention specific data

Surgeon: Dr. SMITH
Surgery date: 05.08.2021
Hospital: CHUQUE DE LA RESSOURCE

TALA configuration

Prosthetic Anterior: 50°

Proposed corrections

CP: +1 mm
ML: -3 mm

Proposed

Autocorrection femorale Hips Plan: 54°
Autocorrection postérieure Hips Plan: 50°

Cette prothèse a été planifiée avec une nouvelle version du logiciel HIP PLAN qui mesure les antépostérieures différemment de l'ancienne version. Néanmoins, nous avons planifié le cot postérieur qui pointe vers le centre de la tête femorale.

FIN: CP=0 ML=+2 AP=-1
ID: CP=3 ML=+3 AP=0

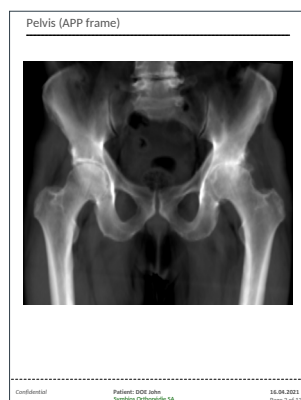
APRIL Ceramic 54
Head 36, +0

Confidential Patient: DOE John
Symbios Orthopédie SA 16.08.2021
Page 1 of 11

1.1 Surgery information

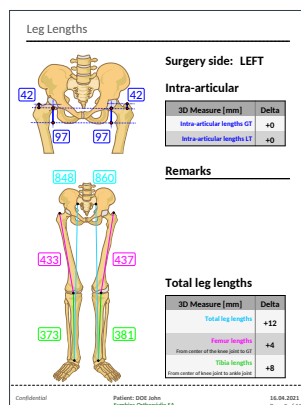
The first page of the report provides:

- General information about the patient, the surgery and the surgeon preferences.
- Information about the planned implants and characteristics of the INDIVIDUAL HIP™ stem and the associated compactor / rasp.
- Details related to the implants and preparation of the femoral canal are given in the "Proposal" field.



1.2 Preoperative pelvis view

- The X-ray presents the front view of the pelvis for a 2D evaluation of the joints.



1.3 Measurement of leg lengths

This page provides:

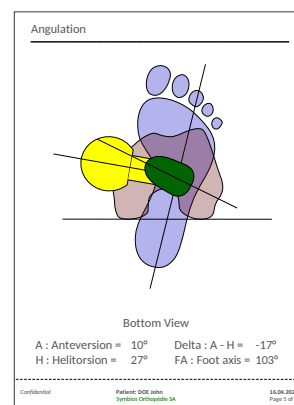
- Measurement of the preoperative intra-articular leg lengths to compare the operated side deformation with the opposite limb.
- Measurement of the preoperative total leg length to know if a leg length discrepancy exists before the surgery.

1.4 Angulation

The drawing presents the angular geometry of the implant, the knee and the foot in a view as seen from below i.e. podal to cranial. It shows:

- The gait angle.
- The prosthesis helitorsion angle.
- The extramedullary correction angle, which allows identification of the ideal final anteversion relative to the posterior bicondylar plane [PBCP].

Anteversion of 15° is generally restored unless there are special instructions from the surgeon (this case for example), which may be discussed with the design engineer.



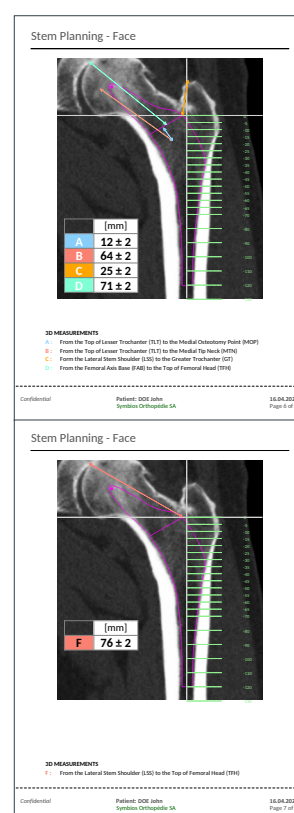
1.5 Stem Planning – Face view

This page presents the INDIVIDUAL HIP™ stem on a front view with a 1:1 scale.

- All the parameters required for the implantation of the INDIVIDUAL HIP™ are annotated on the coronal view of the femur.
- The level of scanner slices are indicated in green. Each level is presented in the part 8: CT Images.

3D MEASUREMENTS

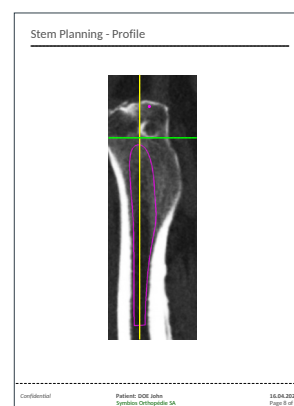
- A From the Top of Lesser Trochanter (TLT) to the Medial Osteotomy Point (MOP)
- B From the Top of Lesser Trochanter (TLT) to the Medial Tip Neck (MTN)
- C From the Lateral Stem Shoulder (LSS) to the Greater Trochanter (GT)
- D From the Femoral Axis Base (FAB) to the Top of Femoral Head (TFH)
- E From the Calcar Osteotomy Point (COP) to the Top of Femoral Head (TFH)
- F From the Lateral Stem Shoulder (LSS) to the Top of Femoral Head (TFH)
- G Prosthetic neck length

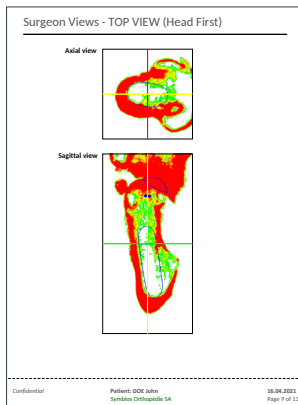


1.6 Stem Planning – Profile view

This part presents the INDIVIDUAL HIP™ stem on a sagittal view with a 1:1 scale.

- The stem anteversion regarding the femur shape can be evaluated.

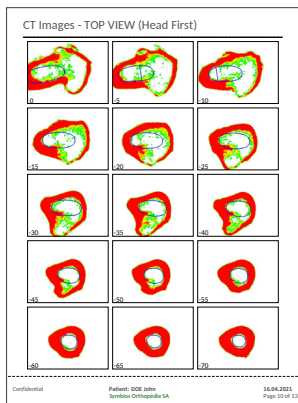




1.7 Stem Planning – Top view

This part provides the top view at the level of osteotomy (about 30°) to:

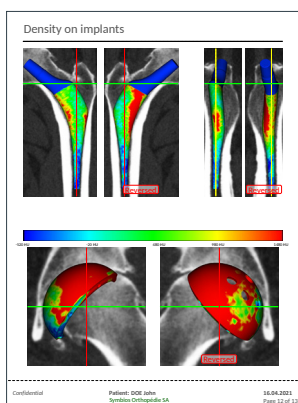
- Control the stem anteversion.
- Preparation of the femoral canal: red zones in the stem delimitation must be removed before the introduction of the compactor / rasp.



1.8 CT Images

The “CT Images” page shows CT slices in the metaphyseal-diaphyseal zone with the stem in situ which allows:

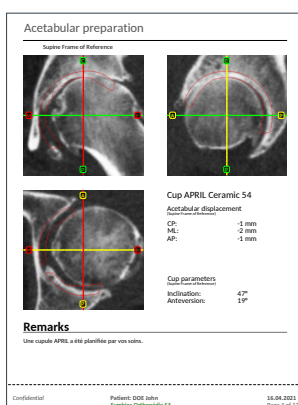
- Evaluation of the cancellous bone density on the basis of the colour code (white, green, yellow and red) which represents increasing bone density.
- Visualization of the zones where intramedullary preparation is required (for example, the removal of bone stock impinging the intended path of the prosthesis).
- Control of the correct implant position at the osteotomy level in the anterior, posterior, medial and lateral planes.



1.9 Density on implants

This page shows the cancellous bone density in contact with the stem on the basis of the colour code (blue, green, yellow and red) which represents increasing bone density.

- Visualization of the zones where intramedullary preparation is required (for example, the removal of bone stock impinging the intended path of the prosthesis).
- Visualization of the zones which allow stem's and cup's stability.



1.10 Acetabular preparation

This page presents the planned cup in the volume reconstructed from the CT scanner images.

- Three sections [axial, sagittal and coronal] passing through the centre of rotation of the cup allow evaluation of the state of the anterior and posterior horns and of the state of the bone stock available from the posterior base and roof of the cotyloid cavity.

➤ **Recommendation:** These parts should be on display in the operating room during the surgery:

- Surgery information
- Stem Planning – Face, profile and top views
- CT Images
- Acetabular preparation

STEP 2

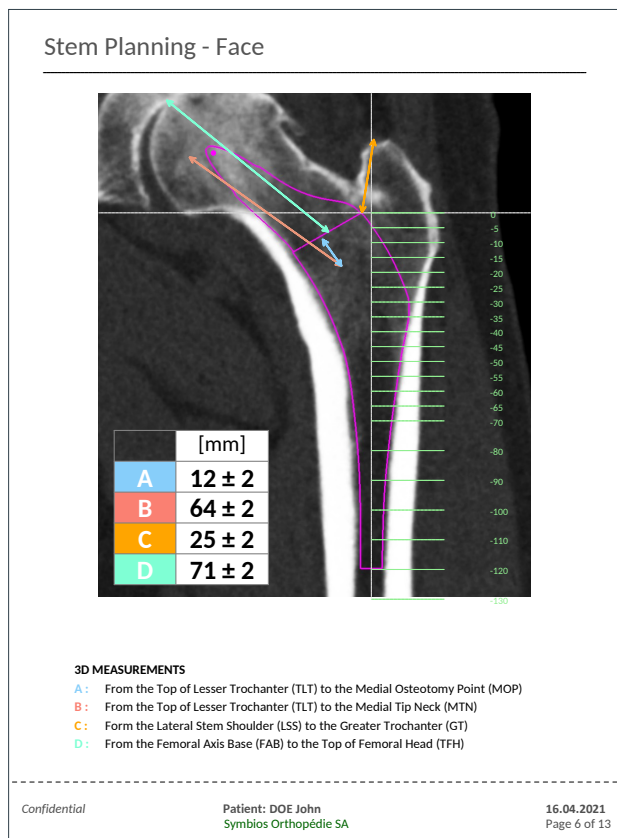
INCISION AND EXPOSURE

2.1 Positioning and access

- The surgery is performed with the patient in extended supine or lateral position.
- Access to the operative site is based on the preference of the operating surgeon[s].

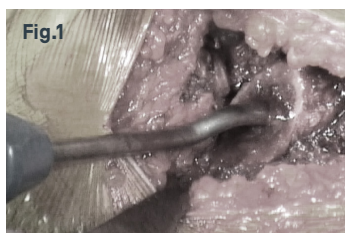
2.2 Femoral osteotomy

- Realize the osteotomy with an oscillating saw according to the preoperative planning in the patient's file.
- **Tip:** The osteotomy level and details are specified in the “Stem Planning – Face view” document.
- It is important to accurately comply with the advised osteotomy level to preserve bone stock, allow accurate implant positioning and maximize primary implant stability, particularly when the stem has a collar.
- The femoral head is removed.
 - Control the peroperative measures with the distances C and D in the part “Stem Planning – Face” of the INDIVIDUAL HIP™ planning report.



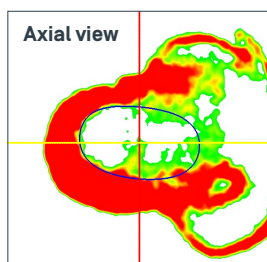
STEP 3

PREPARATION OF THE FEMUR

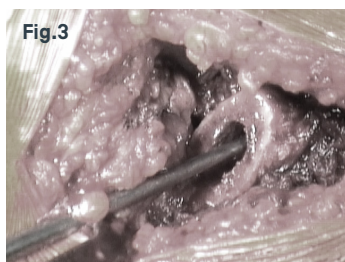


3.1 Preparation of the entry of the femoral canal

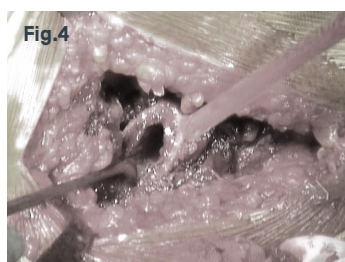
- Prepare the entry of the femoral canal with the long gouge. [\[Fig.1, 2\]](#)
- > **Tip:** The “Stem Planning – Top view” page will assist in identifying the entry point.



Stem Planning – Top view



- The femoral canal axis may be marked with a long and fine curette. [\[Fig.3, 4\]](#)



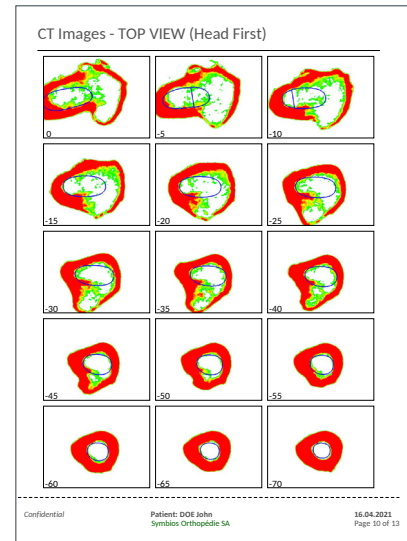
Instruments 



Long gouge
7002 1002

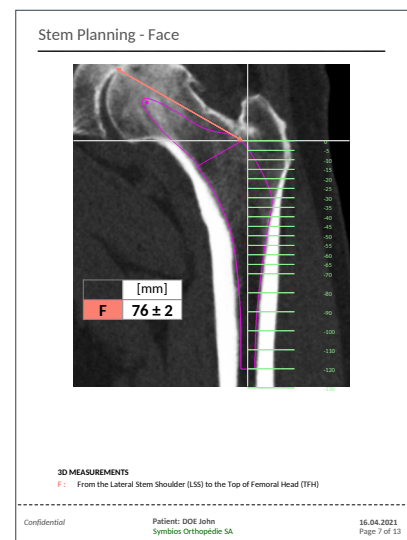
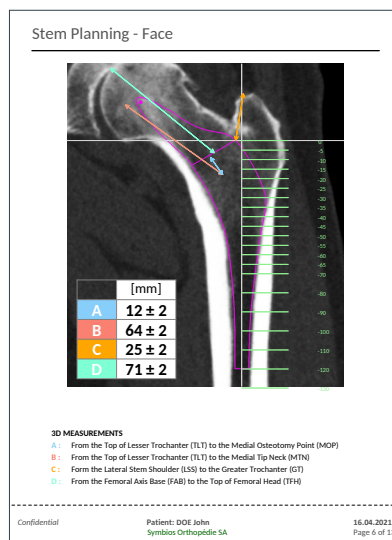
3.2 Preparation of the femoral canal

- Assemble the small reamer with the T-handle.
 - Introduce the small reamer by maintaining it against the greater trochanter in order to prepare the lateral shoulder of the implant.
- **Caution:** Before using the small reamer, control that the diameter of the small reamer is not larger than the compactor/rasp. In case of a narrow compactor/rasp, using the small reamer is not recommended.
- Depending on the femoral anatomy and the osteotomy level, it may be necessary to remove cortical and/or tissue residues located at the base of the femoral neck, using the round rasp, the half-round rasp or a gouge forceps.
- **Important:** Residues may hinder the introduction of the rasp/ compactor and lead to a varus position of the implant. Control if the intramedullary preparation is required by referring to the “CT Images” document.



CT Images

Stem Planning – Face



Instruments ^



Small reamer
7002 3002



T-handle
7019 4001



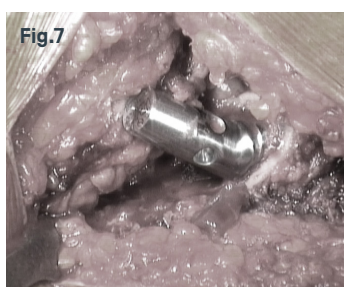
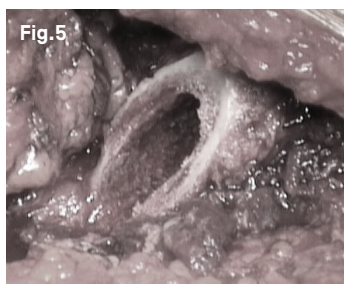
Round rasp
7012 2002



Half-round rasp
7012 2003

STEP 4

COMPACTOR/RASP INSERTION



4.1 Control of the compactor or rasp progression

- > **Caution:** In any case, the rotation of the compactor / rasp should be constrained, resistance could predispose to femoral fracture or cause blocking before its definitive position.

COMPACTOR or COMPACTOR NT

- In case of impaction surface, use the INDIVIDUAL HIP™ Stem impactor otherwise screw the INDIVIDUAL HIP™ Rasp handle in the impaction hole.
- Advance the compactor with repeated blows of moderate force in order to check the compaction of the cancellous bone. **(Fig.6)** Visual and audible indications of compactor blocking should be carefully addressed. A dull sound when struck is generally a sign of resistance to compactor progress.

RASP or RASP NT

- In case of impaction surface, use the INDIVIDUAL HIP™ Stem impactor otherwise screw the INDIVIDUAL HIP™ Rasp handle in the impaction hole.
 - Introduce the rasp and prepare directly the intramedullary zones described in the patient's report.
 - Do not hesitate to get the rasp out several times to remove bone from the femoral canal and clean the rasp teeth to avoid rasp blocking.
- > **Tip:** The compactor / rasp may be laterally forced in order to position its shoulder at the greater trochanter level.

In case of compactor blocking

- Withdraw the compactor and insert a fine curette in the intramedullary canal to detect and remove the obstruction. The round or half-round rasp can also be used.
- Consult the "CT Images" document to have information about the obstacle: any bone removal must be minimal not to compromise the stability of the implant and to preserve the cancellous bone within the intramedullary canal, allowing it to be compressed.
- Reintroduce the compactor until its planned position within the femoral canal. **(Fig.7)**

Instruments ^



INDIVIDUAL HIP™
Compactor / Rasp
3000 0501 / 3000 0701

or



INDIVIDUAL HIP™
Compactor NT / Rasp NT
3000 0511 / 3000 0711



INDIVIDUAL HIP™
Stem impactor
7014 4000

or



INDIVIDUAL HIP™
Rasp handle
7016 2002

STEP 5

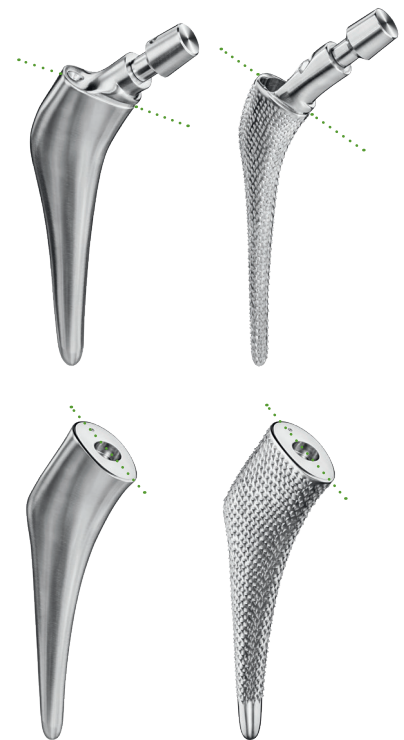
COMPACTOR/RASP POSITION CONTROL

RASP or COMPACTOR

- When the compactor/rasp is in its optimal position within the femur, the groove marking on the compactor/rasp is parallel to the osteotomy line.
- Using the corresponding scanner slice, it is necessary to check its position in all three planes (A, P, M-L) with regard to the greater trochanter, lesser trochanter and centre of rotation of the compactor by comparison with the "Stem Planning – Face" document [c.f. section 1.5, page 11].

RASP NT or COMPACTOR NT

- When the compactor NT/rasp NT is in its optimal position within the femur, the top of the compactor NT/rasp NT is on the same level as the osteotomy line.
- Using the corresponding scanner slice, it is necessary to check its position in all three planes (A, P, M-L) with regard to the greater trochanter, lesser trochanter and centre of rotation of the compactor by comparison with the "Stem Planning – Face" document [c.f. section 1.5, page 11].



Collar position

Collar option: *No specific preparation required for the collar.*

- When the compactor/rasp is in the right position, control the level of the collar regarding to the cortical bone to avoid risk of the stem anchoring a unique point on the collar.
- Do not hesitate to recut bone that could hinder the stem implantation in the planned position.
- When using a compactor NT or a rasp NT report to the patient's file to have the distance of the collar relative to the osteotomy level [c.f. section 1.7, page 12].



Instruments ^



Measuring strip
44.37.15

STEP 6

REDUCTION AND TRIALS

➤ **Caution:** In case of an INDIVIDUAL HIP™ stem delivered with a compactor NT (3000 0511) or a rasp NT (3000 0711), the surgeon has been informed before the surgery and has accepted that the trials will only be realized on the final implant. In this case, please go directly to the **STEP 7**.

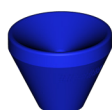
- Put the trial head corresponding to the planning in the patient's file on the taper of the compactor/rasp.
- Reduce the coxofemoral joint with the head impaction end-cap assembled with the screwable impactor and perform the stability tests. **[Fig.9]**
- If the hip joint is stable with the planned head size, you can continue the final implantation.
- If the hip joint is unstable with the planned head size, change the offset of the trial head in accordance with the available offsets for the head and the compatibility with the cup to implant.



Instruments ^



Trial head
7003 xxxx



Head impaction
end-cap
7004 2236 / 7004 3656

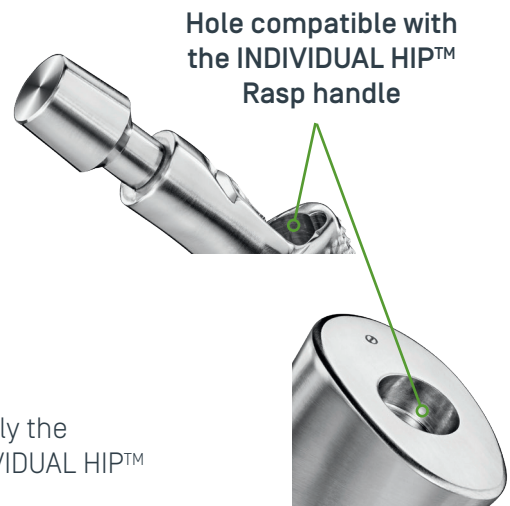
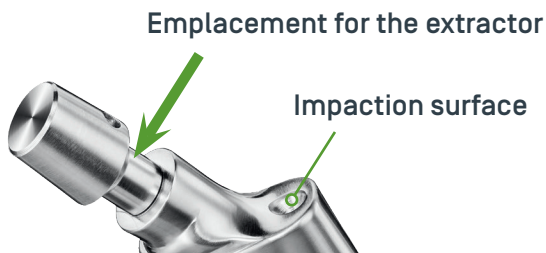


Screwable impactor
7004 1000

STEP 7

COMPACTOR/RASP WITHDRAWAL

- If the compactor/rasp has an impaction surface, please use the INDIVIDUAL HIP™ Compactor extractor by putting it around the neck.
- If the compactor/rasp has an impaction hole for the INDIVIDUAL HIP™ Rasp handle, you can use the same instrument for the extraction.



- The compactor NT or rasp NT has only the impaction hole, please use the INDIVIDUAL HIP™ Rasp handle for the extraction.
- During the extraction of the compactor/rasp, follow the internal curvature to avoid any risk of contact with the greater trochanter. **[Fig.10]**
- > **Important:** The compactor/rasp follows a trajectory that is the inverse of its introduction trajectory, leaving it free to rotate.



Instruments ^



INDIVIDUAL HIP™
Compactor extractor
7014 4001

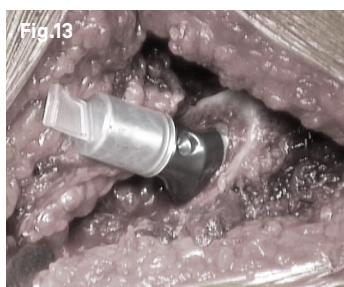
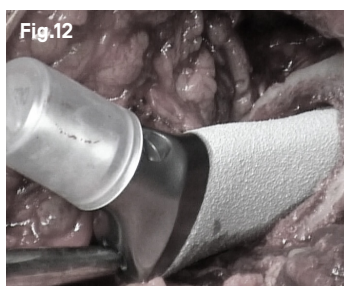
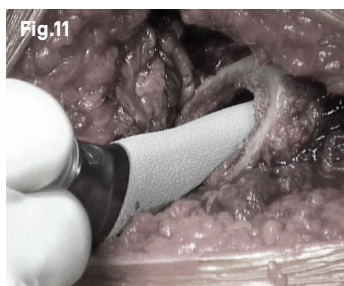
or



INDIVIDUAL HIP™
Rasp handle
7016 2002

STEP 8

IMPLANTATION



8.1 Femoral stem

INDIVIDUAL HIP™ Cementless Stem

- The prosthesis is inserted manually [\[Fig.11\]](#) and then, for the last few centimetres, by impaction with the INDIVIDUAL HIP™ Stem impactor. [\[Fig.12\]](#)
- The final position is checked by alignment of the upper edge of the hydroxyapatite coating, which must be located at the level of the osteotomy line and parallel to it. [\[Fig.13\]](#)

Instruments 



INDIVIDUAL HIP™
Stem impactor
7014 4000

INDIVIDUAL HIP™ Cemented Stem

- Use the cement restrictor set and refer to the manufacturer instructions for the insertion of the cement restrictor.
- Prepare the cement according to the manufacturer instructions.
- Inject the cement into the bone cavity.
- Insert the INDIVIDUAL HIP™ stem manually.
- The final position is checked by alignment of the upper edge of the polished surface, which must be located at the level of the osteotomy line and parallel to it.
- Maintain the stem in its final position.
- Once the cement has hardened, the reduction can be performed.

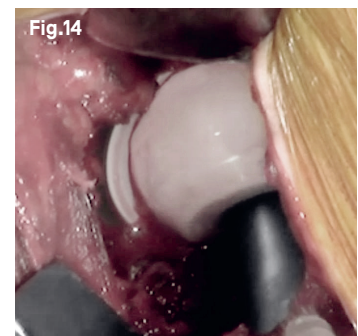


8.2 Femoral head

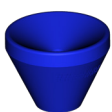
- Put the head corresponding to the selected trial head on the stem taper.
- Impact the head with the head impaction end-cap assembled with the screwable impactor.
- Reduce the coxofemoral joint with the head impaction end-cap assembled with the screwable impactor and perform final tests.

[Fig.14]

- Clean the joint.
- Close the joint and the wound following standard procedure.



Instruments ^



Head impaction
end-cap
7004 2236 / 7004 3656



Screwable impactor
7004 1000

STEP 9

INDIVIDUAL HIP™ STEM EXTRACTION



In case of effective malposition of the stem compared to the planning, the INDIVIDUAL HIP™ stem must be removed.

- Protect the taper.
- Use the INDIVIDUAL HIP™ Stem impactor by positioning it on the extraction hole, which is below the neck, to remove the stem.

> **Caution:** If the taper of the stem is damaged, do not reimplant the INDIVIDUAL HIP™ stem. In rare cases of very small stems, there is not enough place for an extraction hole. The surgeon is informed and has accepted this configuration and the associated risk. The INDIVIDUAL HIP™ stem extraction is done manually.

Instruments ^



INDIVIDUAL HIP™
Stem impactor
7014 4000

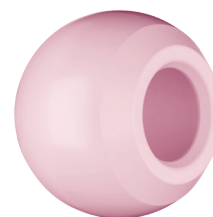
APPENDICES

APPENDIX 1

HEAD COMPATIBILITY

BIOLUX® Delta Head

Ceramic head [Al₂O₃ + ZrO₂-ISO 6474-2], compatible with 12/14 5°40' taper

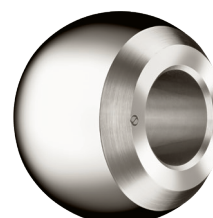


Sizes	Offset in mm						
	-4	-3.5	+0	+3.5	+4	+7	+8
Ø28	-	2014 2801	2014 2802	2014 2803**	-	-	-
Ø32	2014 3201**	-	2014 3202**	-	2014 3203**	2014 3204**	-
Ø36	2014 3601**	-	2014 3602**	-	2014 3603**	-	2014 3604**
Ø40*	2014 4001*	-	2014 4002*	-	2014 4003*	-	2014 4004*

* Only available upon request

Cobalt-Chrome Head

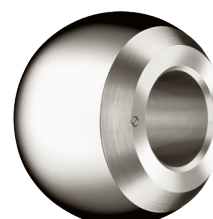
Cobalt-chrome head [CoCrMo-ISO 5832-12], compatible with 12/14 5°40' taper



Sizes	Offset in mm							
	-4	-3.5	-2	+0	+3.5	+4	+7	+8
Ø22.2	-	-	2010 2201	2010 2202	-	2010 2204	-	-
Ø28	-	2010 2801	-	2010 2802	2010 2803**	-	2010 2804**	-
Ø32	2010 3201**	-	-	2010 3202**	-	2010 3203**	-	2010 3204**
Ø36	2010 3601**	-	-	2010 3602**	-	2010 3603**	-	2010 3604**

Stainless Steel Head

Stainless steel head [ISO 5832-9], compatible with 12/14 5°40' taper



Sizes	Offset in mm						
	-4	-3.5	+0	+3.5	+4	+7	+8
Ø28	-	2011 2801	2011 2802	2011 2803**	-	2011 2804**	-
Ø32	2011 3201**	-	2011 3202**	-	2011 3203**	-	2011 3204**

** Not compatible with SERENITY® cup

APPENDIX 2

IMPLANT REFERENCES

Personalized femoral stem, delivered together with personalized smooth compactor or rasp and the specific patient's file.

INDIVIDUAL HIP™ Cementless

3000 0201 INDIVIDUAL HIP™ TiHA

Personalized cementless stem
Titanium alloy (Ti6Al4V-ISO 5832-3), coated
with porous titanium and hydroxyapatite
12/14 5°40' taper

Design options

Coating

- Partial HA coating
- Full HA coating

Collar

- No collar
- Normal collar



INDIVIDUAL HIP™ Cemented

3000 0301 INDIVIDUAL HIP™ Cemented

Personalized cemented stem
Stainless steel [M30NW-ISO 5832-9]
12/14 5°40' taper

Design options

Collar

- No collar
- Normal collar



APPENDIX 3

INSTRUMENT REFERENCES

According to the surgeon preferences in terms of instrumentation and surgical approach, the INDIVIDUAL HIP™ stem is delivered with one of the following model of compactor or rasp.



INDIVIDUAL HIP™ Compactor

3000 0501

Personalized smooth compactor
Stainless steel [316L-NF S94-090]
12/14 5°40' taper



INDIVIDUAL HIP™ Rasp

3000 0701

Personalized piqued rasp
Stainless steel [316L-NF S94-090]
12/14 5°40' taper



INDIVIDUAL HIP™ Compactor NT

3000 0511

Personalized smooth compactor, without trial neck
Stainless steel [316L-NF S94-090]

Only for anterior surgical approach



INDIVIDUAL HIP™ Rasp NT

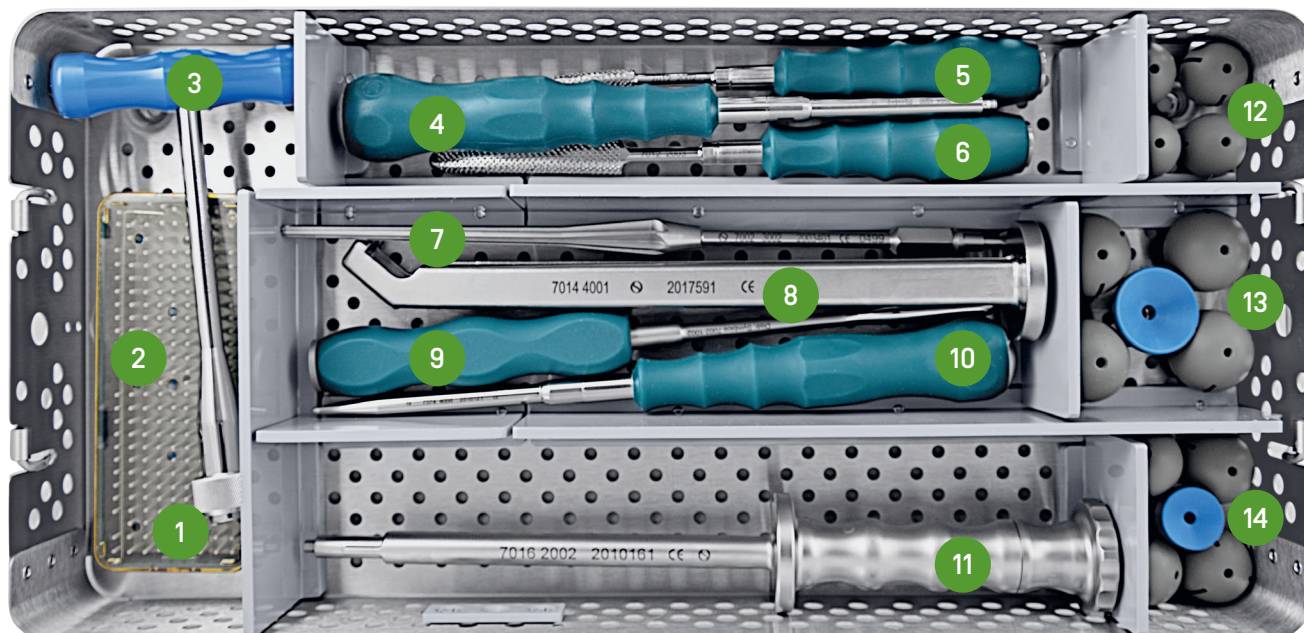
3000 0711

Personalized piqued rasp, without trial neck
Stainless steel [316L-NF S94-090]

Only for anterior surgical approach

INDIVIDUAL HIP™ Instrumentation

REF 7011 0000



Description	Reference	Quantity
- Case	7001 6000	1
1 Micropak	1-2700	1
2 Measuring strip	44.37.15	1
3 T-handle	7019 4001	1
4 Screwable impactor	7004 1000	1
5 Round rasp	7012 2002	1
6 Half-round rasp	7012 2003	1
7 Small reamer	7002 3002	1
8 INDIVIDUAL HIP™ Compactor extractor	7014 4001	1
9 Long gouge	7002 1002	1
10 INDIVIDUAL HIP™ Stem impactor	7014 4000	1
11 INDIVIDUAL HIP™ Rasp handle	7016 2002	1
Trial head Ø28 mm / -3.5 mm	7003 4128	1
Trial head Ø28 mm / +0 mm	7003 4228	1
12 Trial head Ø28 mm / +3.5 mm	7003 4328	1
Trial head Ø28 mm / +7 mm	7003 4428	1

Description	Reference	Quantity
Trial head Ø36 mm / -4 mm	7003 4136	1
Trial head Ø36 mm / +0 mm	7003 4236	1
13 Trial head Ø36 mm / +4 mm	7003 4336	1
Trial head Ø36 mm / +8 mm	7003 4436	1
Head impaction end-cap LD	7004 3656	1
Trial head Ø32 mm / -4 mm	7003 4132	1
Trial head Ø32 mm / +0 mm	7003 4232	1
14 Trial head Ø32 mm / +4 mm	7003 4332	1
Trial head Ø32 mm / +8 mm	7003 4432	1
Head impaction end-cap SD	7004 2236	1

References

- ^[1] Custom cementless stem improves hip function in young patients at 15-year followup
Flecher X, Pearce O, Parratte S, Aubaniac JM, Argenson JN
Clinical Orthopaedics and Related Research 2009, vol. 468, n° 3
- ^[2] Three-dimensional computed cementless custom femoral stems in young patients: midterm followup
Wettstein M, Mouhsine E, Argenson JN, Rubin P, Aubaniac JM, Leyvraz PF
Clinical Orthopaedics and Related Research 2005, vol. 437

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