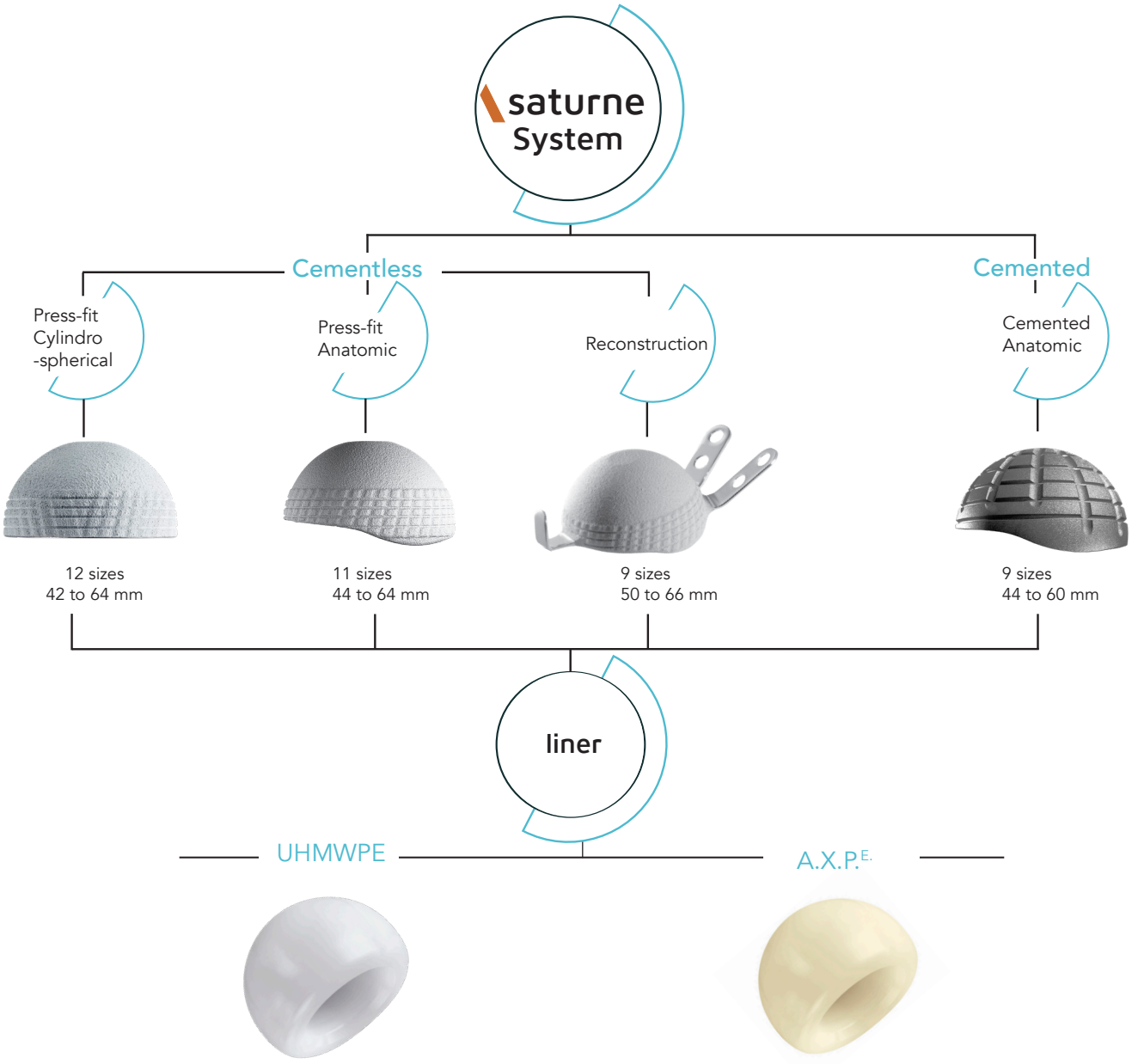
saturne II

amplitude

Surgical Technique

Summary

Concept and range



SATURNE system

		Ø42 mm	Ø44 mm	Ø46 mm	Ø48 mm	Ø50 mm	Ø52 mm	Ø54 mm	Ø56 mm	Ø58 mm	Ø60 mm	Ø62 mm	Ø64 mm	Ø66 mm
Cementless	Saturne cementless													
	Saturne II													
	Saturne reconstruction													
Cemented	Saturne cemented													
	Liner** Ø22,2 mm					*	*	*	*	*	*	*	*	*
	Liner** Ø28 mm													

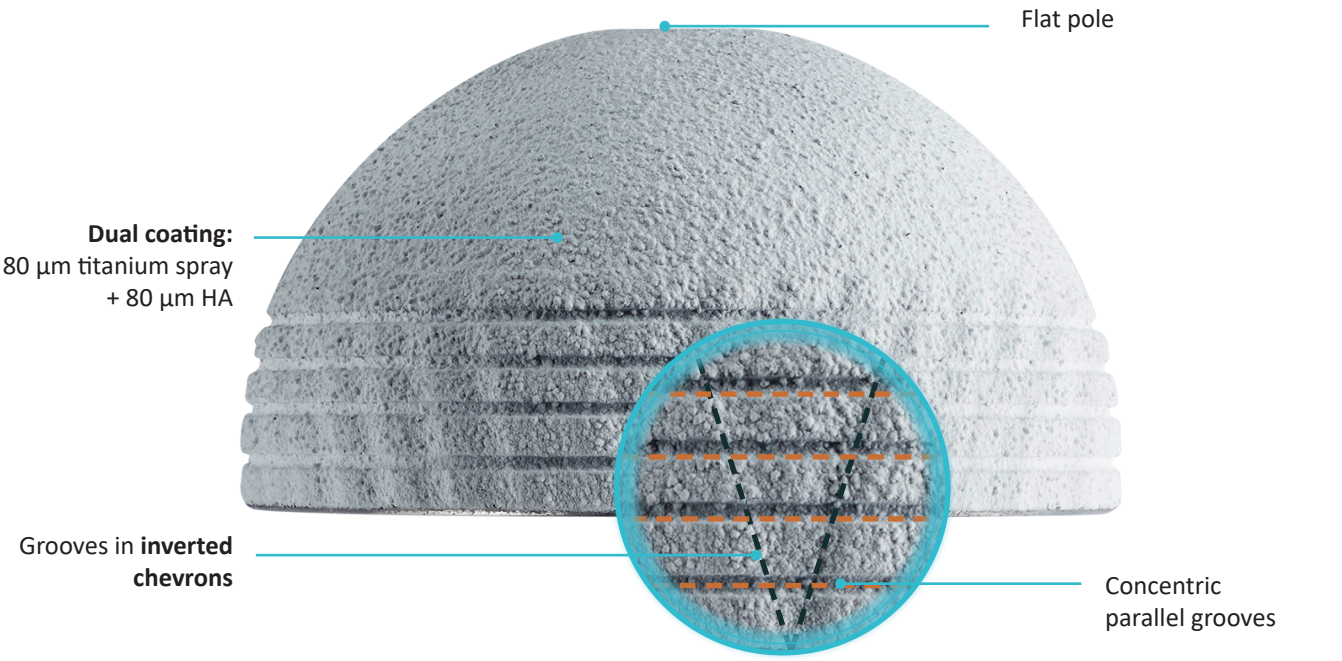
* optional sizes available on request
** UHMWPE or A.X.P.E.

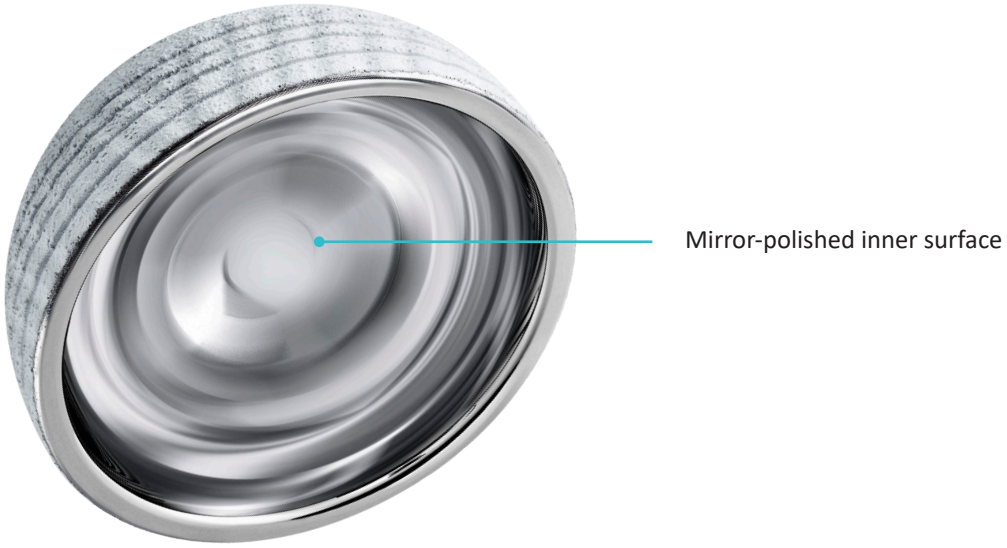
Concept and range

Dual mobility cementless cup

Cylindro-spherical cementless cup with Ti + HA coating:

- 3 mm cylindrical overhang
- 1 mm equatorial press-fit at diameter
- Inverted chevron grooves
- Concentric parallell grooves





Material: Stainless steel (M30NW)

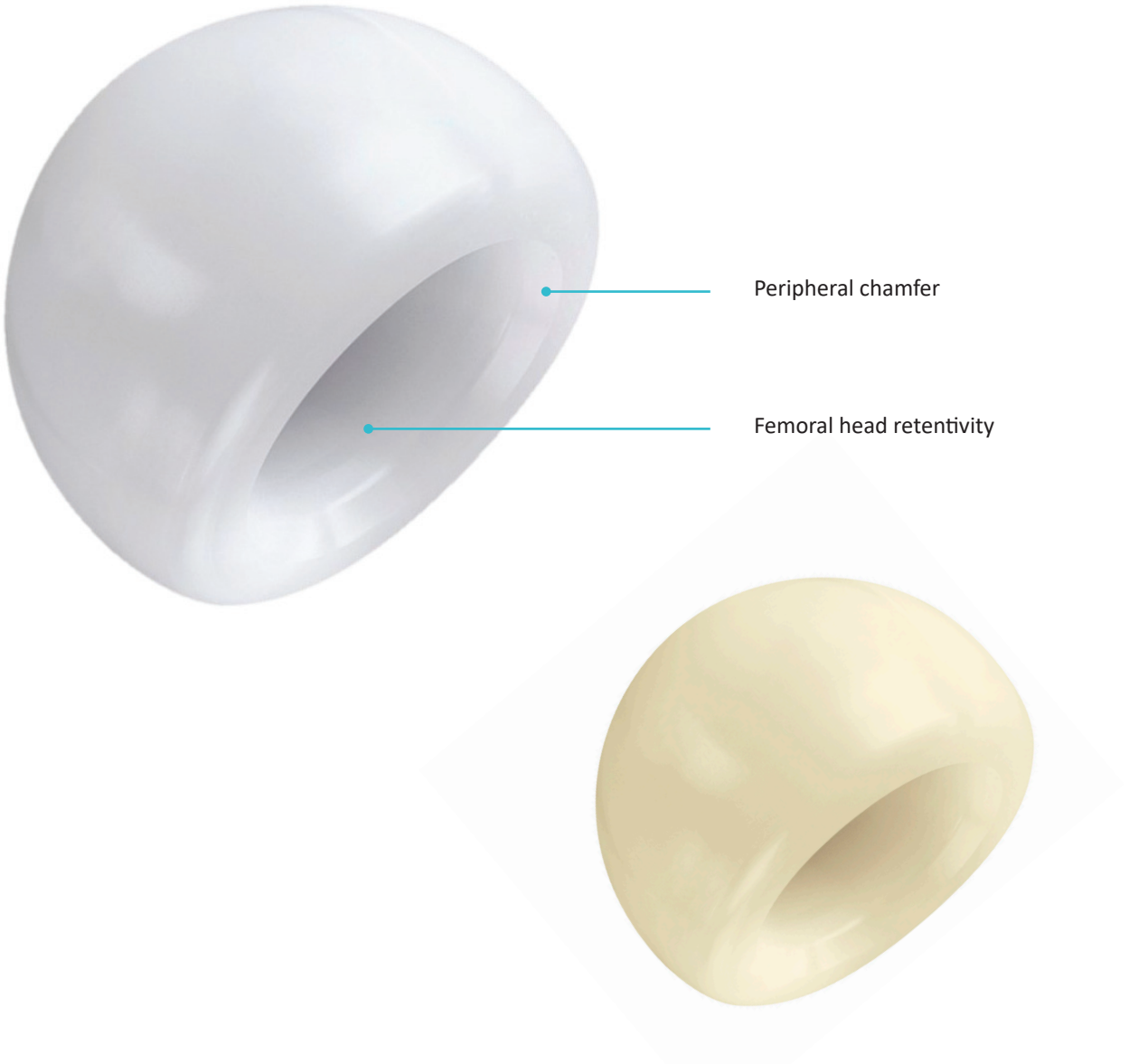
Instructions given in this document are for the SATURNE® II cup only. For other SATURNE® cup versions, please refer to the dedicated surgical technique.

Concept and range

Polyethylene liner

Liners compatible with Ø22.2 mm or Ø28 mm femoral heads.

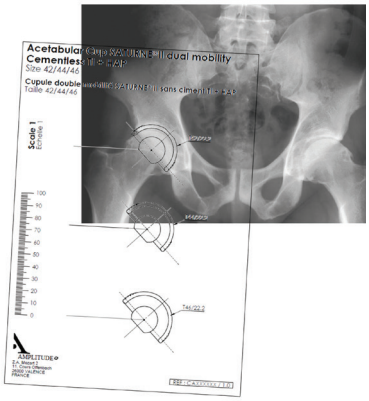
Same design and range for UHMWPE and A.X.P.[E.] liners.



Material: UHMWPE or highly cross-linked polyethylene with vitamin E (A.X.P.[E.])

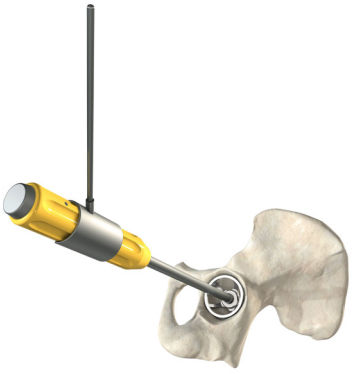
Surgical technique overview

1 Preoperative planning



2 Acetabulum reaming

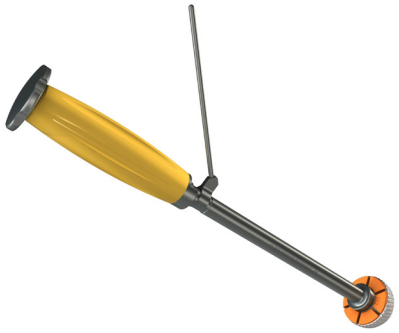
3 Reaming control



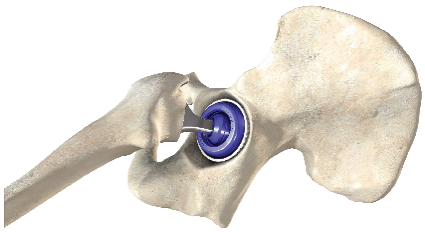
4 Holding the cup

Surgical technique overview

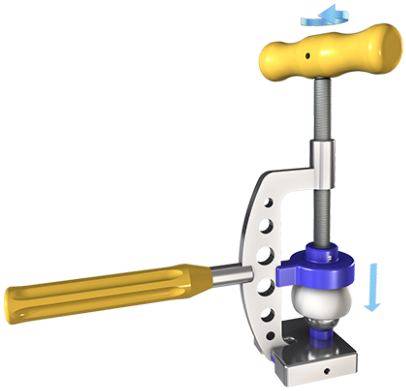
5 Final cup impaction



6 Trials with trial liner (optional)

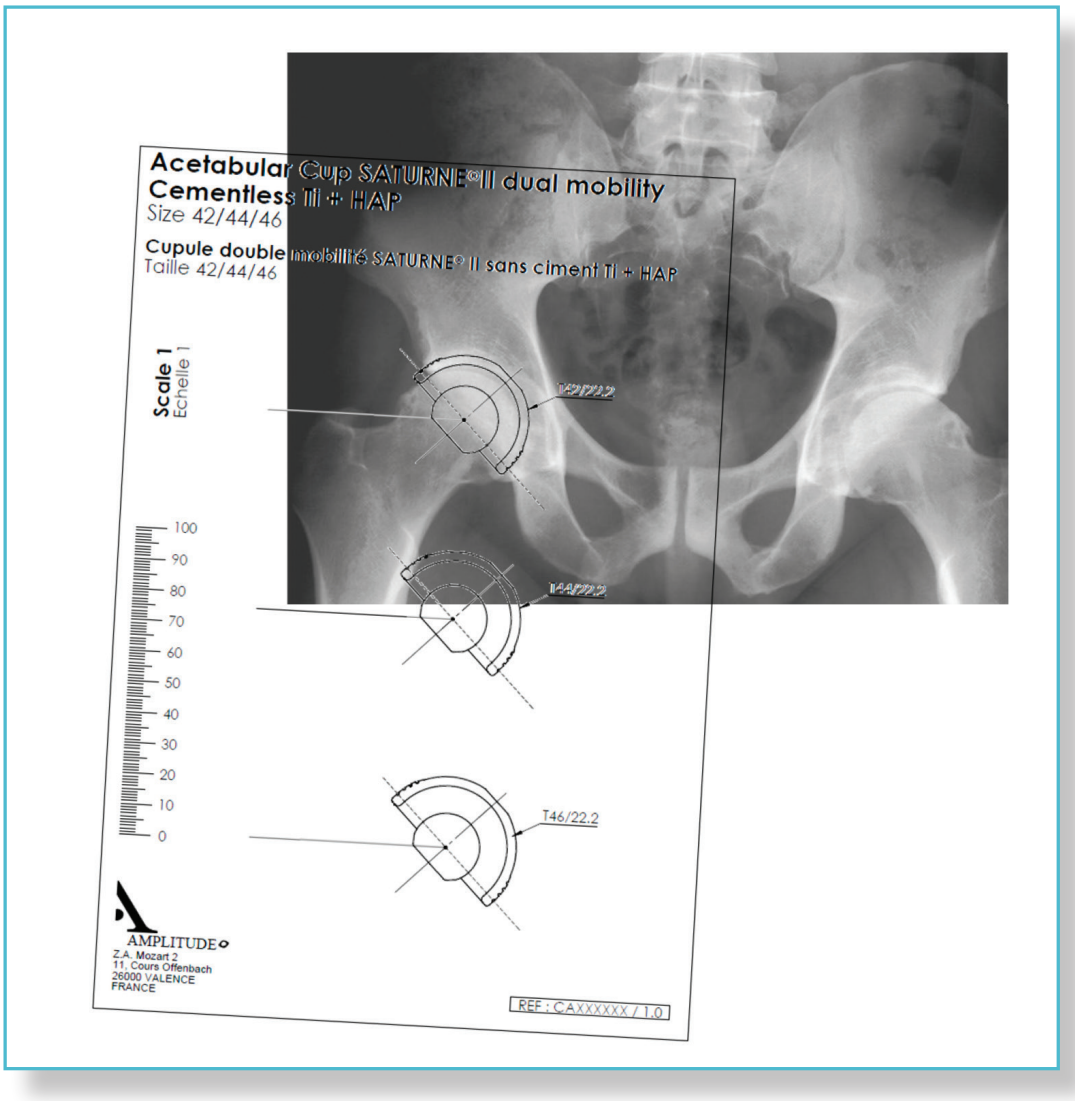


7 Head impaction in the liner



8 Final implant reduction

1 Preoperative planning



Using the x-rays and templates it is possible to:

- Determine the joint center,
- Identify the depth of the acetabulum,
- Assess the position of the cup,
- Determine the cup size.

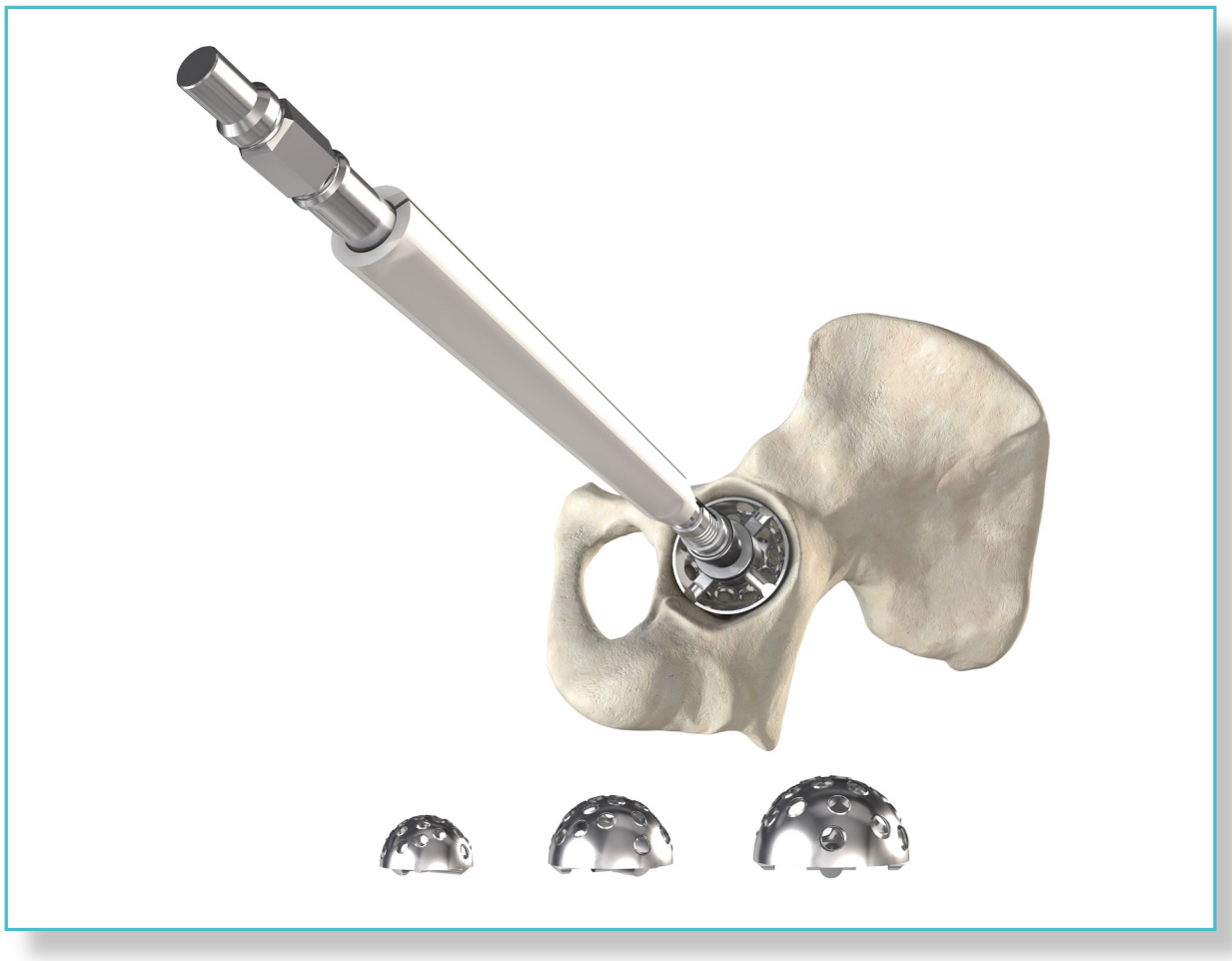
REMINDER

The purpose of this surgical technique description is to provide instructions on how to use the instrumentation properly. The surgeon is fully responsible for choosing and performing the approach and surgical technique.

NOTE

Templates are provided at a 115%, scale and can be provided with other scaling on request or in digital format.

2 Acetabulum preparation



Remove any peripheral osteophytes and resect the labrum. Make sure to remove any posterior and inferior osteophytes that could hinder cup placement.

Prepare the acetabulum using the reamers starting with the smallest acetabular reamer available. The reamers can be used with either a straight or offset reamer handle.

Gradually increase the reamer diameter until good peripheral support is achieved and bleeding subchondral bone has been exposed. Make sure not to go past the acetabular fossa (external lamina). The reamed cavity must be completely circular.

Clean out the bottom of the acetabulum, making sure to remove any bone fragments that could interfere with placement of the trial cup.

NOTE

The acetabular reamers size range covers all trial cups and implants. Depending on the adequation between the trial cup and reamed cavity, the reaming step might need to be performed again (see next page).

3 Reaming control

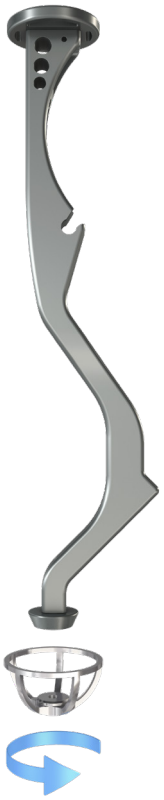
Assemble the trial cup on the impactor (straight or curved). The chosen trial cup size must be based on the last reamer used (see next page). Make sure the trial cup is completely screwed to the impactor handle. The trial has the same dimensions as the implant, **without press-fit.**

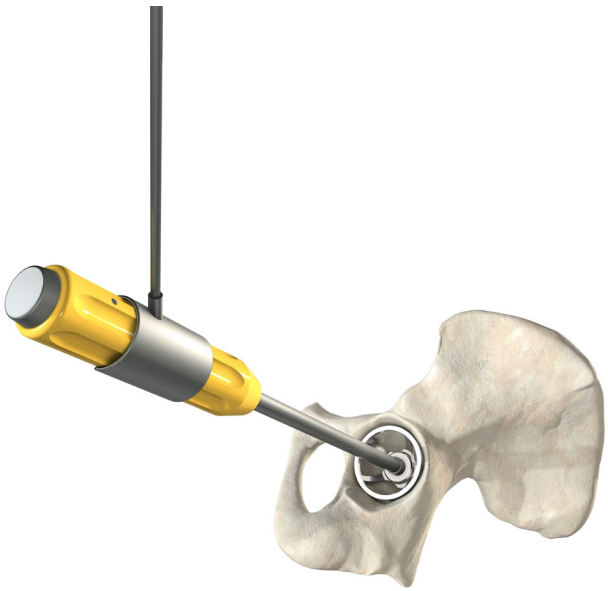
The cup orientor can be placed on the impactor being used, to set a 45° angle relative to the vertical plane.

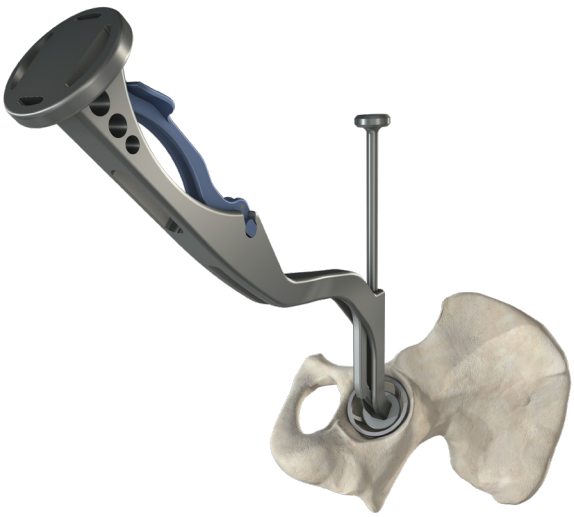
Clean out the bottom and rim of the acetabulum to prevent small bone or tissue fragments from interfering with cup impaction.

Impact the trial cup while maintaining the inclination and anteversion providing the best bone coverage. The cup is typically placed at 45° inclination and 10° to 15° anteversion, depending on the patient. It must make contact with the entire perimeter of the acetabulum and be **stable** and without protruding.

Remove the trial cup when reaming is validated.







NOTE

If the trial cup must be impacted (due to sclerotic or hard bone), it is recommended to **adjust acetabular cavity** reaming, following instructions available next page. In every case, reaming is validated based on the trial cup stability.

NOTE

When performing trials with a **straight impactor**, it can be removed by unscrewing it, to leave only the trial cup in the acetabulum.

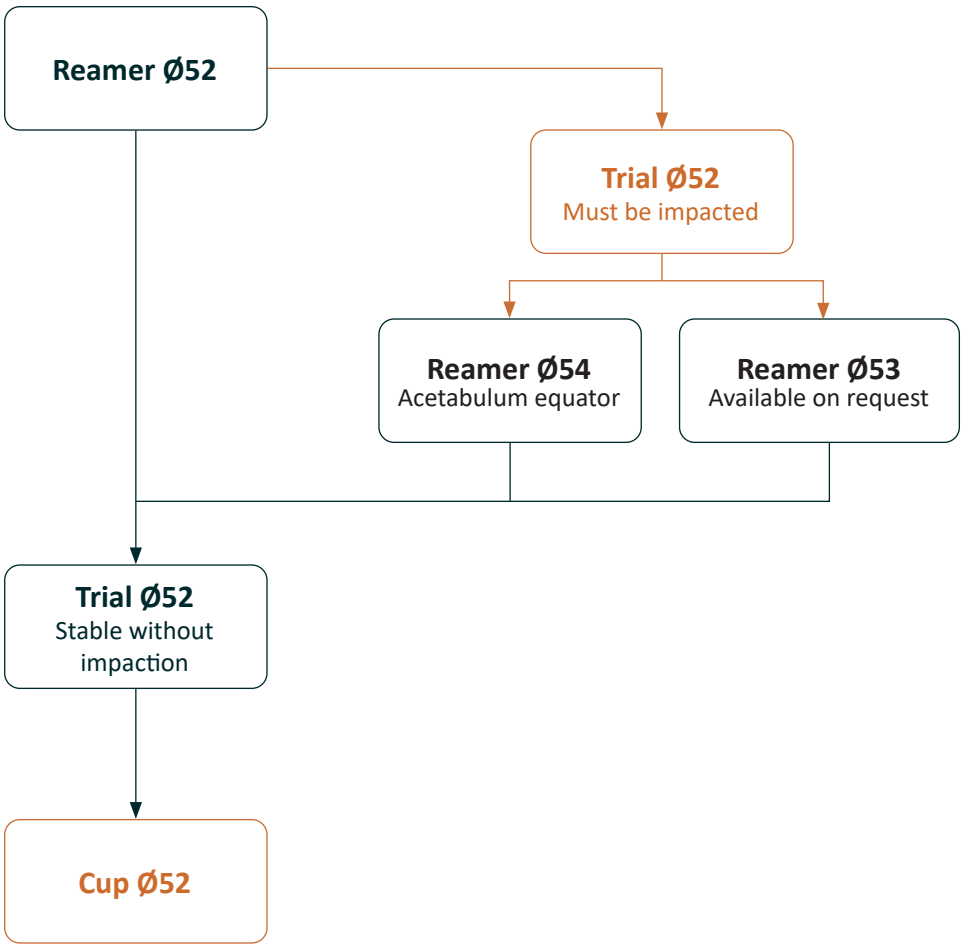
When performing trials with a **curved impactor,** the rod does not need to be assembled to the handle.

Reaming technique

Decision tree

Reaming must be performed using even reamers, by size increment (2 mm). The size of the last validated reamer (see p.11) determines the size of the trial cup. The size is validated if the trial is stable in the acetabulum, and introduced without need of impaction. If the trial must be impacted, the following techniques can be followed:

- Ream the equator of the acetabulum one size over (2 mm),
- Ream the whole acetabulum half a size over (1 mm): those reamers are available on request only.



GENERAL IMPLANT SIZE RECOMMANDATION :
Ø trial cup = Ø final cup

4 Holding the cup

Take the final cup of the same size as the trial cup out of its packaging.

Screw the expandable impaction tip of the same size as the final cup on the impactor handle until stop.

Place the chosen cup on the impaction tip, making sure that the entire periphery of the cup makes contact with the rim of the impaction tip.

With the straight impactor

Turn the yellow handle to the right to expand the impaction tip, until complete grip of the implant.

With the curved impactor

Close the blue lever completely to achieve complete grip of the implant.

NOTE

Assembly instructions of the impactors are available in Annex.

5 Final cup impaction

Straight impactor

Curved impactor

Place the alignment guide on the impactor handle (clipped on the straight impactor, screwed on the curved impactor).

Place the chosen cup in the reamed acetabulum at the predefined inclination and anteversion, and then impact it.

When the cup is perfectly impacted, remove the impactor handle according to the impactor model:

With the straight impactor

Turn the yellow handle to the left.

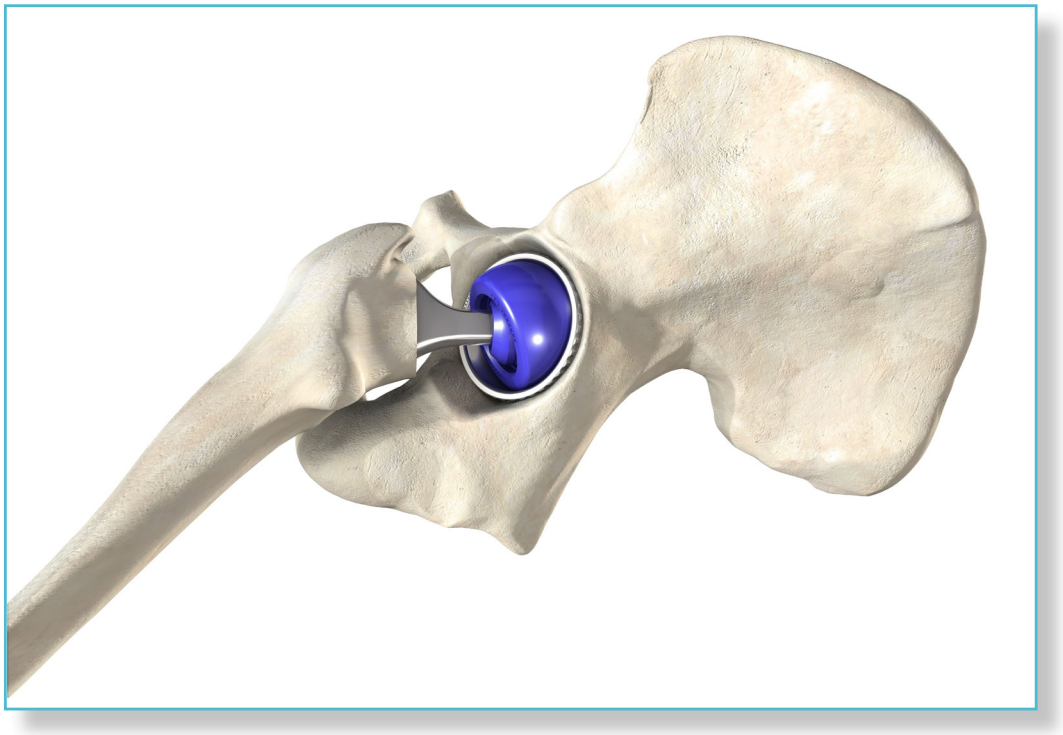
With the curved impactor

Open the handle.

NOTE

If needed, the cup can be realigned using the dedicated cup realignment tip.

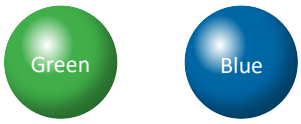
6 Trials with trial liner (optional)



Prepare the femur by following the surgical technique for the chosen stem.

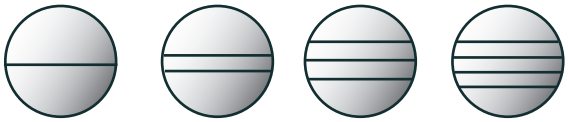
Select the trial liner for dual mobility cup of the same size as that of the final cup, and one that corresponds to the desired femoral head size.

Trial heads and liners color code



Ø22.2mm Ø28mm

Trial heads neck length code*



Short neck | Medium neck | Long neck | Extra-long neck

Perform mobility and stability trials with the femoral stem in place.

Remove trial components when stability is validated.

NOTE

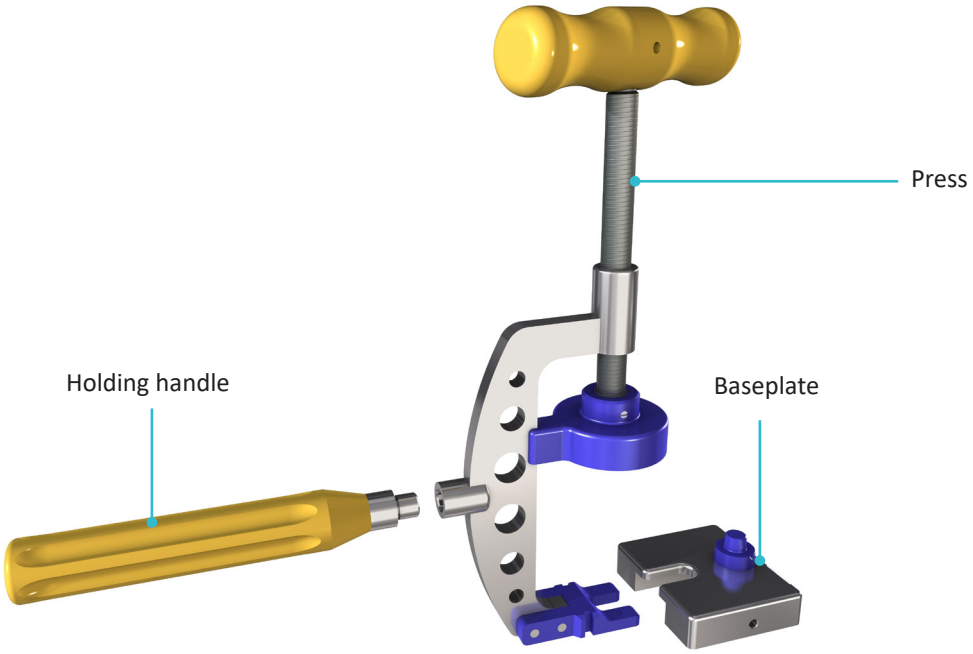
The trial liners for size Ø48 mm and beyond are intended to be used with Ø28 mm femoral heads. If performing trials with Ø22.2 mm femoral heads, clip the universal liner size reducer in the trial liner.

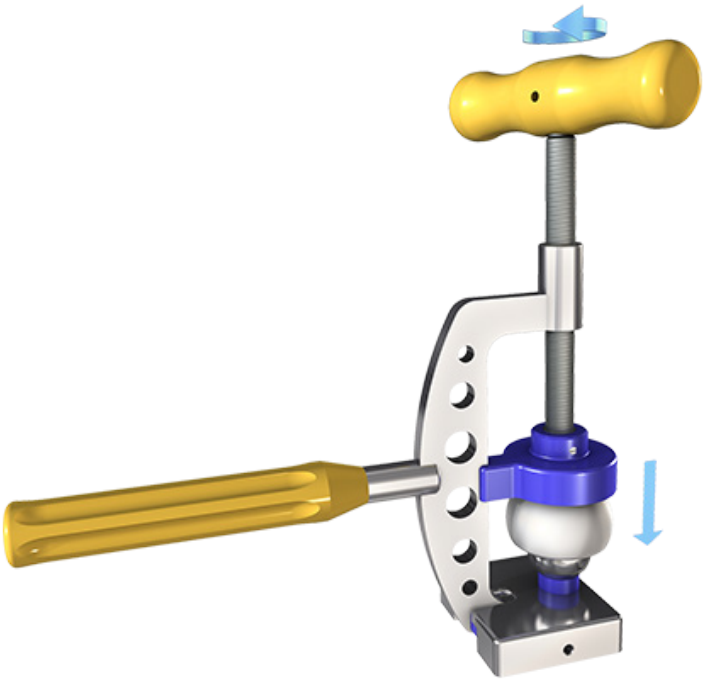
NOTE

Trial liners SATURNE® first generation can be used with the current instrumentation set in replacement of SATURNE® II trial liners. In this case, tests can only be performed with Ø28mm heads for cups sizes greater than or equal to 48mm.

**Indications, contraindications and pairing restrictions are described in the IFU available with the femoral heads. Please read carefully.*

7 Head impaction in the liner





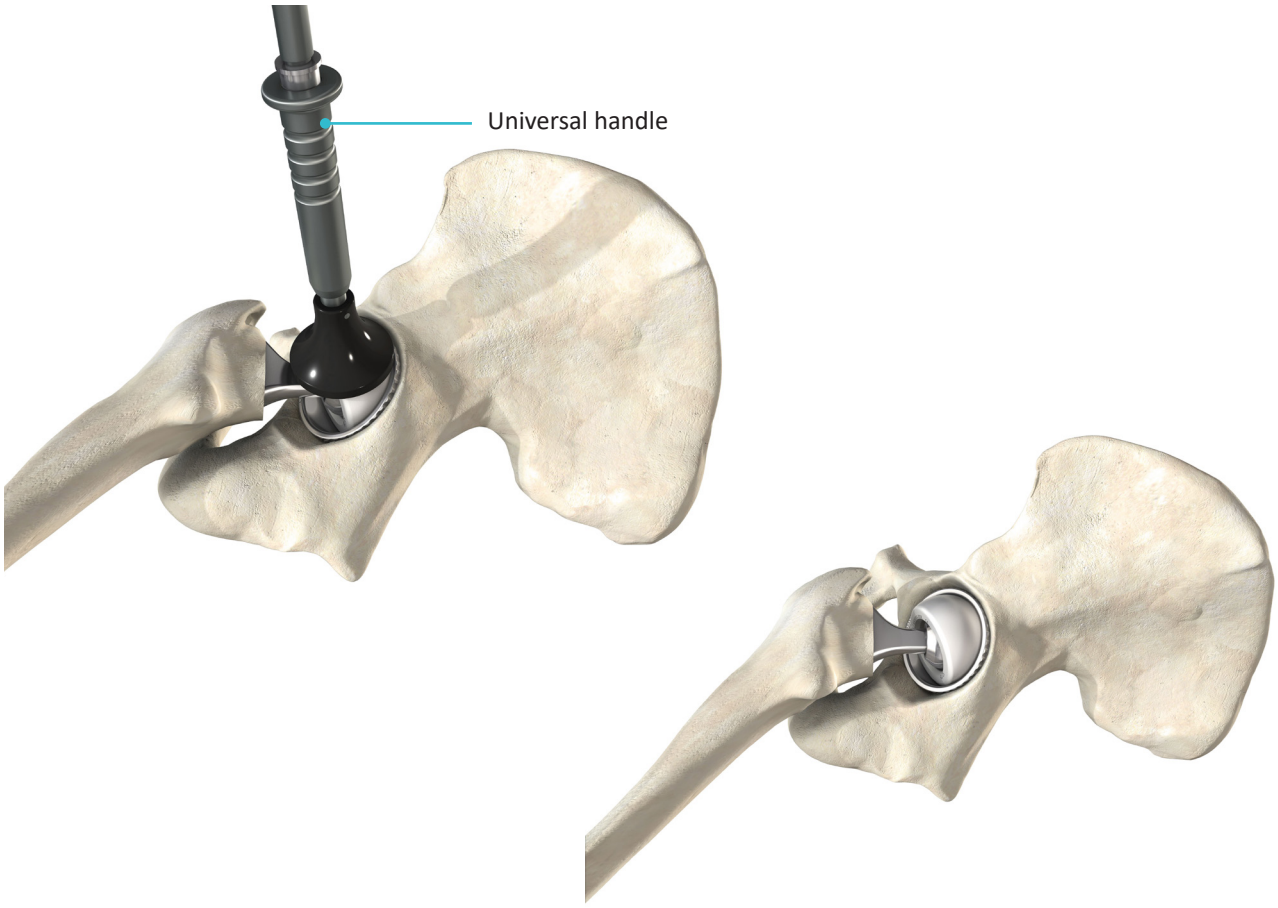
Secure the handle and the baseplate on the dual mobility cup press. Fully loosen the yellow T-handle.

Place a femoral head of the sier chosen during the trials on the baseplate.

Select the liner that matches the size chosen during the trials. Place the liner on the head and turn the T-handle of the press until the liner's retaining threshold has been cleared. A distinctive audible sound indicates that the head has moved into the liner and is correctly seated. Turn the T-handle one of two more times to eliminate any air caught in the liner

Make sure the head can move within the liner.

8 Final implant reduction



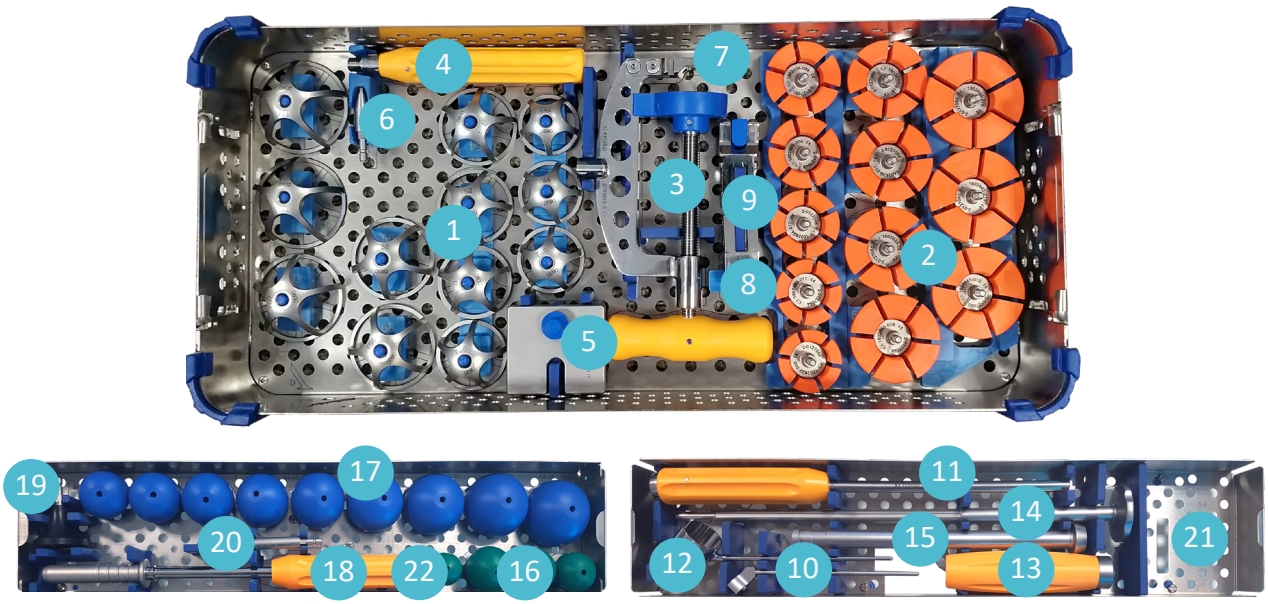
Place the femoral head and liner on the stem taper; impact and reduce it using the liner impaction tip assembled on the universal handle.

Reduce the implants into the implanted cup.

NOTE
Make sure there are no foreign bodies between the liner and cup during the reduction step.

Instrumentation

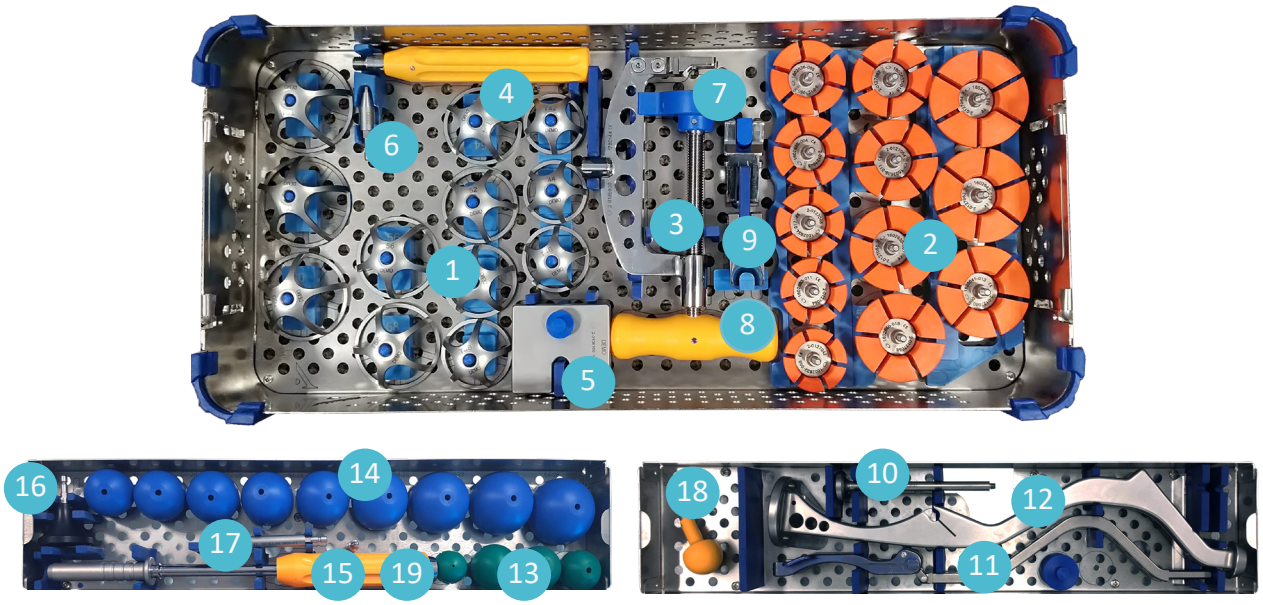
Straight impactor set



Rep	Description	Reference	Qty
1	Saturne® II trial cup Sizes **42** to **64**	2-0127**42** to 2-0127**64**	1 each
2	Saturne® II impaction tip Sizes **42** to **64**	2-0127**42** to 2-0127**64**	1 each
3	Press for dual mobility cup	2-0105900	1
4	Holding handle	2-0104200	1
5	Base for dual mobility press	2-0106100	1
6	H3 Hex tip for universal wrench	2-0106400	1
7	Amplitude tip for dual mobility press	2-0106000	1
8	INITIALE fork for dual mobility press	2-0112400	1
9	12/14 Tip for dual mobility press	2-0113100	1
10	Cup alignment guide for impactor handle Ø15	2-0126000	1
11	Cup impactor	2-0100800	1
12	Cup alignment guide	2-0102000	1
13	Straight impactor handle	2-0126700	1
14	Threaded rod for straight impactor	2-0126900	2
15	Tube for straight impactor	2-0126800	1
16	SATURNE Trial liner Sizes **42**-22 to **46**-22 (2mm increment)	2-0128**42** to 2-0128**46**	1 each*
17	SATURNE Trial liner compatible with reducer Sizes **48**-28 to **64**-28 (2mm increment)	2-0127**48** to 2-0127**64**	1 each*
18	Universal handle	2-0101000	1
19	Tip for Dual Mobility Liner Reduction	2-0107000	1
20	Cup realignment tip	2-0115300	1
21	Cup impaction tip Ø 32	2-0104132	1
22	Head diameter reducer for SATURNE trial liner	2-0127800	1

Instrumentation

Curved impactor set

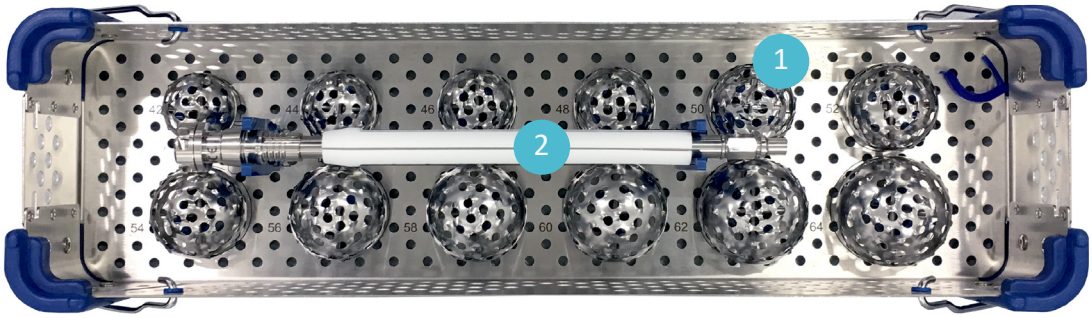


Rep	Description	Reference	Qty
1	Saturne® II trial cup Sizes **42** to **64**	2-0127**42** to 2-0127**64**	1 each
2	Saturne® II impaction tip Sizes **42** to **64**	2-0127**42** to 2-0127**64**	1 each
3	Press for dual mobility cup	2-0105900	1
4	Holding handle	2-0104200	1
5	Base for dual mobility press	2-0106100	1
6	H3 Hex tip for universal wrench	2-0106400	1
7	Amplitude tip for dual mobility press	2-0106000	1
8	INITIALE fork for dual mobility press	2-0112400	1
9	12/14 Tip for dual mobility press	2-0113100	1
10	Alignment guide for Curved impactor with clip system	2-0126600	1
11	Rod for Curved impactor with clip system	2-0126500	1
12	Curved Impactor Handle with clip system	2-0118800	1
13	SATURNE Trial liner Sizes **42**-22 to **46**-22 (2mm increment)	2-0128**42** to 2-0128**46**	1 each*
14	SATURNE Trial liner compatible with reducer Sizes **48**-28 to **64**-28 (2mm increment)	2-0127**48** to 2-012**64**	1 each*
15	Universal handle	2-0101000	1
16	Tip for Dual Mobility Liner Reduction	2-0107000	1
17	Cup realignment tip	2-0115300	1
18	Cup impaction tip Ø 32	2-0104132	1
19	Head diameter reducer for SATURNE trial liner	2-0127800	1

** SATURNE® first generation trial liners (references 2-0105644, 2-0105646, and 2-0105748 to 2-0105764) can be used in replacement of Trial liner SATURNE® II compatible with reducer size 44 to 64 (references 2-0128044, 2-0128046 and 2-0127748 to 2-012764).*

Instrumentation

Acetabular reamers set



Rep	Description	Reference	Qty
1	Acetabular reamer Ø**42** à Ø**64**	2-0192**942** to 2-0192**964**	1 each
2	Complete monobloc reamer holder with AO connection	MPF310030	1

Acetabular reamers set - odd sizes

Rep	Description	Reference	Qty
1	Acetabular reamer Ø**41** to Ø**65**	2-0192**941** to 2-0192**965**	1 each
2	Straight Reamer Handle - AO coupling	T17780*	1

* optional if the tray of even sizes reamers has already been provided.

Description	Reference
IMA reamer handle - Metallic – AO	50244501

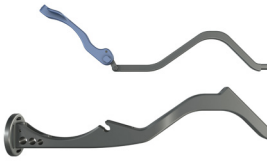
Description	Reference
IMA reamer handle - carbon – AO	T17875

Annex A

Rod assembly on the curved impactor

The curved impactor handle has two components:

- The rod
- The impactor handle body

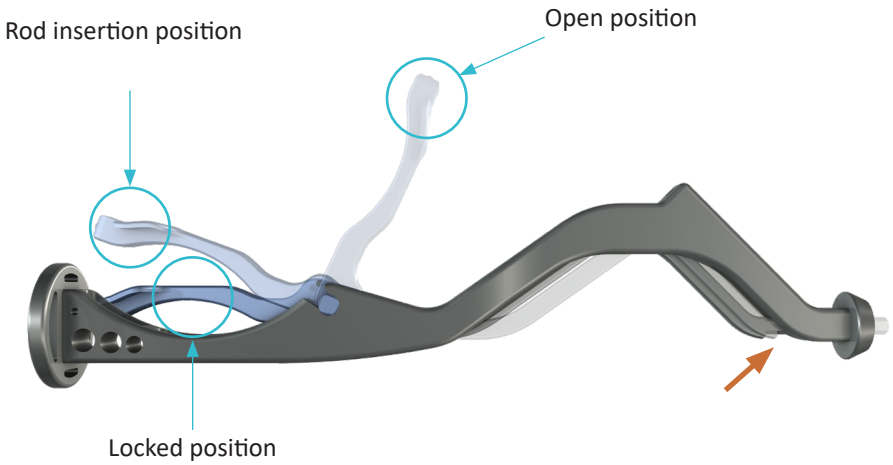


To assemble those two elements:

1. Slide the rod into the opening on the impactor handle;
2. Place the end of the rod in the opening at the end of the impactor handle;
3. Set the oval projection on the rod's blue lever in the oblong hole on the impactor handle.

The impactor handle is now ready for use in the following positions:

- **Rod insertion position;**
- **Open position,** used to assemble the expandable impactor tip (push the part of the rod identified by the orange arrow of the illustration to ease this positioning);
- **Locked position,** used to insert the trial cup (if the handle is used with the rod already assembled for trials) and the final cup.



Annex B

Straight impactor assembly

The straight impactor handle has three components:

- Threaded rod 
- Handle 
- Tube 

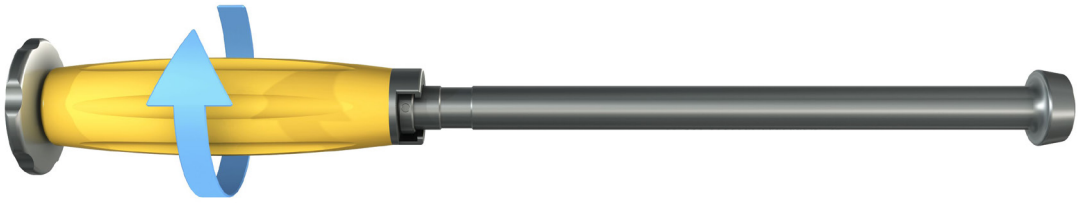
To assemble these elements:

1. Assemble the handle and tube;

2. Slide the threaded rod into the open end of the handle while maintaining previous assembly.

Warning: a pin in the tube engages the groove in the threaded rod. This enables only one position of the threaded rod.

3. Turn the yellow handle completely to complete the assembly.



NOTES

TO.H.002/EN/B

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