H1

CERAMIC ON CERAMIC
HIP RESURFACING
ARTHROPLASTY

Surgical Technique

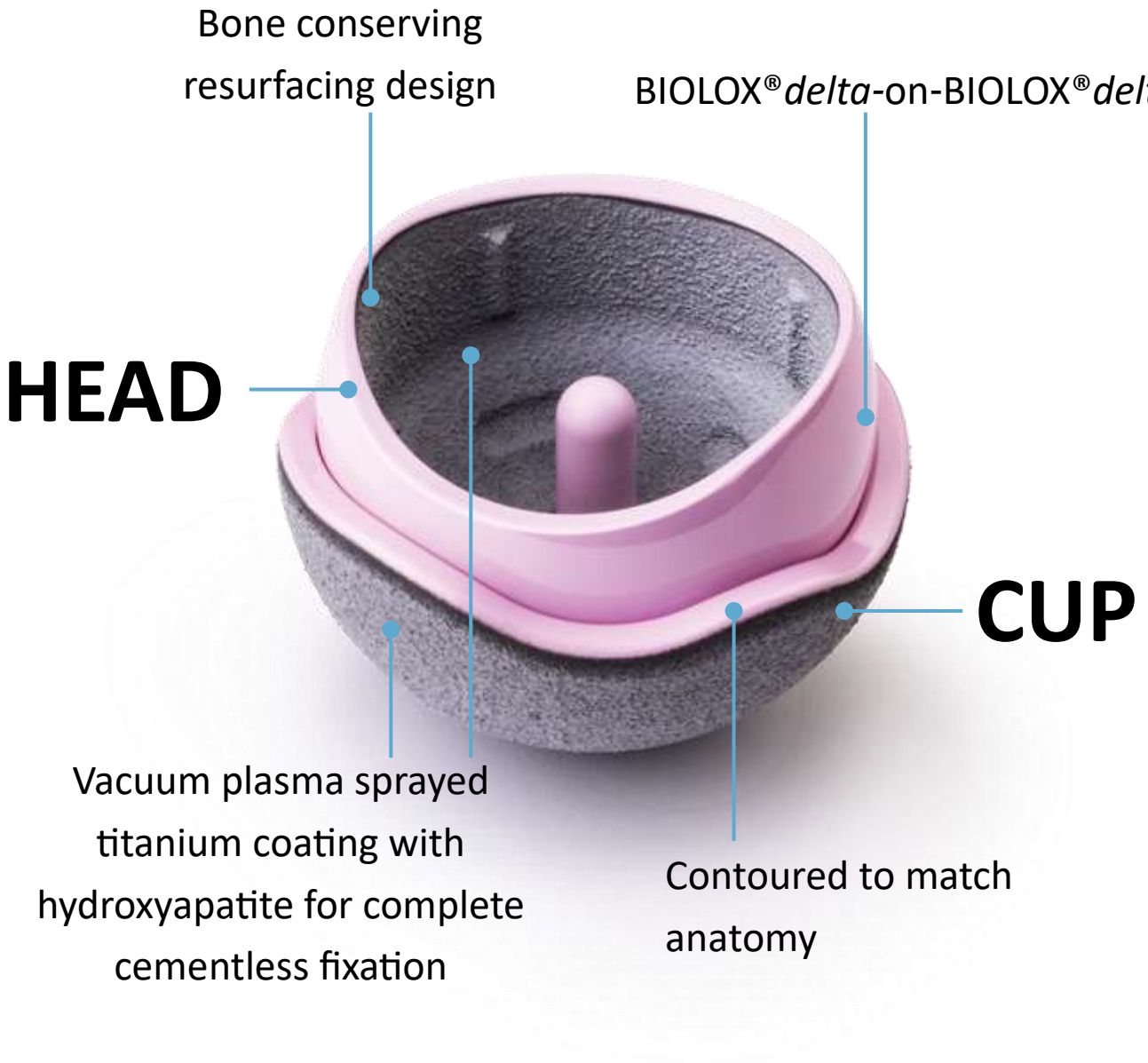
EMBODY

Contents

Introduction

Description of the H1 system

The H1 is a contoured ceramic-on-ceramic hip resurfacing arthroplasty system. It consists of two monoblock implant components (femoral head and acetabular cup) made of BIOLOX®*delta* with vacuum-plasma-sprayed titanium and hydroxyapatite for cementless fixation. The contours of the H1 components are designed to better reflect the native morphology of the femoral head and acetabulum. The H1 is supplied with size-specific single-use instruments.



Introduction

Patient selection

The H1 is intended for use in patients requiring primary hip resurfacing arthroplasty due to:

- Primary osteoarthritis
- Osteoarthritis secondary to trauma, avascular necrosis, developmental hip dysplasia or other self-limiting conditions

NOTE

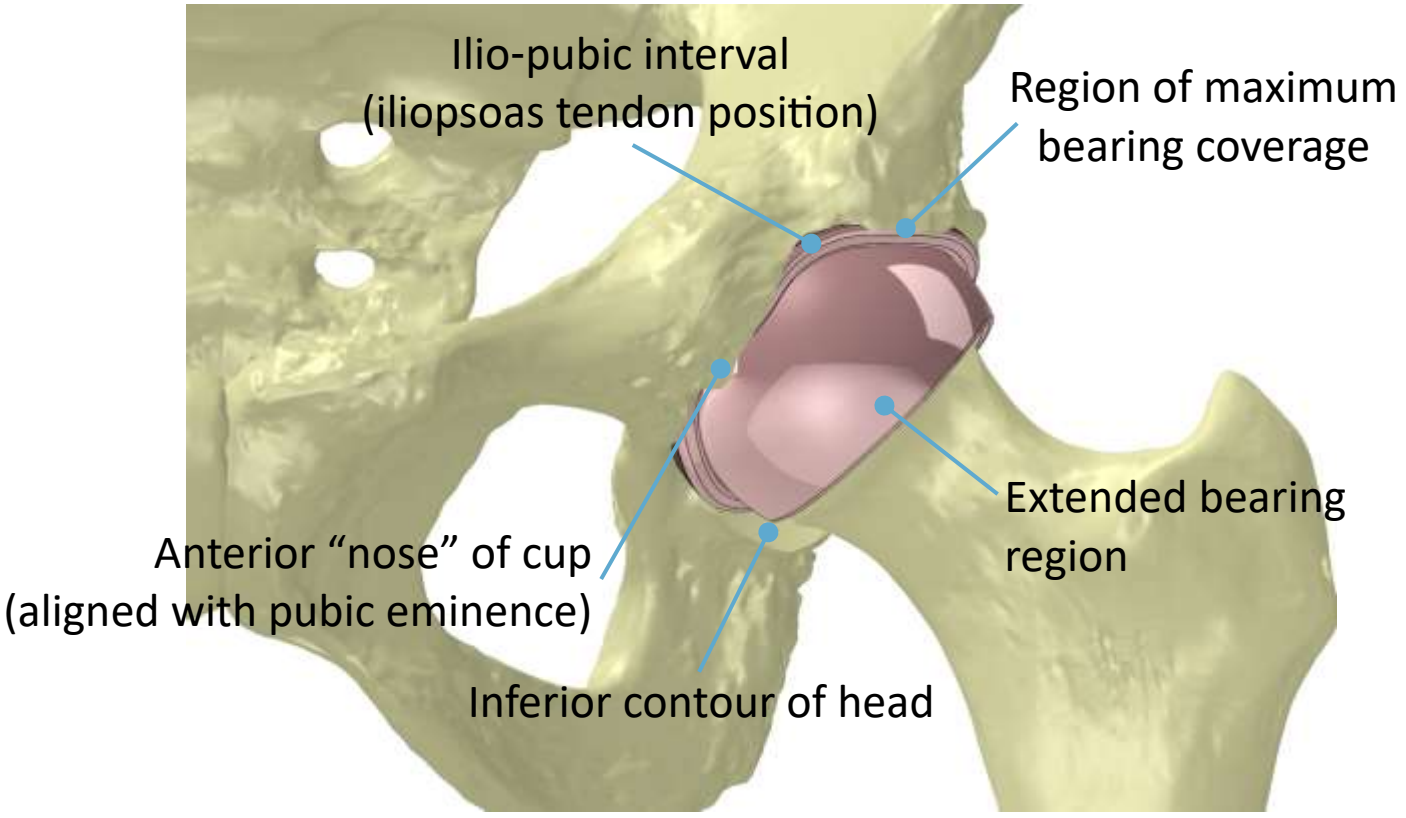
Refer to Instructions for Use for the list of contraindications.

Introduction

The H1 contours

The contoured profile of the cup implant is derived from the natural profile of the acetabulum. This improves the fit around the acetabular rim and helps to avoid implant overhang, particularly anterosuperior at the position where the psoas tendon moves over the acetabular rim. It is therefore easier to place the cup at the target inclination angle of 45°, without overhang and the resulting risk of psoas impingement. In addition to positioning the cup at the appropriate inclination and anteversion angles, rotational orientation must also be considered. The target for cup rotation is to ensure that the region of maximum bearing coverage is positioned superiorly whilst the illio-pubic interval is aligned with the natural recess without overhang. In this position the anterior nose should be approximately 12° inferior to the true anterior position.

The contoured profile of the head implant is derived from the natural profile of the head neck junction. The profile reduces the risk of the implant rim overhanging at the head neck junction, particularly inferiorly where the psoas tendon passes over the edge of the implant, without compromising the flexion facets. The target for head rotation is to position the contours inferiorly and superiorly, with the extended bearing regions positioned anteriorly and posteriorly.



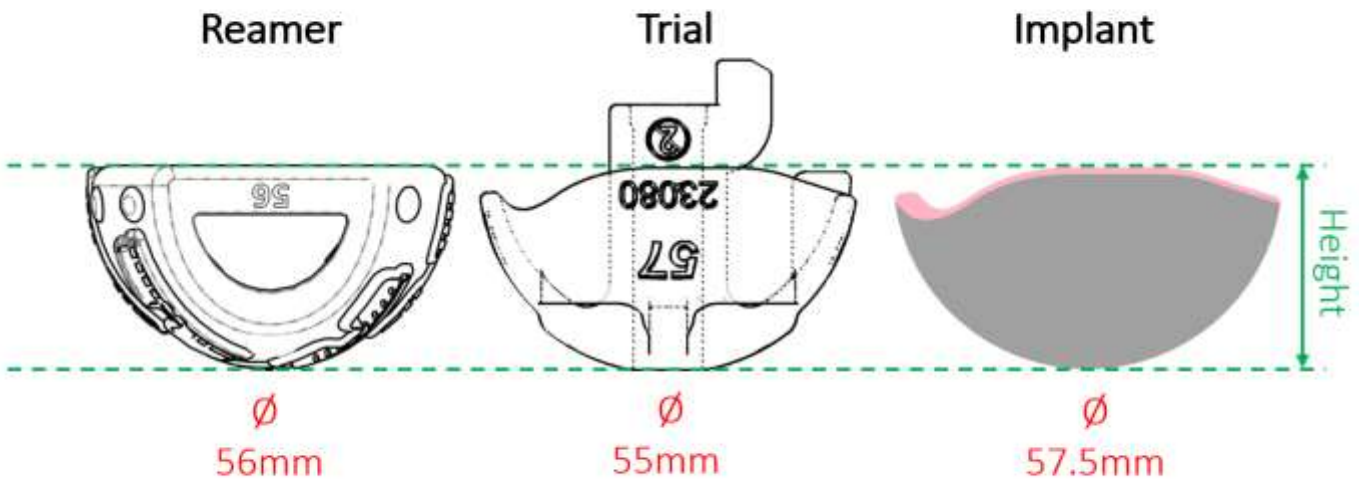
Introduction

H1 Sizing

The true external diameter of the H1 Head component corresponds directly to the labelled size and matches the internal diameter of the compatible cup. Each H1 head has a single compatible cup:

Cup Size	51	53	55	57	59	61
Head Size	44	46	48	50	52	54

The true external diameter of the H1 Cup component is 0.5mm greater than the labelled size. This size includes the average thickness of the VPS coating. The true internal diameter of the H1 Cup component corresponds directly to the labelled size and is 7mm less than the labelled external diameter. For example, a 57 cup as labelled has an external diameter of 57.5mm and an internal diameter of 50mm (the bearing surface). Under-reaming is required for adequate press-fit. The acetabulum should be under-reamed by 1mm from the labelled cup size. Optimal press-fit will be achieved by careful acetabular bone preparation and implant placement. The cup trial does not give an indication of press-fit but is intended to advise the user on cup orientation and depth:



Introduction

The H1 instruments

The H1 Instruments are size-specific, single-use instruments. For each cup/head implant combination there is an associated instrument kit. The instruments are distributed in three trays:

Tray 1: non-sized drilling, guidance and impaction instruments.

Tray 2: size-specific reamers and reamer driver. 3 reamers are provided as standard: 3mm under the labelled cup size; 2mm under the labelled cup size; 1mm under the labelled cup size.

Tray 3: size-specific guidance, cutting, trialling and impaction instruments.

Single-use instruments

The H1 instruments are single-use; the majority are manufactured from nylon, using additive manufacturing techniques – "3D Printed". They are designed to be used once and then disposed of. This should be considered while using the H1 Instruments.

Instrument markings

The following markings are used on some of the instruments to provide guidance to the user:

SUP or **SUPERIOR**	Superior (femoral head)
INF or **INFERIOR**	Inferior (femoral head)
A	Anterior (acetabulum)
P	Posterior (acetabulum)
ROTATION	Cup rotation
LEFT and **RIGHT**	Refers to left or right hip
	Single-use

Introduction

Pre-operative planning

Pre-operative planning should be carried out prior to using the H1. Please contact info@embody-ortho.com for further information regarding our 2D and 3D planning options.

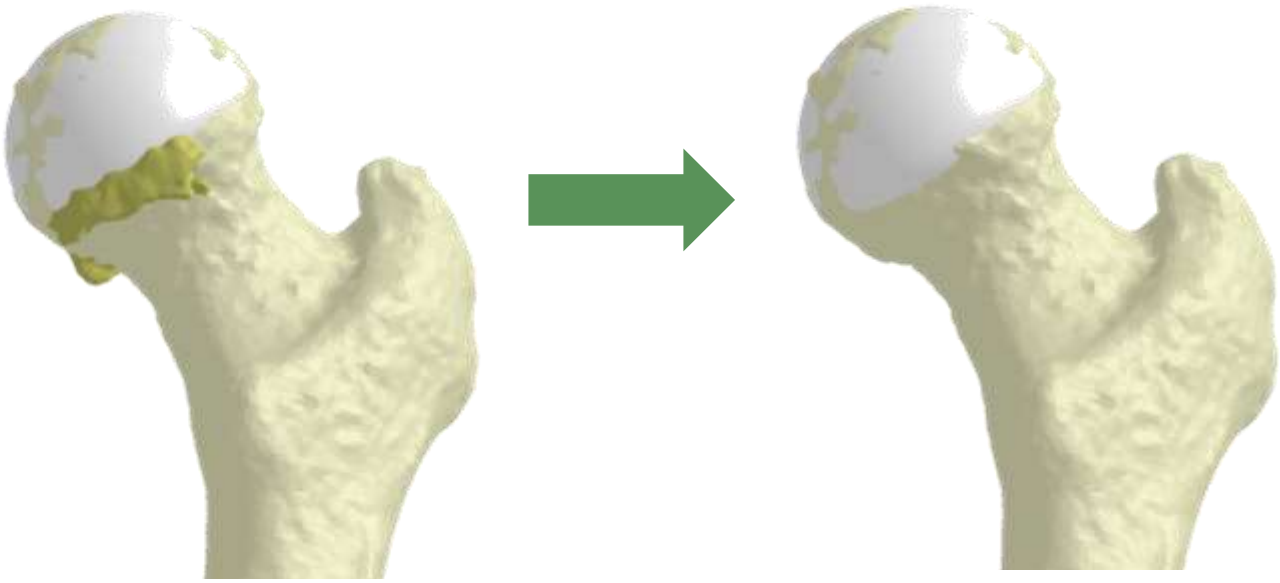
Surgical approach

Patient positioning

The H1 may be implanted using a variety of surgical approaches. The specific approach depends on the surgeon's preference and therefore may differ from the procedure shown. The surgical approach chosen must provide adequate exposure.

Exposure

The femoral head should be exposed to allow circumferential inspection of the junction of the femoral head and neck. Osteophytes at the head neck junction should have been identified on the preoperative images. These osteophytes need to be removed to allow access to the neck close to the femoral head. Use diathermy to score the coronal and sagittal planes through the femoral head to aid the bony preparation if desired.

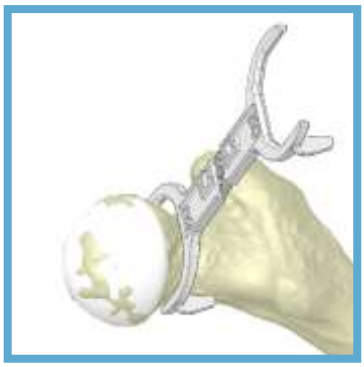


WARNING

Remove only osteophytic bone

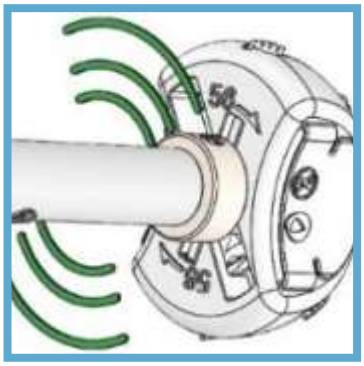
Key surgical steps summary

Sizing



Aligning

Acetabular preparation

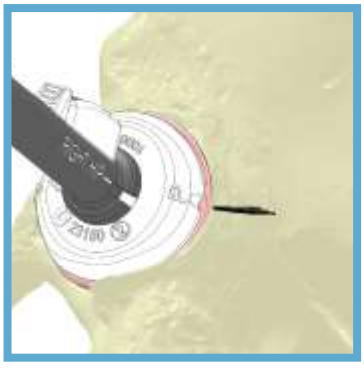


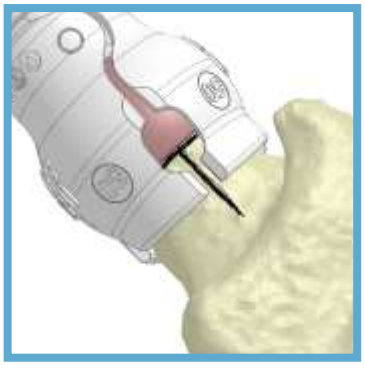
Femoral head preparation

Acetabular cup trialling

Femoral head trialling

Acetabular cup implantation





Femoral head implantation

Intra-operative sizing

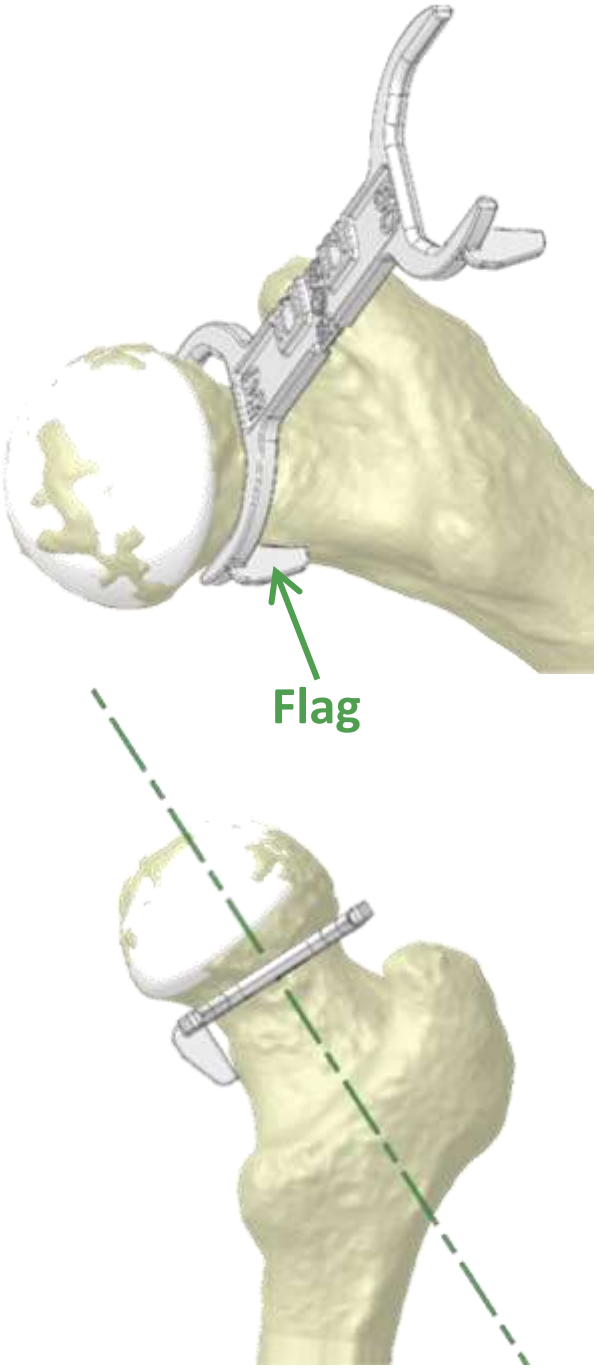
Open Tray 1. Once the femoral head is dislocated, the **Head/Neck Sizing Templates** must be used to determine the implant size, which should have been estimated during preoperative planning. Each **Template** is engraved with the relevant **Head Implant** size.

WARNING

Osteophytes that prevent correct placement of the Template must be removed

Disconnect the chosen **Template** from the stack and place it around the femoral neck with the flag placed inferiorly. The largest dimension of the femoral neck is from inferomedial to superolateral. The **Template** must be free to move on this widest portion to reduce the risk of notching and allow angular adjustment with the **Femoral Head Guide** later on.

The flag on the **Template** corresponds to the flag on the **Head Guide Clamp**, and helps to determine the correct femoral head alignment. The flag should be aligned to the medial calcar and should sit close to the medial head/neck junction.



NOTE

If the flag is too long for the patient's anatomy, it can be trimmed with a rongeur

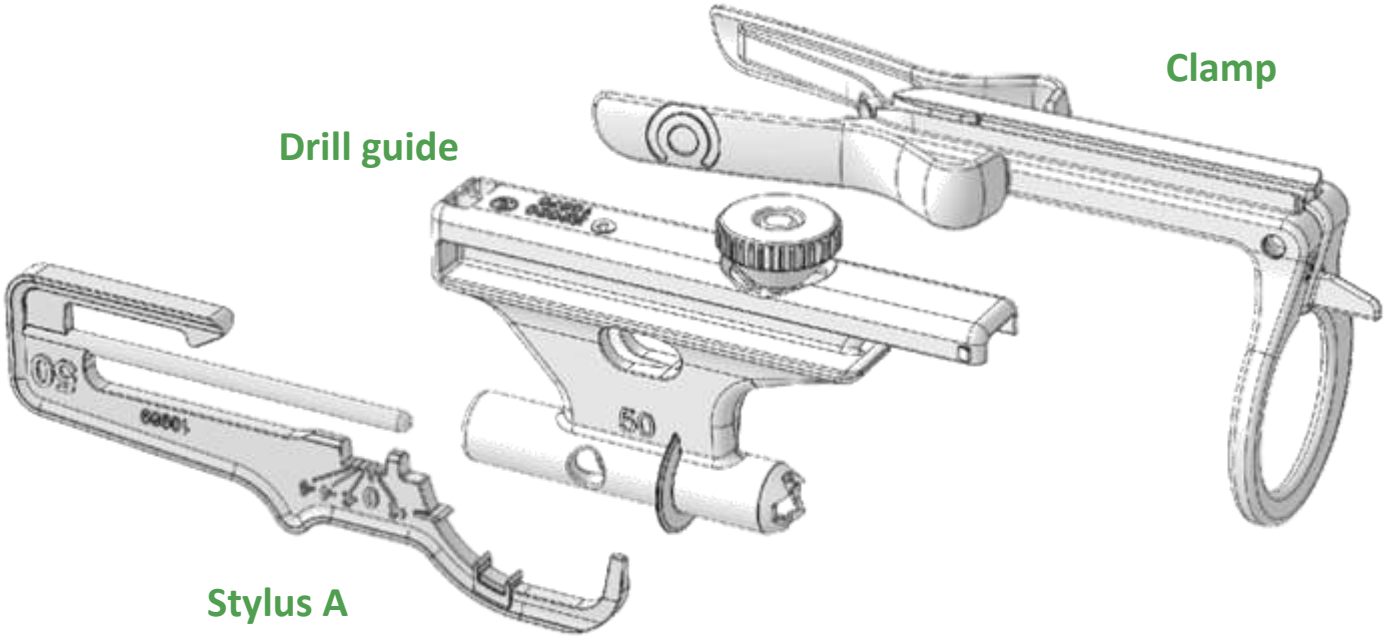
WARNING

Use at least two Templates to ensure that the most appropriate size is selected.
The chosen Template must be free to move on the widest portion of the femoral neck.

Femoral head preparation

Once the implant size is confirmed, the chosen sized Trays 2 and 3 can be opened.

The Femoral Head Guide consists of 3 key parts to allow satisfactory placement of the guide rod:

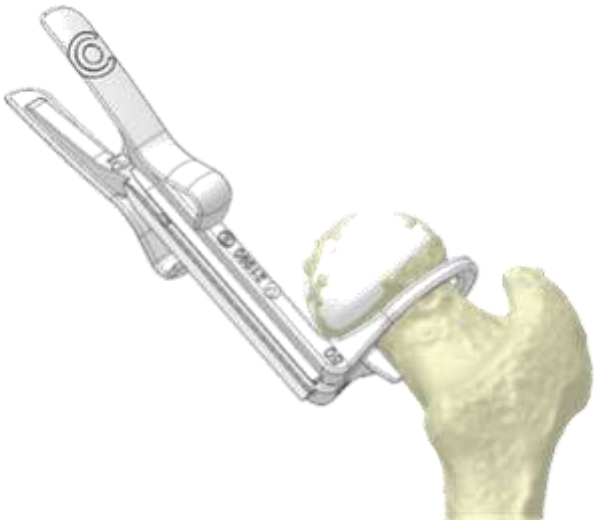


WARNING

Correct use of the Femoral Head Guide will allow the surgeon to prepare the femoral head without notching and to achieve an implant position such that there is no exposed cancellous bone inferiorly with a stem/shaft angle of at least 130° and no more varus than the native neck. Anteversion should follow the natural version of the femoral neck. If it is not possible to avoid both notching and exposed cancellous bone inferiorly with the chosen implant size/position combination, then a different size and/or an adjusted stem/shaft angle will be required.

Femoral head preparation

Squeeze the handles of the **Head Guide Clamp** to open it and place it around the femoral head, paying attention to any osteophytes which may be preventing the **Clamp** from sitting on the neck. Once in place around the femoral neck, snap closed.



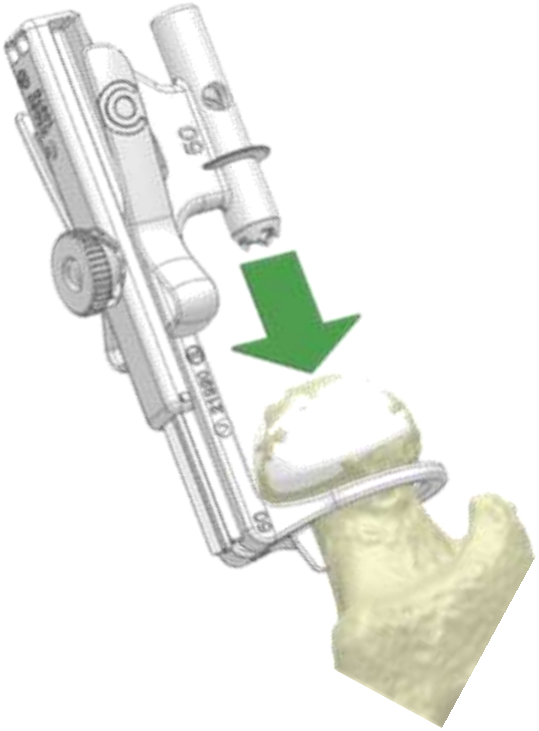
WARNING

If the Clamp cannot be closed properly, osteophytes may need removing OR a larger size may be required

NOTE

If the flag is too long for the patient's anatomy, it may be trimmed with a rongeur

Slide the **Femoral Head Drill Guide** onto the **Clamp** until it makes contact with the top of the femoral head

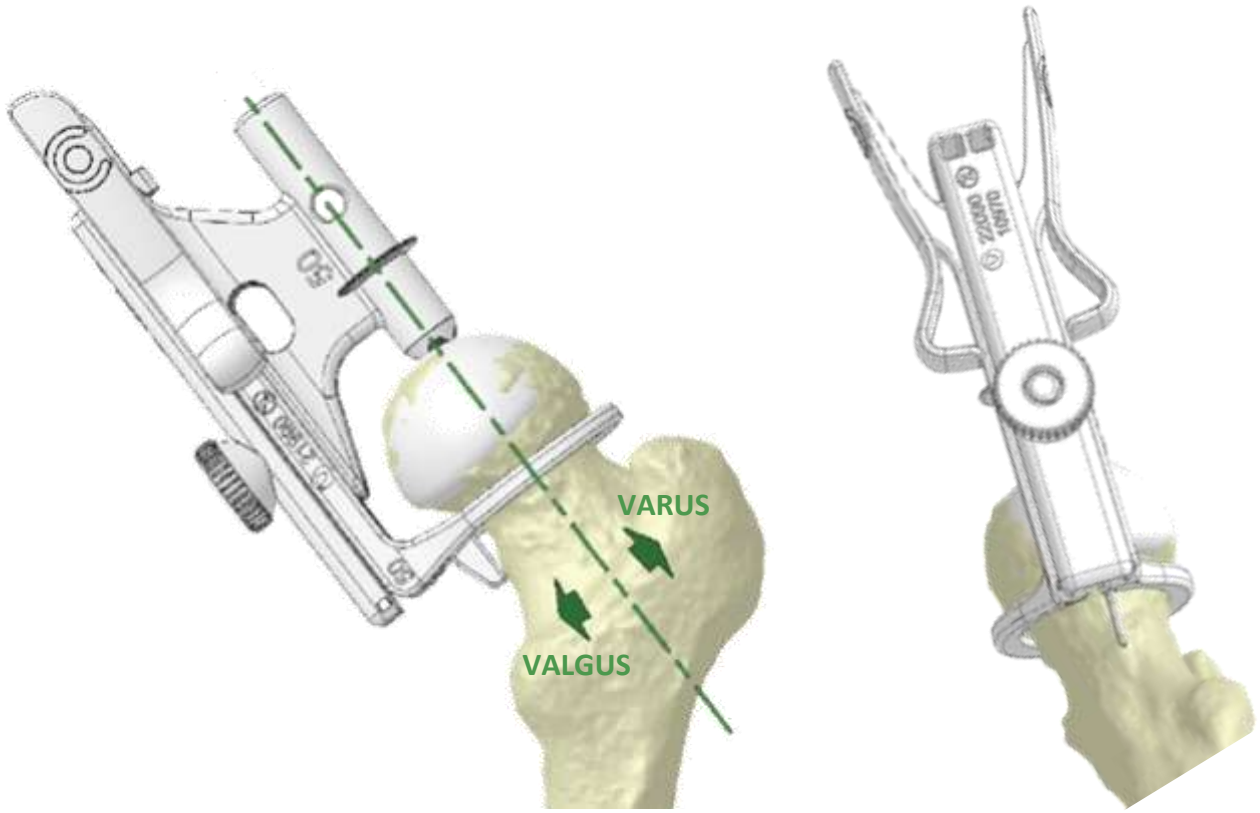


NOTE

Do not squeeze the Clamp; this will make it harder to slide the Drill Guide into place

Femoral head preparation

Manoeuvre the **Head Guide** to achieve the desired stem/shaft and anteversion angles. The flag on the **Clamp** should be aligned to the medial calcar. The ring of the **Clamp** should ideally should sit close to the medial head/neck junction, giving an indication of where the rim of the implant will ultimately sit. If this is not the case, **Stylus A** can used for additional guidance (see Page 18).



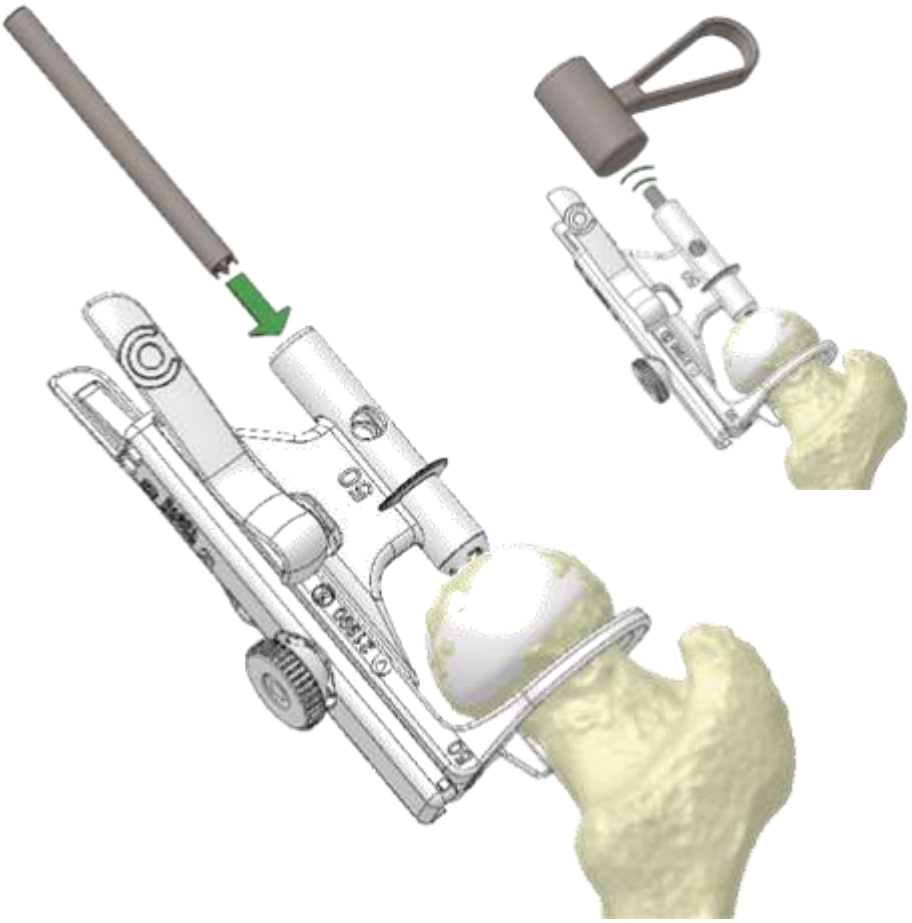
When satisfied, push the **Drill Guide** spikes through cartilage and lock the **Drill Guide** in place by tightening the screw.

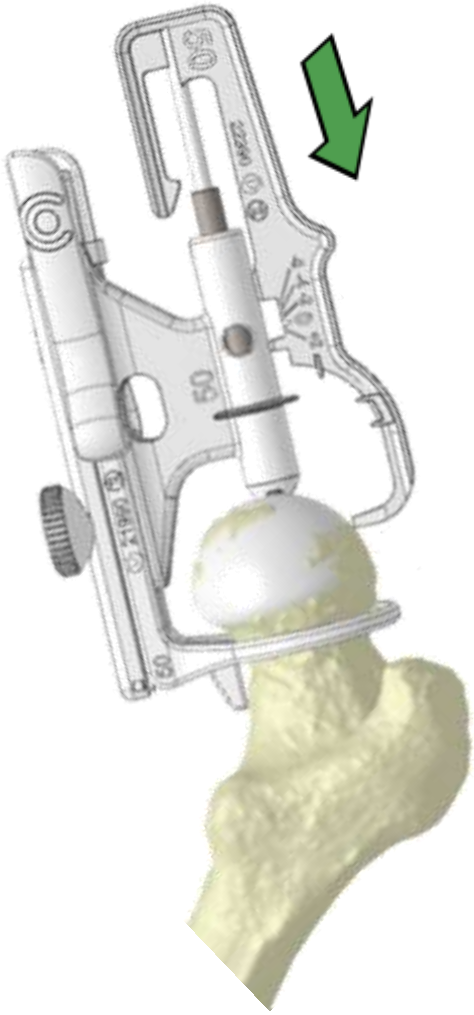
WARNING

The nylon spikes of the Drill Guide must be pushed into the cartilage

Femoral head preparation

Slide the **Spiked Tube** through the **Drill Guide** until it makes contact with the top of the femoral head. Give the **Spiked Tube** an impact with a mallet to ensure that the spikes are fully engaged with the bone.

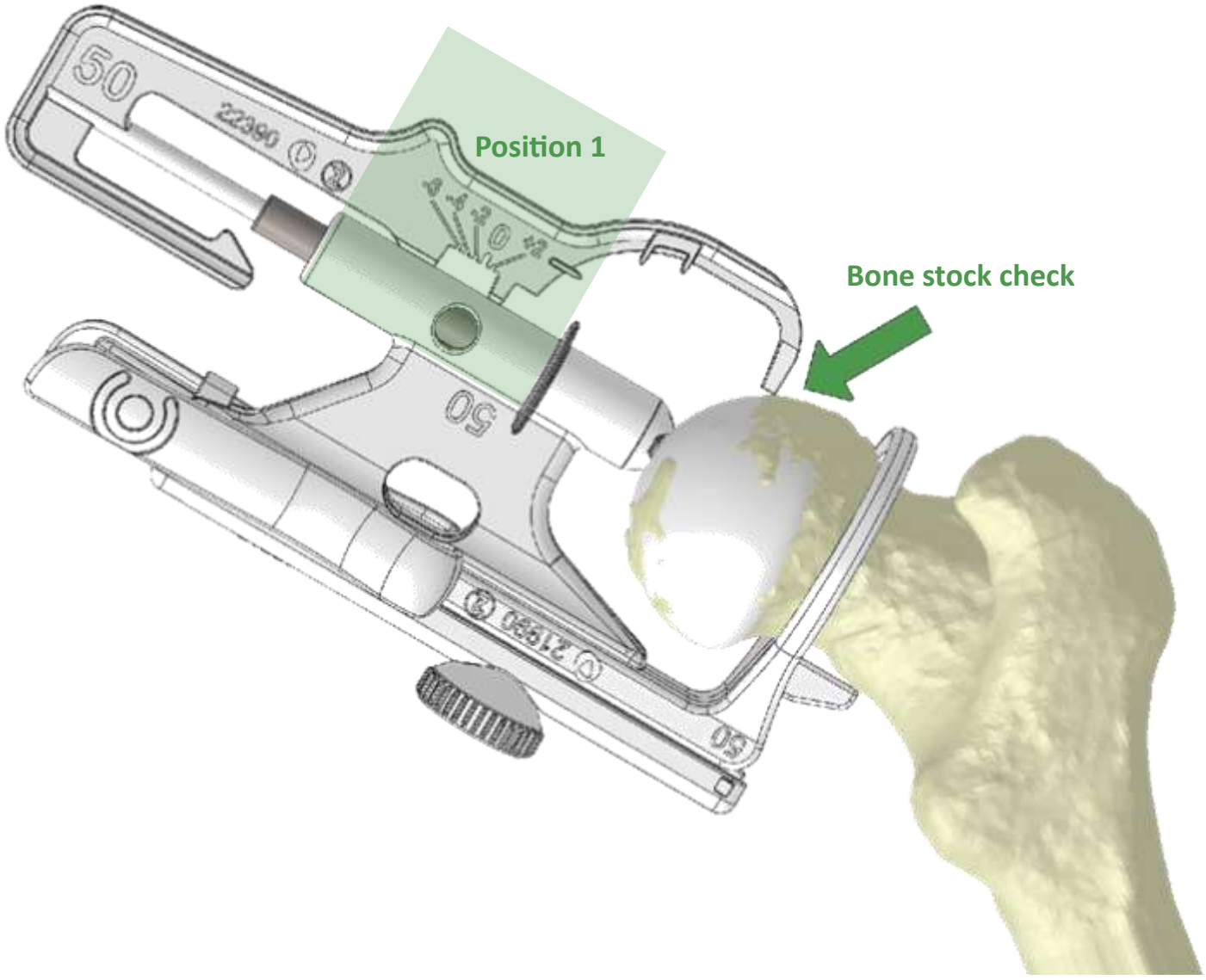




Slide **Stylus A** down the **Spiked Tube.**

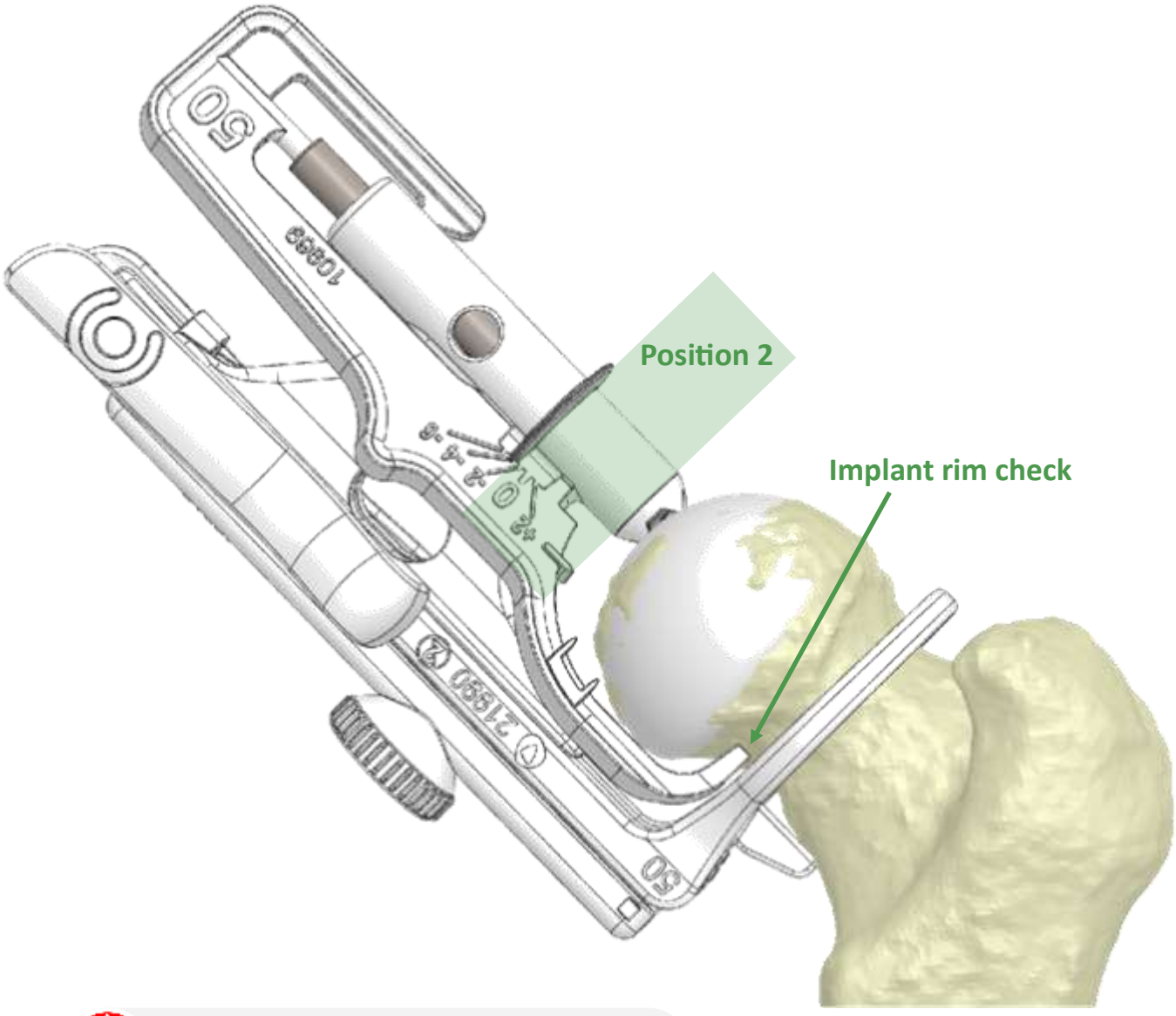
Femoral head preparation

Stylus A must be used in position 1, where it gives an indication of how much bone will be removed during the cutting procedures. The **Stylus** should make contact with the femoral head in all positions to avoid leaving unsupported portions of the **Head Implant.** You should observe how the amount of bone to be removed varies between the 4 quadrants by rotating the **Stylus** around the neck. Typically, less bone is removed anterosuperiorly, while more bone is removed posteromedially.



Femoral head preparation

If the **Head Guide Clamp** cannot sit close the medial head-neck junction, **Stylus A** can also be used in position 2 to check for notching and to ensure that no exposed cancellous bone will exist at the desired implant orientation. The Stylus gives an indication of the depth of top-head cut required to achieve this.

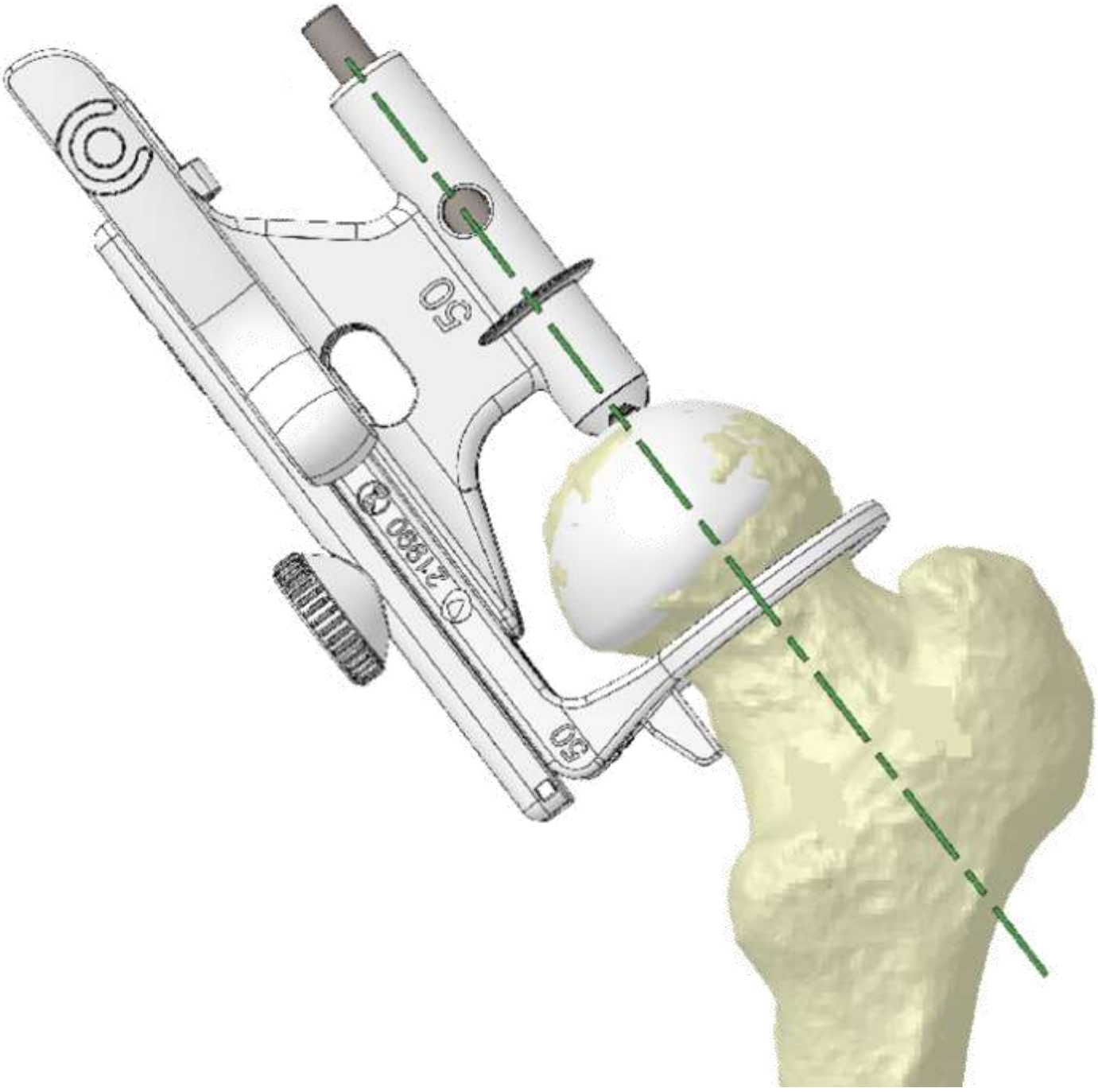


WARNING

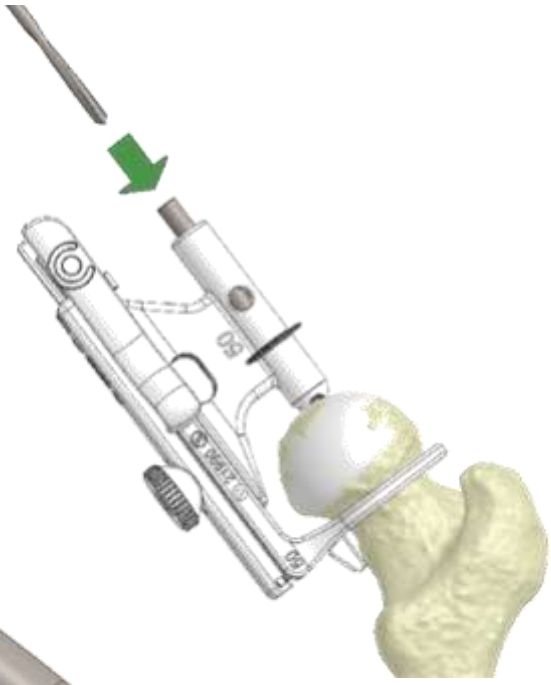
The Stylus must be in contact with the drill guide in order to give correct guidance

Femoral head preparation

Double-check the alignment of the **Head Guide** before drilling, using an **Alignment Rod** for extra guidance if desired.

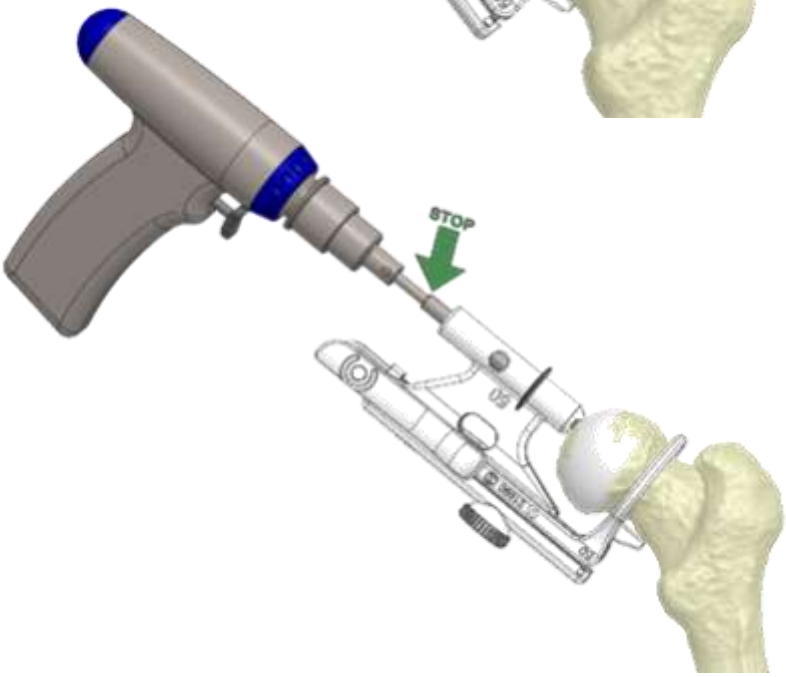


Femoral head preparation



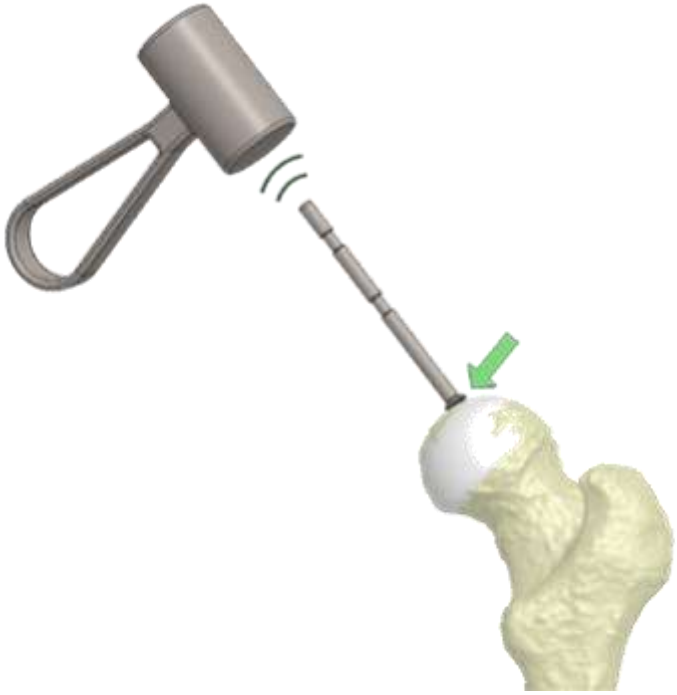
Connect the **Guide Rod Drill** to power tool.

Drill through the **Spiked Tube** until the stop is reached.



WARNING

Do not lean on or bias the drill



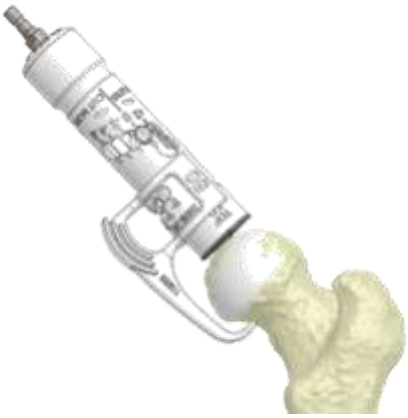
Unlock and remove the **Head Guide Clamp, Drill Guide** and **Spiked Tube**

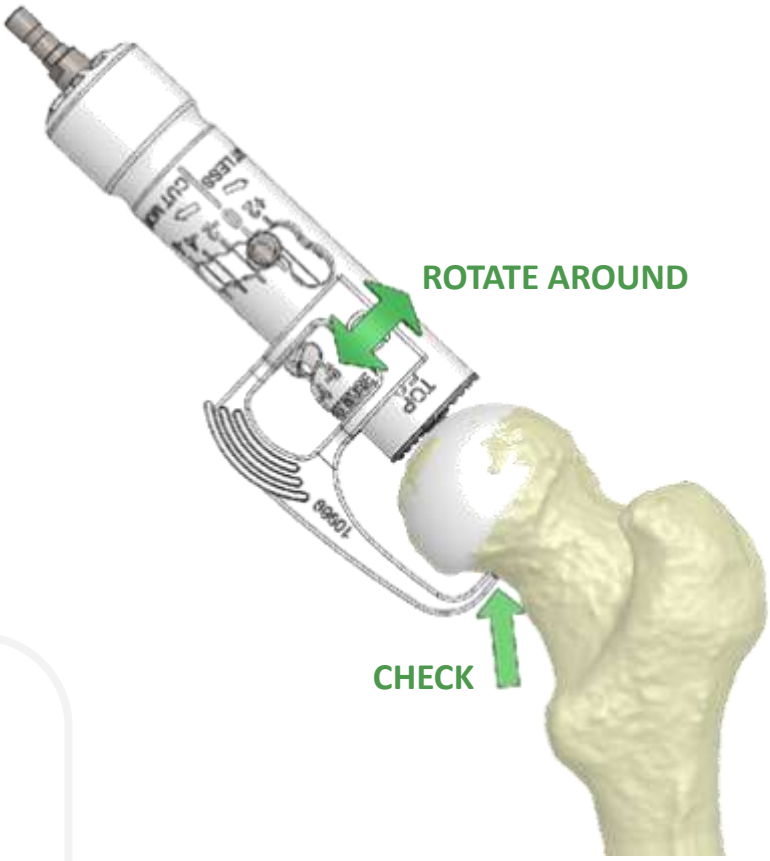
Insert the **Guide Rod** into the bone tunnel and impact with a hammer until the flange of the **Guide Rod** bottoms out on bone.

Femoral head preparation

Slide the **Top Head Cutter** down the **Guide Rod** until it contacts the top of the femoral head.

Attach **Stylus B** to the **Top Head Cutter** and check that it rotates around the **Cutter** smoothly. Paying particular attention to the inferior region, rotate the **Stylus** around the **Top Head Cutter**, varying the planned cut depth, until the **Stylus** tip pinpoints the desired implant rim position at the inferior head/neck junction. Read off the number indicated by the **Stylus.**



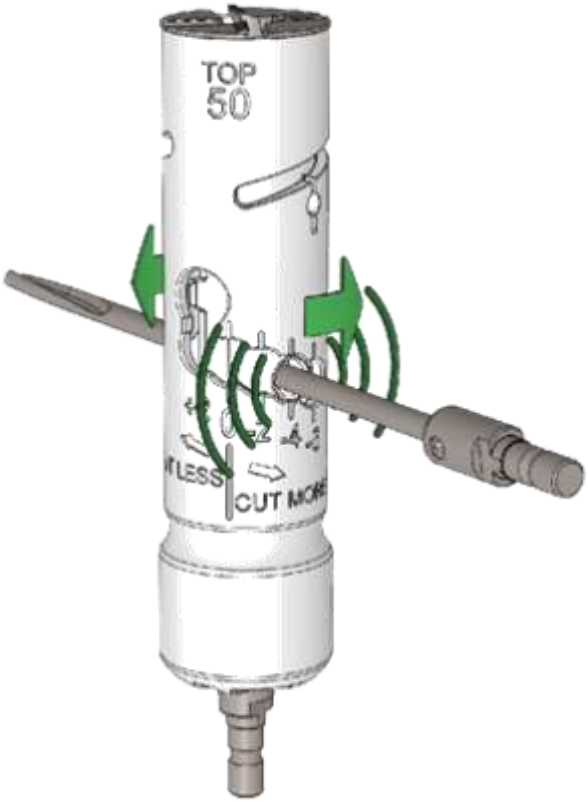


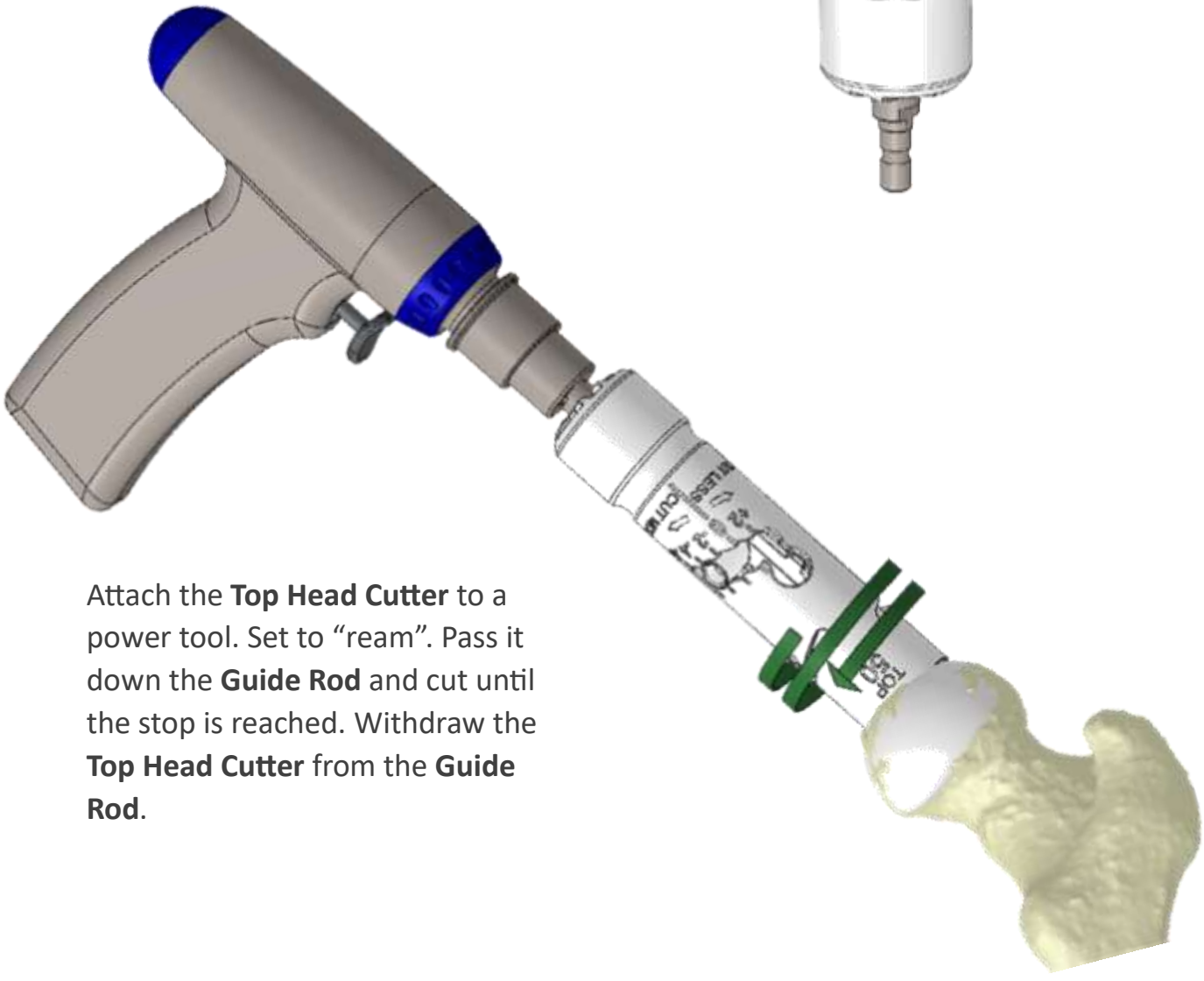
NOTE

Stylus B must run smoothly in its track on the Top Head Cutter to give a correct reading

Femoral head preparation

Remove the **Stylus** and the **Top Head Cutter** from the **Guide Rod** and adjust the **Cutter** to the number indicated by the **Stylus**.





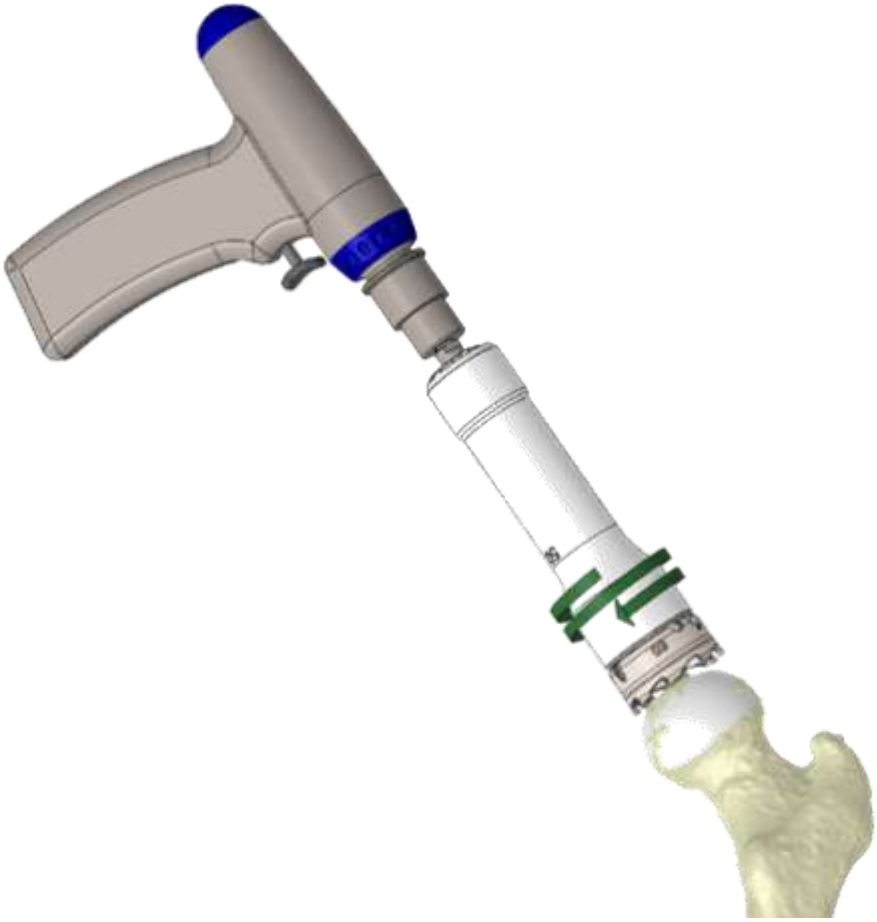
Attach the **Top Head Cutter** to a power tool. Set to “ream”. Pass it down the **Guide Rod** and cut until the stop is reached. Withdraw the **Top Head Cutter** from the **Guide Rod**.

Femoral head preparation

Remove the **Top Head Cutter** from the power tool.

Connect the **Sleeve/chamfer Cutter** to the power tool. Set to “ream”.

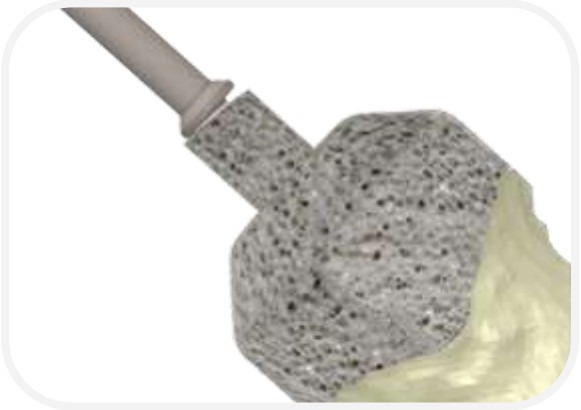
Pass the **Sleeve/chamfer Cutter** down the **Guide Rod** and cut until the stop is reached.



Withdraw the **Sleeve/chamfer Cutter** from the Guide Rod.

WARNING

Leave the remaining column of bone intact at this stage to enable adjustment later on

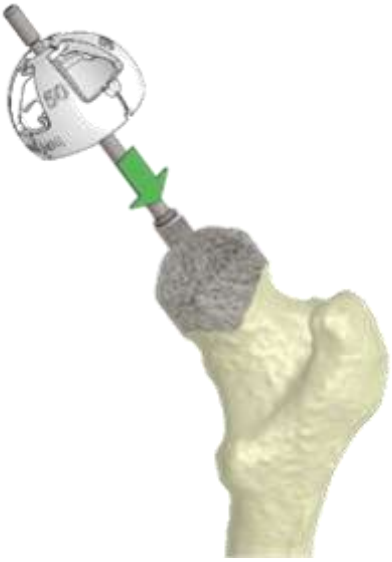


Femoral head trialling

NOTE

The H1 Femoral Head Implant is contoured and the rotational position of the implant around its axis is important. The features on the femoral head trial are designed to replicate those on the real implant. The superior and inferior positions as marked on the Head Trial must be positioned appropriately on the femur, and then fine-tuned by slightly rotating the trial component to achieve the best fit at the head-neck junction.

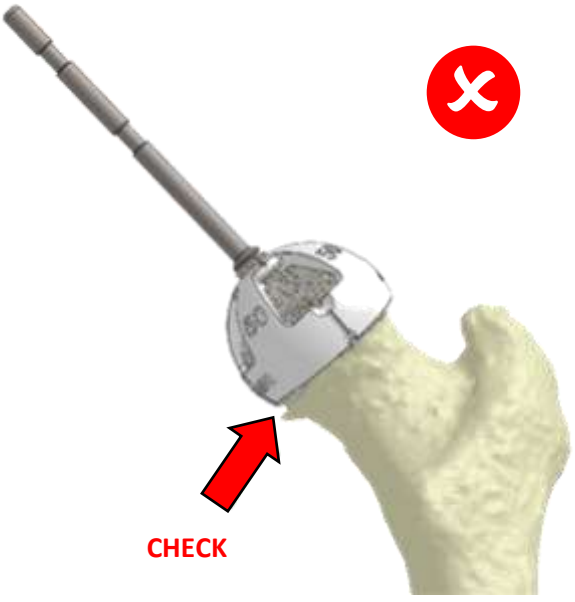
Slide the femoral **Head Trial** over the **Guide Rod** and onto the prepared bone.



WARNING

Ensure that the trial is fully seated on the bone before assessing its position on the bone

Rotate the **Trial** to achieve the appropriate superior and inferior positions and assess the contoured edge relative to the head/neck junction and the proximal/distal position of the head.



Femoral head trialling

WARNING

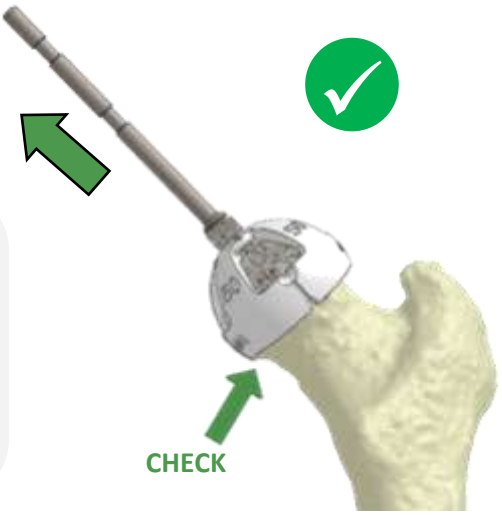
The medial head/neck junction must be checked for exposed cancellous bone

Remove the **Trial** and if necessary adjust the **Top Head Cutter** to cut more and repeat the top head and sleeve/chamfer cutting stages.

WARNING

The top-head and sleeve/chamfer cutting stages must be repeated if exposed cancellous bone is observed at the rim of the Head Trial

If femoral head cuts have been repeated, carry out the head trialling stage again. Once satisfied, remove the **Guide Rod**.



WARNING

Leave the remaining column of bone intact at this stage to enable adjustment later on.

Acetabular preparation

Expose the complete acetabulum.

Connect the smallest **Reamer** to the **Reamer Driver** and rotate to lock it into place.

Connect the **Reamer Driver** to the power tool. Set to “ream”.

Using your standard reaming technique, use all 3 **Reamers** sequentially until you have reamed to the desired depth, finishing with the reamer that is 1mm below the stated cup size.

NOTE

Three Reamers are provided with the H1 System: 3mm below the stated cup size, 2mm below the stated cup size and 1mm below the stated cup size. Under-reaming is required for adequate press-fit. Finish reaming with the 1mm-under Reamer.

Cup Size	1st Reamer	2nd Reamer	Final Reamer
51	48	49	50
53	50	51	52
55	52	53	54
57	54	55	56
59	56	57	58
61	58	59	60

Acetabular cup trialling

Attach the **Cup Trial** to the **Impactor** in either the “LEFT” or “RIGHT” position.

WARNING

The tab on the trial must be inserted into the correct slot (LEFT or RIGHT)

Attach the **Aerial** to the **Impactor** - it can go in one of two locations:

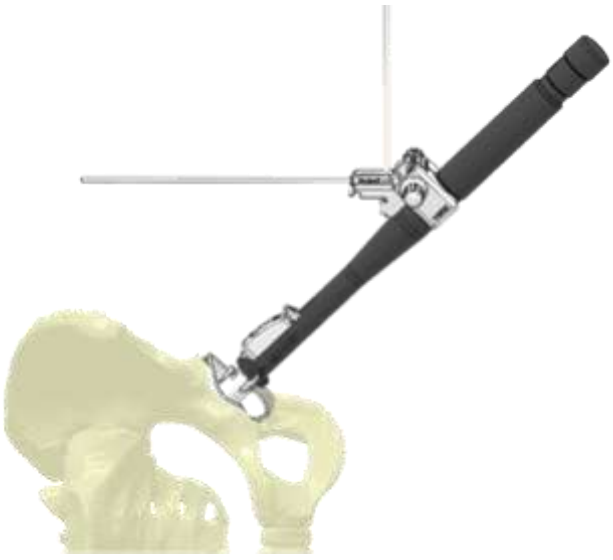
Position 1: above the hand

Position 2: below the hand

Insert the **Alignment Rods** into the **Aerial**

WARNING

The vertical rod indicating inclination must be inserted into the correct slot (LEFT or RIGHT)

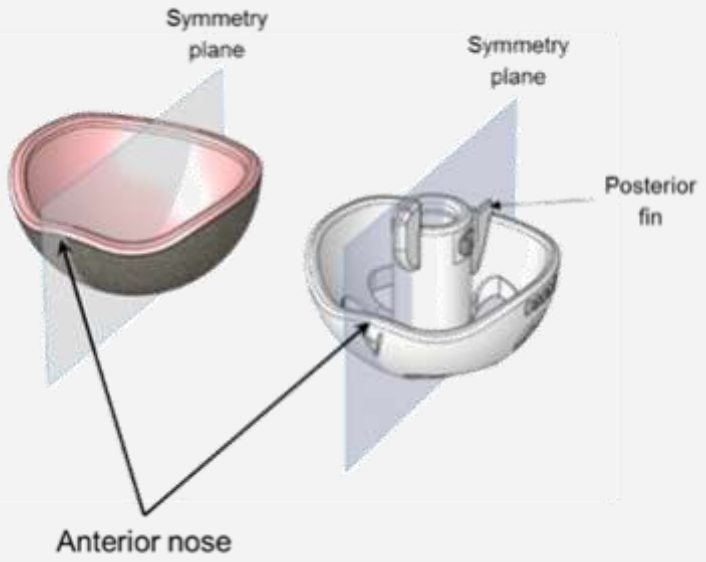


Acetabular cup trialling

NOTE

The features on the Cup Trial match those on the real implant. The contoured profile of the cup implant is derived from the natural profile of the acetabulum. This improves the fit around the acetabular rim and helps to avoid implant overhang, particularly anterosuperior at the position where the psoas tendon moves over the acetabular rim. It is therefore easier to place the cup at the prescribed inclination angle of 45°, without overhang and the resulting risk of psoas impingement. The contours must be orientated as indicated to achieve this benefit.

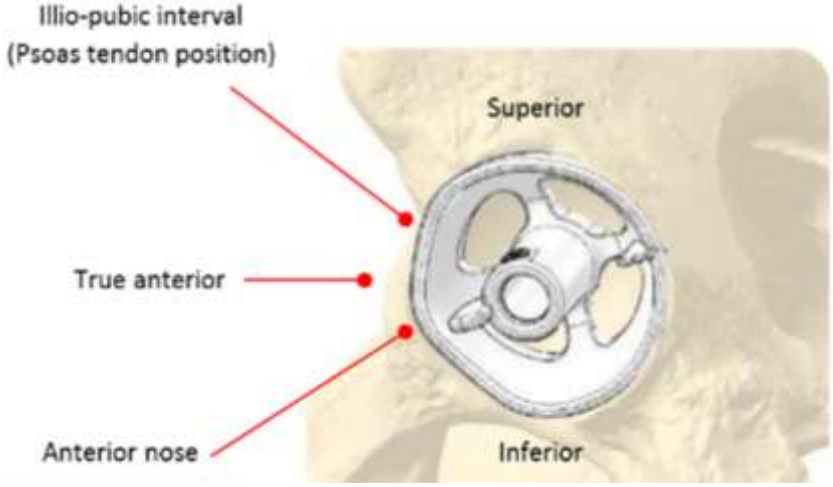
The anterior nose should be positioned approximately 12° inferior to the true anterior position. Observation and palpation of the illio-pubic interval is advisable to finely align the Cup Trial.



WARNING

The Aerial and Rods indicate 45°inclination and 20° anteversion in the anatomic reference planes

Place the **Cup Trial** into the prepared acetabulum until it bottoms out and adjust its position until inclination and anteversion are satisfactory. Then rotate the screw on the **Aerial** to adjust the cup rotation.



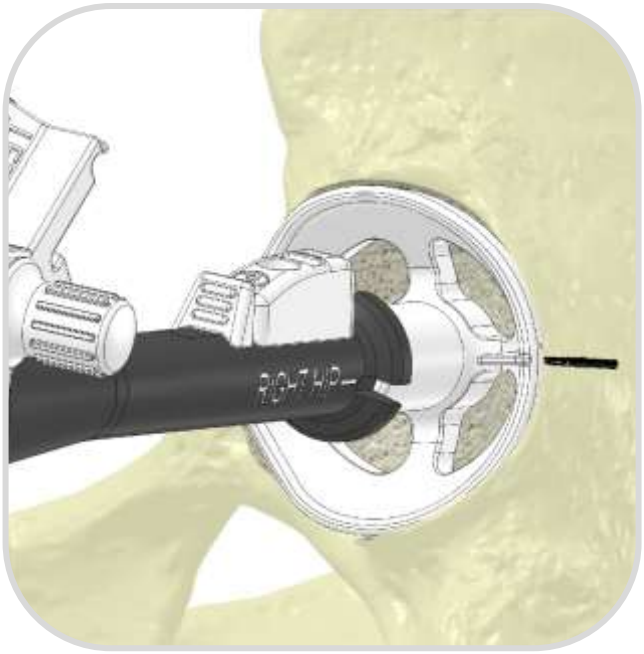
Acetabular cup trialling

Re-ream at this stage if the cup needs to go deeper.

Mark the posterior (“P”) cup position (aligned with the **Cup Trial** markings) with a marker or diathermy.

WARNING

Failure to mark the Trial position may result in the implant not being positioned correctly.



Withdraw the impactor and remove the **Cup Trial** from the **Impactor.**

WARNING

Do not remove the aerial at this stage - its guidance is needed for final implant positioning

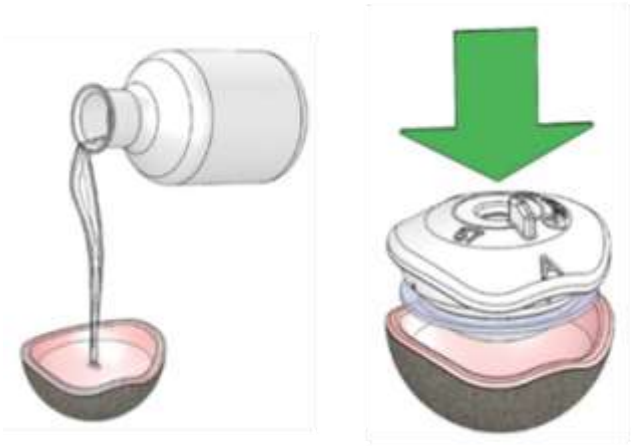
Acetabular cup implantation

NOTE

The cup impaction instruments must not be assembled until just prior to

Place the **Cup Implant** on its inner packaging on top of a stable surface. Fill the **Cup Implant** at least 2/3 full with sterile water or saline.

Align the “A” on the **Cup Impaction Cap** with the anterior “nose” of the **Cup Implant** and place the **Cup Impaction Cap** into the **Cup Implant**, checking that the contours of the **Cap** and **Cup Implant** are aligned. Push the **Cup Impaction Cap** into the **Cup Implant**—the liquid will flow through the hole in the top.



NOTE

It is better to overfill the cup than not use enough sterile liquid.

WARNING

Use sterile water or saline

Push the **Impactor** into the **Cup Impaction Cap** in either “LEFT” or “RIGHT” position. Keep pushing until a seal is formed. Check that a seal has been properly made by gently rotating the cup away from the Cup **Impaction Cap** and checking that the contours of the **Cap** and **Cup Implant** are flush.

WARNING

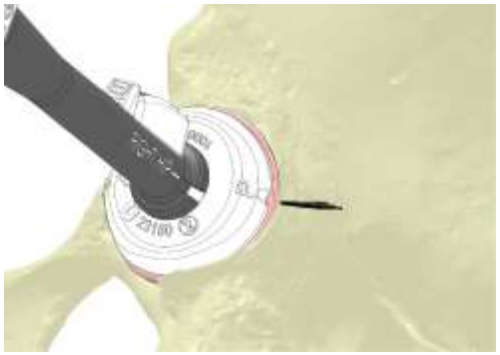
The tab on the Cup Impaction Cap must be inserted into the correct slot (LEFT or RIGHT)

Acetabular cup implantation

NOTE

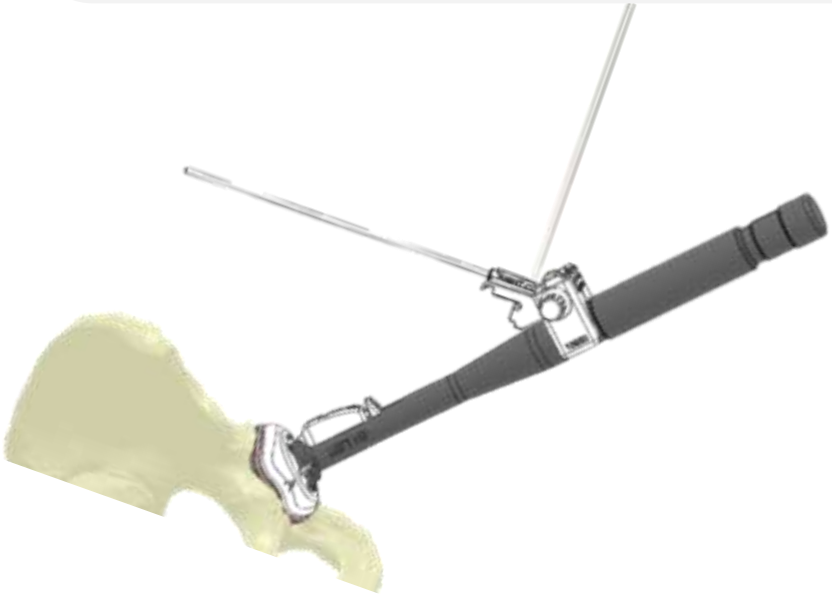
The seal that is formed is strong enough to hold the weight of the cup, but may fail if an attempt is made to adjust the position of a partially-fixed cup.

Place the **Cup Implant** assembly into the prepared acetabulum and align with the mark(s) on the bone. Orientate the "P" on the **Cup Impaction Cap** to match up with the mark on the bone, as the cup assembly approaches the acetabulum.



WARNING

The Cup Impaction System is single-use: if the seal fails before the cup has been impacted successfully, it may not be possible to reform the seal. Care should be taken to ensure the rim of the Cup Impaction Cap is "flush" with the rim of the Cup Implant before impaction takes place.



Check the position of the **Cup Implant** using the **Aerial**. Ensure that the **Cup Impaction Cap** is correctly orientated before impaction.

Using a mallet, impact the **Cup Implant** until stable. Do not bias the **Impactor.**

NOTE

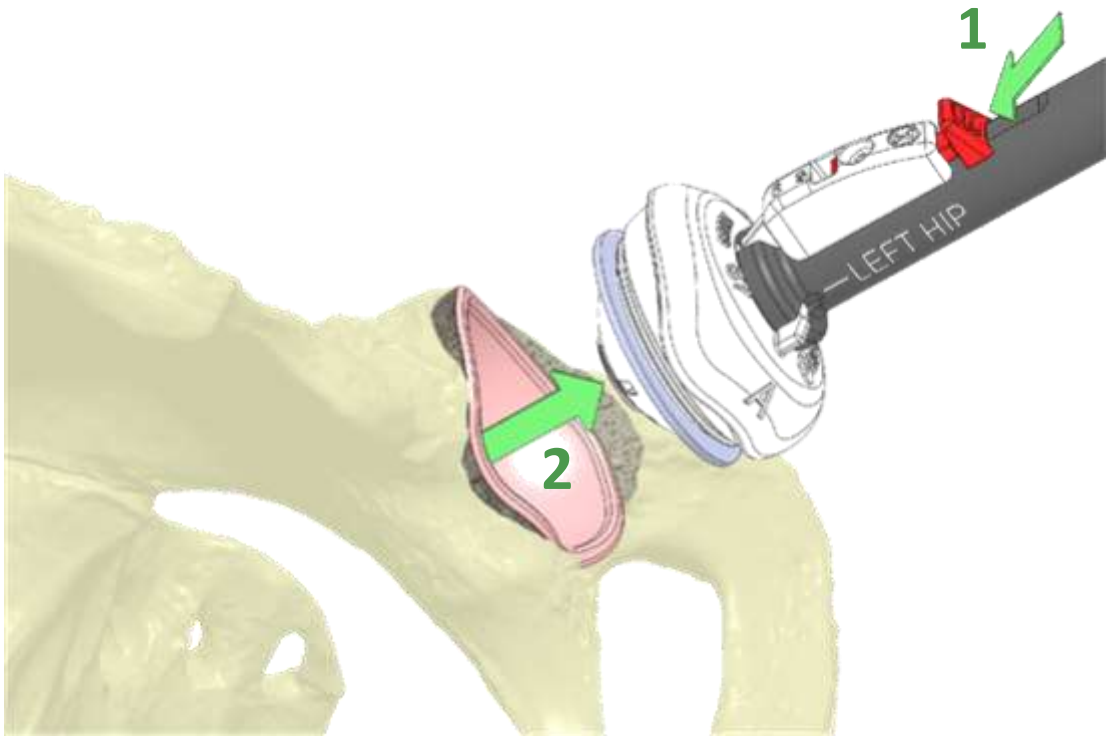
There may be an audible change when seating has been achieved.

WARNING

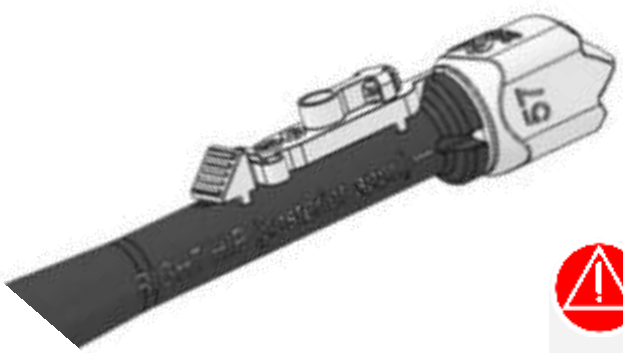
Do not continue impaction once seating is detected

Acetabular cup implantation

Release the **Cup Impaction Cap** by pressing the valve button on the **Impactor.** Withdraw the **Impactor** and **Cup Impaction Cap**. Check the stability of the **Cup Implant**.



If any adjustment of the **Cup Implant** position is required, the **Cup Rim Impactor** may be used for this purpose.

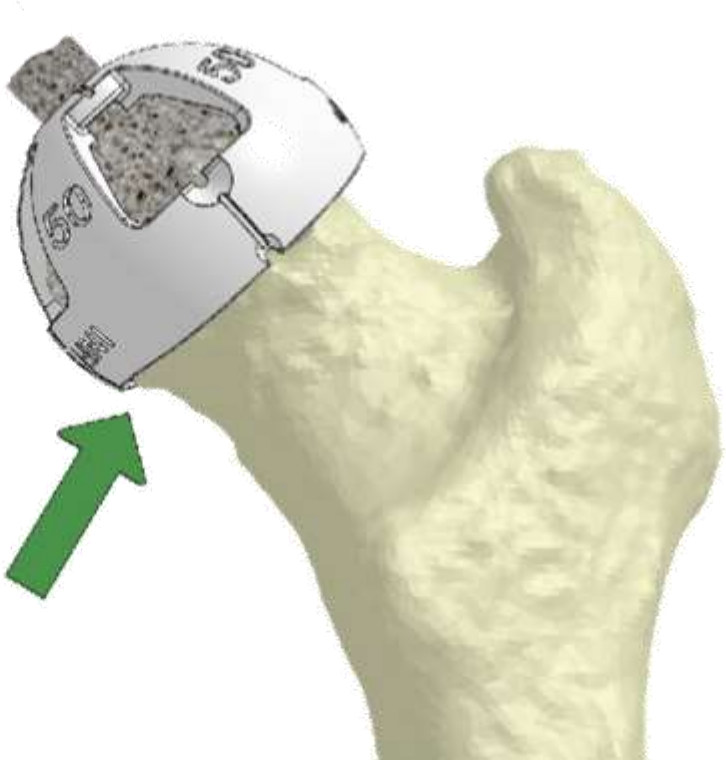


WARNING

The Cup Implant MUST be re-impacted using the Cup Impaction Cap if any adjustment via the rim has been carried out.

Femoral head trialling

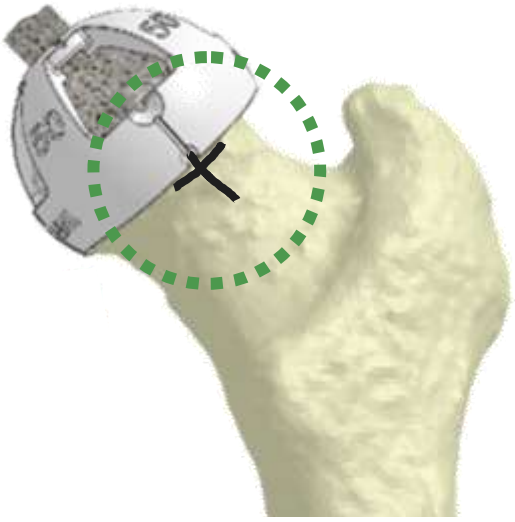
Re-check the position of the **Head Trial**.



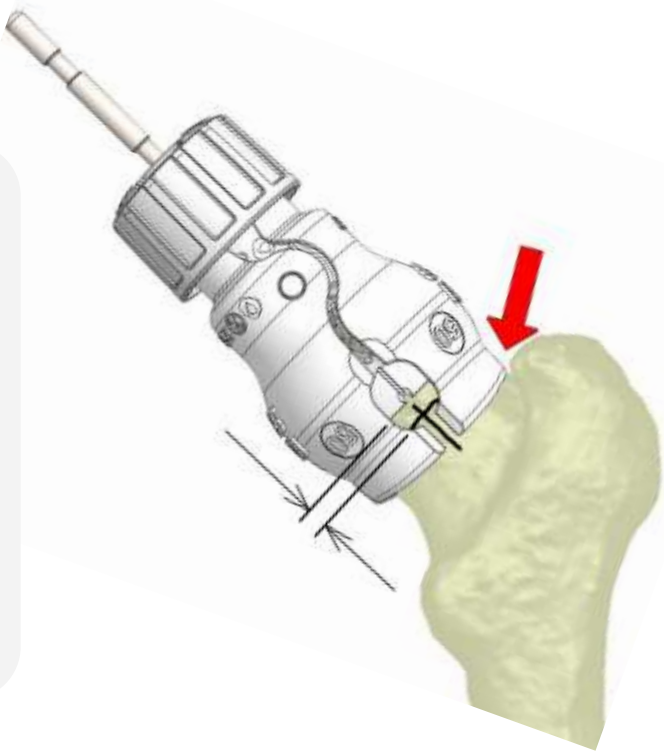
WARNING

Repeat femoral head preparation if exposed bone is observed at the rim of the head trial

Once satisfied, make marks indicating the depth and rotational position of the **Head Trial** on the bone with a marker or dia-thermy.



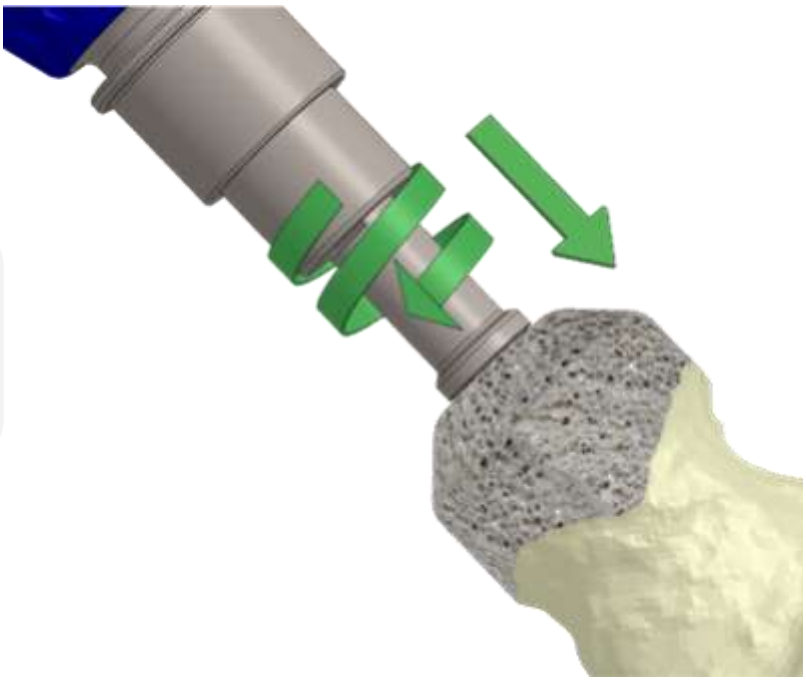
Femoral head implantation



NOTE

At this stage, if the length of the femoral neck raises concerns about impingement of the Head Impaction Cap Body on the greater trochanter, the Head Impaction Cap Body and the Head Trial may be used together to check whether there is a risk that impingement may occur in the final stage of impaction of the Head Implant

Remove the **Head Trial.** Connect the **Stem Overdrill** to the power tool and perform drilling operation until the stop is reached.



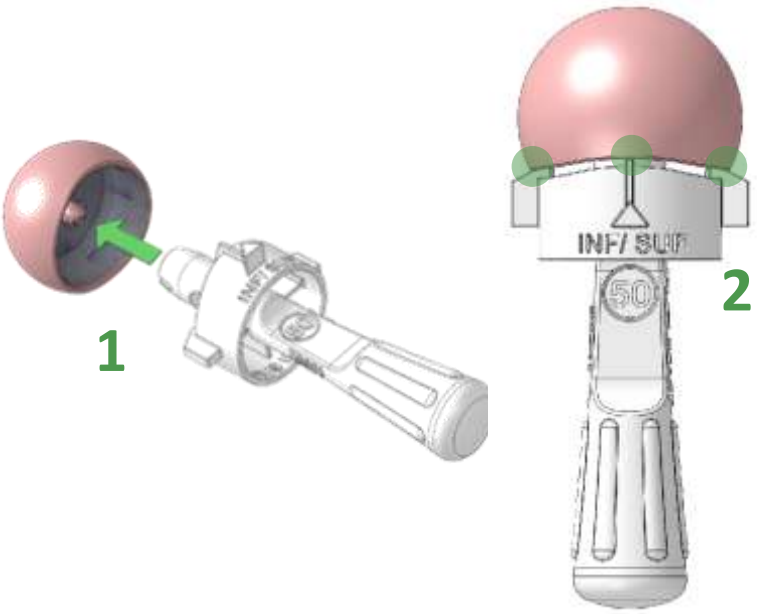
WARNING

The Stem Overdrill must be used

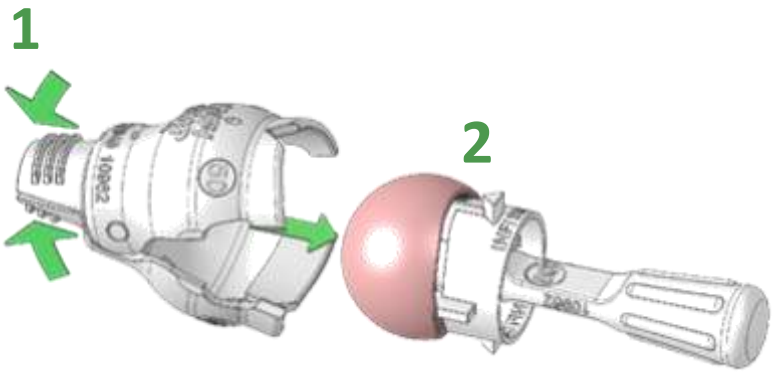
Femoral head implantation

Use the **Head Impaction Cap Loader** to insert the **Head Implant** into the **Head Impaction Cap Body** in the correct orientation as follows:

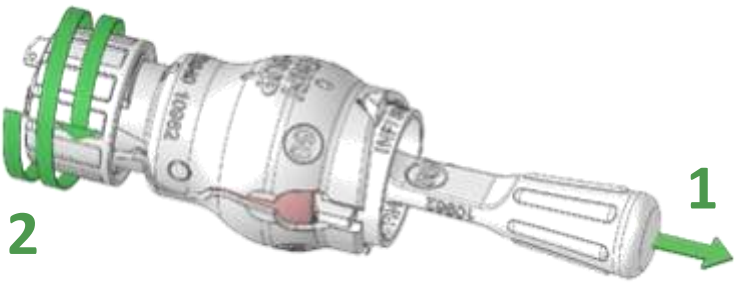
Put the **Head Implant** onto the **Head Impaction Cap Loader**, rotate until the **Head Implant** contours match the **Loader** contours and the four locators are in contact with the **Head Implant**



Squeeze open the **Head Impaction Cap Body** and push the Head Implant inside.

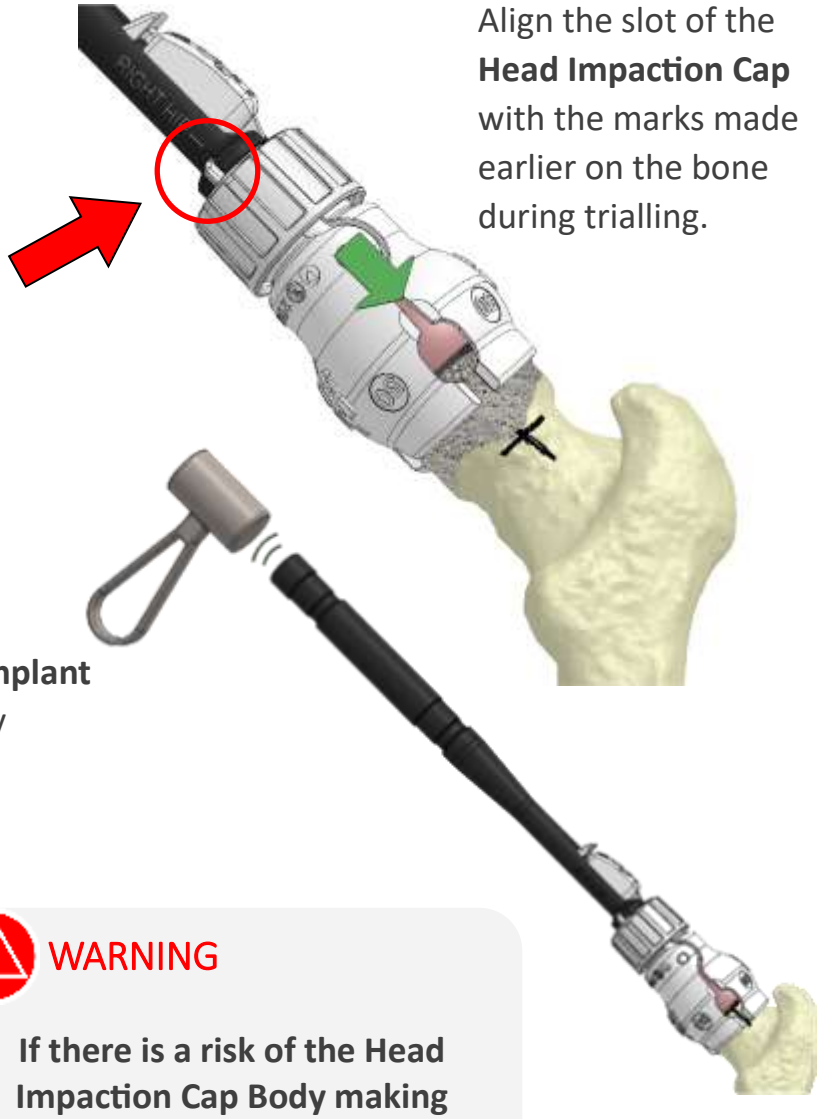


Screw the **Head Impaction Cap Centre** onto the Body until it is tight on the top of the **Head Implant.** Remove the Head **Impaction Cap Loader** and Connect the Head assembly onto the **Impactor.**



Femoral head implantation

Present the Head assembly to the prepared femoral head.

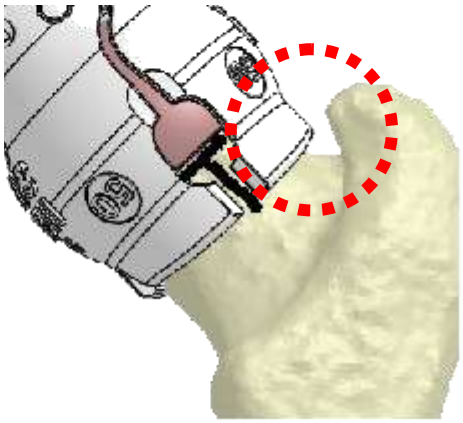


Align the slot of the **Head Impaction Cap** with the marks made earlier on the bone during trialling.

WARNING

Ensure the tab goes into one of the empty slots on the impactor

Using a mallet, impact the **Head Implant** onto the femur until the previously marked line is reached.



WARNING

If there is a risk of the Head Impaction Cap Body making contact with the greater trochanter, observe the position of the instrument closely during impaction.

NOTE

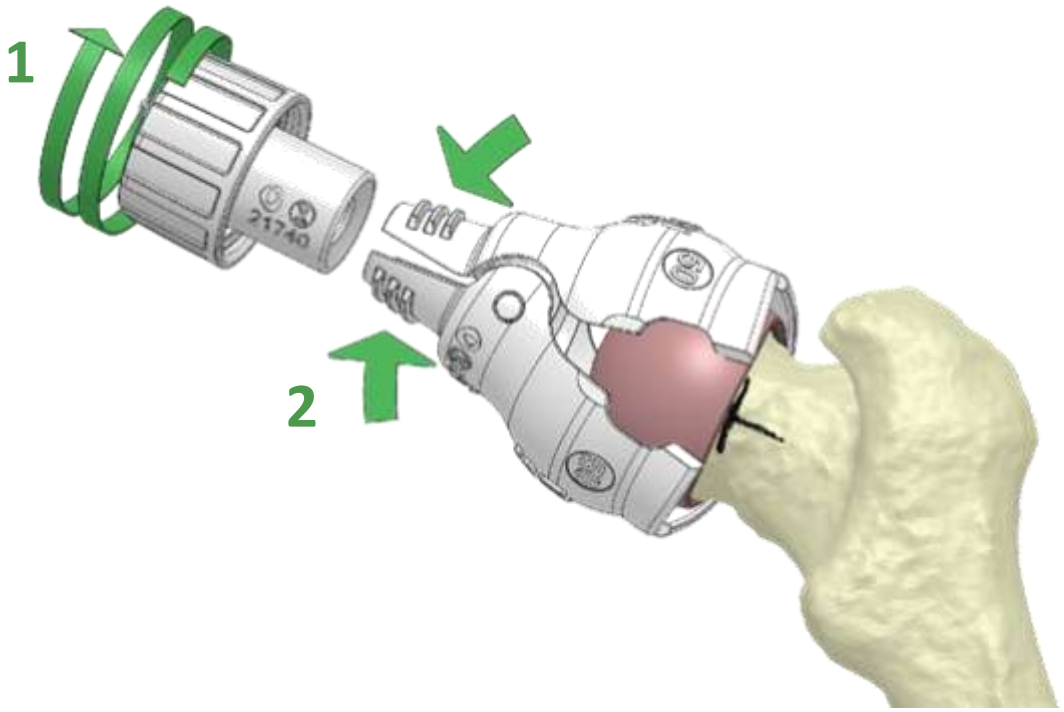
There may be an audible change when seating has been achieved.

WARNING

Do not continue impaction once seating is detected

Femoral head implantation

Unscrew and remove the **Head Impaction Cap Centre**, squeeze and remove the **Head Impaction Cap Body.**



If necessary, reattach the **Head Impaction Cap Centre** to the **Impactor** and perform a final impaction on the **Head Implant**.

Joint reduction

Clean the bearing surfaces of the **Implants** with wash. Fill the acetabulum with saline. Reduce the joint and check ROM.

Catalogue

The H1 Implants

Part No.	Name
19851	Resurfacing Cup (51mm)
19853	Resurfacing Cup (53mm)
19855	Resurfacing Cup (55mm)
19857	Resurfacing Cup (57mm)
19859	Resurfacing Cup (59mm)
19861	Resurfacing Cup (61mm)
19544	Resurfacing Head (44mm)
19546	Resurfacing Head (46mm)
19548	Resurfacing Head (48mm)
19550	Resurfacing Head (50mm)
19552	Resurfacing Head (52mm)
19554	Resurfacing Head (54mm)

Catalogue

The H1 Instruments

Tray 1 options

Tray Part No.	For implant size	Item Number	Item Description & Sizes
27110	All	21230	Spiked Tube
	All	21240	Guide Rod Drill
	All	21250	Guide Rod
	All	21470	Stem Overdrill
	All	23010	Straight Impactor
	All	23230	Aerial
	All	23260	Alignment Rods x2
	All	21920	Head/neck Sizing Templates

Catalogue

The H1 Instruments

Tray 2 options

Tray Part No.	For implant size	Item Number	Item Description & Sizes
27114	44/51	25130	Acetabular Reamer 48
		25140	Acetabular Reamer 49
		25150	Acetabular Reamer 50
		25010	Straight Acetabular Reamer Driver
27115	46/53	25150	Acetabular Reamer 50
		25160	Acetabular Reamer 51
		25170	Acetabular Reamer 52
		25010	Straight Acetabular Reamer Driver
27116	48/55	25170	Acetabular Reamer 52
		25180	Acetabular Reamer 53
		25190	Acetabular Reamer 54
		25010	Straight Acetabular Reamer Driver
27117	50/57	25190	Acetabular Reamer 54
		25200	Acetabular Reamer 55
		25210	Acetabular Reamer 56
		25010	Straight Acetabular Reamer Driver
27118	52/59	25210	Acetabular Reamer 56
		25220	Acetabular Reamer 57
		25230	Acetabular Reamer 58
		25010	Straight Acetabular Reamer Driver
27119	54/61	25230	Acetabular Reamer 58
		25240	Acetabular Reamer 59
		25250	Acetabular Reamer 60
		25010	Straight Acetabular Reamer Driver

Catalogue

The H1 Instruments

Tray 3 options

Tray Part No.	Tray Size	Item Number	Item Description & Sizes
27195	44/51	21380	Sleeve/Chamfer Cutter 44
		21280	Top Head Cutter 44
		21500	Head Trial 44
		21610	Head Impaction Cap Body 44
		21710	Head Impaction Cap Centre 44
		22160	Head Impaction Cap Loader 44
		21960	Head Guide Clamp 44
		22060	Head Guide Drill Guide 44
		23050	Cup Trial 51
		23150	Cup Impaction Cap 51
		23290	Cup Rim Impactor 51
		22360	Stylus A 44
		22560	Stylus B 44
27196	46/53	21390	Sleeve/Chamfer Cutter 46
		21290	Top Head Cutter 46
		21510	Head Trial 46
		21620	Head Impaction Cap Body 46
		21720	Head Impaction Cap Centre 46
		22170	Head Impaction Cap Loader 46
		21970	Head Guide Clamp 46
		22070	Head Guide Drill Guide 46
		23060	Cup Trial 53
		23160	Cup Impaction Cap 53
		23300	Cup Rim Impactor 53
		22370	Stylus A 46
		22570	Stylus B 46
27197	48/55	21400	Sleeve/Chamfer Cutter 48
		21300	Top Head Cutter 48
		21520	Head Trial 48
		21630	Head Impaction Cap Body 48
		21730	Head Impaction Cap Centre 48
		22180	Head Impaction Cap Loader 48
		21980	Head Guide Clamp 48
		22080	Head Guide Drill Guide 48
		23070	Cup Trial 55
		23170	Cup Impaction Cap 55
		23310	Cup Rim Impactor 55
		22380	Stylus A 48
		22580	Stylus B 48

Catalogue

The H1 Instruments

Tray 3 options (continued)

Tray Part No.	Tray Size	Item Number	Item Description & Sizes
27198	50/57	21410	Sleeve/Chamfer Cutter 50
		21310	Top Head Cutter 50
		21530	Head Trial 50
		21640	Head Impaction Cap Body 50
		21740	Head Impaction Cap Centre 50
		22190	Head Impaction Cap Loader 50
		21990	Head Guide Clamp 50
		22090	Head Guide Drill Guide 50
		23080	Cup Trial 57
		23180	Cup Impaction Cap 57
		23320	Cup Rim Impactor 57
		22390	Stylus A 50
		22590	Stylus B 50
27199	52/59	21420	Sleeve/Chamfer Cutter 52
		21320	Top Head Cutter 52
		21540	Head Trial 52
		21650	Head Impaction Cap Body 52
		21750	Head Impaction Cap Centre 52
		22200	Head Impaction Cap Loader 52
		22000	Head Guide Clamp 52
		22100	Head Guide Drill Guide 52
		23090	Cup Trial 59
		23190	Cup Impaction Cap 59
		23330	Cup Rim Impactor 59
		22400	Stylus A 52
		22600	Stylus B 52
27200	54/61	21430	Sleeve/Chamfer Cutter 54
		21330	Top Head Cutter 54
		21550	Head Trial 54
		21660	Head Impaction Cap Body 54
		21760	Head Impaction Cap Centre 54
		22210	Head Impaction Cap Loader 54
		22010	Head Guide Clamp 54
		22110	Head Guide Drill Guide 54
		23100	Cup Trial 61
		23200	Cup Impaction Cap 61
		23340	Cup Rim Impactor 61
		22410	Stylus A 54
		22610	Stylus B 54

The H1 System is currently only available as part of a clinical investigation.

The H1 System is manufactured by:

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