



**QUARTER**<sup>TM</sup>  
Pressfit Acetabular System

**SURGICAL TECHNIQUE**



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## SYSTEM DESCRIPTION

### QUARTER cup technical characteristics SIZES Ø40 to Ø68 mm.



**Apical hole occluder.**

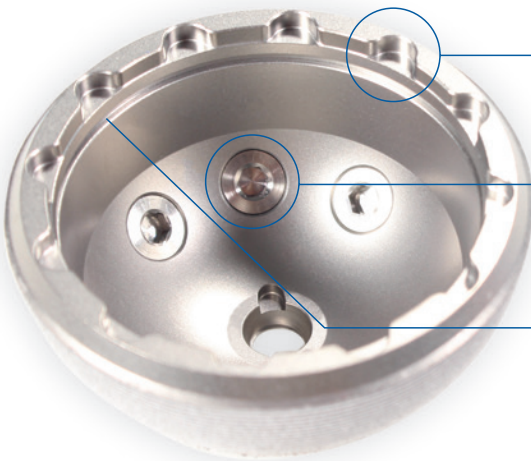
Plasma Spray coating (Titanium and Hidroxyapatite)

**Hole occluders.**

Plasma Spray coating (Titanium and Hidroxyapatite)

**Peripheral slots**

for pressfit fixation



**12 peripheral notches**

**Screw holes**

**Internal peripheral groove**

for liner fixation

**MATERIAL**

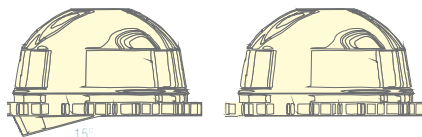
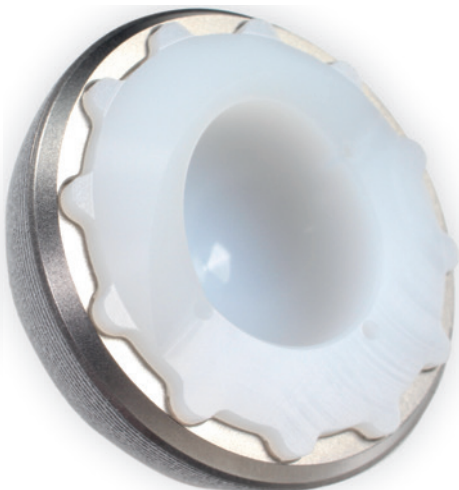
Titanium alloy Ti6Al4V (ISO 5832-3)

**COATING**

Plasma Spray (Titanium and Hidroxyapatite)

### QUARTER liner technical characteristics

- ▣ **Neutral and anti-luxation liner (15° lip)**
- ▣ Designed for **femoral heads of Ø 22, 28, 32, 36 and 40 mm.**
- ▣ **Peripheral groove** to fix liner to the QUARTER cup
- ▣ **12 peripheral anti-rotational notches** spaced 30° apart
- ▣ **Minimum polyethylene wall thickness: 5 mm.** (ISO 21535)



**MATERIAL**

XL Cross Linked UHMWPE polyethylene (ISO 5834-1)

## SYSTEM DESCRIPTION

Femoral heads Ø22, Ø28, Ø32, Ø36 and Ø40

**BIOLOX® delta\* Ceramic**

\* Biolox® Delta is a trade mark from CeramTech GmbH

**COBALT CHROMIUM**

**STAINLESS STEEL**



NECK LENGTH FOR EACH Ø FEMORAL HEADS								
NECK LENGTH		Ø22	Ø28	Ø32	Ø36	Ø40	NECK LENGTH	
SHORT							SHORT	
MEDIUM							MEDIUM	
LONG							LONG	
X LONG							X LONG	

## QUARTER System compatibility

**QUARTER** system allows to implant **QUARTER** cup from size Ø40 mm to Ø68 mm and femoral heads Ø22 mm to Ø40 mm conditional to the limitation of the liner compatible with the cup. Liners available are **NEUTRAL** or **ANTILUXATION**, conditional to the limitation of cup size.

		Ø FEMORAL HEADS						
		Ø22	Ø28	Ø32	Ø36	Ø40		
Ø CUP	SIZE (mm)						SIZE (mm)	
	Ø 40	ANTILUXATION					Ø 40	
	Ø 42						Ø 42	
	Ø 44						Ø 44	
	Ø 46						Ø 46	
	Ø 48		ANTILUXATION				Ø 48	
	Ø 50			ANTILUXATION			Ø 50	
	Ø 52				ANTILUXATION		Ø 52	
	Ø 54					ANTILUXATION	Ø 54	
	Ø 56						Ø 56	
	Ø 58		NEUTRAL				Ø 58	
	Ø 60			NEUTRAL			Ø 60	
	Ø 62				NEUTRAL		Ø 62	
	Ø 64					NEUTRAL	Ø 64	
	Ø 66						Ø 66	
	Ø 68						Ø 68	

## DISCLAIMER

Surgival Co, S.A.U. (from now on, Surgival) is exclusively the manufacturer of this system. Surgival is not empowered to take decisions on the surgical practice. SURGEONS will be responsible to determine and use the adequate surgical techniques for each specific patient's case.

Surgival is not responsible of the surgical technique selected, any assessment procedure or the restitution of the anatomic conditions in any patient.

## INDICATIONS

- Osteoarthritis
- Reumatoid arthritis
- Avascular necrosis
- Consequences of subluxation or luxation congenital
- Femoral neck fractures
- Failed reconstruction processes: proximal femoral osteotomy, arthrodesis, painful endoprosthesis

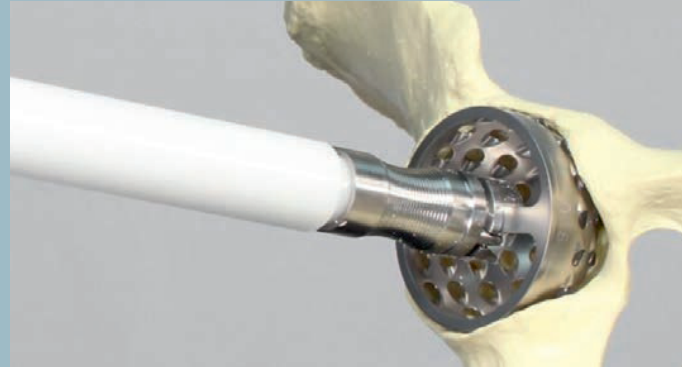
## CONTRAINDICATIONS

- Allergy to the materials
- Infection
- Muscular atrophy or neuromuscular disease
- Vascular insufficiency
- Osteoporosis
- Osteomalacia
- Obesity
- Metabolic disorders which may affect bone formation
- Neurological disease

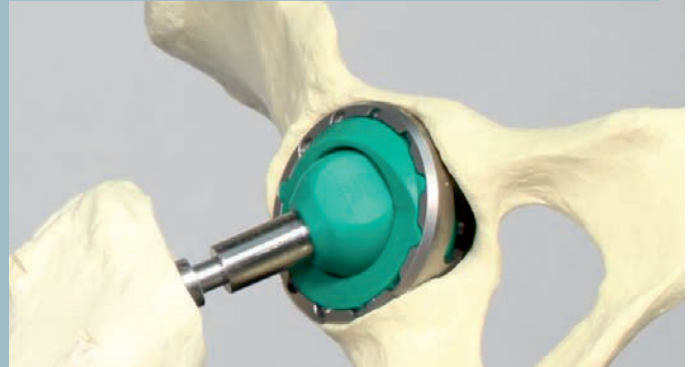


## SURGICAL TECHNIQUE

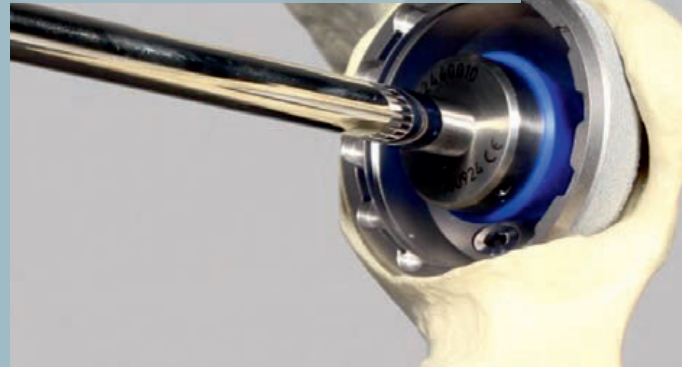
1. Acetabular reaming



2. Trial cup reduction



3. QUARTER cup



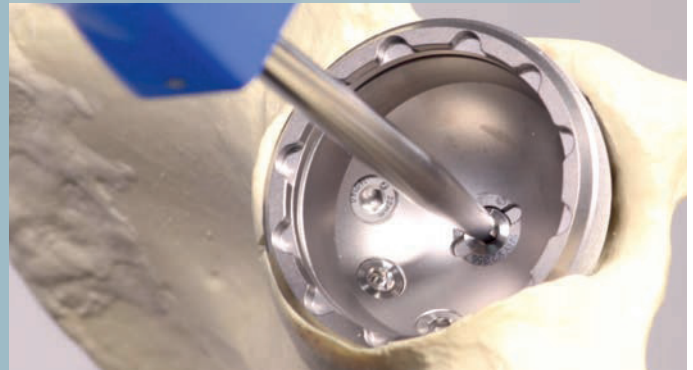
4. Screws



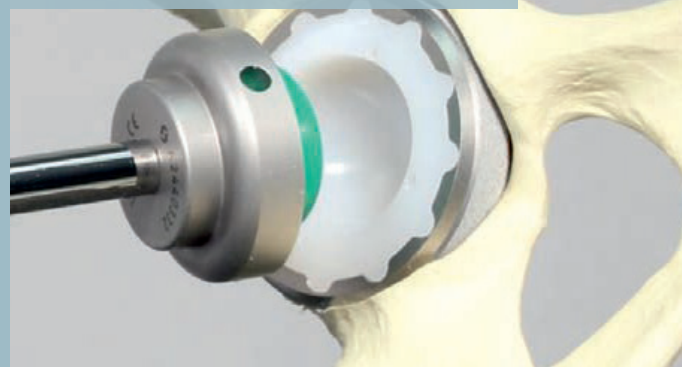
5. QUARTER cup + trial insert reduction



6. Apical hole occluder introduction



7. Liner introduction



8. Final reduction



## 0 Pre-operative planning

The QUARTER™ system has a complete range of X-ray templates (Image 1) for the correct pre-operative estimation.

X-ray templates must be positioned with the A/P radiograph to try to determine the pre-operative size and position of the implant. Although final decision should be taken during surgery.

NOTE: Templates\* with different magnification are available (100% and 115%). Make sure to use the right template according to the X-ray magnification.

\*Contact Surgival to ask for the digital template files.



Image 1

## 0 Surgical Approach

Surgical approach is at the discretion of the surgeon (Image 2):

- Lateral decubitus position for lateral, posterior and posterolateral approach.
- Supine position for anterior or anterolateral approach.

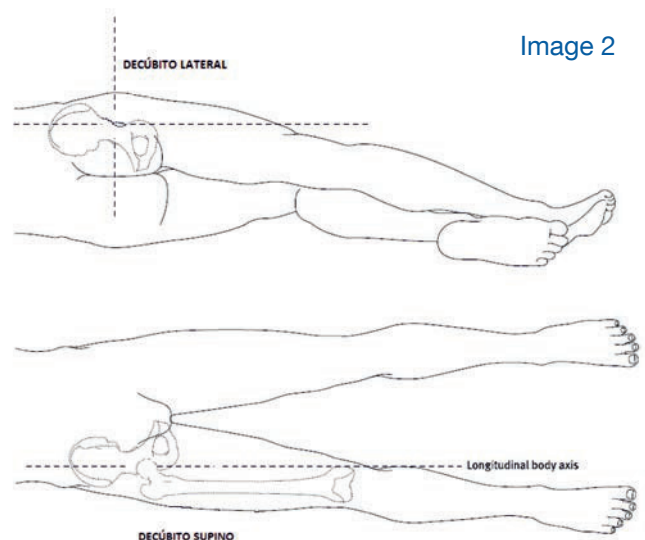


Image 2



# 1 Acetabular reaming

After pre-operative assessment, acetabular reaming must be done (Image 3).

Use the [Handle for reamer](#) (ref. A1701075) and the [Acetabular reamers set](#).

1. Start with the smaller sizes of reams and progress to bigger sizes, until exposing an hemispheric bleeding cancellous bone. It is important to preserve subchondral bone for the right fixation of the implant.

Reaming angle is under surgeons criteria (our instruments in posterior stages will offer references of 45° abduction and 15° anteversion).

NOTE: There is a Ø38 mm. reamer available to initiate the reaming. Smallest size of implant is the Ø40 mm. QUARTER cup.

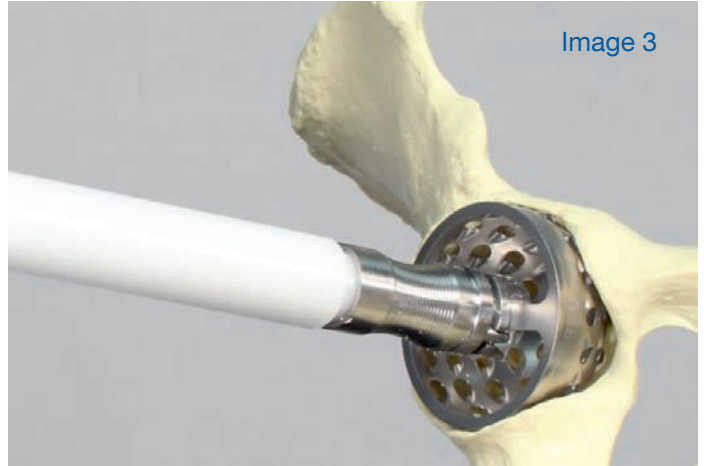


Image 3

## SIZE DETAILS: REAMER, TRIAL CUP AND QUARTER CUP



**REAMER SIZE Ø 52 mm**  
Ø 52 mm.



**TRIAL CUP SIZE Ø 52 mm**  
Ø 53 mm. (1 mm pressfit)



**QUARTER CUP SIZE Ø 52 mm**  
Ø 53,3 mm. (1,3 mm pressfit)

**Trial cup + 1 mm. diameter** than the reamer, allows pressfit when trial reduction is performed with trial inserts.

**QUARTER CUP + 1,3 mm. diameter** of the peripheral slots than the reamer, allow extra pressfit fixation for the cup.

## 2 Trial cup and reduction

### 2.1 Trial cup

Make sure the acetabulum is clean and without any soft tissues that could interfere when positioning the trial cup.

Place the trial cup of the same size than the last reamer used (Image 4). Assess the perfect fitting of the trial cup. The windows of the trial cup allow to confirm the full seating.

Position of the QUARTER TRIAL CUP is under surgeon's criteria but our instruments have references to facilitate 45° abduction and 15° anteversion (Image 5).

Use the [cup and insert universal handle](#) (ref. A2440015) to position the trial cup with the desired orientation.

#### ORIENTATION OF THE TRIAL CUP

How to use the alignment rods to reference the position in 45° abduction and 15° anteversion.

1. Screw the first rod in the marked 45° thread fixing the position of the rotating ring (fully threaded rod blocks the position of the ring)
2. Screw the second rod in one of the 15° threaded holes available. (Right of the 45° hole for a right hip operation or left of the 45° hole for a left hip)

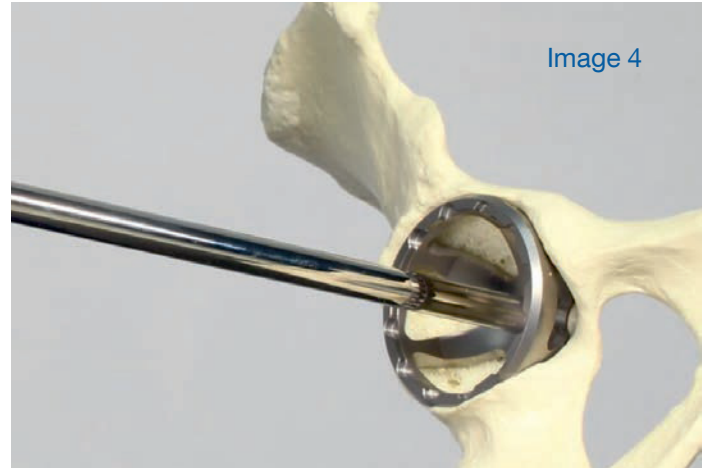
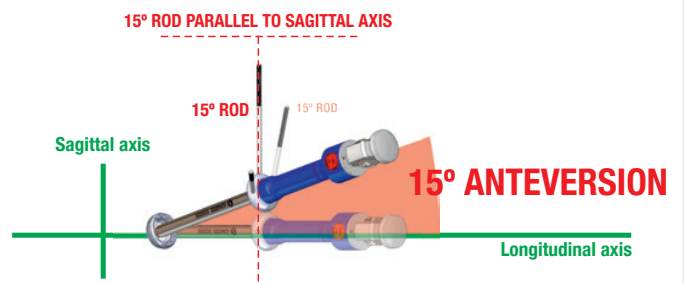
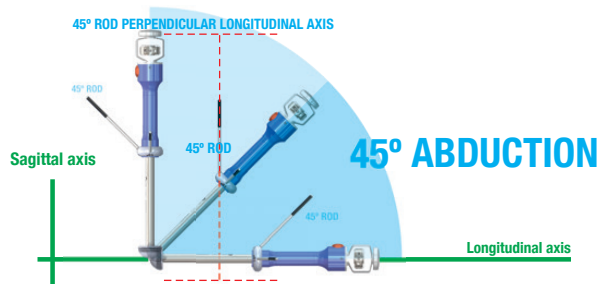


Image 4

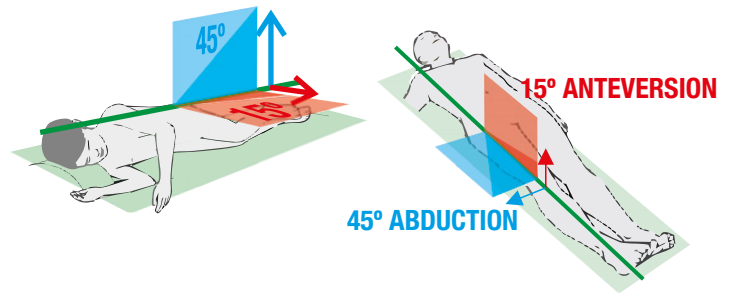


Image 5



## SURGICAL TECHNIQUE

Position of the final implant is under surgeon's criteria but our instrument have references to facilitate 45° abduction and 15° anteversion. QUARTER cup and insert universal handle and QUARTER cup definitive impactor (ref. A2440010) both have the alignment rods.

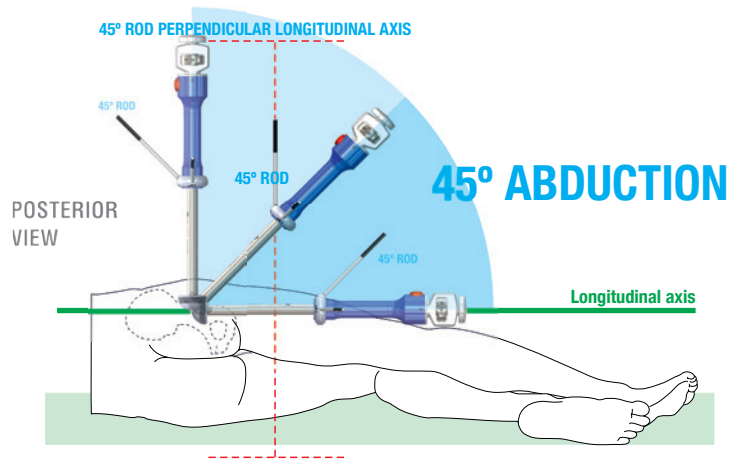


### LATERAL PATIENT POSITION

Approaches: lateral, posterolateral and posterior.

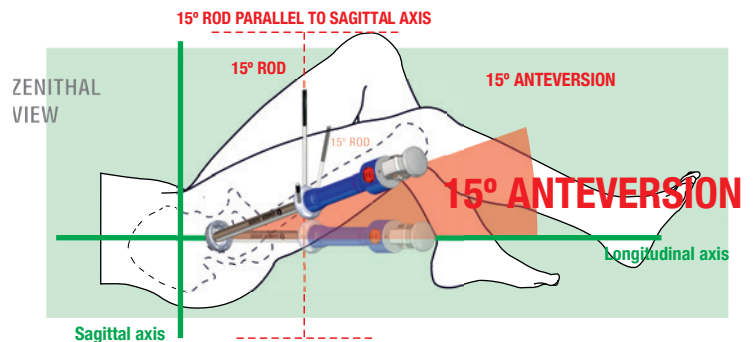
#### 45° ABDUCTION

1. Move the handle laterally until reaching 45° with the longitudinal body axis. The 45° ROD will be perpendicular to the longitudinal body axis.



#### 15° ANTEVERSION

2. Move the handle from posterior to anterior until reaching 15° with the longitudinal axis. The 15° ROD will be parallel to the sagittal axis.

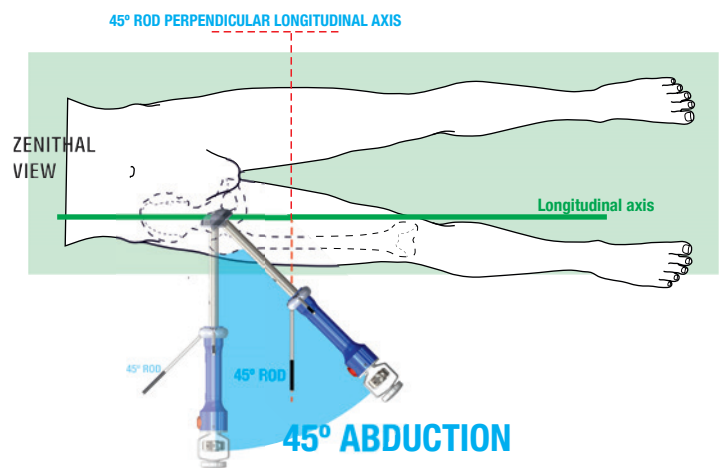


### SUPINE PATIENT POSITION

Approaches: anterior or anterolateral.

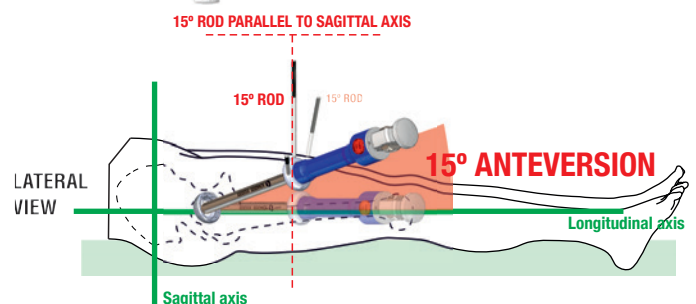
#### 45° ABDUCTION

1. Move the handle laterally until reaching 45° with the longitudinal body axis. The 45° ROD will be perpendicular to the longitudinal body axis.



#### 15° ANTEVERSION

2. Move the handle from posterior to anterior until reaching 15° with the longitudinal axis. The 15° ROD will be parallel to the sagittal axis.



## SURGICAL TECHNIQUE

### 2.2 Trial insert

Choose your desired trial insert from all our range conditional to three variable:

- Trial cup size →
- Diameter of the desired femoral head →
- Neutral or anti-luxation liner

**Trial Insert and trial femoral heads must be of the same colour for their correspondence.**



COLOUR	YELLOW	BLUE	GREEN	GREY	RED
CUPS	Ø40-Ø46	Ø44-Ø68	Ø48-Ø68	Ø52-Ø68	Ø56-Ø68
HEAD	Ø22	Ø28	Ø32	Ø36	Ø40
NECKS	S-M-L	S-M-L-XL	S-M-L-XL	S-M-L-XL	S-M-L-XL
INSERT	ANTI-LUXATION	ANTI-LUXATION OR NEUTRAL	ANTI-LUXATION OR NEUTRAL	ANTI-LUXATION OR NEUTRAL	ANTI-LUXATION OR NEUTRAL

1. Position the trial insert manually and tighten the apical screw with the hexagonal straight screwdriver (ref. B3610005) (image 6).

NOTE: The apical screw ensures the position of the trial insert without tightening it too strongly.

CAUTION: Trial insert must not be impacted.

2. The system has trial femoral heads for rasps and trial femoral heads for stems. Choose the femoral trial head of the same colour than the trial insert and with the desired neck length available in the system (short, medium, long or extra long) (image 7).

3. Perform the trial reduction and assess tensions, the full range of movements and stability of the hip.

#### EXTRACTION OF THE TRIAL CUP

Untighten the apical screw with the hexagonal straight screwdriver.

NOTE: if the apical screw is totally unscrewed from the trial insert could fall into the surgical field)

Trial insert can be manually removed from the trial cup or with a Kocher clip.

Screw the trial cup and insert universal handle to the trial cup in the apical hole to extract the trial cup.

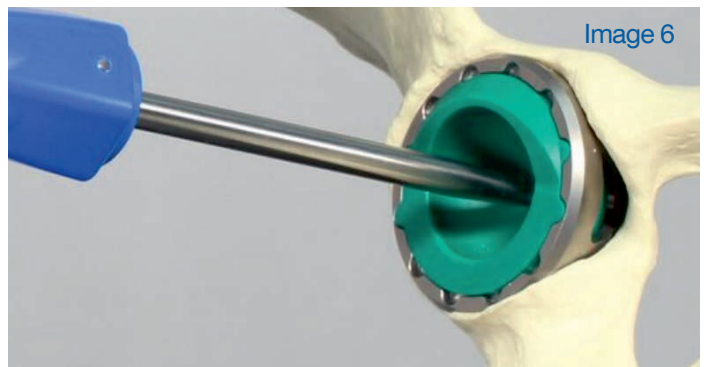


Image 6

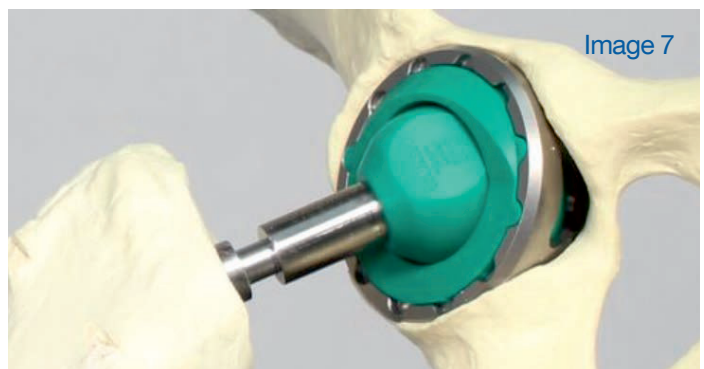


Image 7

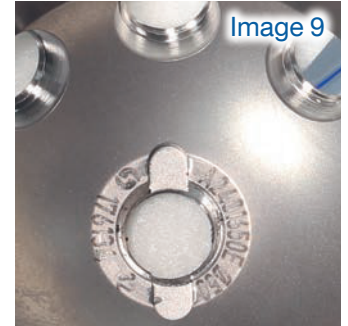
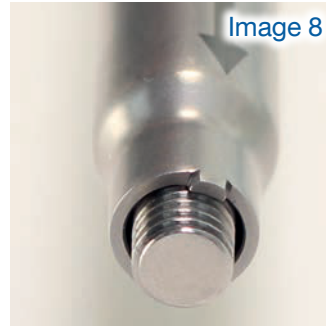


### 3 QUARTER cup

#### 3.1 Cup impactor

The tip of the QUARTER definitive cup impactor has two anti-rotational tabs (image 8) that must be introduced in the two slots (image 9) of the QUARTER CUP when tightening the hand knob of the handle. The position of the tabs are marked with two arrows in the tip of the impactor (image 10 and 11).

The locking button of the system secures the cup to the handle during impaction.



To secure the cup during impaction, the design of our impactor has a system that approaches the cup to the impactor when tightening the hand knob.

1. Screw the QUARTER definitive cup impactor slightly to the QUARTER cup and find the position where the tabs of the impactor (marked with the arrow) face the slots in the cup.
2. Keeping the position to match up the tabs with the slots, tighten the hand knob of the handle to fix the cup to the impactor.
3. Make sure the tabs are fully inserted in the slots before impaction (image 11).
4. Unscrew slightly the hand knob and push the locking button of the system and screw again until click it locked.
5. Without releasing the button impact the QUARTER cup.





### 3.2 Alignment rods

Position of the final implant is under surgeon's criteria but our instruments have references of 45° abduction and 15° anteversion to facilitate that habitual position. Correct alignment of the cup also positions the screw holes in the posterior-superior area of the acetabulum for extra fixation.

When the QUARTER definitive cup impactor is fully and correctly assembled to the cup, one of the arrows points the center hole of the cup. **This center hole and the arrow are the ones to be aligned with the 45° alignment rod. This reference allows to position the screw holes posterior-superior in the acetabulum (Image 12).**

To prepare the impactor with the alignment rods available for orientation (45° abduction and 15° anteversion) follow these steps:

1. Screw the first rod in the marked 45° thread without fixing the position of the rotating ring (fully threaded rod blocks the position of the ring).
2. Rotate the ring and align the rod positioned in the 45° thread with the arrow marking the centered hole of the cup.
3. Screw the 45° rod fully to block the position of the ring.
4. Screw the second rod in one of the marked 15° threaded holes available. (Right of the 45° hole for a right hip operation or left of the 45° hole for a left hip).

**⚠ NOTE:** Make sure the patient is rightly positioned in the table, otherwise the provided references within the sagittal plane and the frontal plane may lead to the incorrect position of the cup.

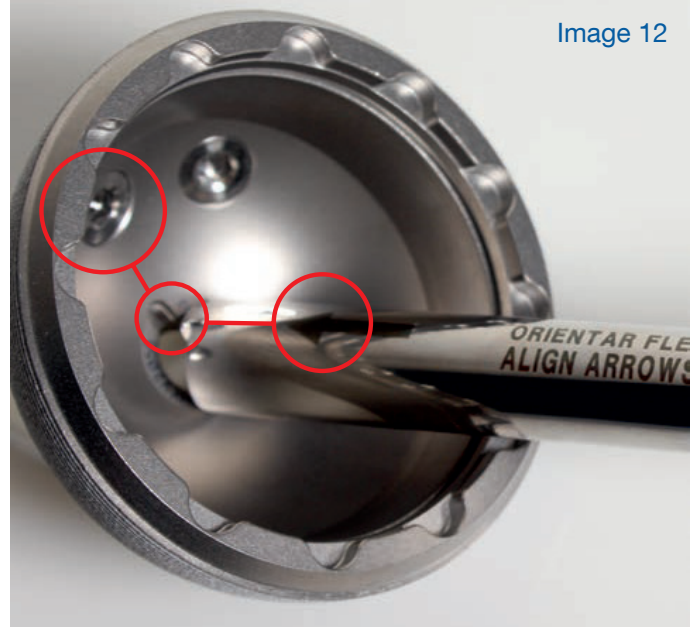
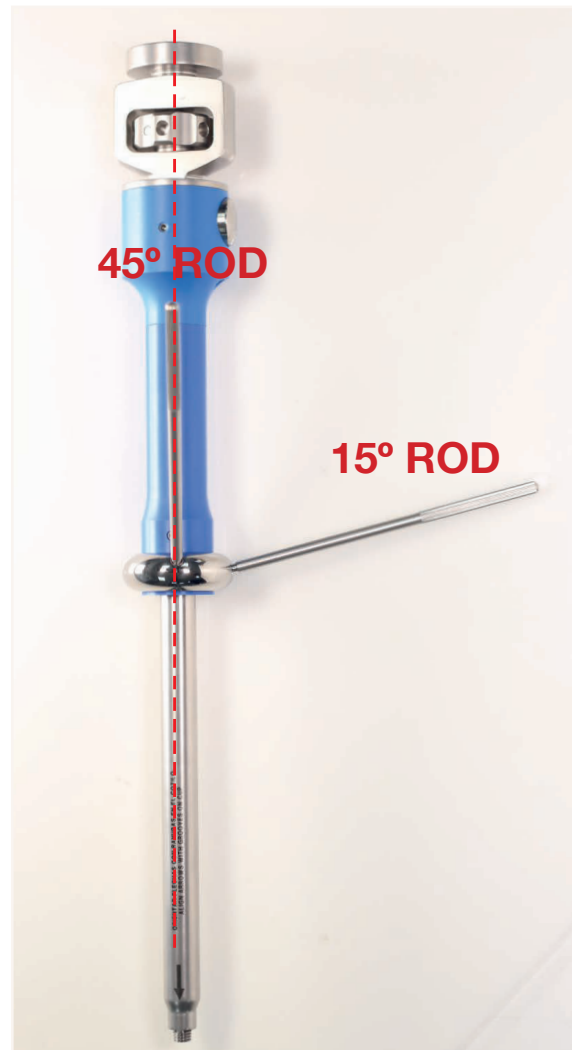


Image 12



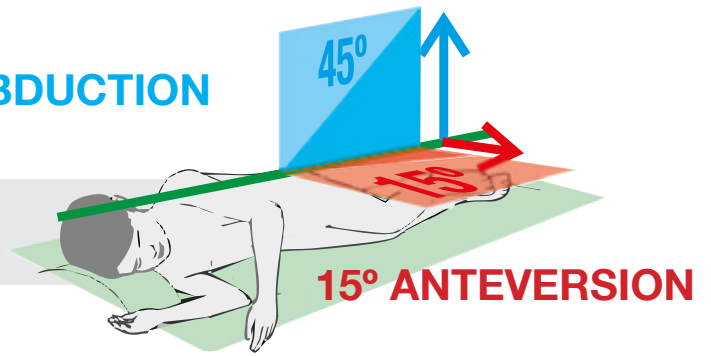
## SURGICAL TECHNIQUE

**45° ABDUCTION**

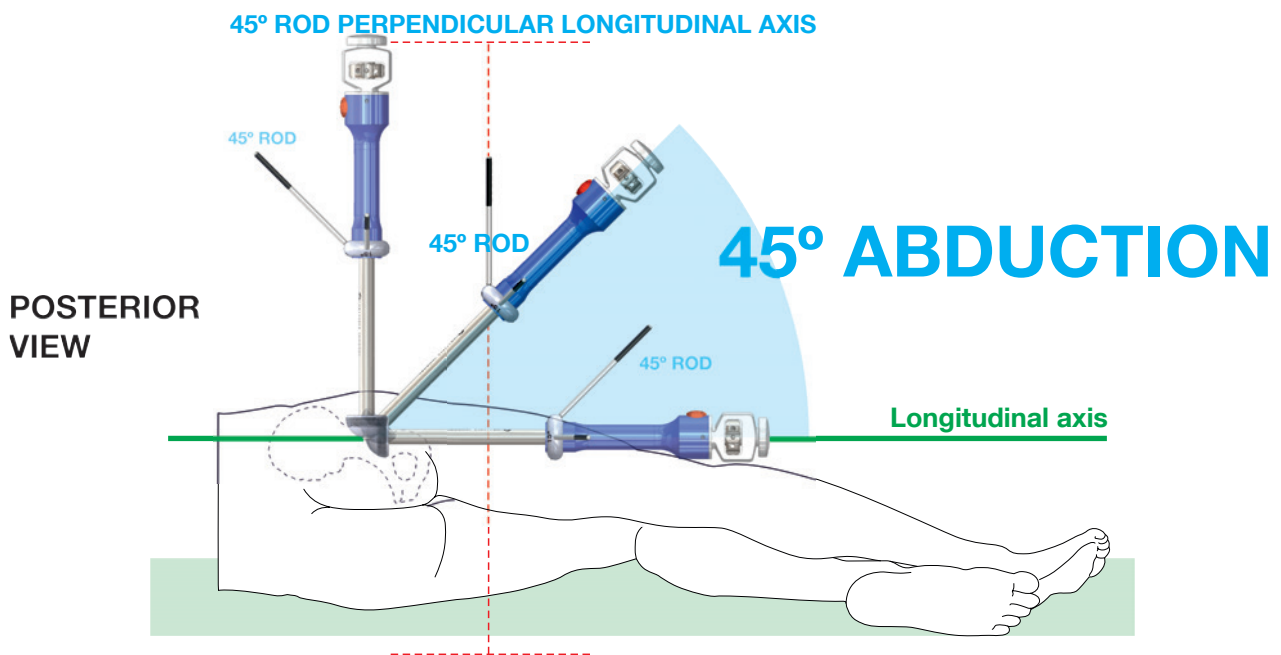
### LATERAL PATIENT POSITION

Approaches: lateral, posterolateral and posterior

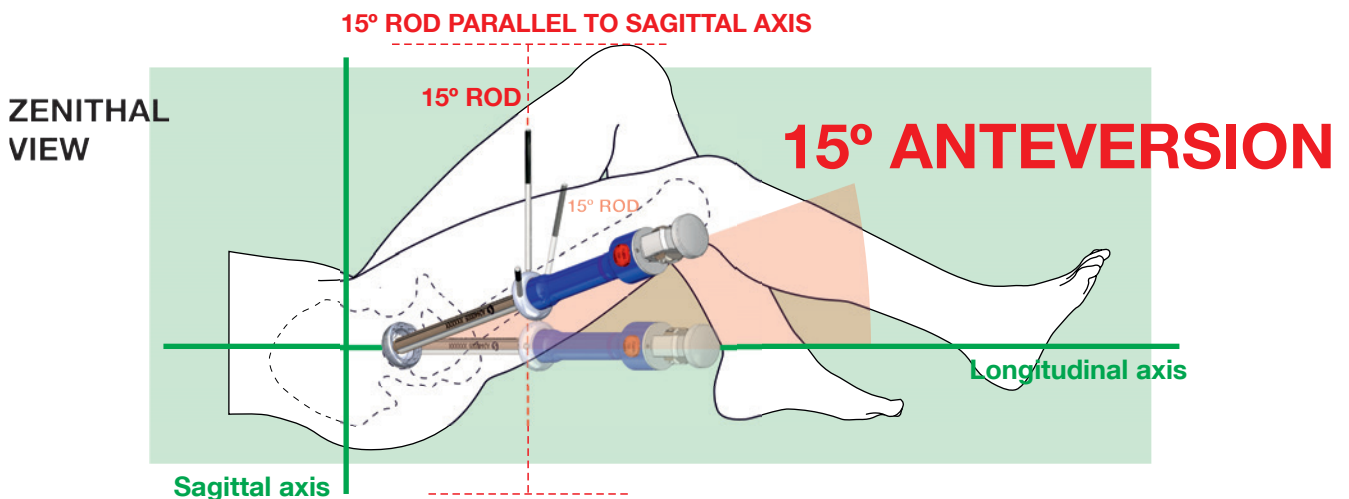
Position of the final implant is under surgeon's criteria but our instruments have references to facilitate 45° abduction and 15° anteversion.



1. Move the handle laterally until reaching 45° with the longitudinal body axis. The 45° ROD will be perpendicular to the longitudinal body axis.



2. Move the handle from posterior to anterior until reaching 15° with the longitudinal axis. The 15° ROD will be parallel to the sagittal axis.



## SURGICAL TECHNIQUE

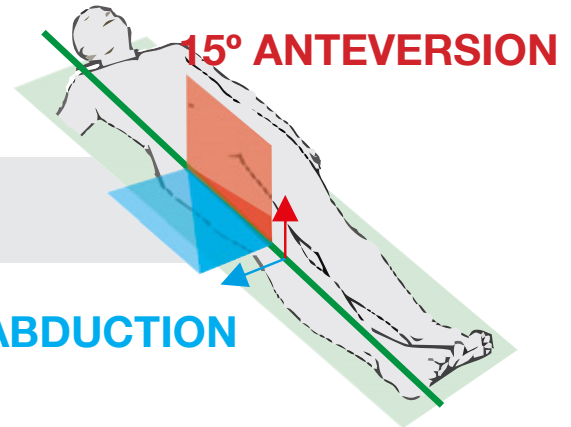
### SUPINE PATIENT POSITION

Approaches: anterior or anterolateral

Position of the final implant is under surgeon's criteria but our instruments have references to facilitate 45° abduction and 15° anteversion.

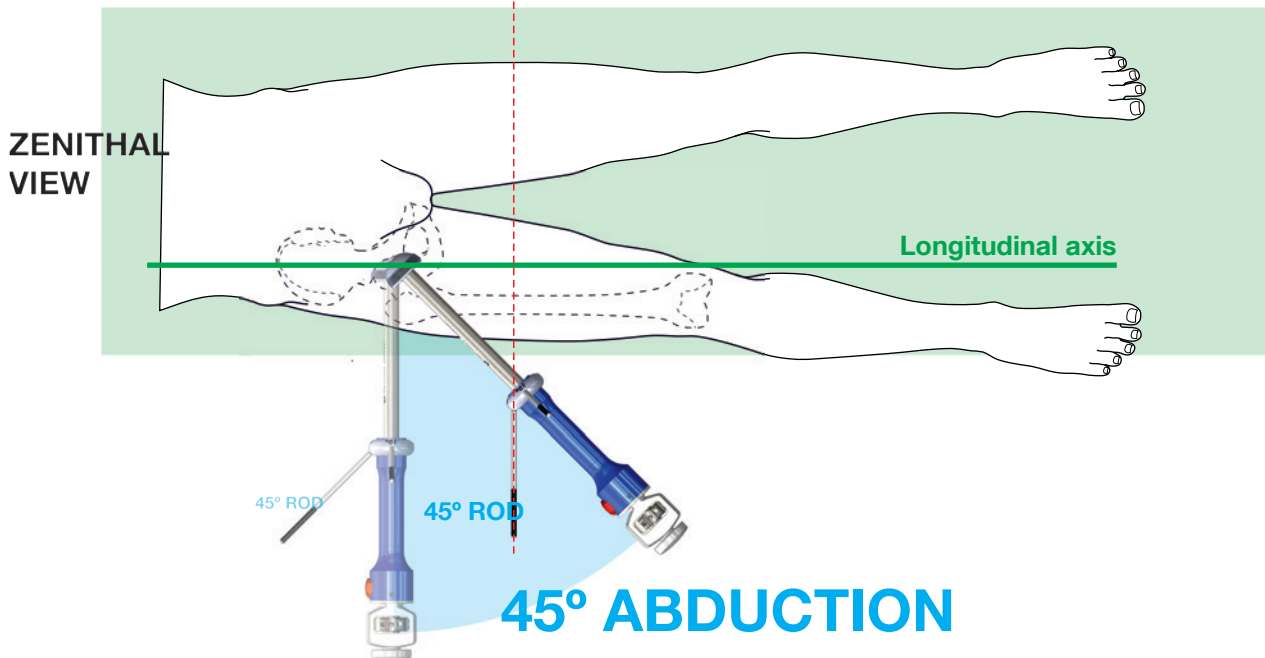
**45° ABDUCTION**

**15° ANTEVERSION**



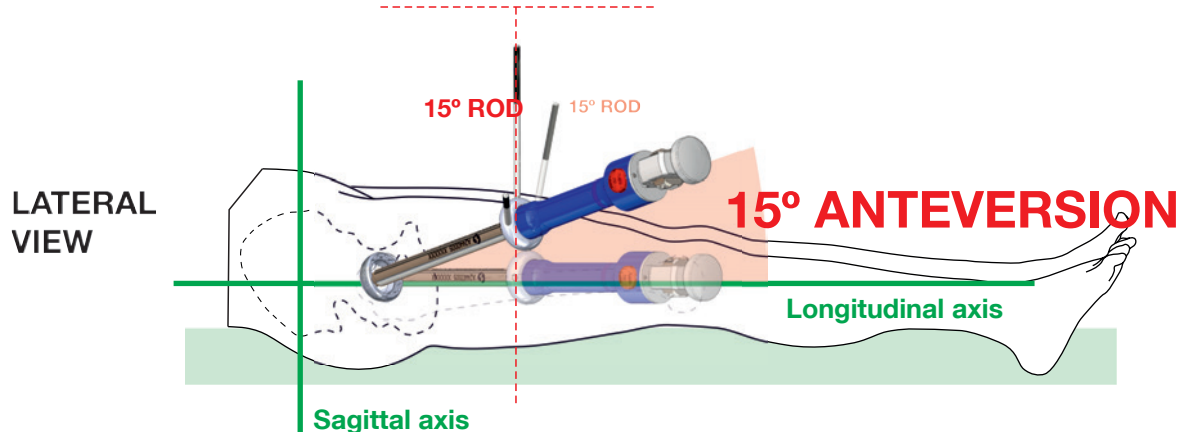
1. Move the handle laterally until reaching 45° with the longitudinal body axis. The 45° ROD will be perpendicular to the longitudinal body axis.

**45° ROD PERPENDICULAR LONGITUDINAL AXIS**



2. Move the handle from posterior to anterior until reaching 15° with the longitudinal axis. The 15° ROD will be parallel to the sagittal axis.

**15° ROD PARALLEL TO SAGITTAL AXIS**



### 3.1 QUARTER cup impaction

The cup holes must be positioned posterior-superior in the acetabulum (image 13) in order to:

- Avoid vascular and nerve damage in all the anterior part of the acetabulum.
- Posterior-superior acetabulum allows screws longer than 35 mm in the ilium.

**1. IMPACT** the cup and unscrew the impactor from the cup unscrewing the hand knob of the impactor handle.

Apical hole allows visual assessment of the correct impaction.

**2.** For extra impaction, use the **QUARTER definitive cup impactor** with the **universal handle**. (ref. A2440010 and ref. A2440015. **Image 14**)

**3.** After impactation tighten the hole occluders or retire them if screws are used for extra fixation.

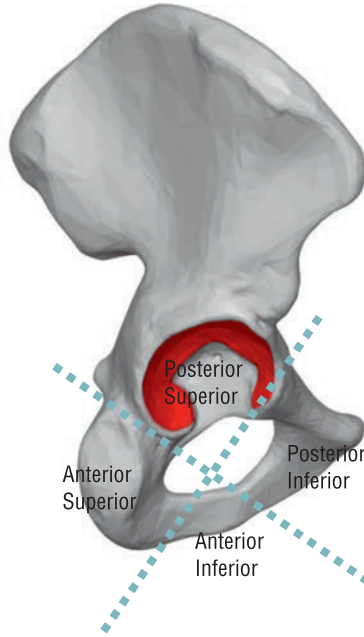


Image 13

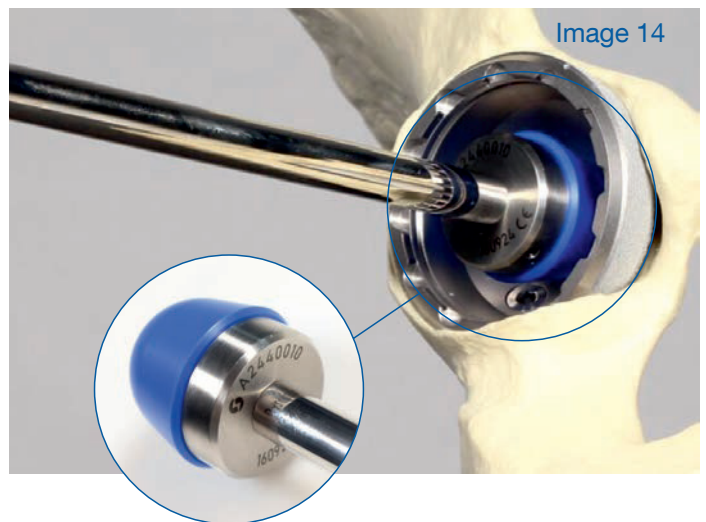


Image 14

## 4 SCREWS for extra fixation (optional)

When the press-fit design of the QUARTER cup is not giving the desired fixation or movement is appreciated after impaction, it is necessary to use the provided screws in the posterior-superior area of the acetabulum.

1. Retire the desired **hole occluders** using the **Straight hexagonal screwdriver** or the **Cardan hexagonal screwdriver** (Images 15 y 16).

**▲ NOTE:** Hole occluders may fall from the tip of the screwdrivers. Be careful and use your hand to hold them and avoid them falling in the surgical field.

2. Use the **drill flexible shaft** (ref. F0005930) and one of the two **Ø 3,2 mm drill bits** available: 35 or 56 mm.

Position the **Drill guide** (ref. F0005935) in the hole and point it in the desired direction. Introduce the drill bit through the guide to drill (image 17).

Drill the whole length of the drill bit or until the cortical bone is reached.

3. Use the **Depth gauge** (ref. F0005960) to determine the length of the screw required (Image 18).

4. Hold the screws with the **Screw holding forceps** (ref. F0005950), point it in the right direction of the drilled hole and screw them with the **straight or cardan hexagonal screwdriver** (Image 19).

**▲ NOTE:** Check manually that none of the screw heads protude over the hole and may damage the insert or avoid correct positioning.



Image 15  
Straight hexagonal screwdriver  
(ref. B3610005)

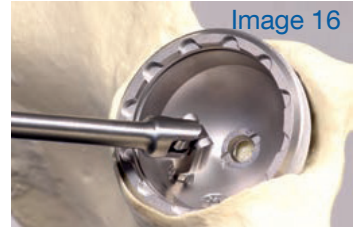


Image 16  
Cardan hexagonal screwdriver  
(ref. B3611360)



Image 17



Image 18

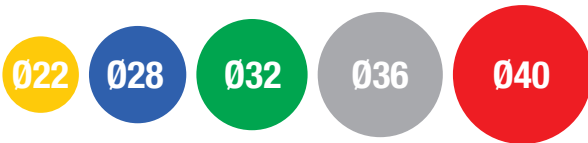


Image 19



## 5 QUARTER cup + trial insert reduction

Use the trial insert for the implanted QUARTER cup size combined with the correspondent trial femoral head available in five diameters (Ø22, Ø28, Ø32, Ø36 and Ø40) and several neck lengths. **Trial insert and femoral head must be of the same colour.**



1. Make sure the interior of the cup is cleaned and dried and introduce manually the trial insert in the cup

2. Use the [straight hexagonal screwdriver](#) (ref. B3610005) ([Image 20](#)) to fix the trial insert to the QUARTER CUP

**⚠ NOTE:** Do not impact the trial insert.

**⚠** Apical screw of the trial insert is only intended to fix the position during the trial reduction. Do not overtighten it as trial insert may be damaged.

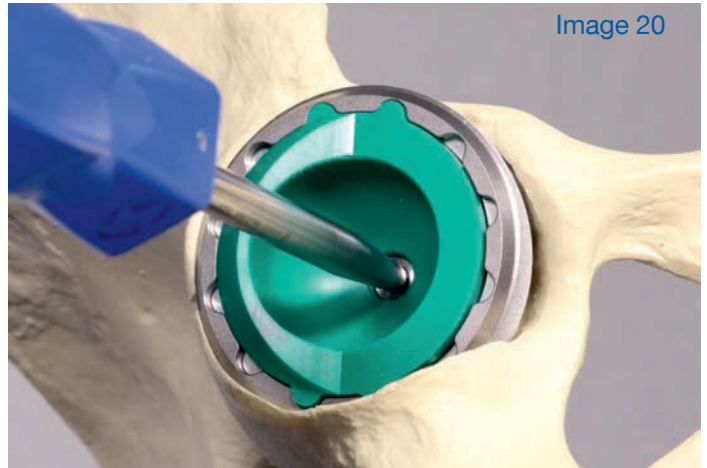
3. Choose the correspondent trial femoral head for the final trial reduction. The trial femoral head must be of the same colour than the insert and is available in four neck lengths (S, M, L and XL)

4. Once reduced, assess tensions, alignment, mobility and flexion and external rotation). ([Image 21](#))

5. After trial reduction and assessment, unscrew the apical screw and retire manually or with a Kocher forceps the trial insert.

**⚠ NOTE:** Do not unscrew totally the apical screw, as may fall in the surgical field.

Be careful using the Kocher forceps to retire the trial insert as may scratch it.



## 6 Apical hole occluder introduction

Take the apical hole occluder and use the **straight hexagonal screwdriver** (ref. B3610005) to tighten it in the apical hole (Image 22).

**NOTE:** Apical hole occluder may fall from the tip of the screwdriver. Be careful and use your hand to hold it and avoid it falling in the surgical field.

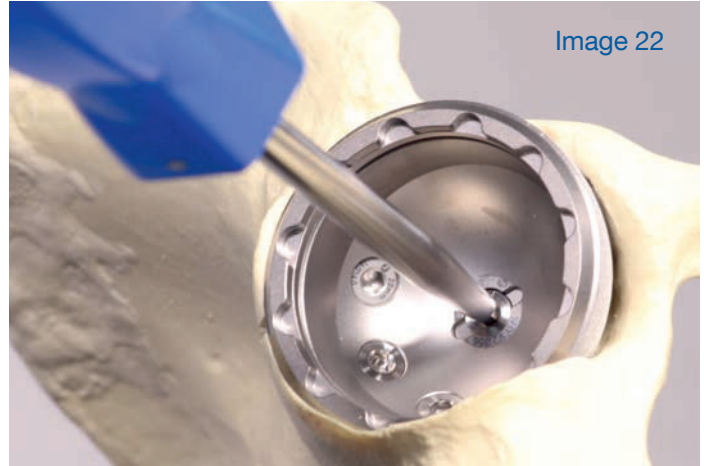
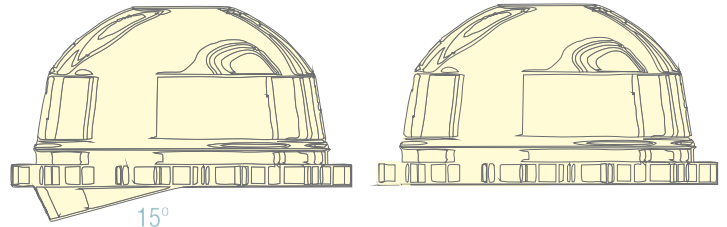


Image 22

## 7 Liner introduction

Choose the correct liner having into account:

- Diameter of the QUARTER cup implanted (Ø40 to Ø68)
- Diameter of the femoral head to be implanted (Ø22, Ø28, Ø32, Ø36 and Ø40) Conditional to the limitation of the Quarter cup size for each insert
- Neutral or anti-luxation liner. (Conditional to the limitation of the liner)



### POSITIONER FOR LINER INTRODUCTION

	Ø22	Ø28	Ø32	Ø36	Ø40
ANTI-LUXATION	A2440122	A2440128	A2440132	A2440136	
NEUTRAL		A2440028	A2440032	A2440036	A2440040

## SURGICAL TECHNIQUE

Choose the **positioner** corresponding to the definitive liner and screw the universal handle (ref. A2440015) (**image 23**).

1. The positioner has 3 pins to be introduced in the 3 holes that the liner has (**imagen 23**). These pins hold the liner to the positioner and allows to position and impact the liner.

NOTE: The cup must be cleaned and dried before sitting the liner.

2. Position the liner in the cup with the handle (**image 24**) checking before definitive impaction:

- Insert is correctly settled with all the peripheral grooves inserted in the peripheral notches of the cup.
- When using ANTI-LUXATION INSERT, the anti-luxation tab must be positioned posterior-superior.

3. Impact with the hammer and check visually that the peripheral grooves are leveled with the peripheral notches of the cup (**image 25**). Now the handle and the positioner can be retired.



Image 23

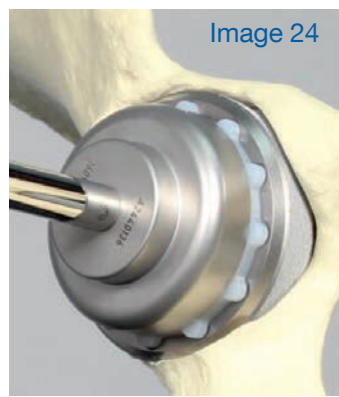


Image 24

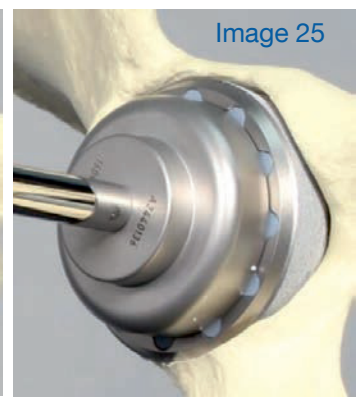


Image 25

If extra impaction may be needed for the system, there are available **definitive impactors** for each size. These impactors adapt to the sferic shape of the system and do not contact the cup ot the liner to avoid damage on the articular surface.



### DEFINITIVE IMPACTORS FOR LINERS

	Ø22	Ø28	Ø32	Ø36	Ø40
ANTI-LUXATION	A2440322	A2440328	A2440332	A2440336	
NEUTRAL		A2440228	A2440232	A2440236	A2440240

4. Choose the definitive impactor corresponding to the liner implanted (depending on femoral size and neutral or anti-luxant liner) and screw it to the **cup and insert universal handle**. The impactor adapts to the spherical cap and avoids contact with the liner.

Impact with the hammer (**Image 26**)

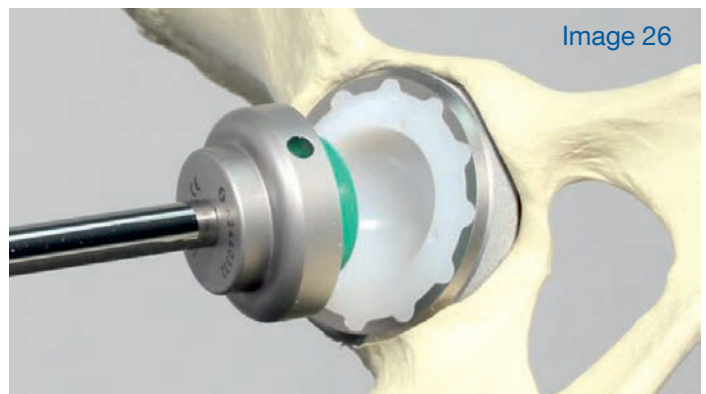


Image 26

## 8 Final reduction

1. Impact the femoral head with the assessed neck length in the trial reduction.

⚠ NOTE: Do not use the hammer directly on the head to impact it to the stem. Use always the femoral head **reductor impactor** (ref. A2700380) provided.

⚠ NOTE: The taper neck of the stem must be cleaned and dried before impacting the head. The cup of the insert must be cleaned to avoid any debris before final reduction.

2. Reduce the hip and assess the stability, range of motion, tension of the system and risk of luxation.

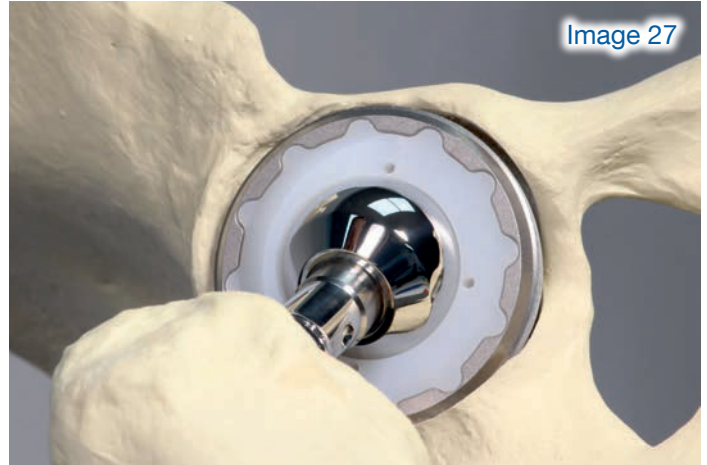


Image 27

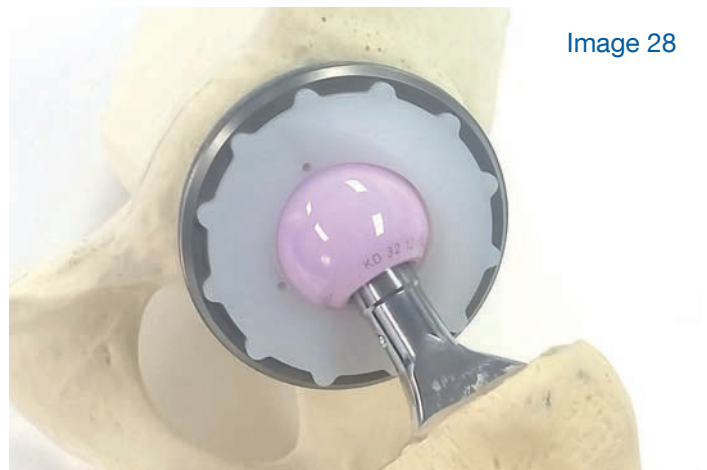


Image 28



## Appendix

### QUARTER system extraction

In the event of implant failure, the system may be retired following these steps:

#### A.1 Insert extraction

**⚠ NOTE:** Insert extraction may damage the interior of the QUARTER cup. It is recommended to extract the insert only in the cases where all the system will be retired.

1. Drill the insert with the Ø 3,2 mm drill bit (ref. F0005932) in the crown of the insert with an inclination of 20° until reaching the cup ([image 29](#)).

**⚠ NOTE:** Drilling will produce debris that we must clean from the surgical plane.

2. Screw the [insert extractor](#) (ref. A2440020) in the drilled hole until the insert is lifted and released from its original position ([image 30 and 31](#)).

**⚠ NOTE:** The [insert extractor](#) may damage the interior of the cup. Extraction is only recommended in the event of retiring the whole system.

The retired insert cannot be used again as the performed extraction will damage it completely.



Image 29

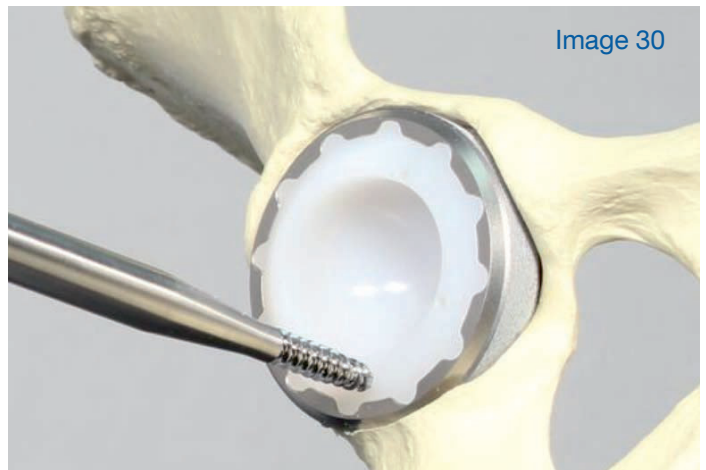


Image 30

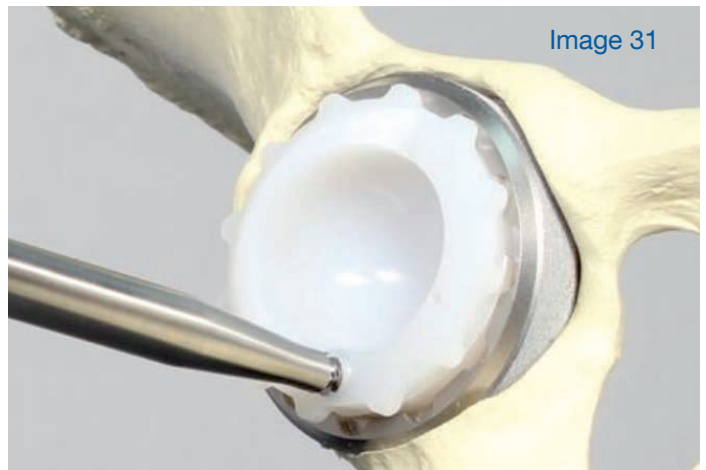


Image 31

#### A.2 Screws and apical hole occluder

1. Retire the screws and [apical hole occluder](#) with the [straight hexagonal screwdriver or/and the cardan hexagonal screwdriver](#) (ref. B3610005 y B3611360).

#### A.3 QUARTER cup extraction

1. Screw the [quarter definitive cup impactor](#) (ref. A2440005) in the apical hole as previously explained in the surgical technique. Remove the QUARTER CUP.



## 2.1 QUARTER cups

### QUARTER SHELL<sup>™</sup>

Diameter (Ø)	Reference
Ø 40 mm	<b>A2401640E</b>
Ø 42 mm	<b>A2401642E</b>
Ø 44 mm	<b>A2401644E</b>
Ø 46 mm	<b>A2401646E</b>
Ø 48 mm	<b>A2401648E</b>
Ø 50 mm	<b>A2401650E</b>
Ø 52 mm	<b>A2401652E</b>
Ø 54 mm	<b>A2401654E</b>
Ø 56 mm	<b>A2401656E</b>
Ø 58 mm	<b>A2401658E</b>
Ø 60 mm	<b>A2401660E</b>
Ø 62 mm	<b>A2401662E</b>
Ø 64 mm	<b>A2401664E</b>
Ø 66 mm	<b>A2401666E</b>
Ø 68 mm	<b>A2401668E</b>



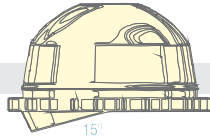
### QUARTER<sup>™</sup> SCREWS

Lenght	Reference
20 mm	<b>A2400520</b>
25 mm	<b>A2400525</b>
30 mm	<b>A2400530</b>
35 mm	<b>A2400535</b>
40 mm	<b>A2400540</b>
45 mm	<b>A2400545</b>



## SYSTEM COMPONENTS

### LINERS QUARTER™



#### ANTI-LUXATION (15°)

Shell diameter Femoral Head Reference

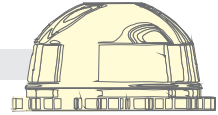
Ø 40 mm	Ø 22 mm	A2412240E
Ø 42 mm	Ø 22 mm	A2412242E
Ø 44 mm	Ø 22 mm	A2412244E
Ø 46 mm	Ø 22 mm	A2412246E

Ø 44 mm	Ø 28 mm	A2412844E
Ø 46 mm	Ø 28 mm	A2412846E
Ø 48 mm	Ø 28 mm	A2412848E
Ø 50 mm	Ø 28 mm	A2412850E
Ø 52 mm	Ø 28 mm	A2412852E
Ø 54 mm	Ø 28 mm	A2412854E
Ø 56 mm	Ø 28 mm	A2412856E
Ø 58 mm	Ø 28 mm	A2412858E
Ø 60 mm	Ø 28 mm	A2412860E
Ø 62 mm	Ø 28 mm	A2412862E
Ø 64 mm	Ø 28 mm	A2412864E
Ø 66 mm	Ø 28 mm	A2412866E
Ø 68 mm	Ø 28 mm	A2412868E

Ø 48 mm	Ø 32 mm	A2413248E
Ø 50 mm	Ø 32 mm	A2413250E
Ø 52 mm	Ø 32 mm	A2413252E
Ø 54 mm	Ø 32 mm	A2413254E
Ø 56 mm	Ø 32 mm	A2413256E
Ø 58 mm	Ø 32 mm	A2413258E
Ø 60 mm	Ø 32 mm	A2413260E
Ø 62 mm	Ø 32 mm	A2413262E
Ø 64 mm	Ø 32 mm	A2413264E
Ø 66 mm	Ø 32 mm	A2413266E
Ø 68 mm	Ø 32 mm	A2413268E

Ø 52 mm	Ø 36 mm	A2413652E
Ø 54 mm	Ø 36 mm	A2413654E
Ø 56 mm	Ø 36 mm	A2413656E
Ø 58 mm	Ø 36 mm	A2413658E
Ø 60 mm	Ø 36 mm	A2413660E
Ø 62 mm	Ø 36 mm	A2413662E
Ø 64 mm	Ø 36 mm	A2413664E
Ø 66 mm	Ø 36 mm	A2413666E
Ø 68 mm	Ø 36 mm	A2413668E

### LINERS QUARTER™



#### NEUTRAL

Shell diameter Femoral Head Reference

Ø 44 mm	Ø 28 mm	A2402844E
Ø 46 mm	Ø 28 mm	A2402846E
Ø 48 mm	Ø 28 mm	A2402848E
Ø 50 mm	Ø 28 mm	A2402850E
Ø 52 mm	Ø 28 mm	A2402852E
Ø 54 mm	Ø 28 mm	A2402854E
Ø 56 mm	Ø 28 mm	A2402856E
Ø 58 mm	Ø 28 mm	A2402858E
Ø 60 mm	Ø 28 mm	A2402860E
Ø 62 mm	Ø 28 mm	A2402862E
Ø 64 mm	Ø 28 mm	A2402864E
Ø 66 mm	Ø 28 mm	A2402866E
Ø 68 mm	Ø 28 mm	A2402868E

Ø 48 mm	Ø 32 mm	A2403248E
Ø 50 mm	Ø 32 mm	A2403250E
Ø 52 mm	Ø 32 mm	A2403252E
Ø 54 mm	Ø 32 mm	A2403254E
Ø 56 mm	Ø 32 mm	A2403256E
Ø 58 mm	Ø 32 mm	A2403258E
Ø 60 mm	Ø 32 mm	A2403260E
Ø 62 mm	Ø 32 mm	A2403262E
Ø 64 mm	Ø 32 mm	A2403264E
Ø 66 mm	Ø 32 mm	A2403266E
Ø 68 mm	Ø 32 mm	A2403268E

Ø 52 mm	Ø 36 mm	A2403652E
Ø 54 mm	Ø 36 mm	A2403654E
Ø 56 mm	Ø 36 mm	A2403656E
Ø 58 mm	Ø 36 mm	A2403658E
Ø 60 mm	Ø 36 mm	A2403660E
Ø 62 mm	Ø 36 mm	A2403662E
Ø 64 mm	Ø 36 mm	A2403664E
Ø 66 mm	Ø 36 mm	A2403666E
Ø 68 mm	Ø 36 mm	A2403668E

Ø 56 mm	Ø 40 mm	A2404056E
Ø 58 mm	Ø 40 mm	A2404058E
Ø 60 mm	Ø 40 mm	A2404060E
Ø 62 mm	Ø 40 mm	A2404062E
Ø 64 mm	Ø 40 mm	A2404064E
Ø 66 mm	Ø 40 mm	A2404066E
Ø 68 mm	Ø 40 mm	A2404068E

## SYSTEM COMPONENTS

### FEMORAL HEADS

#### BIOLOX® delta\* CERAMIC



\*BIOLOX® delta is a trade mark from CeramTec GmbH

Diameter (Ø)	Neck	Reference
Ø 22 mm	Short	A1507160E
Ø 22 mm	Medium	A1507161E
Ø 22 mm	Large	A1507162E
Ø 28 mm	Short	A1507140E
Ø 28 mm	Medium	A1507141E
Ø 28 mm	Large	A1507142E
Ø 32 mm	Short	A1507113E
Ø 32 mm	Medium	A1507114E
Ø 32 mm	Large	A1507115E
Ø 32 mm	X Large	A1507116E
Ø 36 mm	Short	A1507170E
Ø 36 mm	Medium	A1507171E
Ø 36 mm	Large	A1507172E
Ø 36 mm	X Large	A1507173E
Ø 40 mm	Short	A1507180E
Ø 40 mm	Medium	A1507181E
Ø 40 mm	Large	A1507182E
Ø 40 mm	X Large	A1507183E

#### COBALT CHROMIUM



Diameter (Ø)	Neck	Reference
Ø 22 mm	Short	A1506160E
Ø 22 mm	Medium	A1506161E
Ø 22 mm	Large	A1506162E
Ø 28 mm	Short	A1506040E
Ø 28 mm	Medium	A1506041E
Ø 28 mm	Large	A1506042E
Ø 28 mm	X Large	A1506043E
Ø 32 mm	Short	A1506013E
Ø 32 mm	Medium	A1506014E
Ø 32 mm	Large	A1506015E
Ø 32 mm	X Large	A1506016E
Ø 36 mm	Short	A1506070E
Ø 36 mm	Medium	A1506071E
Ø 36 mm	Large	A1506072E
Ø 36 mm	X Large	A1506073E
Ø 40 mm	Short	A1506080E
Ø 40 mm	Medium	A1506081E
Ø 40 mm	Large	A1506082E
Ø 40 mm	X Large	A1506083E

#### STAINLESS STEEL



Diameter (Ø)	Neck	Reference
Ø 22 mm	Short	A1509160E
Ø 22 mm	Medium	A1509161E
Ø 22 mm	Large	A1509162E
Ø 28 mm	Short	A1509040E
Ø 28 mm	Medium	A1509041E
Ø 28 mm	Large	A1509042E
Ø 28 mm	X Large	A1509043E
Ø 32 mm	Short	A1509013E
Ø 32 mm	Medium	A1509014E
Ø 32 mm	Large	A1509015E
Ø 32 mm	X Large	A1509016E
Ø 36 mm	Short	A1509070E
Ø 36 mm	Medium	A1509071E
Ø 36 mm	Large	A1509072E
Ø 36 mm	X Large	A1509073E
Ø 40 mm	Short	A1509080E
Ø 40 mm	Medium	A1509081E
Ø 40 mm	Large	A1509082E
Ø 40 mm	X Large	A1509083E

## SYSTEM COMPONENTS

### 2.2 Instruments

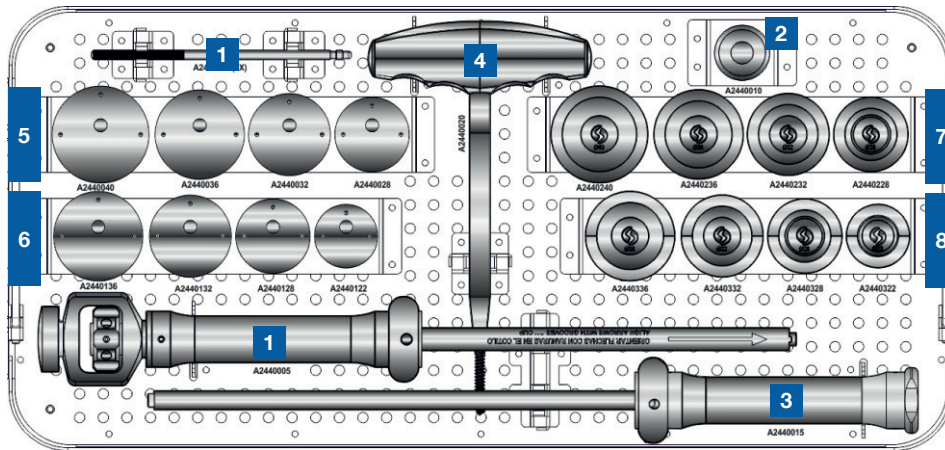
#### COMPLETE SET OF INSTRUMENTS QUARTER<sup>TM</sup>

A2445000

#### QUARTER BASIC INSTRUMENTAL

A2445100

#### UPPER TRAY



1	A2440005	Guide impactor/handle for Quarter cup
2	A2440010	Definitive cup impactor
3	A2440015	Cup and insert universal handle
4	A2440020	Insert extractor
5	A2440028	Positioner for neutral inserts (head Ø 28 mm)
	A2440032	Positioner for neutral inserts (head Ø 32 mm)
	A2440036	Positioner for neutral inserts (head Ø 36 mm)
	A2440040	Positioner for neutral inserts (head Ø 40 mm)
6	A2440122	Positioner for antiluxation inserts (head Ø 22 mm)
	A2440128	Positioner for antiluxation inserts (head Ø 28 mm)
	A2440132	Positioner for antiluxation inserts (head Ø 32 mm)
	A2440136	Positioner for antiluxation inserts (head Ø 36 mm)
7	A2440228	Definitive impactor for neutral inserts (head Ø 28 mm)
	A2440232	Definitive impactor for neutral inserts (head Ø 32 mm)
	A2440236	Definitive impactor for neutral inserts (head Ø 36 mm)
	A2440240	Definitive impactor for neutral inserts (head Ø 40 mm)
8	A2440322	Definitive impactor for antiluxation inserts (head Ø 22 mm)
	A2440328	Definitive impactor for antiluxation inserts (head Ø 28 mm)
	A2440332	Definitive impactor for antiluxation inserts (head Ø 32 mm)
	A2440336	Definitive impactor for antiluxation inserts (head Ø 36 mm)

The diagram illustrates the 1000 Series Wheel and Tire Assembly. It features a grid of 18 different wheel and tire combinations, each labeled with a part number. The wheels are arranged in two rows of nine. The top row shows wheels with different tire sizes and types, including 1000, 1000S, 1000L, 1000M, 1000N, 1000P, 1000Q, 1000R, and 1000S. The bottom row shows wheels with different tire sizes and types, including 1000, 1000S, 1000L, 1000M, 1000N, 1000P, 1000Q, 1000R, and 1000S. Below the grid, a list of tools is provided, numbered 1 through 8, with their respective part numbers. The tools include a screwdriver (1), a screwdriver (2), a screwdriver (3), a screwdriver (4), a screwdriver (5), a screwdriver (6), a screwdriver (7), and a screwdriver (8).

Wheel/Tire Part Number	Tool Part Number
040 A2421040	1 F0005930 (2X)
042 A2421042	2 B3611360
044 A2421044	3 F0005960
046 A2421046	4 F0005935
048 A2421048	5 F0005935
050 A2421050	6 F0005931
052 A2421052	7 F0005932
054 A2421054	8 F0005932
056 A2421056	
058 A2421058	
060 A2421060	
062 A2421062	
064 A2421064	
066 A2421066	
068 A2421068	

## REAMER SET

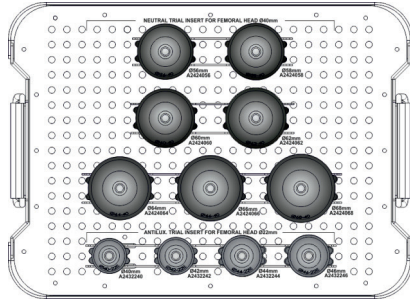
3	<b>F1701038</b>	Acetabular reamer Ø 38 mm
	<b>F1701040</b>	Acetabular reamer Ø 40 mm
	<b>F1701042</b>	Acetabular reamer Ø 42 mm
	<b>A1701044</b>	Acetabular reamer Ø 44 mm
	<b>A1701046</b>	Acetabular reamer Ø 46 mm
	<b>A1701048</b>	Acetabular reamer Ø 48 mm
	<b>A1701050</b>	Acetabular reamer Ø 50 mm
	<b>A1701052</b>	Acetabular reamer Ø 52 mm
3	<b>A1701054</b>	Acetabular reamer Ø 54 mm
	<b>A1701056</b>	Acetabular reamer Ø 56 mm
	<b>A1701058</b>	Acetabular reamer Ø 58 mm
	<b>A1701060</b>	Acetabular reamer Ø 60 mm
	<b>A1701062</b>	Acetabular reamer Ø 62 mm
	<b>A1701064</b>	Acetabular reamer Ø 64 mm
	<b>F1701066</b>	Acetabular reamer Ø 66 mm
	<b>F1701068</b>	Acetabular reamer Ø 68 mm



## SYSTEM COMPONENTS

### TRIAL INSERTS

#### TRIAL INSERTS SET BOX Ø 22 mm and Ø 40 mm A2445540



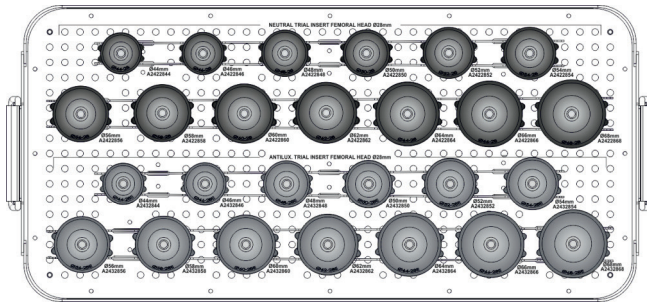
#### NEUTRAL

Cup diameter	Head Diameter	Reference
Ø 56 mm	Ø 40 mm	A2424056
Ø 58 mm	Ø 40 mm	A2424058
Ø 60 mm	Ø 40 mm	A2424060
Ø 62 mm	Ø 40 mm	A2424062
Ø 64 mm	Ø 40 mm	A2424064
Ø 66 mm	Ø 40 mm	A2424066
Ø 68 mm	Ø 40 mm	A2424068

#### ANTILUXATION

Cup diameter	Head Diameter	Reference
Ø 40 mm	Ø 22 mm	A2432240
Ø 42 mm	Ø 22 mm	A2432242
Ø 44 mm	Ø 22 mm	A2432244
Ø 46 mm	Ø 22 mm	A2432246

#### TRIAL INSERTS SET BOX Ø 28 mm A2445510



#### NEUTRAL

Cup Diameter	Head Diameter	Reference
Ø 44 mm	Ø 28 mm	A2422844
Ø 46 mm	Ø 28 mm	A2422846
Ø 48 mm	Ø 28 mm	A2422848
Ø 50 mm	Ø 28 mm	A2422850
Ø 52 mm	Ø 28 mm	A2422852
Ø 54 mm	Ø 28 mm	A2422854
Ø 56 mm	Ø 28 mm	A2422856
Ø 58 mm	Ø 28 mm	A2422858
Ø 60 mm	Ø 28 mm	A2422860
Ø 62 mm	Ø 28 mm	A2422862
Ø 64 mm	Ø 28 mm	A2422864
Ø 66 mm	Ø 28 mm	A2422866
Ø 68 mm	Ø 28 mm	A2422868

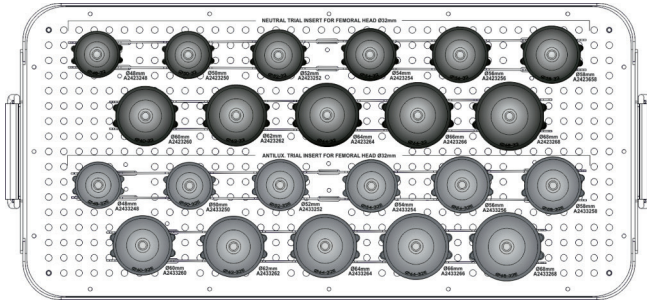
#### ANTILUXATION

Cup Diameter	Head Diameter	Reference
Ø 44 mm	Ø 28 mm	A2432844
Ø 46 mm	Ø 28 mm	A2432846
Ø 48 mm	Ø 28 mm	A2432848
Ø 50 mm	Ø 28 mm	A2432850
Ø 52 mm	Ø 28 mm	A2432852
Ø 54 mm	Ø 28 mm	A2432854
Ø 56 mm	Ø 28 mm	A2432856
Ø 58 mm	Ø 28 mm	A2432858
Ø 60 mm	Ø 28 mm	A2432860
Ø 62 mm	Ø 28 mm	A2432862
Ø 64 mm	Ø 28 mm	A2432864
Ø 66 mm	Ø 28 mm	A2432866
Ø 68 mm	Ø 28 mm	A2432868

## SYSTEM COMPONENTS

### TRIAL INSERTS SET BOX Ø 32 mm

A2445520



#### NEUTRAL

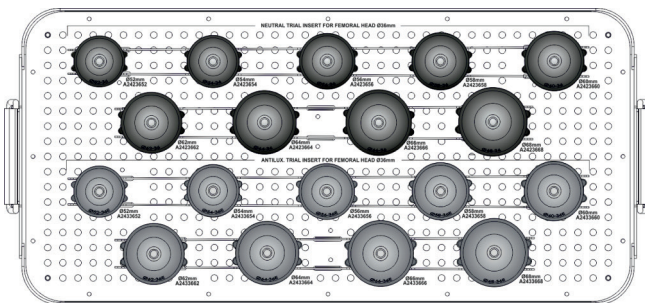
Cup Diameter	Head Diameter	Reference
Ø 48 mm	Ø 32 mm	A2423248
Ø 50 mm	Ø 32 mm	A2423250
Ø 52 mm	Ø 32 mm	A2423252
Ø 54 mm	Ø 32 mm	A2423254
Ø 56 mm	Ø 32 mm	A2423256
Ø 58 mm	Ø 32 mm	A2423258
Ø 60 mm	Ø 32 mm	A2423260
Ø 62 mm	Ø 32 mm	A2423262
Ø 64 mm	Ø 32 mm	A2423264
Ø 66 mm	Ø 32 mm	A2423266
Ø 68 mm	Ø 32 mm	A2423268

#### ANTILUXATION

Cup Diameter	Head Diameter	Reference
Ø 48 mm	Ø 32 mm	A2433248
Ø 50 mm	Ø 32 mm	A2433250
Ø 52 mm	Ø 32 mm	A2433252
Ø 54 mm	Ø 32 mm	A2433254
Ø 56 mm	Ø 32 mm	A2433256
Ø 58 mm	Ø 32 mm	A2433258
Ø 60 mm	Ø 32 mm	A2433260
Ø 62 mm	Ø 32 mm	A2433262
Ø 64 mm	Ø 32 mm	A2433264
Ø 66 mm	Ø 32 mm	A2433266
Ø 68 mm	Ø 32 mm	A2433268

### TRIAL INSERTS SET BOX Ø 36 mm

A2445530



#### NEUTRAL

Cup Diameter	Head Diameter	Reference
Ø 52 mm	Ø 36 mm	A2423652
Ø 54 mm	Ø 36 mm	A2423654
Ø 56 mm	Ø 36 mm	A2423656
Ø 58 mm	Ø 36 mm	A2423658
Ø 60 mm	Ø 36 mm	A2423660
Ø 62 mm	Ø 36 mm	A2423662
Ø 64 mm	Ø 36 mm	A2423664
Ø 66 mm	Ø 36 mm	A2423666
Ø 68 mm	Ø 36 mm	A2423668

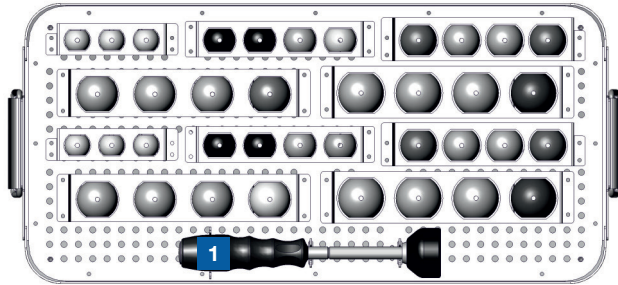
#### ANTILUXATION

Cup Diameter	Head Diameter	Reference
Ø 52 mm	Ø 36 mm	A2433652
Ø 54 mm	Ø 36 mm	A2433654
Ø 56 mm	Ø 36 mm	A2433656
Ø 58 mm	Ø 36 mm	A2433658
Ø 60 mm	Ø 36 mm	A2433660
Ø 62 mm	Ø 36 mm	A2433662
Ø 64 mm	Ø 36 mm	A2433664
Ø 66 mm	Ø 36 mm	A2433666
Ø 68 mm	Ø 36 mm	A2433668

## SYSTEM COMPONENTS

### TRIAL FEMORAL HEADS SET

A1536100



### TRIAL FEMORAL HEADS FOR STEMS

Diameter (Ø)	Neck	Reference
Ø 22 mm	Short	A1536160
Ø 22 mm	Medium	A1536161
Ø 22 mm	Long	A1536162
Ø 28 mm	Short	A1536140
Ø 28 mm	Medium	A1536141
Ø 28 mm	Long	A1536142
Ø 28 mm	Extra Long	A1536143
Ø 32 mm	Short	A1536113
Ø 32 mm	Medium	A1536114
Ø 32 mm	Long	A1536115
Ø 32 mm	Extra Long	A1536116
Ø 36 mm	Short	A1536070
Ø 36 mm	Medium	A1536071
Ø 36 mm	Long	A1536072
Ø 36 mm	Extra Long	A1536073
Ø 40 mm	Short	A1536080
Ø 40 mm	Medium	A1536081
Ø 40 mm	Long	A1536082
Ø 40 mm	Extra Long	A1536083

### TRIAL FEMORAL HEADS FOR RASPS

Diameter (Ø)	Neck	Reference
Ø 22 mm	Short	A1550160
Ø 22 mm	Medium	A1550161
Ø 22 mm	Long	A1550162
Ø 28 mm	Short	A1550140
Ø 28 mm	Medium	A1550141
Ø 28 mm	Long	A1550142
Ø 28 mm	Extra Long	A1550143
Ø 32 mm	Short	A1556126
Ø 32 mm	Medium	A1550127
Ø 32 mm	Long	A1550128
Ø 32 mm	Extra Long	A1550129
Ø 36 mm	Short	A1550070
Ø 36 mm	Medium	A1550071
Ø 36 mm	Long	A1550072
Ø 36 mm	Extra Long	A1550073
Ø 40 mm	Short	A1550080
Ø 40 mm	Medium	A1550081
Ø 40 mm	Long	A1550082
Ø 40 mm	Extra Long	A1550083

1

A2700380

Reductor impactor



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