

Aria



Signature
ORTHOPAEDICS

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Introduction

The Signature Orthopaedics Aria Instrument system is an optimised instrument set for implantation of the Signature Orthopaedics Aria cementless hip stem. The Aria instrument set features an adaptable broach handle that quick-connects to several instrument attachments to reduce the overall number of instruments and minimize the size and weight of the instrument tray.

Indications

Signature Orthopaedics' hip replacement range is intended to replace a hip joint where bone stock is sufficient to support the implant. When a surgeon has selected prosthetic replacement as the preferred treatment, the devices are indicated for:

- Non-inflammatory degenerative joint disease including osteoarthritis or avascular necrosis
- Inflammatory joint disease including rheumatoid arthritis (excluding TSI stem)
- Correction of functional deformity including congenital hip dysplasia
- Traumatic injury involving the hip joint including traumatic arthritis or femoral head or neck fracture
- Failed previous hip surgery including internal fixation or joint fusion, reconstruction, hemiarthroplasty, surface replacement, or total replacement.

Contraindications

In general, prosthetic components require adequate bone support for correct fit and function. The use of prosthetic components is therefore contraindicated where any pathological condition may reduce the quantity and or strength of the bone which is supporting the prosthesis. Some contraindications are relative to the extent and severity of conditions and the benefits of prosthetic arthroplasty should be considered based on the patient's overall evaluation and the possibility of alternative treatment. Examples of such conditions include; osteoporosis, osteomalacia, osteogenesis imperfecta, or hypophosphatemia. Other contraindications include:

- Conditions limiting blood supply to the bone or joint.
- Systemic or local infection.
- Previous high dose radiotherapy.
- Psychological or neurological conditions which would restrict the patient's ability or compliance in restricting physical activity.
- Skeletal immaturity
- Conditions or activity which may place excessive load on the components such as; obesity, muscle, tendon & ligament deficiencies, multiple joint disabilities, and Charcot joints.

Aria Stem Features

Cementless Hip Stem

- Clinically proven geometry, material and coating (Ti6Al4V with titanium plasma spray coating).
- Threaded proximal feature aids in positioning and removal.

1. Standard and High offset versions

2. 12/14 Taper

3. Low-profile lateral shoulder

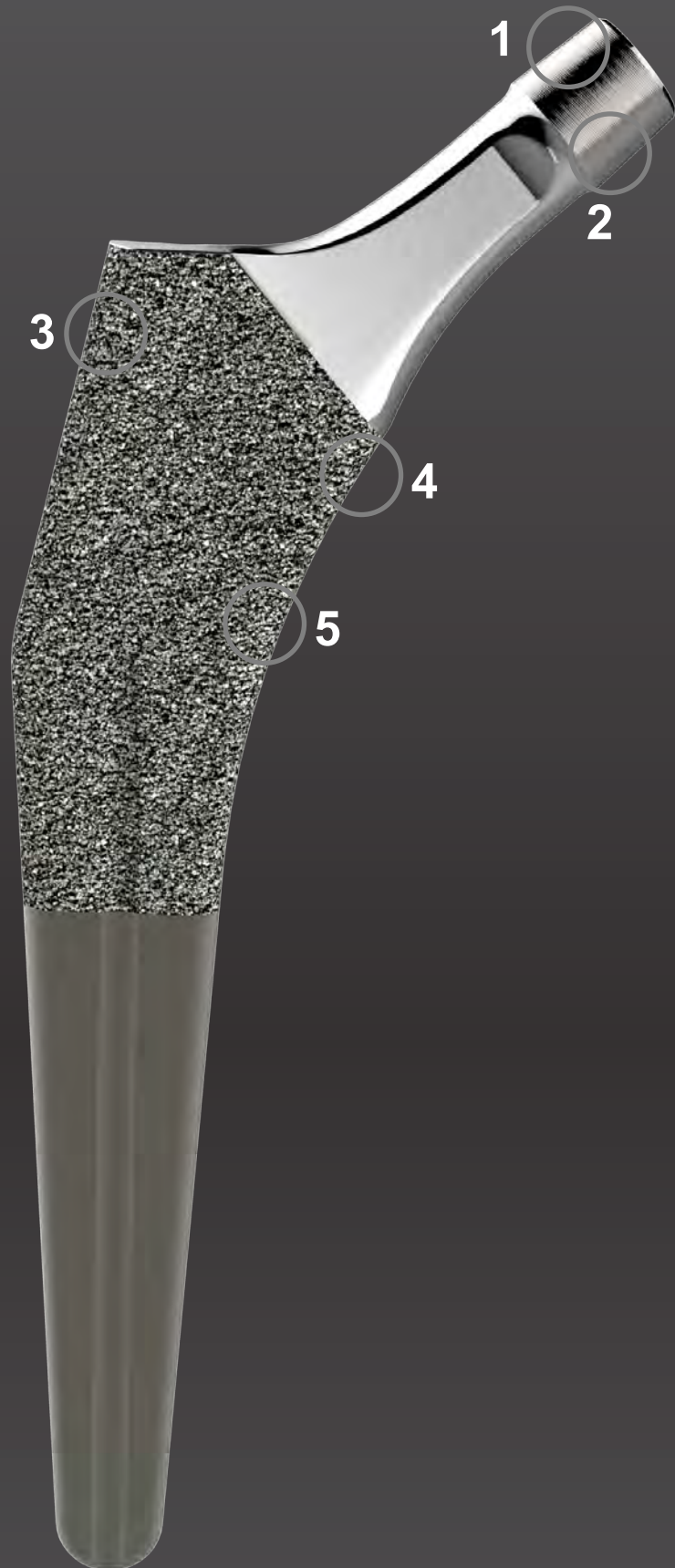
Enables easy insertion in reduced insertion techniques, including anterior approach.

4. Tapered geometry

Wedge-shaped stem improves initial fixation and proximal bone loading.

5. Titanium Plasma Spray Coating

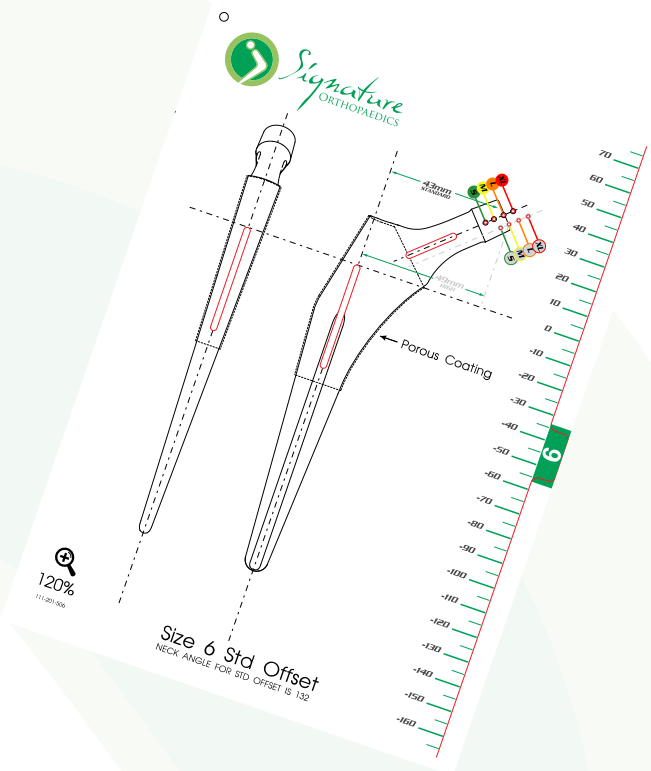
- Tensile Strength > 22MPa
- Shear Strength > 22MPa
- Coating Thickness 70-130 microns.



1

Preoperative Planning

Aria X-Ray templates can be used over anterior/posterior and lateral radiographs to help determine the correct size to restore the patient's anatomy. Templates are 120% magnification.



2

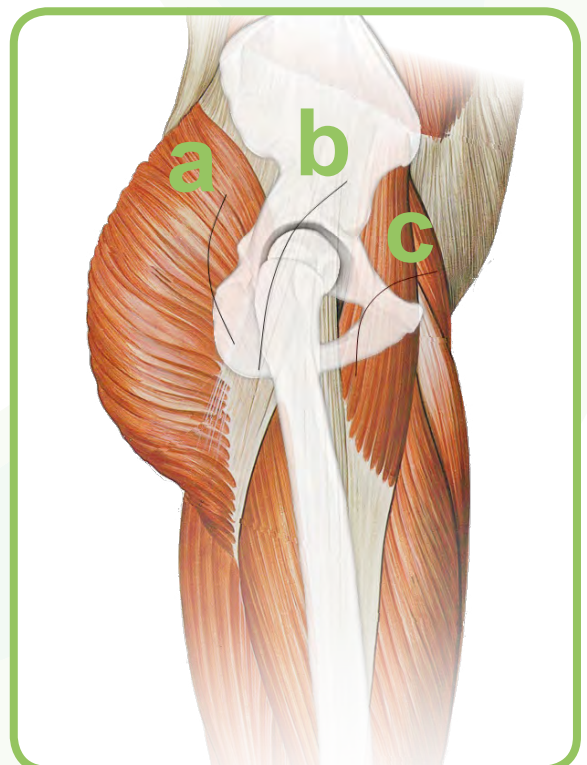
Preoperative Planning

The Logical cup can be used with any surgical approach that the surgeon selects.

- Posterior approach
- Posterolateral/anterolateral approach
- Anterior approach

Note:

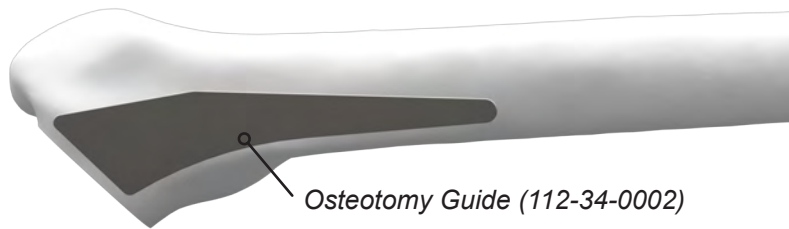
Prior to the following steps, complete all steps detailed in 111-12-0003 for the Logical acetabular cup implantation.





Femoral Neck Resection

The osteotomy guide should be used in conjunction with preoperative planning, to determine the level of the femoral neck resection. This can be performed in multiple steps, depending on surgeon preference.



Optional technique:

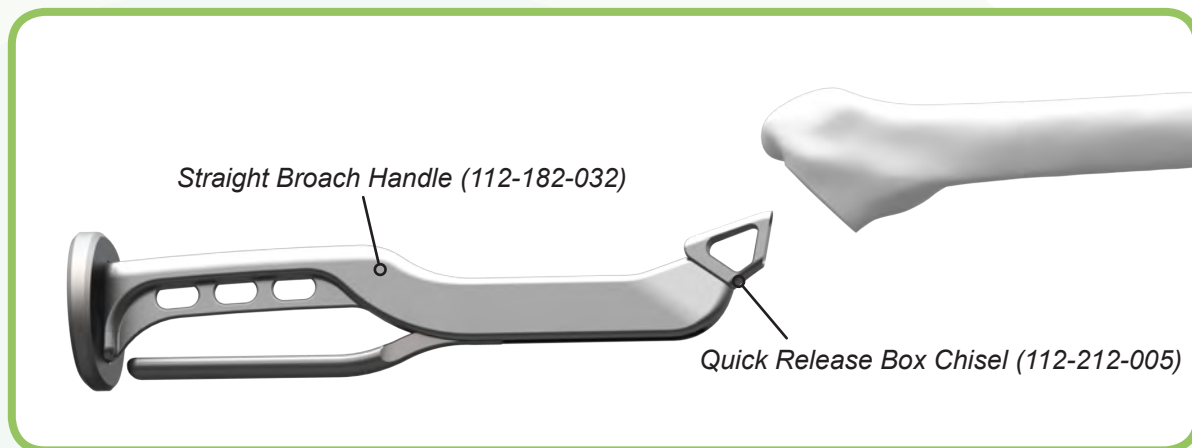
The femoral head extractor may be used with the T-handle or under power to aid in the removal of the resected head, especially during an anterior approach technique.



4

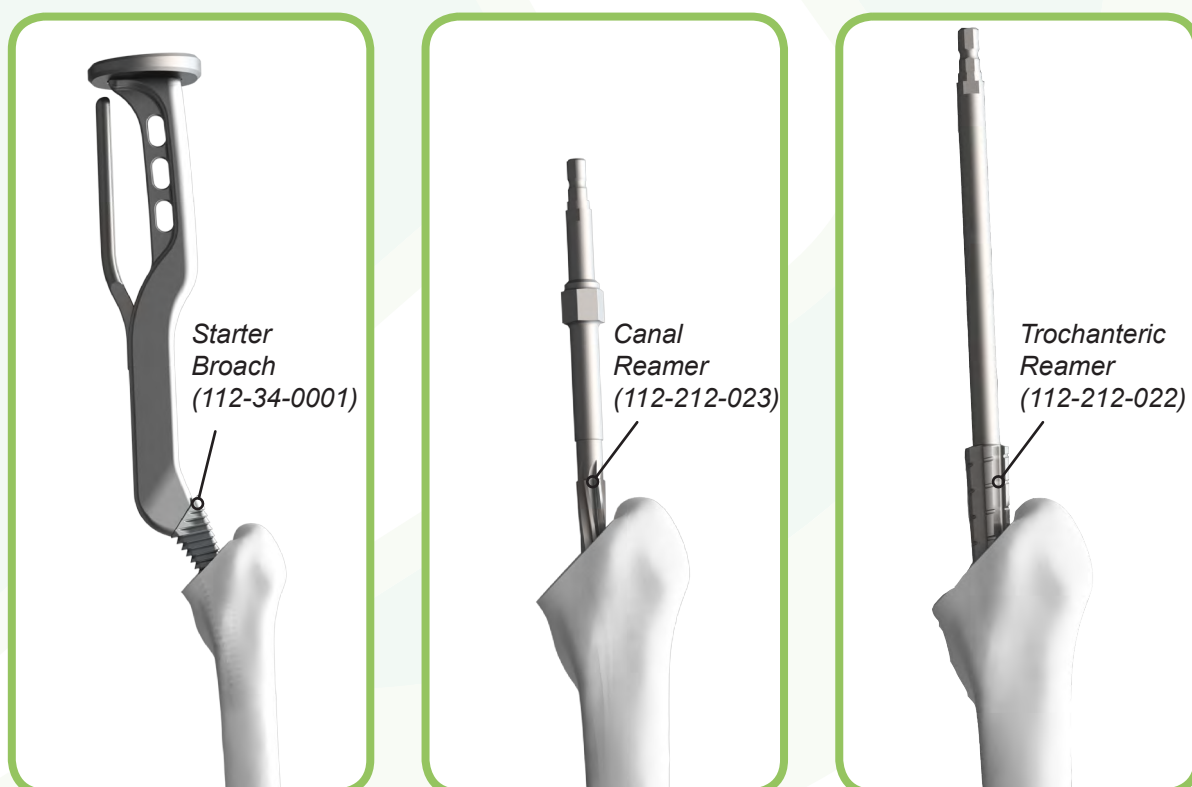
Femoral Preparation

Enter the femoral canal as laterally as possible with the Box Osteotome to initiate access to the medullary canal. The Canal Reamer may be used as needed to open the natural axis of the femoral canal for broach preparation.

**Optional technique:**

While the Aria system is intended to be a broach-only system, the Aria instrument tray contains instruments for optional use to ensure proper axial alignment along the femoral canal and to induce lateral bias where needed:

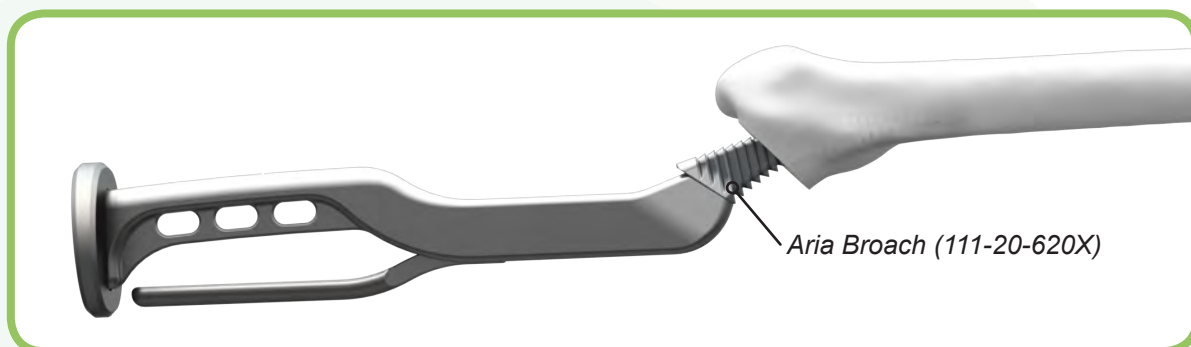
- Starter broach induces lateral bias by rasping beneath the greater trochanter
- Canal reamer creates a guide hole for the distal end of the trochanteric reamer
- Trochanteric reamer removes trochanteric bone tissue laterally to ensure neutral alignment with the femoral axis during broaching



5

Broaching

The broach should run parallel to the posterior cortex following the natural anatomy of the femur. Begin with the smallest broach and increase the size of the broach sequentially until longitudinal and rotational stability is achieved; broaching should then be stopped. Careful preoperative planning is key to help selection of the final broach size. The version will be determined by the natural version of the femur.

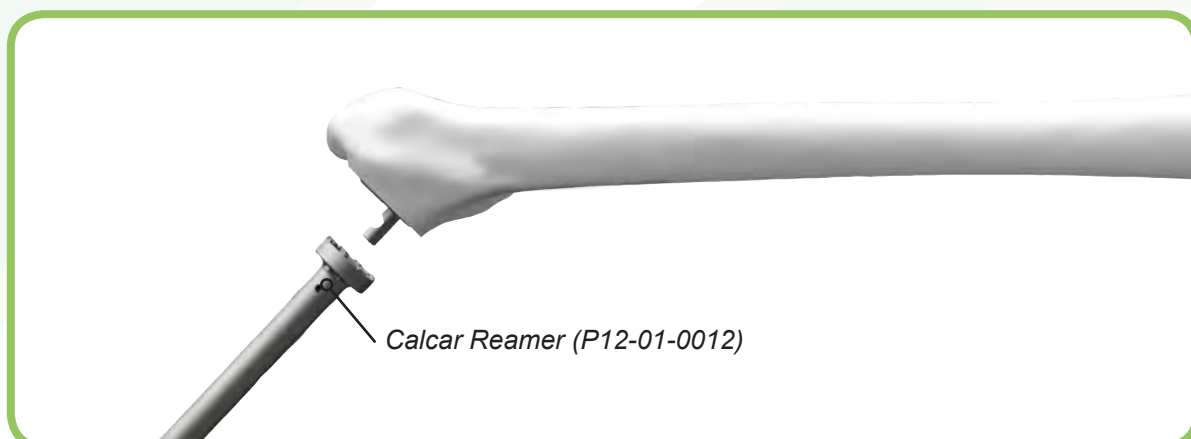
**Note:**

Refer to **Appendix: Compaction Broaching Techniques and Tips** for detail on the theory of compaction broaching, why this technique is used for Aria stems, and how to form a bed of compacted bone that will maximize the longevity and stability of Aria stems in many bone types.

6

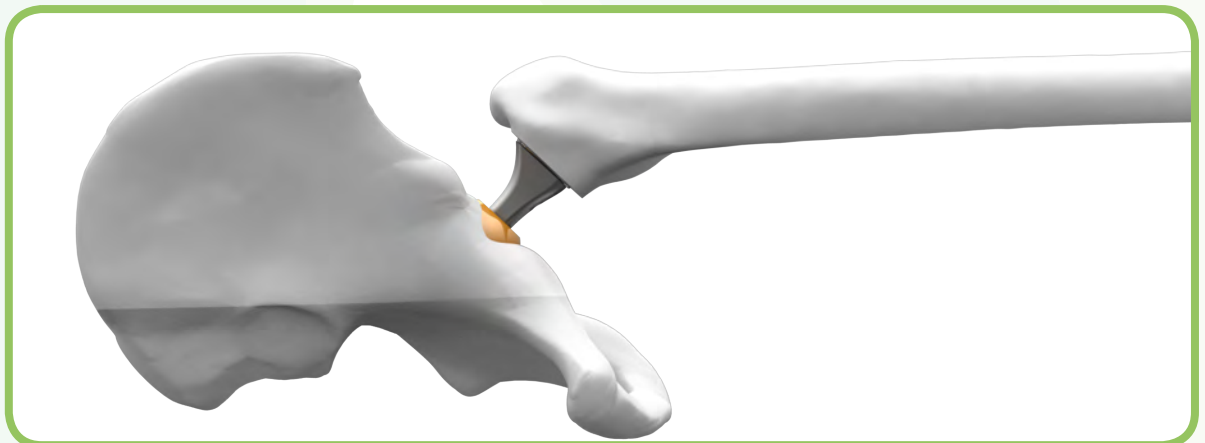
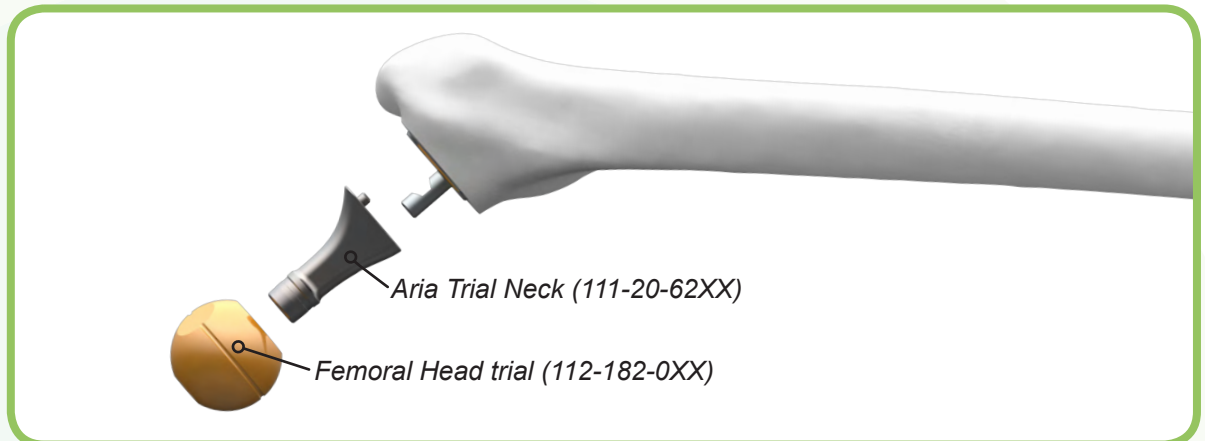
Calcar Reaming

With the broach in situ, use the Calcar Reamer to achieve a flat resection surface. Slide the reamer over the broach quick connect fitting to maintain the resection angle. Carefully advance the reamer towards the broach face and into the resected edge of the femur until it bottoms out against the broach face.



**Trial Reduction**

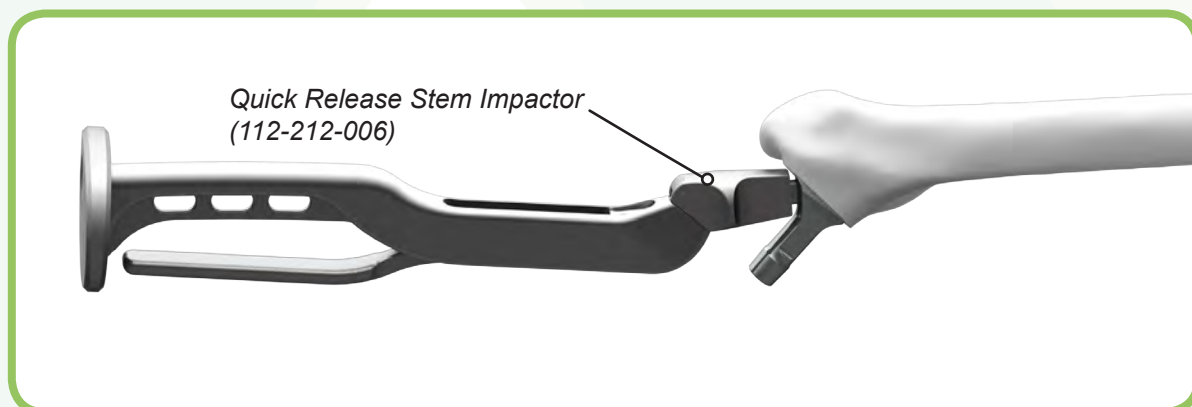
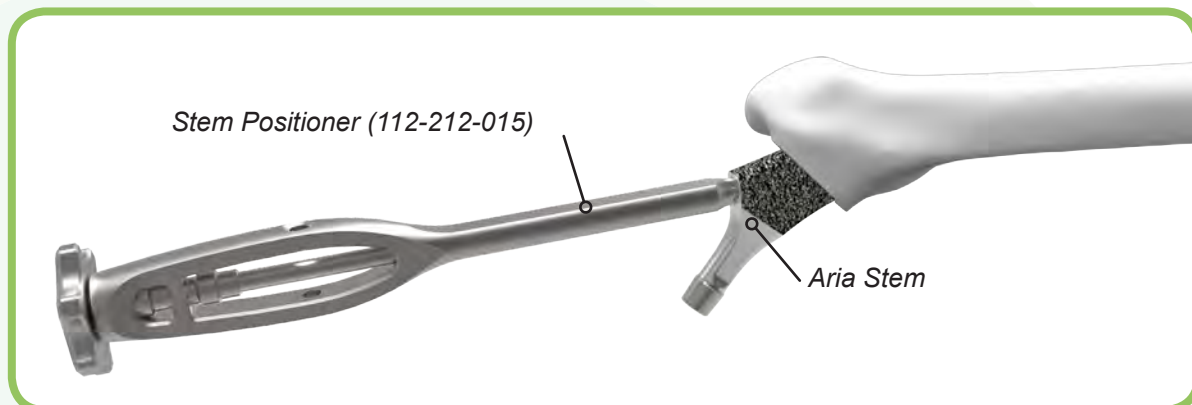
With the final broach still in situ, attach the appropriate trial neck and trial head. Reduce the hip and assess what adjustments, if any, are required to provide stability through a full range of motion. Remove the trial head, trial neck and final broach. DO NOT irrigate or dry the femoral canal. This will help to preserve the compacted cancellous bone quality and encourage biological fixation of the stem.

**Instrument identification:**

Trial heads are colour coded based on offset. Refer to Aria Implants Sizing Guide in this surgical technique for more details.

**Femoral Component Insertion**

When implanting the definitive stem (same size as final broach) in the femoral canal, ensure that it is directed in by hand. This will help avoid changing the version as a precautionary measure. There should be no more than 15-20mm between the resection line and the top of the porous coating on the stem. If the stem does not readily go down this far, the surgeon should broach again. Once the stem is placed, lightly tap the stem impactor to fully seat. DO NOT over-impact as this may lead to splitting of the femur.

**Instrument operation:**

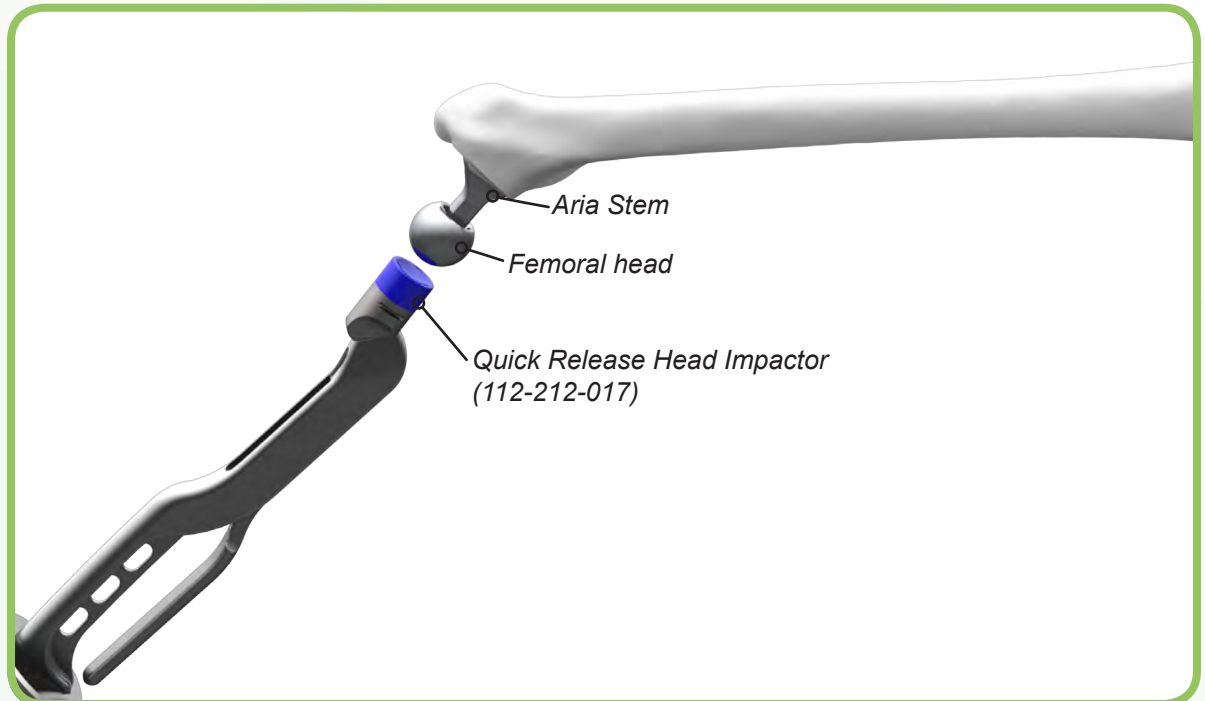
To connect the Aria stem to the stem positioner, first slide the inner shaft of the positioner through the outer shaft, spinning the strikeplate so the inner shaft threads in and falls through. Turn the threaded tip of the inner shaft into the female threads on the Aria stem until a snug hold is achieved to prevent damage to the threads.



9

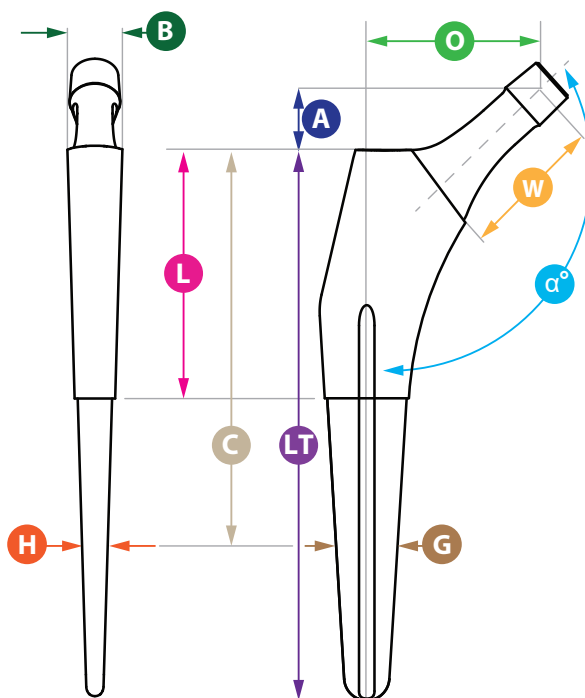
Femoral Head Impaction

A final trial reduction is carried out to confirm joint stability and range of motion. Clean and dry the stem taper to remove any particulate matter or debris. Place the femoral head onto the taper and lightly tap it using the head impactor. Ensure that bearing surfaces are clean and finally reduce the hip.



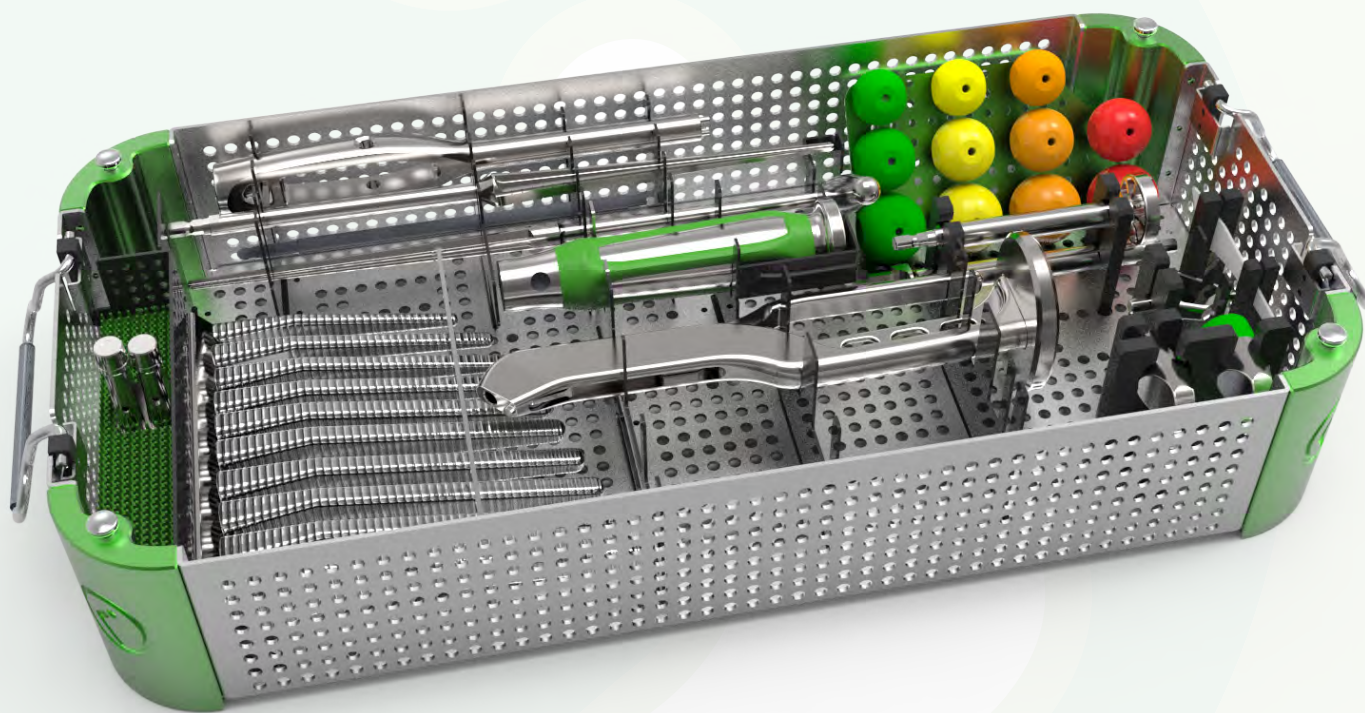
Aria Implant Sizing Guide

Cementless Hip Stems and Femoral Heads



SIZE	OFFSET	LT	L	W	O	α°	G	H	C	B	A
0	111-20-6000	128	54	35.7	35.6	132	4.9	4.4	120	11.7	11.4
	111-20-6100	128	54	40.1	41.6	132	4.9	4.4	120	11.7	11.4
1	111-20-6001	130	61	38.5	38.7	132	5.6	4.6	122	12.0	12.7
	111-20-6101	130	61	43.0	44.7	132	5.6	4.6	122	12.0	12.7
2	111-20-6002	133	63	39.4	40.1	132	6.9	4.9	124	12.4	13.4
	111-20-6102	133	63	43.8	46.1	132	6.9	4.9	124	12.4	13.4
3	111-20-6003	136	64	39.3	40.7	132	8.1	5.0	126	12.6	13.4
	111-20-6103	136	64	43.8	46.7	132	8.1	5.0	126	12.6	13.4
4	111-20-6004	138	65	40.4	42.1	132	8.9	5.0	128	12.7	14.1
	111-20-6104	138	65	44.9	48.1	132	8.9	5.0	128	12.7	14.1
5	111-20-6005	140	66	40.4	42.7	132	9.7	5.0	130	12.8	14.1
	111-20-6105	140	66	44.9	48.7	132	9.7	5.0	130	12.8	14.1
6	111-20-6006	143	67	40.4	43.3	132	10.9	5.1	132	13.0	14.1
	111-20-6106	143	67	44.9	49.3	132	10.9	5.1	132	13.0	14.1
7	111-20-6007	145	68	40.4	43.9	132	11.7	5.2	134	13.3	14.1
	111-20-6107	145	68	45.0	49.9	132	11.7	5.2	134	13.3	14.1
8	111-20-6008	148	70	43.4	46.8	132	12.9	5.2	136	13.4	16.1
	111-20-6108	148	70	47.9	52.8	132	12.9	5.2	136	13.4	16.1
9	111-20-6009	151	71	43.4	47.4	132	13.9	5.3	138	13.6	16.1
	111-20-6109	151	71	47.9	53.4	132	13.9	5.3	138	13.6	16.1
10	111-20-6010	153	72	43.4	48.0	132	14.9	5.3	140	13.6	16.1
	111-20-6110	153	72	47.9	54.0	132	14.9	5.3	140	13.6	16.1
11	111-20-6011	158	74	43.4	49.3	132	17.2	6.0	142	14.5	16.1
	111-20-6111	158	74	47.9	55.3	132	17.2	6.0	142	14.5	16.1
12	111-20-6012	163	76	43.6	50.5	132	19.0	6.3	144	14.9	16.1
	111-20-6112	163	76	48.0	56.5	132	19.0	6.3	144	14.9	16.1

		Ø28	Ø32	Ø36	Ø40	
S	CrCo	-3.5	111-152-011	111-152-021	111-152-031	111-152-041
	Ceramic	-3.5	111-152-611	111-152-621	111-152-631	111-152-641
M	CrCo	+0.0	111-152-012	111-152-022	111-152-032	111-152-042
	Ceramic	+0.0	111-152-612	111-152-622	111-152-632	111-152-642
L	CrCo	+4.0	111-152-013	111-152-023	111-152-033	111-152-043
	Ceramic	+4.0	111-152-613	111-152-623	111-152-633	111-152-643
XL	CrCo		+8.0	111-152-024	111-152-034	111-152-044
	Ceramic		+8.0	111-152-624	111-152-634	111-152-644



Aria Instruments

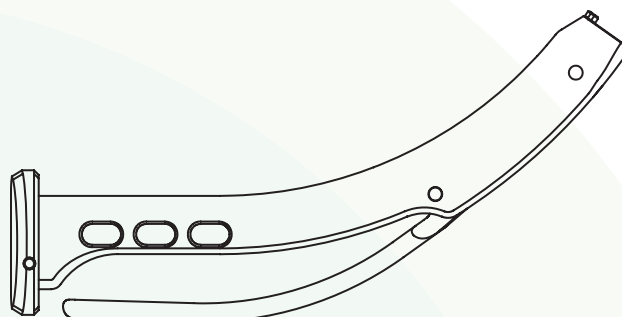
Straight Broach Handle

112-182-032



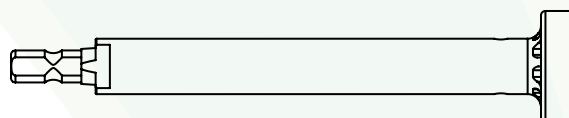
Curved Broach Handle

112-182-001



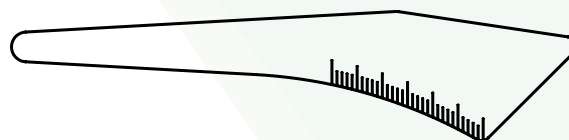
Calcar Reamer

P12-01-0012



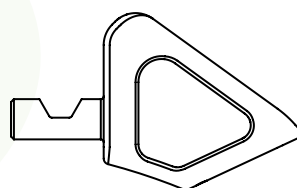
Osteotomy Guide

112-34-0002



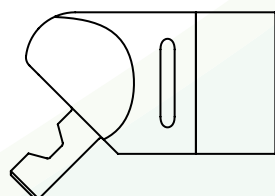
Quick Release Box Chisel

112-212-005



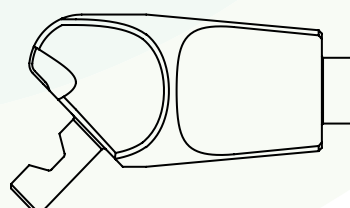
Quick Release Head Impactor

112-212-017



Quick Release Stem Impactor

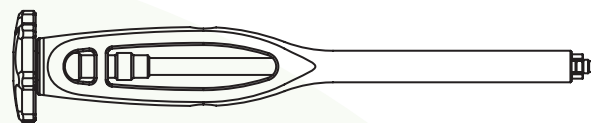
112-212-006



Aria Instruments

Stem Positioner

112-182-027 Outer
112-182-028 Inner



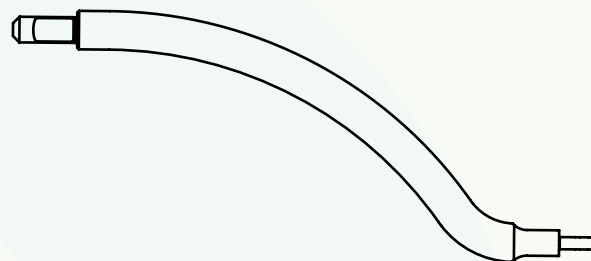
Stem Positioner UniBody

112-212-026



Modular Stem Impactor

112-25-0080 Curved
112-25-0092 Offset
112-25-0093 Bullet Tip



Canal Reamer

112-212-023



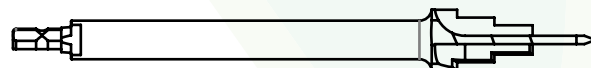
Trochanteric Canal Reamer

112-212-022



Stepped Entry Reamer

112-162-001



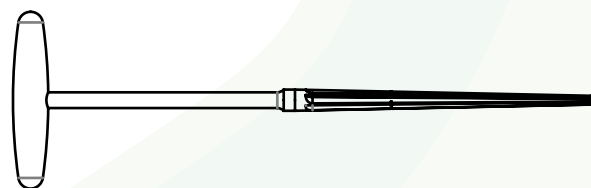
IM Drill

112-182-087



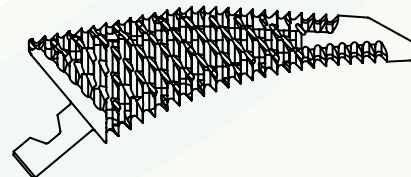
Tapered Pin Reamer

112-182-013



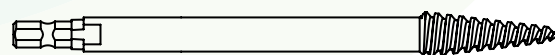
Starter Broach

112-34-0001



Femoral Head Extractor

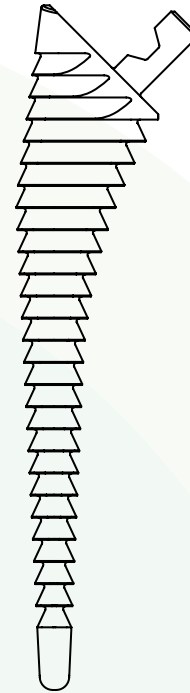
112-182-117



Aria Instruments

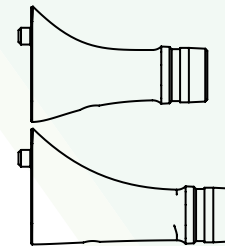
Aria Broaches

111-20-6200	Size 0
111-20-6201	Size 1
111-20-6202	Size 2
111-20-6203	Size 3
111-20-6204	Size 4
111-20-6205	Size 5
111-20-6206	Size 6
111-20-6207	Size 7
111-20-6208	Size 8
111-20-6209	Size 9
111-20-6210	Size 10
111-20-6211	Size 11
111-20-6212	Size 12



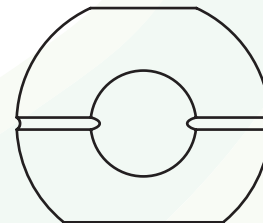
Aria Trial Necks

111-20-6250	Size 0 Standard Offset
111-20-6260	Size 0 High Offset
111-20-6251	Size 1 Standard Offset
111-20-6261	Size 1 High Offset
111-20-6252	Size 2-3 Standard Offset
111-20-6262	Size 2-3 High Offset
111-20-6253	Size 4-7 Standard Offset
111-20-6263	Size 4-7 High Offset
111-20-6254	Size 8-12 Standard Offset
111-20-6264	Size 8-12 High Offset



Trial Femoral Heads

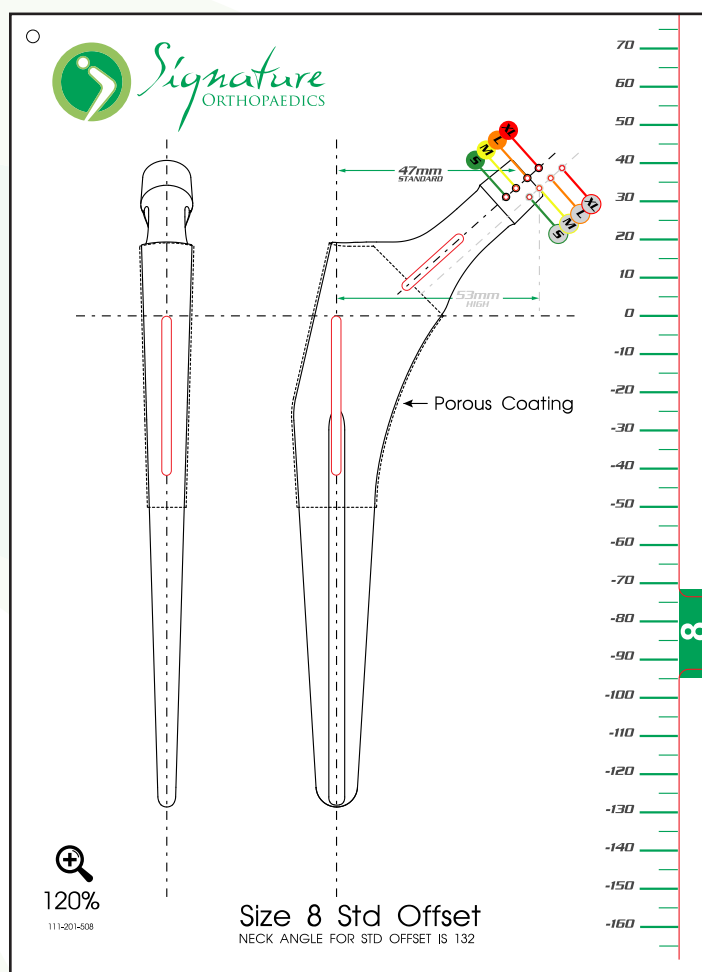
111-182-040	Ø28mm -3.5mm Green
111-182-041	Ø28mm 0.0mm Yellow
111-182-042	Ø28mm +4.0mm Orange
111-182-017	Ø32mm -3.5mm Green
111-182-018	Ø32mm 0.0mm Yellow
111-182-019	Ø32mm +4.0mm Orange
111-182-020	Ø32mm +8.0mm Red
111-182-021	Ø36mm -3.5mm Green
111-182-022	Ø36mm 0.0mm Yellow
111-182-023	Ø36mm +4.0mm Orange
111-182-024	Ø36mm +8.0mm Red
111-182-043	Ø40mm -3.5mm Green
111-182-044	Ø40mm 0.0mm Yellow
111-182-045	Ø40mm +4.0mm Orange
111-182-046	Ø40mm +8.0mm Red



Aria Instruments

Aria Preoperative Templates

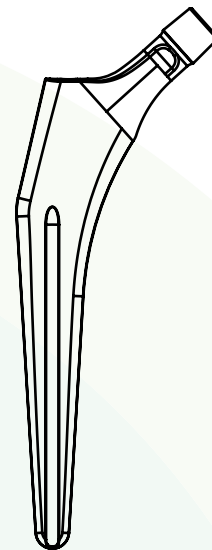
111-201-500	Size 0 Template
111-201-501	Size 1 Template
111-201-502	Size 2 Template
111-201-503	Size 3 Template
111-201-504	Size 4 Template
111-201-505	Size 5 Template
111-201-506	Size 6 Template
111-201-507	Size 7 Template
111-201-508	Size 8 Template
111-201-509	Size 9 Template
111-201-510	Size 10 Template
111-201-511	Size 11 Template
111-201-512	Size 12 Template



Aria Implants

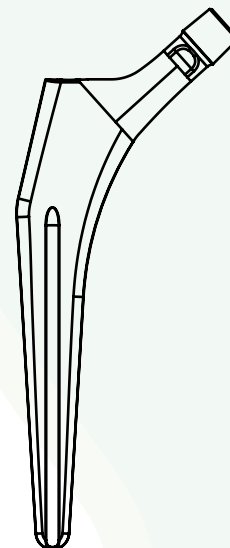
Aria Standard Offset Stem

111-20-6000	Size 0
111-20-6001	Size 1
111-20-6002	Size 2
111-20-6003	Size 3
111-20-6004	Size 4
111-20-6005	Size 5
111-20-6006	Size 6
111-20-6007	Size 7
111-20-6008	Size 8
111-20-6009	Size 9
111-20-6010	Size 10
111-20-6011	Size 11
111-20-6012	Size 12



Aria High Offset Stem

111-20-6100	Size 0
111-20-6101	Size 1
111-20-6102	Size 2
111-20-6103	Size 3
111-20-6104	Size 4
111-20-6105	Size 5
111-20-6106	Size 6
111-20-6107	Size 7
111-20-6108	Size 8
111-20-6109	Size 9
111-20-6110	Size 10
111-20-6111	Size 11
111-20-6112	Size 12

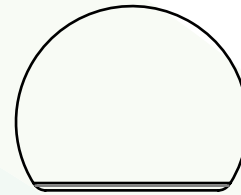


Aria Implants

Femoral Heads

111-152-011	Ø28mm -3.5mm CrCo
111-152-012	Ø28mm 0.0mm CrCo
111-152-013	Ø28mm +4.0mm CrCo
111-152-021	Ø32mm -3.5mm CrCo
111-152-022	Ø32mm 0.0mm CrCo
111-152-023	Ø32mm +4.0mm CrCo
111-152-024	Ø32mm +8.0mm CrCo
111-152-031	Ø36mm -3.5mm CrCo
111-152-032	Ø36mm 0.0mm CrCo
111-152-033	Ø36mm +4.0mm CrCo
111-152-034	Ø36mm +8.0mm CrCo
111-152-041	Ø40mm -3.5mm CrCo
111-152-042	Ø40mm 0.0mm CrCo
111-152-043	Ø40mm +4.0mm CrCo
111-152-044	Ø40mm +8.0mm CrCo

111-152-611	Ø28mm -3.5mm Ceramic
111-152-612	Ø28mm 0.0mm Ceramic
111-152-613	Ø28mm +4.0mm Ceramic
111-152-621	Ø32mm -3.5mm Ceramic
111-152-622	Ø32mm 0.0mm Ceramic
111-152-623	Ø32mm +4.0mm Ceramic
111-152-624	Ø32mm +8.0mm Ceramic
111-152-631	Ø36mm -3.5mm Ceramic
111-152-632	Ø36mm 0.0mm Ceramic
111-152-633	Ø36mm +4.0mm Ceramic
111-152-634	Ø36mm +8.0mm Ceramic
111-152-641	Ø40mm -3.5mm Ceramic
111-152-642	Ø40mm 0.0mm Ceramic
111-152-643	Ø40mm +4.0mm Ceramic
111-152-644	Ø40mm +8.0mm Ceramic





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LOGICAL



Signature
ORTHOPAEDICS

Introduction

The Signature Orthopaedics Logical Instrument system is an optimised instrument set for implantation of the Signature Orthopaedics Logical Cementless Acetabular Cup and Liner. The Logical instrument set is comprised of two trays for a streamlined and efficient instrument set.

The primary tray contains all of the common base instrument needed for every procedure. The secondary tray serves as an ancillary case that is required only for very small and large statured patients.

Indications

Signature Orthopaedics' hip replacement range are intended to replace a hip joint where bone stock is sufficient to support the implant. When a surgeon has selected prosthetic replacement as the preferred treatment, the devices are indicated for:

- Non-inflammatory degenerative joint disease including osteoarthritis or avascular necrosis
- Inflammatory joint disease including rheumatoid arthritis (excluding TSI stem)
- Correction of functional deformity including congenital hip dysplasia
- Traumatic injury involving the hip joint including traumatic arthritis or femoral head or neck fracture
- Failed previous hip surgery including internal fixation or joint fusion, reconstruction, hemiarthroplasty, surface replacement, or total replacement Signature Orthopaedics hip replacement components may be intended for cemented or cementless use. Please verify whether the particular component is intended for cemented or cementless use by checking the package label.

Signature Orthopaedics' constrained liner components are indicated particularly for patients at high risk of hip dislocation due to a history of prior dislocation, bone loss, joint or soft tissue laxity, neuromuscular disease or intraoperative instability. The Signature Orthopaedics TSI Stem is subject to the following additional indications for use:

1. Young adult high demand patients who have
 - a) a long life expectancy
 - b) a high level of activity
 - c) a demanding work profile
2. Young adult male <65 years of age (or <70 years if good bone quality and high demand with long life expectancy)
3. Femoral <60 years of age
4. Good bone stock (Dorr a or b bone), T score of femoral neck >-2.0

Contradictions

In general, prosthetic components require adequate bone support for correct fit and function. The use of prosthetic components is therefore contraindicated where any pathological condition may reduce the quantity and or strength of the bone which is supporting the prosthesis. Some contraindications are relative to the extent and severity of conditions and the benefits of prosthetic arthroplasty should be considered based on the patient's overall evaluation and the possibility of alternative treatment. Examples of such conditions include; osteoporosis, osteomalacia, osteogenesis imperfecta, or hypophosphatemia.

Other contraindications include:

- Conditions limiting blood supply to the bone or joint.
- Systemic or local infection.
- Previous high dose radiotherapy.
- Psychological or neurological conditions which would restrict the patient's ability or compliance in restricting physical activity.
- Skeletal immaturity
- Conditions or activity which may place excessive load on the components such as; obesity, muscle, tendon & ligament deficiencies, multiple joint disabilities, and Charcot joints.
- Signature Orthopaedics' constrained liners are contraindicated particularly for active patients.
- Signature Orthopaedics' TSI stem is contraindicated for patients with rheumatoid arthritis, where bone stock may not be sufficient to support the device.

Logical Acetabular Cup and Liner Features

Ceramic Liner

- Clinically proven geometry and material (BIOLOX® delta)
- Excellent biological behaviour
- Significantly low taper corrosion
- No metal ion release

Polymer Liner

- Clinically proven geometry, material (UHMWPE)
- Base resin: GUR1020
- Stock Forming: Compression molded
- Cross Linking: Gamma irradiation at 7.5 MRads
- Thermal Stabilisation: Remelting
- Sterilisation: ETO
- Available in both neutral and 10° hooded variations

Acetabular Cup

- Clinically proven geometry, material and porous coating (Ti6Al4V)
- Available in 3-Hole, multi-hole and no hole options.

Sintered Titanium Coating

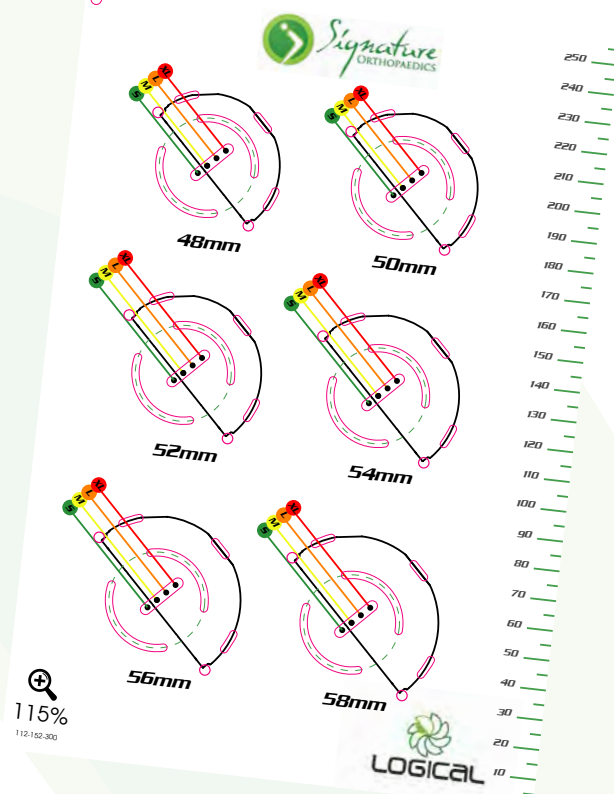
- Tensile Strength > 35MPa
- Shear Strength > 25MPa
- Porosity 45-65% and pore size 100-300 microns.



1

Pre-Operative Planning

Preoperative assessment of the appropriate size position of the acetabular component will provide intraoperative guidance for acetabular reaming. To determine the acetabular cup size and position, hold the template at approximately 45° of abduction and place the center of rotation over the anatomic center of the acetabular image. Final component size and position should be determined intraoperatively. Templates are 115% magnification.

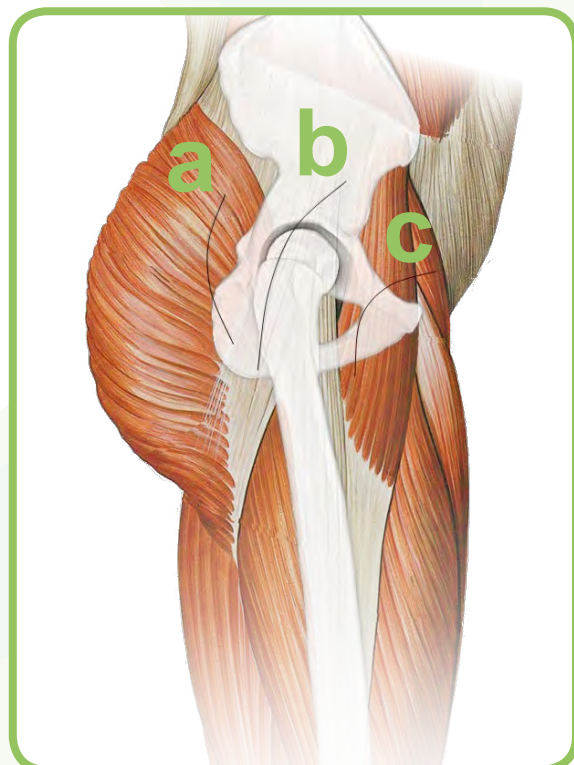


2

Pre-Operative Planning

The Logical cup can be used with any surgical approach that the surgeon selects.

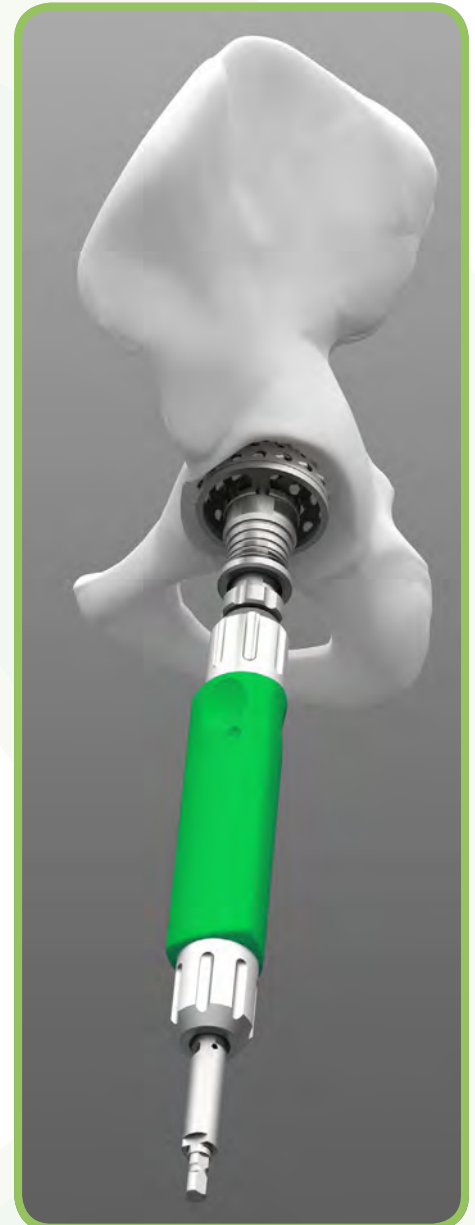
- Posterior approach
- Posterolateral/anterolateral approach
- Anterior approach





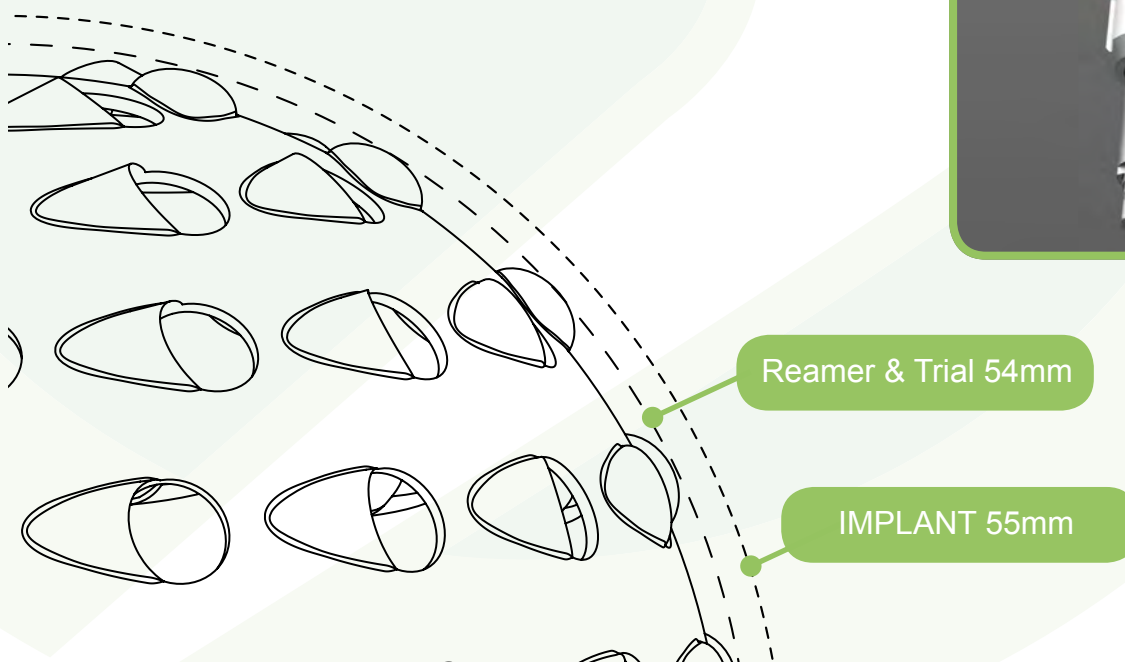
Acetabular Preparation

Osteophytes should be removed to gain assessment of the true acetabular rim. Reaming should be sequential and start with the smallest reamer that conforms to the acetabular cavity. Reaming to the circumferential line on the reamer will mimic a full hemisphere. Gradually enlarge the acetabulum by reaming articular cartilage until a continuous surface of cancellous bone is exposed.



Note:

A 54mm reamer will ream a hemispherical cavity 54mm in diameter, and a 54mm trial cup is Ø54mm.
A 54mm Logical cup is 54mm + 1mm of porous coating.
This coating thickness of 1mm will give a press fit.



4

Acetabular Preparation

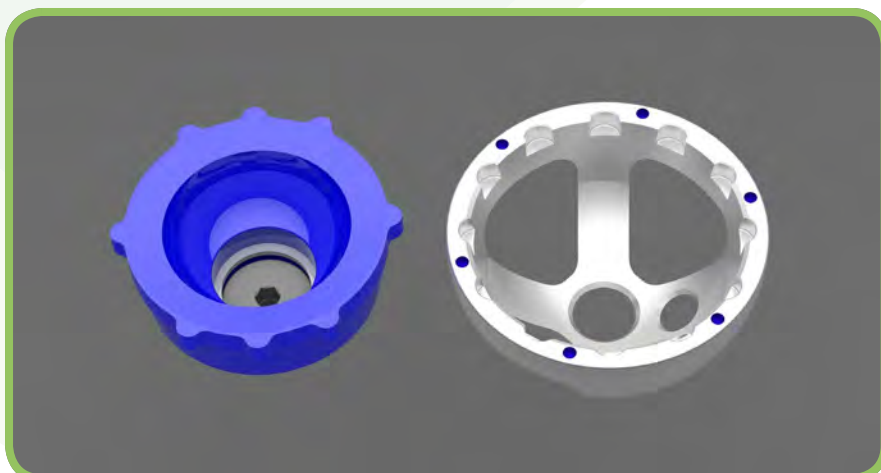
Osteophytes should be removed to gain assessment of the true acetabular rim. Reaming should be sequential and start with the smallest reamer that conforms to the acetabular cavity. Reaming to the circumferential line on the reamer will mimic a full hemisphere. Gradually enlarge the acetabulum by reaming articular cartilage until a continuous surface of cancellous bone is exposed.

**Trial Acetabular Cups**

112-152-191	44mm
112-152-192	46mm
112-152-193	48mm
112-152-194	50mm
112-152-195	52mm
112-152-196	54mm
112-152-197	56mm
112-152-198	58mm
112-152-199	60mm
112-152-200	62mm
112-152-201	64mm
112-152-202	66mm
112-152-203	68mm

Instrument Identification:

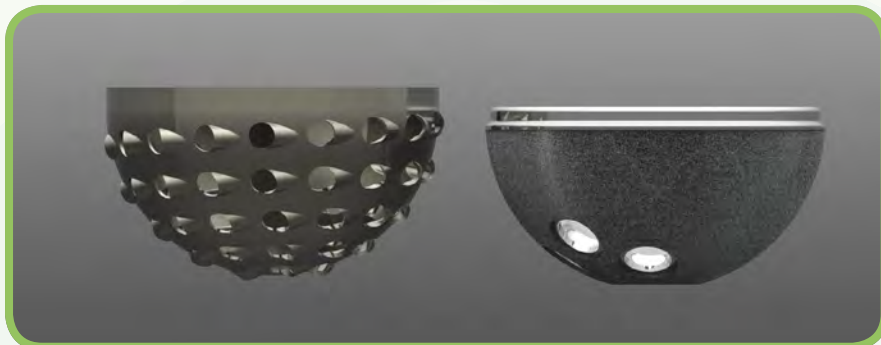
Trial acetabular cups are identified by the size marked on the top rim. They are also colour-coded to match with compatible trial liners. Look for the coloured dot on the top rim. Each trial cup size corresponds to a Logical cup implant size. Refer to the Logical Implants Sizing Chart in this technique for more details.



5

Implant Acetabular Cup Insertion

Thread the appropriate size prosthetic cup onto the impactor (same size as the final reamer). The cup rotation can be adjusted with regards to the impactor by pressing the button and rotating the strikplate, in increments of 15°. The alignment guide can be attached to the impactor to help with anteversion and abduction angles. Seat the cup with a series of firm mallet blows to the end of the impactor. Screw placement can begin once the cup component is securely positioned and the impactor is removed.



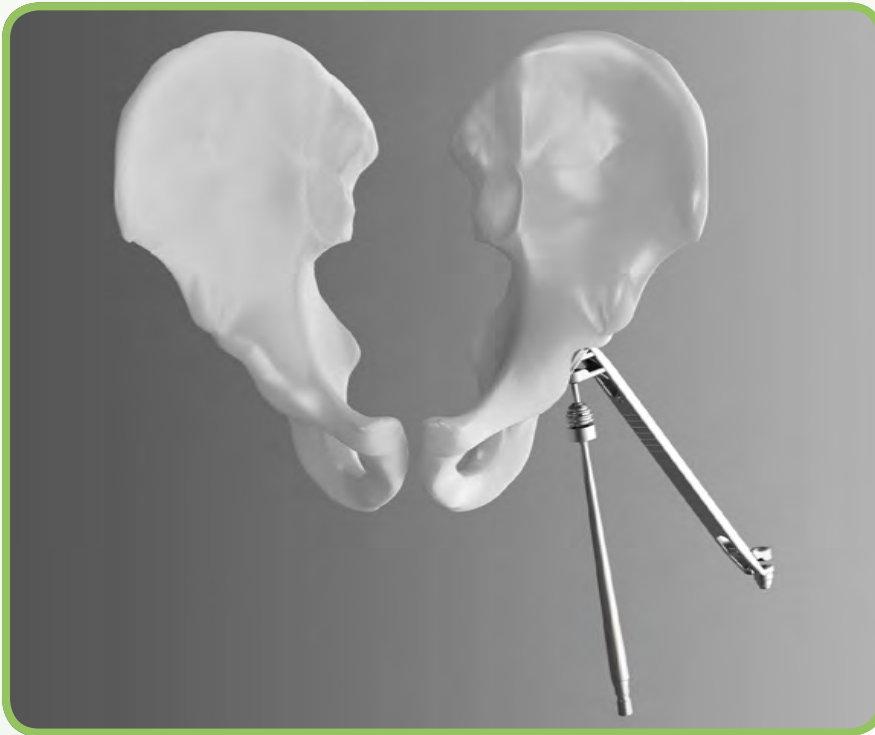
Note:

The alignment guide indicates 30° of operative anteversion, which equates to 20° of radiographic anteversion. Operative anteversion differs from radiographic anteversion due to the projection of angles on a radiograph.

6

Determine Screw Location and Drill Depth

Determine screw location and select a suitable drill depth (see figure below). The flexible drill allows a wide range of drilling angles while still being able to apply pressure to the drill.



Instrument operation:

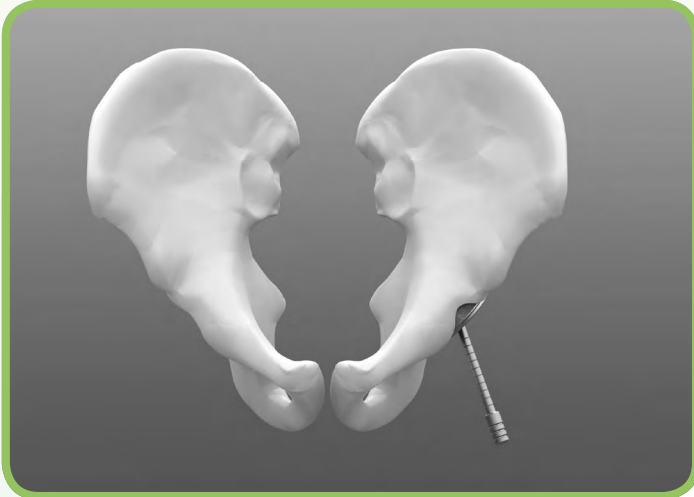
The drill guide has flip-down depth stops at each end. One in 10mm steps, which allows a 50mm drill to drill a hole at 40, 30 and 20mm deep. While the other end in steps of 5mm, which allows holes to be drilled at 25 and 35mm.





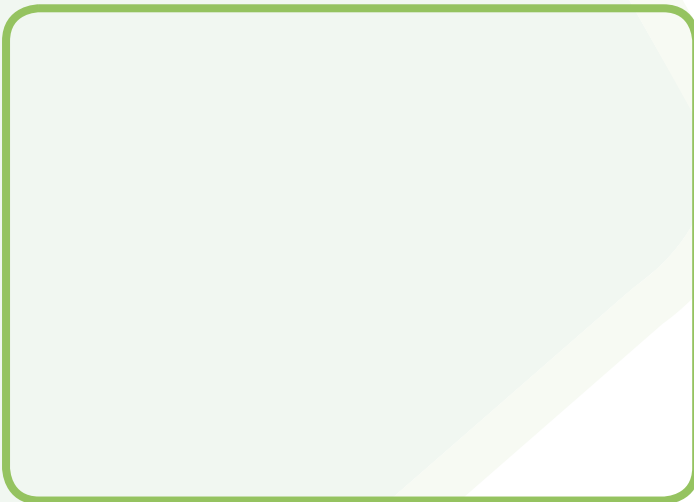
Determine Screw Length

Use the screw depth gauge to determine the appropriate length screw. Due to intrapelvic vascularity, screw placement in the medial aspect of the acetabulum must be carefully considered.



Insert Screws

Screws snap into the screw inserter, allowing them to rotate freely without falling out at any angle. Pull inserter off screw to allow for countersinking of the screw head. Full seating can be confirmed with the use of a trial liner prior to impacting the prosthetic liner, or by manually examining the inner surface. To ensure proper prosthetic liner seating in the cup, screw heads must be seated below the inner surface of the cup.



Instrument operation:

The drill guide has flip-down depth stops at each end. One in 10mm steps, which allows a 50mm drill to drill a hole at 40, 30 and 20mm deep. While the other end in steps of 5mm, which allows holes to be drilled at 25 and 35mm.

9

Trial Liner Evaluation

Trial liners that match the prosthetic implant are available to evaluate the optimum position of the final implant. Position the trial liner in the desired orientation and secure it in place with the captured screw using one of the 3.5mm hex screwdriver shafts. Apical Screw insertion should not take place until a reduction with the trial liner is completed.

Neutral	10° Hooded	Head Ø(mm)	Cup Ø(mm)
112-152-156	112-152-061	28	44-46
112-152-157	112-152-062	28	48-50
112-152-158	112-152-063	28	52-54
112-152-159	112-152-064	32	48-50
112-152-160	112-152-065	32	52-54
112-152-161	112-152-066	32	56-58
112-152-162	112-152-067	32	60-68
112-152-163	112-152-068	36	52-54
112-152-164	112-152-069	36	56-58
112-152-165	112-152-070	36	60-68
112-152-166	112-152-142	40	56-58
112-152-167	112-152-143	40	60-68



10

Liner Placement

Prior to inserting the prosthetic liner, thoroughly irrigate and clean the cup. Insert the prosthetic liner by hand (or using the ceramic liner inserter if ceramic is chosen), making sure the face of the liner is parallel with the face of the acetabular cup. The anti-rotation tabs should be lined up with the slots in the cup. Use the liner impactor on the cup impactor to apply a series of firm mallet blows to fully seat the liner.

A final inspection of the liner should be done to ensure the liner is firmly locked in place. Neutral and ceramic liners should be flush with the cup face along the entire rim. Only the lower half of the rim of lipped liners should be flushed with the cup face.

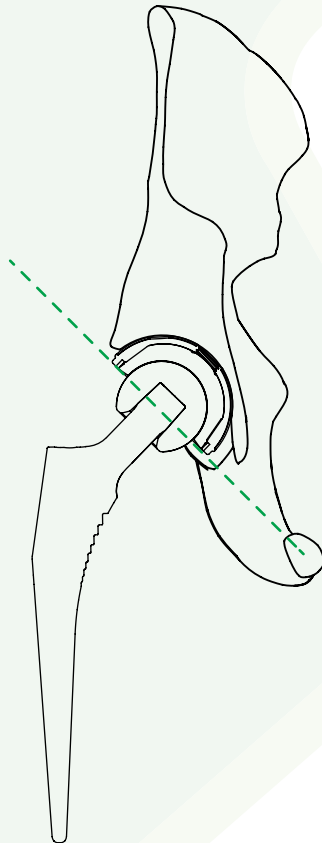


**Positioning**

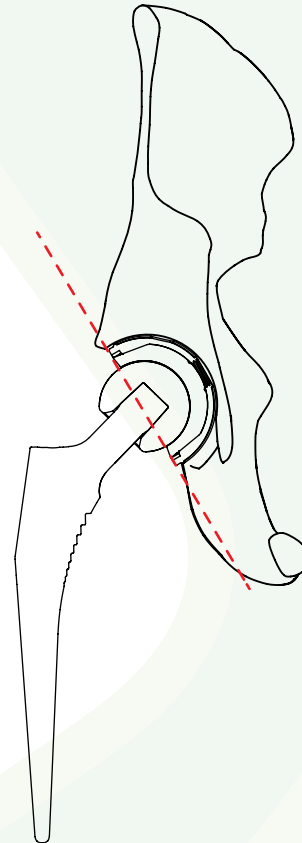
Current studies have highlighted that correct acetabular component positioning is a key element to success with all types of bearings used in hip replacement surgery. As well as subluxation, impingement, fixation and range of motion, optimum femoral head coverage and mechanical loading of the bearing must also be considered when positioning the acetabular component. Incorrect acetabular component positioning can lead to edge loading and undesirable effects across all bearings, such as dislocation, increased wear, and polyethylene fractures.

CORRECT

Inclination 40-45°
Anteversion 15-20°

**INCORRECT**

Inclination >45°
Anteversion >20°



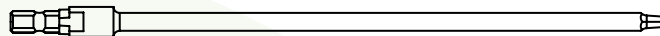
Logical Instrument Trays



Logical Instruments

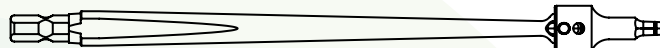
Hi Torque Screwdriver 3.5mm Hex

112-152-336



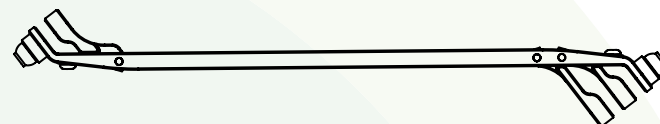
Flexible Screwdriver

112-152-026



Drill Guide

112-152-017



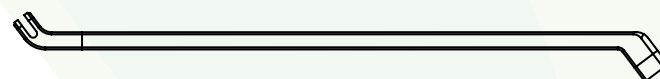
Depth Gauge

112-152-032



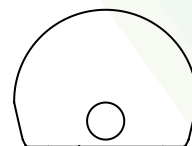
Screw Inserter

112-152-038



Liner Impactors

112-152-002 - 28mm
112-152-334 - 32mm
112-152-121 - 36mm
112-152-003 - 40mm



Flexible Drill Shaft

192-072-001 (Quick connect drill bits 192-072-002)



Reamer Shaft Assembly

112-152-018 (Large Reamer Grip 112-152-316, Slim grip 112-152-022)



Logical Instruments

Straight Cup Inserter

112-152-085



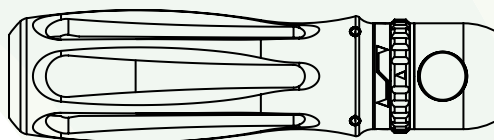
Alignment Guide (Two parts in tray)

112-152-322



Ratcheting Screwdriver

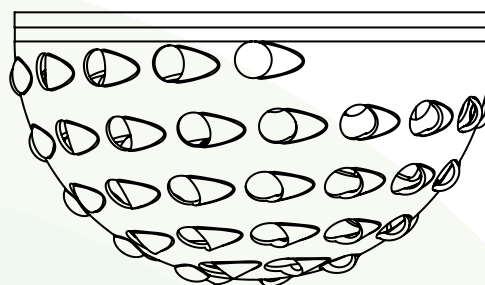
192-062-001



Logical Instruments

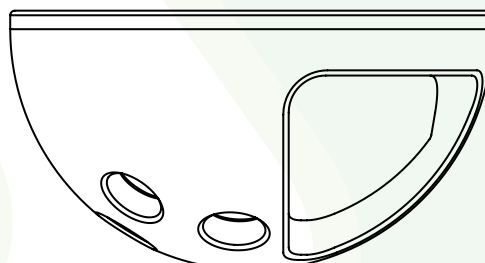
Acetabular Reamers

112-152-244	44mm
112-152-245	45mm
112-152-246	46mm
112-152-247	47mm
112-152-248	48mm
112-152-249	49mm
112-152-250	50mm
112-152-251	51mm
112-152-252	52mm
112-152-253	53mm
112-152-254	54mm
112-152-255	55mm
112-152-256	56mm
112-152-257	57mm
112-152-258	58mm
112-152-259	59mm
112-152-260	60mm
112-152-261	61mm
112-152-262	62mm
112-152-263	63mm
112-152-264	64mm
112-152-265	65mm
112-152-266	66mm
112-152-267	67mm
112-152-268	68mm



Trial Acetabular Cups

112-152-191	44mm
112-152-192	46mm
112-152-193	48mm
112-152-194	50mm
112-152-195	52mm
112-152-196	54mm
112-152-197	56mm
112-152-198	58mm
112-152-199	60mm
112-152-200	62mm
112-152-201	64mm
112-152-202	66mm
112-152-203	68mm

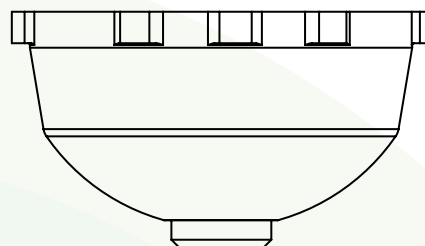


Logical Instruments

Logical Trial Liner Neutral

112-152-156	28/44-46mm
112-152-157	28/48-50mm
112-152-158	28/52-54mm
112-152-159	32/48-50mm
112-152-160	32/52-54mm
112-152-161	32/56-58mm
112-152-162	32/60-68mm
112-152-163	36/52-54mm
112-152-164	36/56-58mm
112-152-165	36/60-68mm
112-152-166	40/56-58mm
112-152-167	40/60-68mm

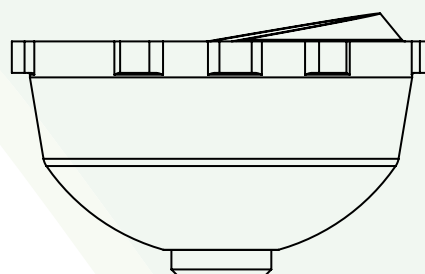
A
B
C
B
C
D
E
C
D
E
D
E



Logical Trial Liner 10° Hooded

112-152-061	28/44-46mm
112-152-062	28/48-50mm
112-152-063	28/52-54mm
112-152-064	32/48-50mm
112-152-065	32/52-54mm
112-152-066	32/56-58mm
112-152-067	32/60-68mm
112-152-068	36/52-54mm
112-152-069	36/56-58mm
112-152-070	36/60-68mm
112-152-142	40/56-58mm
112-152-143	40/60-68mm

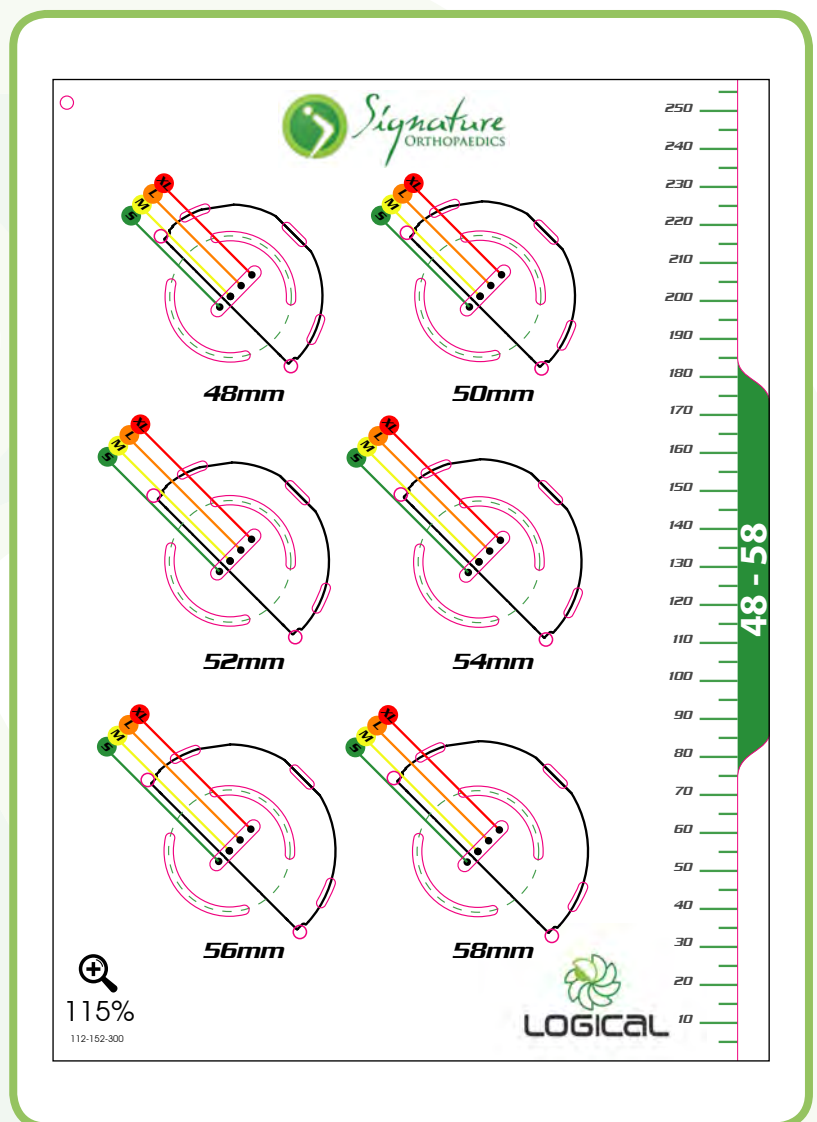
A
B
C
B
C
D
E
C
D
E
D
E



Logical Preoperative Templates

Logical Templates

112-152-304	38-46mm
112-152-300	48-58mm
112-152-301	60-68mm



Logical Implants

Logical G Series Acetabular Cups, 3 Hole

111-12-3344	44mm
111-12-3346	46mm
111-12-3348	48mm
111-12-3350	50mm
111-12-3352	52mm
111-12-3354	54mm
111-12-3356	56mm
111-12-3358	58mm
111-12-3360	60mm
111-12-3362	62mm
111-12-3364	64mm
111-12-3366	66mm
111-12-3368	68mm

Logical UHMWPE Liner Neutral

111-12-5844	28/44-46mm
111-12-5850	28/48-50mm
111-12-5852	28/52-54mm
111-12-5250	32/48-50mm
111-12-5252	32/52-54mm
111-12-5256	32/56-58mm
111-12-5260	32/60-68mm
111-12-5652	36/52-54mm
111-12-5656	36/56-58mm
111-12-5660	36/60-68mm
111-12-5456	40/56-58mm
111-12-5460	40/60-68mm

A
B
C
B
C
D
E
C
D
E
D
E

Logical UHMWPE Liner 10° Hooded

111-12-6844	28/44-46mm
111-12-6850	28/48-50mm
111-12-6852	28/52-54mm
111-12-6250	32/48-50mm
111-12-6252	32/52-54mm
111-12-6256	32/56-58mm
111-12-6260	32/60-68mm
111-12-6652	36/52-54mm
111-12-6656	36/56-58mm
111-12-6660	36/60-68mm
111-12-6456	40/56-58mm
111-12-6460	40/60-68mm

A
B
C
B
C
D
E
C
D
E
D
E

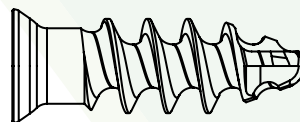
Logical Instruments

Logical Ceramic Liner Neutral

111-12-1002	28/44-46mm	A
111-12-1003	28/48-50mm	B
111-12-1004	28/52-54mm	C
111-12-1005	32/48-50mm	B
111-12-1006	32/52-54mm	C
111-12-1007	32/56-58mm	D
111-12-1008	32/60-68mm	E
111-12-1009	36/52-54mm	C
111-12-1010	36/56-58mm	D
111-12-1011	36/60-68mm	E
111-12-1012	40/56-58mm	D
111-12-1013	40/60-68mm	E

Acetabular Fixation Screws, Ø6.5mm

111-12-9120	20mm
111-12-9125	25mm
111-12-9130	30mm
111-12-9135	35mm
111-12-9140	40mm
111-12-9145	45mm
111-12-9150	50mm
111-12-9155	55mm
111-12-9160	60mm
111-12-9165	65mm
111-12-9170	70mm



Apical Screw

111-122-031



Manufactured By:
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NSW, Australia

