LOGICAL

Signature
ORTHOPAEDICS

# Table of Contents

# 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 s*treamlined* and efficient instrument set.

The primary tray contains all of the common base instruments 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 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.

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.

## Contrinadications

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.

# Logical Acetabular Cup and Liner Features

## Ceramic Liner (not available in the U.S.A)

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

## Polymer Liner

- 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 neutral, 10° hooded, 20º Hooded constrained and +4mm lateralised variations

## Acetabular Cup

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

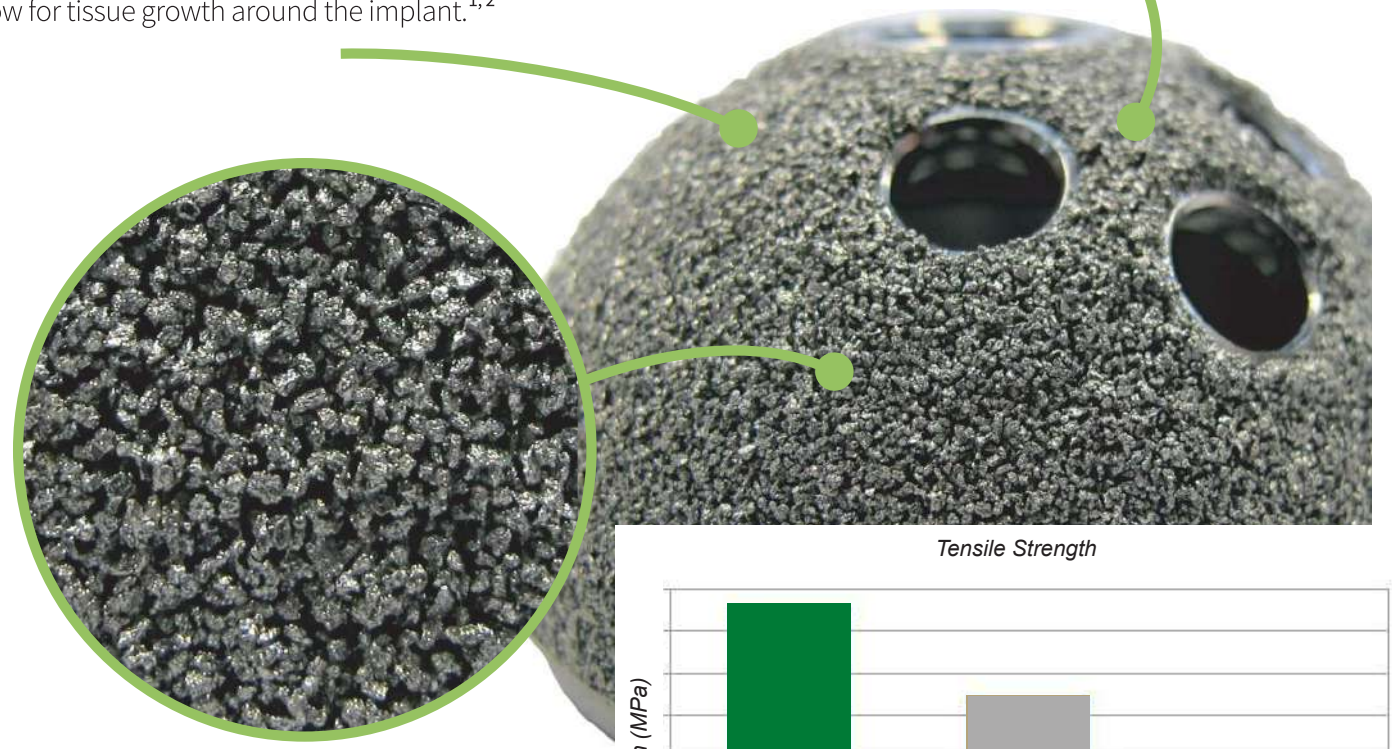
## Sintered Titanium Coating (G-Series)

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

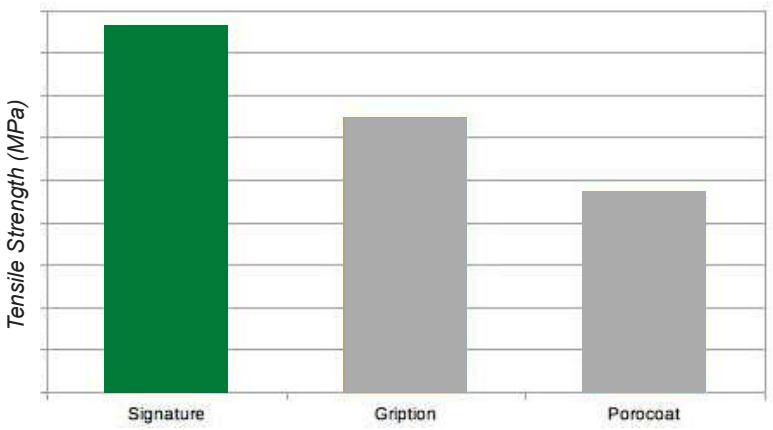
# Logical G-Series Coating

**1.3x** stronger tensile strength than Gription coating

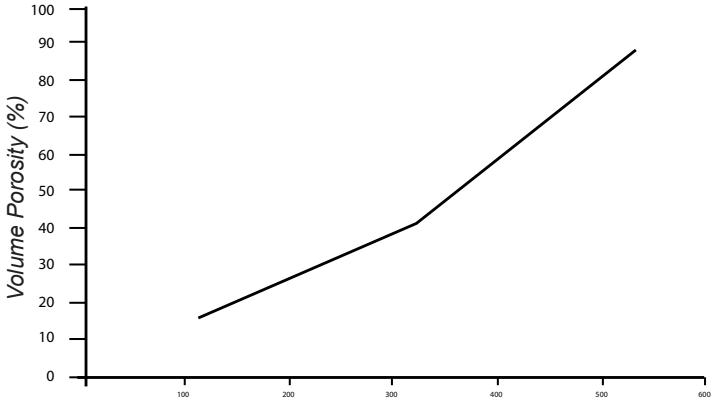
**The Logical G-Series** Coating has an average pore size of 100-330µm which is considered in literature to be within the optimal pore range of 40 to 500µm to allow for tissue growth around the implant.[1,2]



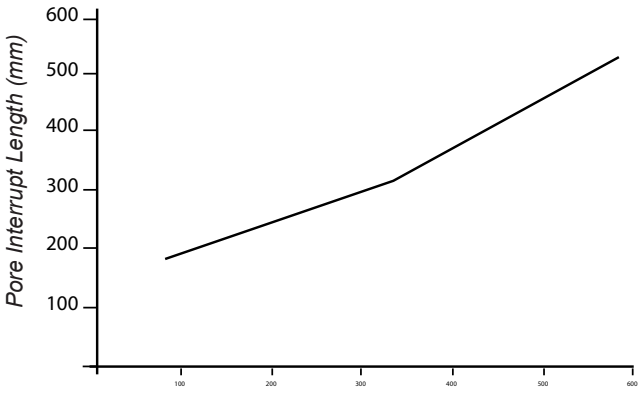
*Tensile Strength*




*Gradient Porosity*




*Gradient Pore Size*



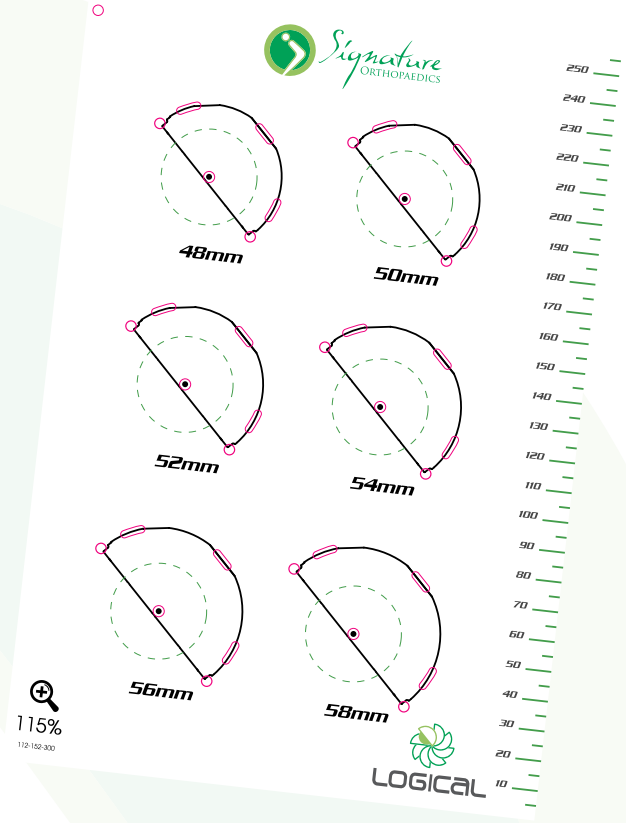

*1 - S. C. P. Cachinho and R. N. Correia, "Titanium scaffolds for osteointegration: mechanical, in vitro and corrosion behaviour," J. Mater. Sci. Mater. Med., vol. 19, no. 1, pp. 451–457, 2008*
*2 - J. D. Bobyn, R. M. Pilliar, H. U. Cameron, and G. C. Weatherly, "The optimum pore size for the fixation of porous-surfaced metal implants by the ingrowth of bone.," Clin. Orthop. Relat. Res., no. 150, pp. 263–270, 1980.*

Signature Orthopaedics

1

## Preoperative Planning

Preoperative assessment of the appropriate size and 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.

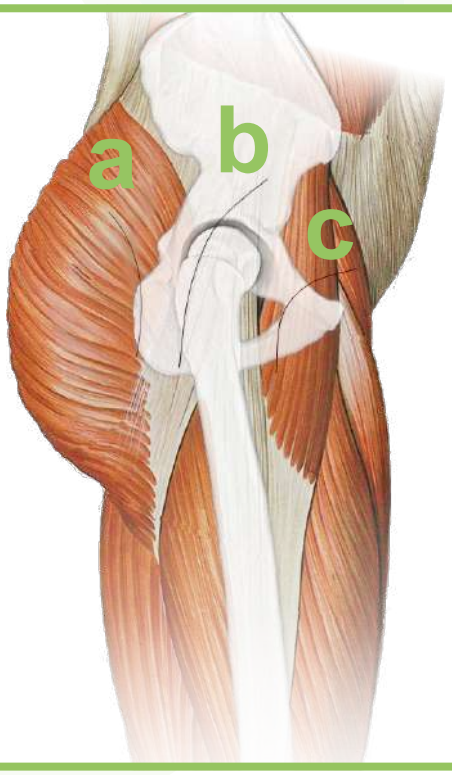



2

## Preoperative Planning

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

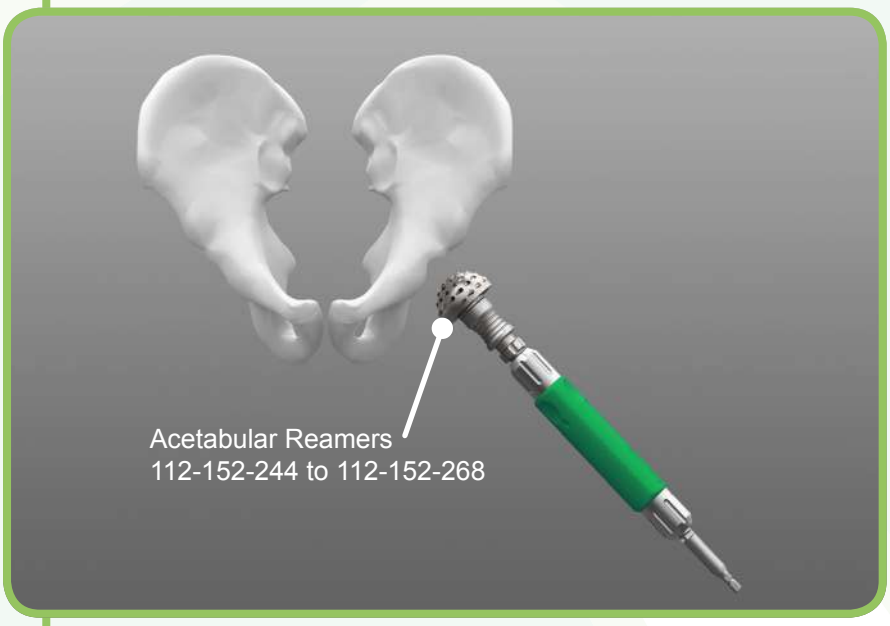
a. Posterior approach
b. Posterolateral/anterolateral approach
c. Anterior approach



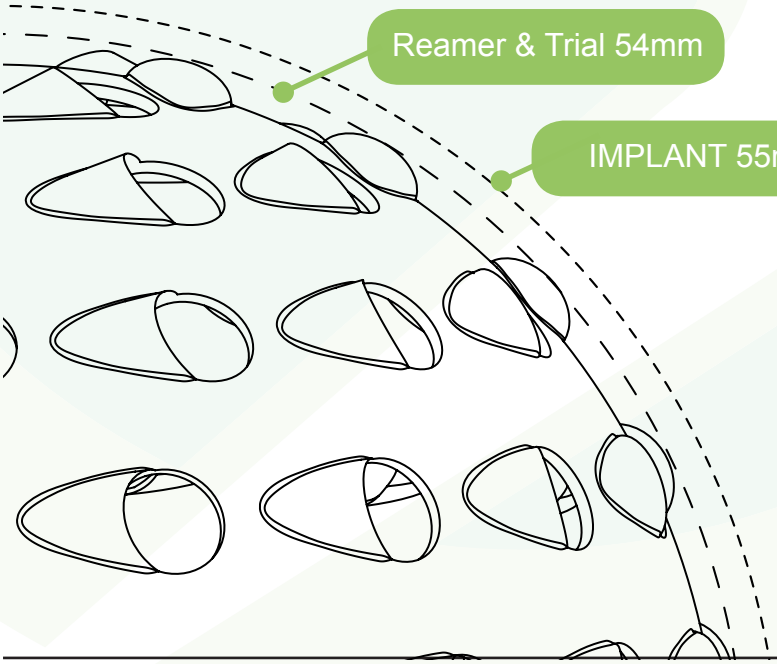
3

## 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.




Reamer Handles available in both large (112-152-018) and slim versions (112-152-342)

4

## Acetabular Trialling and Positioning

Trial cups are available to evaluate the size and optimum position of the final implant. Screw the trial cup onto the end of the cup inserter and position the trial cup in the desired orientation by manoeuvring the cup impactor.


**Trial Acetabular Cups**

| Part Number | Diameter |
|---|---|
| 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 |
| 112-152-206 | 70mm |

### 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. Each trial cup size corresponds to a Logical cup implant size. Refer to the Logical Implants Sizing Chart in this technique for more details (pg13).

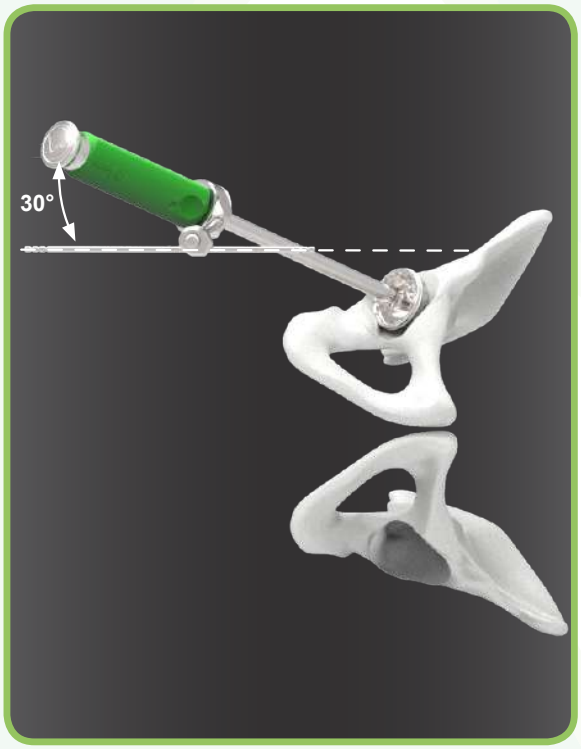
### Example below:

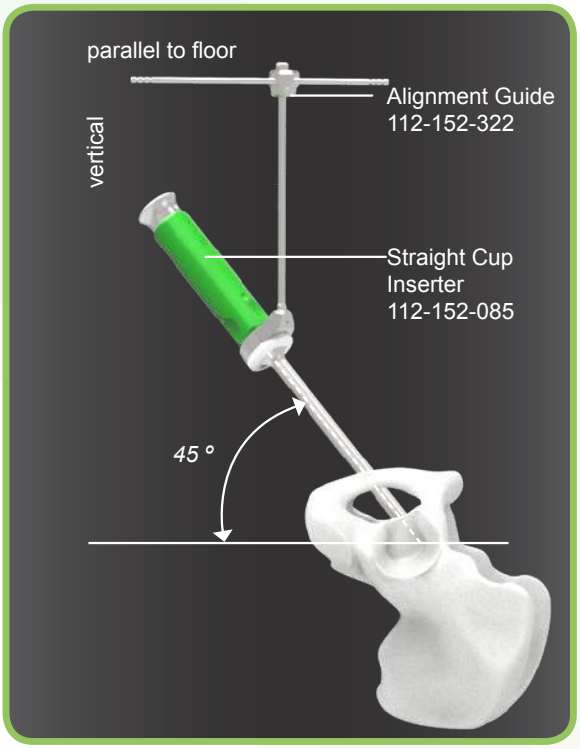
Connection type B shown, the blue trial liner matches the blue trial shell, which matches the blue colouring on the box label and the hole covers on the implant.

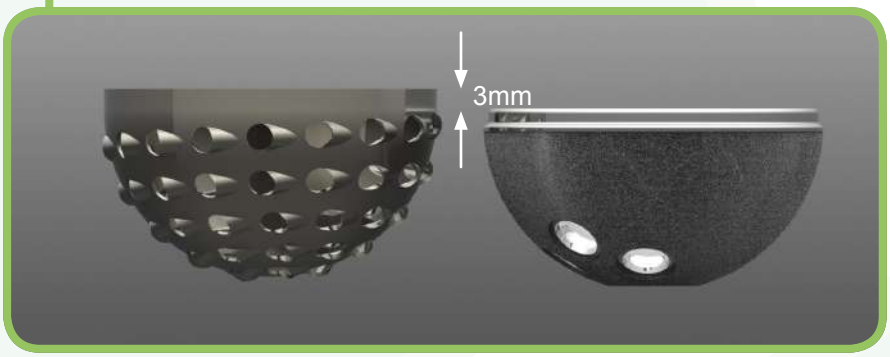
5

## 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 strikeplate, 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.

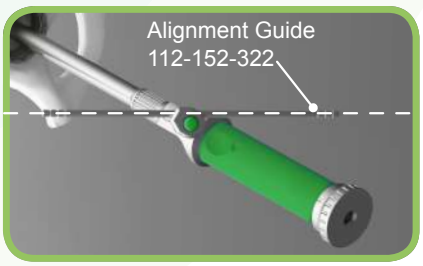



**Optional:**
A curved cup inserter option is also available, please inquire for additional instructions for use.

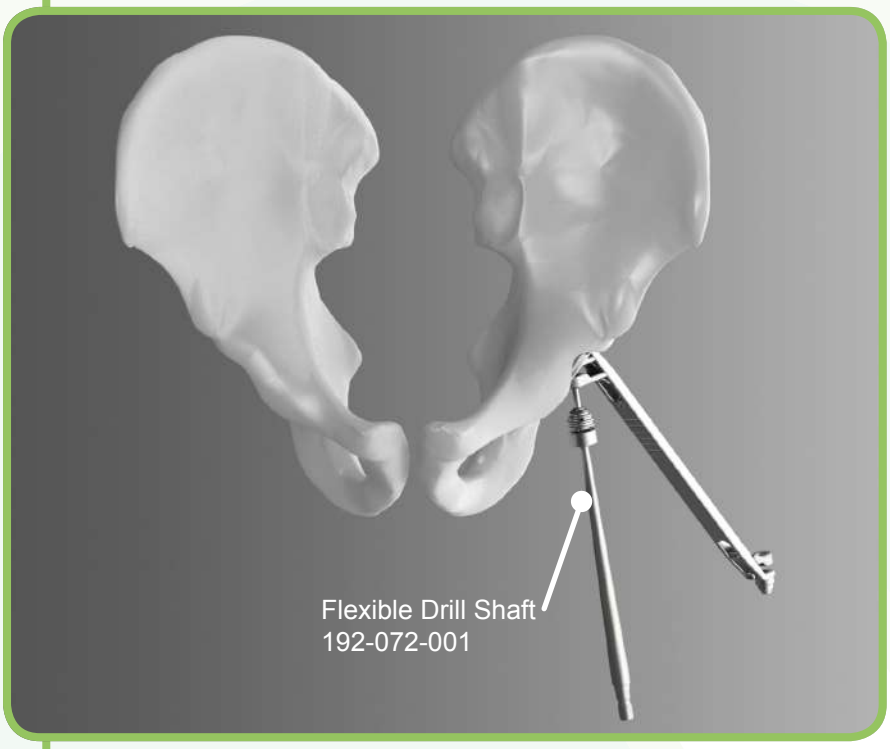
**Note:**
The alignment guide indicates 30° of operative anteversion, which equates to 20° of radiographic anteversion. Operative anteversion differs from radiographic anteversion due to the projection of angles on a radiograph.

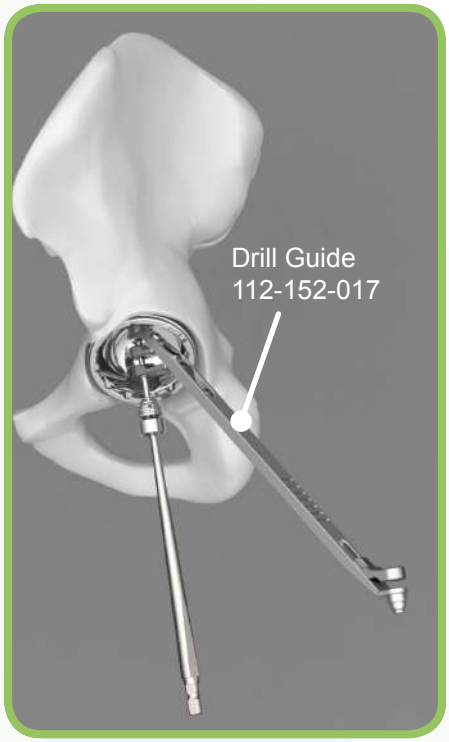


6

## Determine Screw Location and Drill Depth

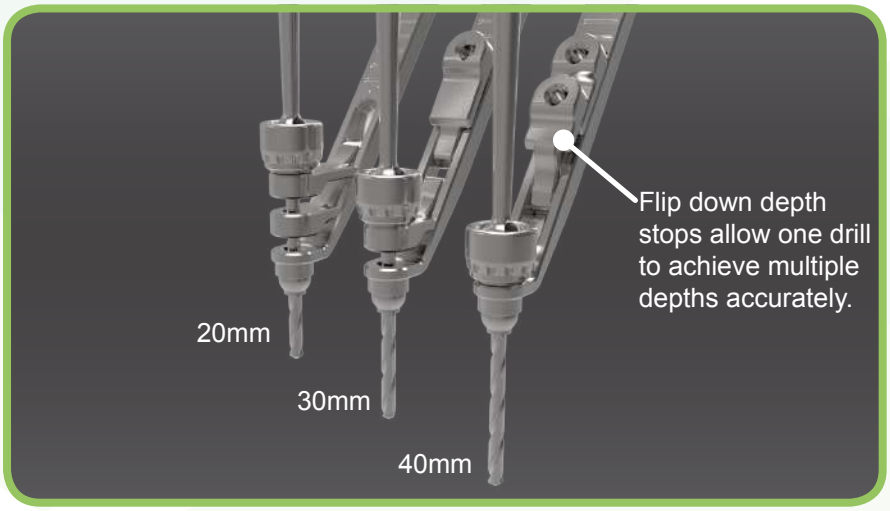
Determine screw location and select a suitable drill depth (see figure below). The flexible drill allows a wide range of drilling angles while still being able to apply pressure to the drill.




### Instrument operation:

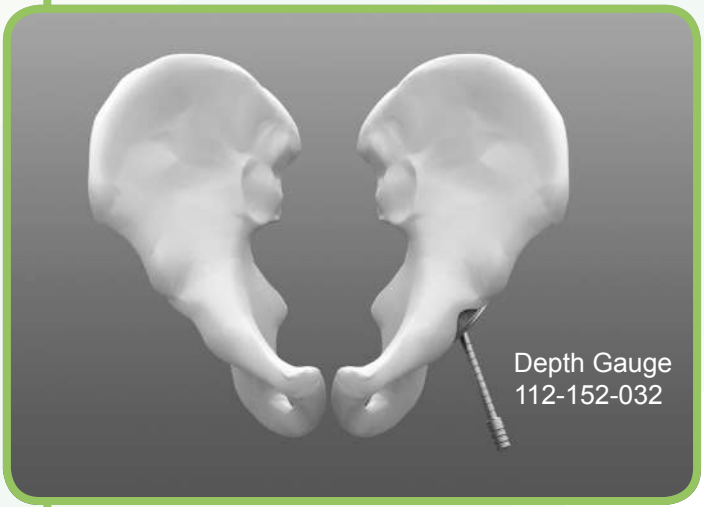
The drill guide has flip-down depth stops at each end.
One end has 10mm steps, which allows a 50mm drill to drill a hole at 40, 30 and 20mm deep.
While the other end has steps of 5mm, which allows holes to be drilled at 25 and 35mm.



7

## Determine Screw Length

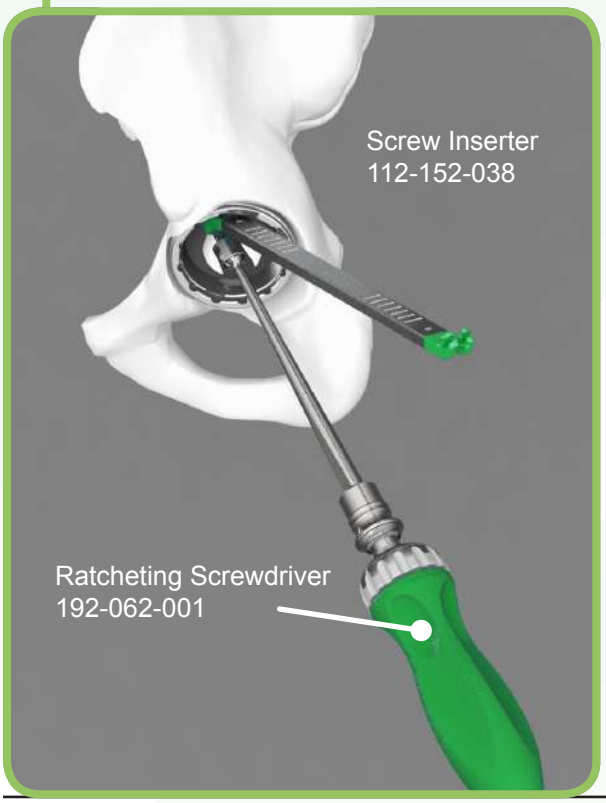
Use the screw depth gauge to determine the appropriate length screw. Due to intrapelvic vascularity, screw placement in the medial aspect of the acetabulum must be carefully considered.




8

## 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. Hex driver available in both tapered and parallel versions.




Solid end provides stability to flexible driver.

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.
Refer to “Logical Instruments” for information about sizes.


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 (112-152-230) 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 flush with the cup face.


11

**Ceramic Liner Placement** **(*Not available in USA)**
The ceramic liner inserter (112-152-230), has a series of snap rings that are coloured per the connection type. The example below is yellow (C type connection). 4 different Impactor heads are available (28/32/26/40mm - 112-152-21X). The snap ring is loaded onto the inserter first, followed by the impactor head. This will grip the ceramic liner firmly, in any position desired. Once the ceramic liner is loaded into the shell, a firm tap on the end of the inserter will see the snap ring let go of the ceramic liner, and the ceramic liner seat into the shell. Further impaction may be done using the straight cup inserter coupled with the ceramic liner impact adapter, as shown below.

An alternative to the liner impactor for the ceramic liners, is to use the “Ceramic Liner Impact Adapter” (112-152-305) with an appropriate sized trial head. This combination can also be used on the polyethylene liners.

Straight Cup Inserter
112-152-085

Ceramic Liner Impact
Adapter 112-152-305

Regular Trial Head

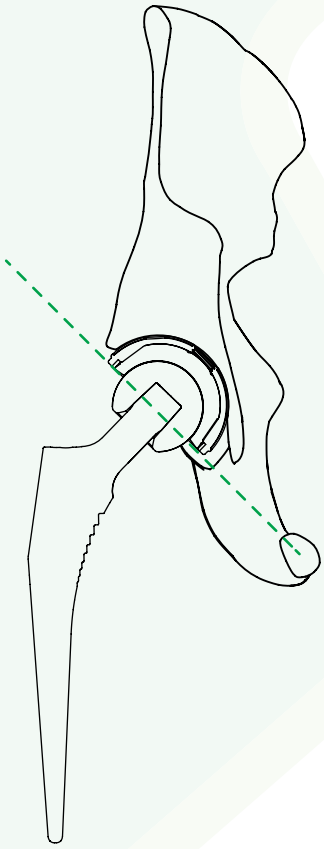
12

## 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.

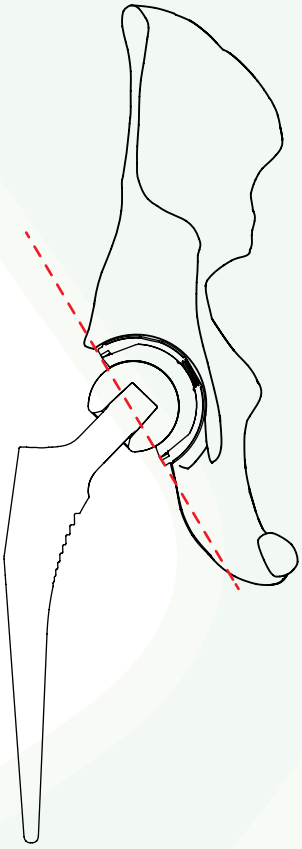
**CORRECT**

Inclination 40-45°
Anteversion 15-20°



**INCORRECT**

Inclination >45°
Anteversion >20°



*Data on file

13

**Polyethylene Liner removal**

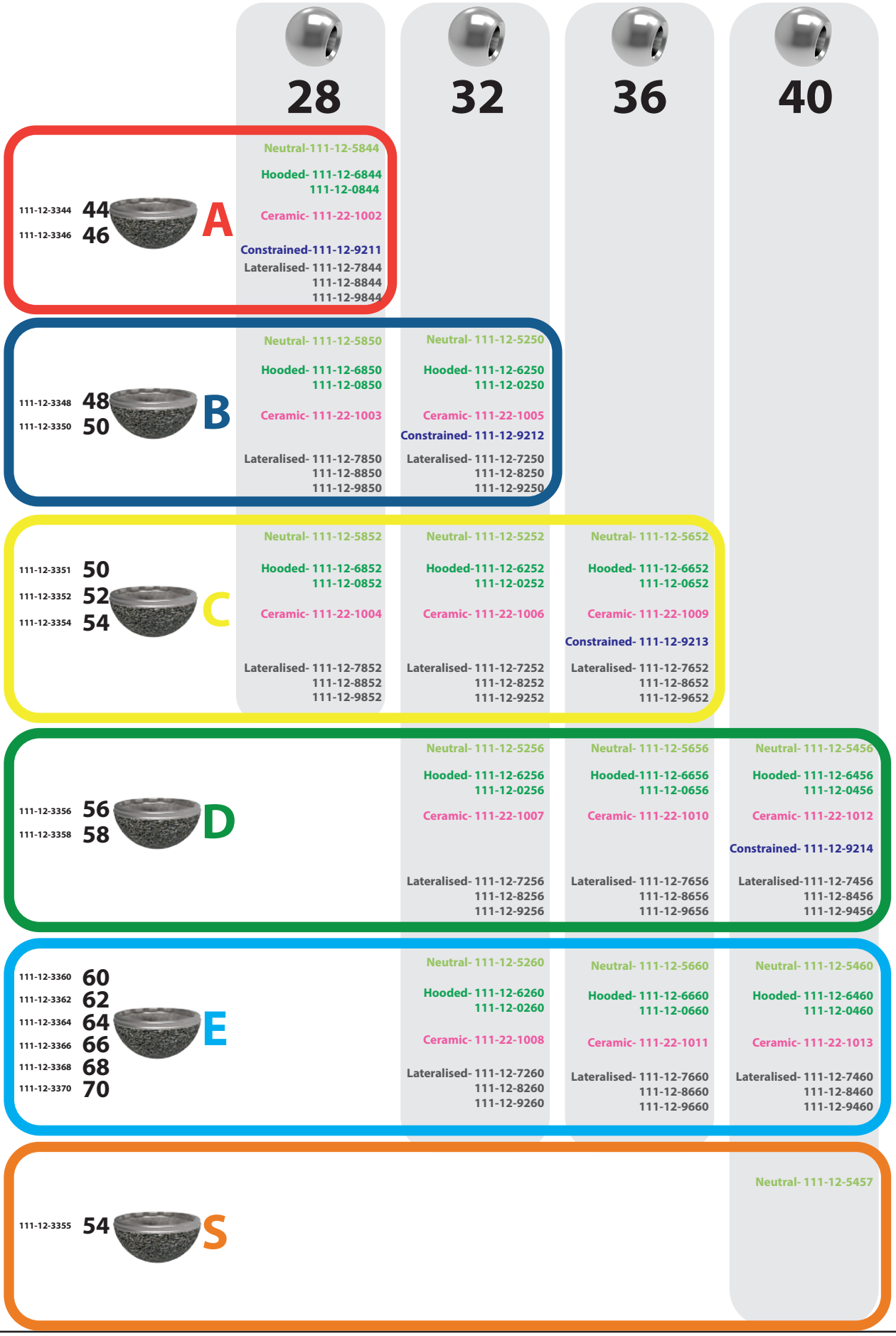
Upon removal of any Liner, inspect the taper and polyethylene locking mechanisms for damage. Special care should be taken not to lever against the Shell during Liner removal.

a. Locate a 3.5mm drill bit included in the Kit.
b. Drill a pilot hole into the dome of the Liner between the pole and the taper region of the Shell.
c. Drive the screw into the pilot hole by hand until the Liner is lifted out of the Shell.

*Special care should be taken not to damage the Shell taper or locking mechanism during removal of the Liner.

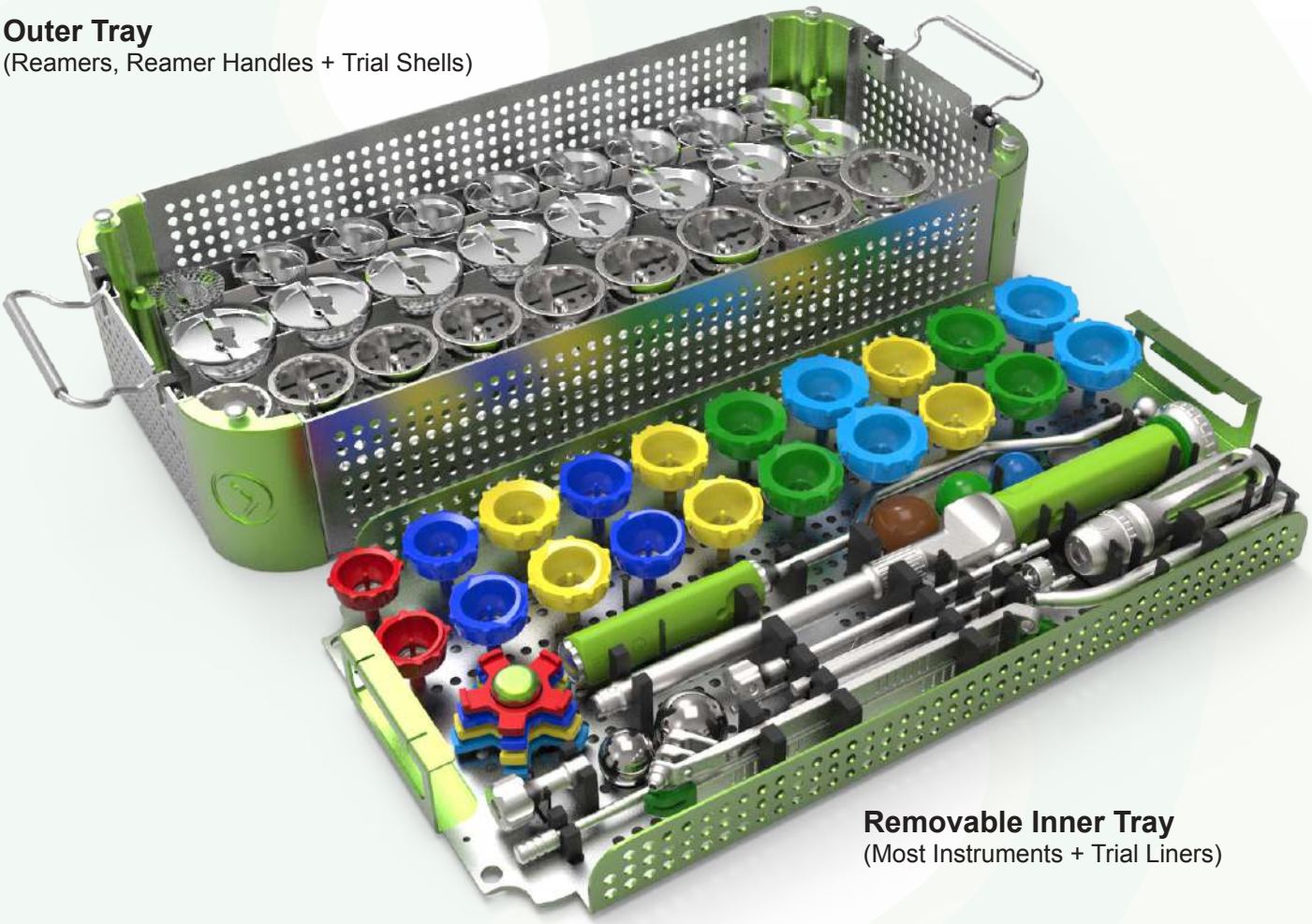
# Logical Implant Sizing Guide

Acetabular Cups, ceramic and UHMWPE Liners
*Ceramic liners not available in USA



## Primary Logical Instrument Tray

**Outer Tray**
(Reamers, Reamer Handles + Trial Shells)



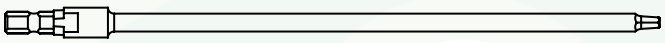
**Removable Inner Tray**
(Most Instruments + Trial Liners)

The secondary tray that is required only for very small and large statured patients not shown.

# Logical Instruments

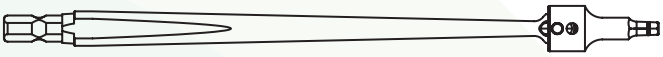
## Hi Torque Screwdriver 3.5mm Hex

112-152-306



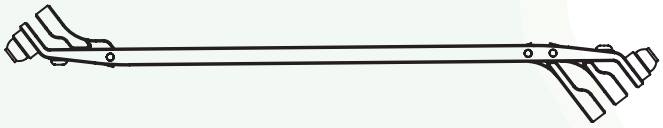
## Flexible Screwdriver

112-152-026



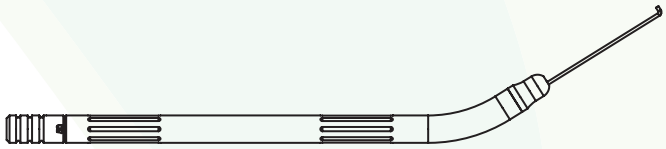
## Drill Guide

112-152-017



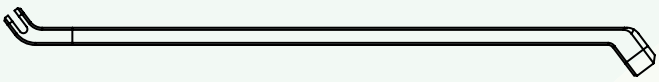
## Depth Gauge

112-152-032



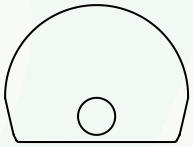
## Screw Inserter

112-152-038



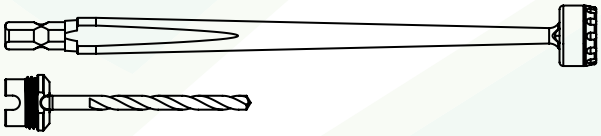
## Liner Impactors

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



## Optimus Drill (Flexible Drill)

192-072-001 (Drill bits 192-072-002)



## Reamer Shaft Assembly

112-152-018 (Large Reamer Grip 112-152-316)

# Logical Instruments

## Straight Cup Inserter

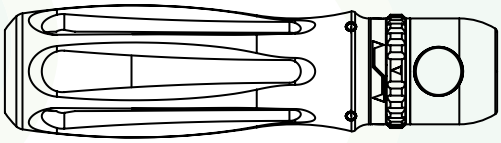
112-152-085 (Cup alignment can be set in increments of 15°)

## Alignment Guide (Two parts in tray)

112-152-322 (Button release)

## Ratcheting Screwdriver

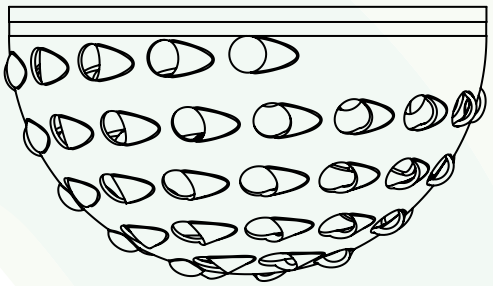
192-062-001



# Logical Instruments

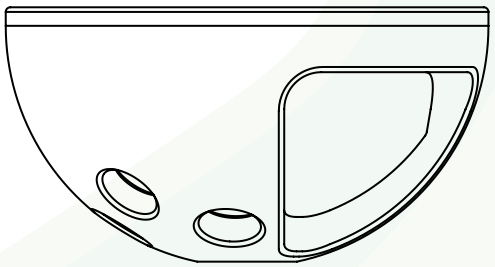
## Acetabular Reamers

| | |
|---|---|
| 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 |
| 112-152-269 | 69mm |
| 112-152-270 | 70mm |



## Trial Acetabular Cups

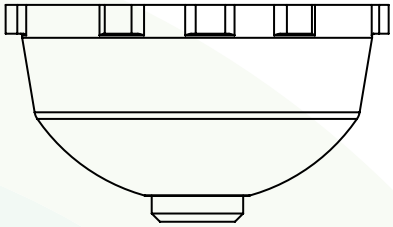
| | |
|---|---|
| 112-152-191 | 44mm |
| 112-152-192 | 46mm |
| 112-152-193 | 48mm |
| 112-152-194 | 50mm |
| 112-152-195 | 52mm |
| 112-152-196 | 54mm |
| 112-152-197 | 56mm |
| 112-152-198 | 58mm |
| 112-152-199 | 60mm |
| 112-152-200 | 62mm |
| 112-152-201 | 64mm |
| 112-152-202 | 66mm |
| 112-152-203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



# Logical Instruments

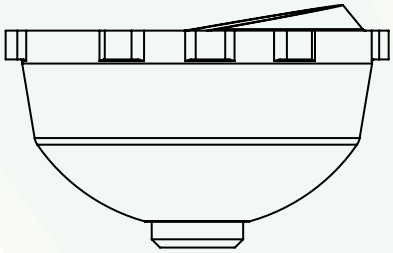
## Logical Trial Liner Neutral

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



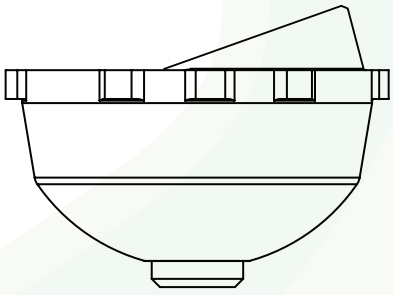
## Logical Trial Liner 10° Hooded

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



## Logical Trial Liner 20° Hooded

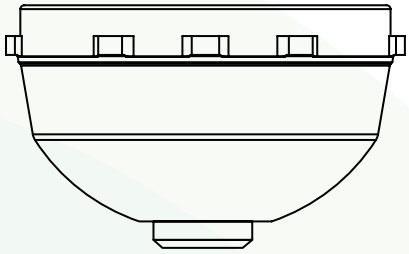
| | | |
|---|---|---|
| 112-152-517 | 28/44-46mm | A |
| 112-152-518 | 28/48-50mm | B |
| 112-152-519 | 28/52-54mm | C |
| 112-152-520 | 32/48-50mm | B |
| 112-152-521 | 32/52-54mm | C |
| 112-152-522 | 32/56-58mm | D |
| 112-152-523 | 32/60-68mm | E |
| 112-152-524 | 36/52-54mm | C |
| 112-152-525 | 36/56-58mm | D |
| 112-152-526 | 36/60-68mm | E |
| 112-152-527 | 40/56-58mm | D |
| 112-152-528 | 40/60-68mm | E |



# Logical Instruments

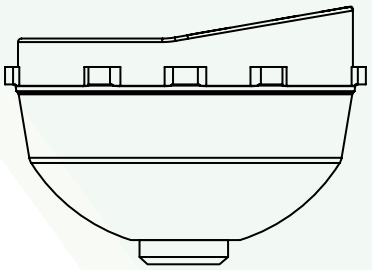
## Logical Lateralised Trial Liner Neutral

| | | |
|---|---|---|
| 112-15-7844 | 28/44-46mm | A |
| 112-15-7850 | 28/48-50mm | B |
| 112-15-7852 | 28/52-54mm | C |
| 112-15-7250 | 32/48-50mm | B |
| 112-15-7252 | 32/52-54mm | C |
| 112-15-7256 | 32/56-58mm | D |
| 112-15-7260 | 32/60-68mm | E |
| 112-15-7652 | 36/52-54mm | C |
| 112-15-7656 | 36/56-58mm | D |
| 112-15-7660 | 36/60-68mm | E |
| 112-15-7456 | 40/56-58mm | D |
| 112-15-7460 | 40/60-68mm | E |



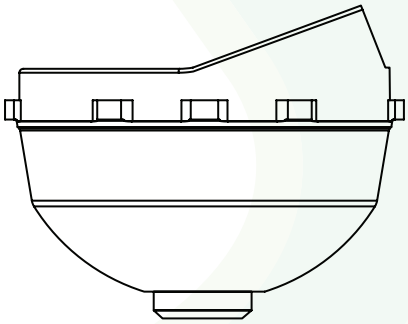
## Logical Lateralised Trial Liner 10° Hooded

| | | |
|---|---|---|
| 112-15-8844 | 28/44-46mm | A |
| 112-15-8850 | 28/48-50mm | B |
| 112-15-8852 | 28/52-54mm | C |
| 112-15-8250 | 32/48-50mm | B |
| 112-15-8252 | 32/52-54mm | C |
| 112-15-8256 | 32/56-58mm | D |
| 112-15-8260 | 32/60-68mm | E |
| 112-15-8652 | 36/52-54mm | C |
| 112-15-8656 | 36/56-58mm | D |
| 112-15-8660 | 36/60-68mm | E |
| 112-15-8456 | 40/56-58mm | D |
| 112-15-8460 | 40/60-68mm | E |



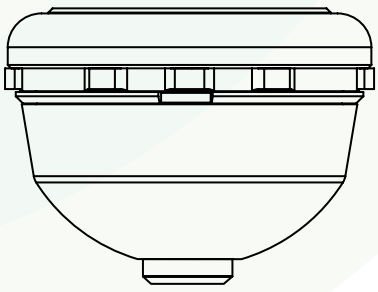
## Logical Lateralised Trial Liner 20° Hooded

| | | |
|---|---|---|
| 112-15-9844 | 28/44-46mm | A |
| 112-15-9850 | 28/48-50mm | B |
| 112-15-9852 | 28/52-54mm | C |
| 112-15-9250 | 32/48-50mm | B |
| 112-15-9252 | 32/52-54mm | C |
| 112-15-9256 | 32/56-58mm | D |
| 112-15-9260 | 32/60-68mm | E |
| 112-15-9652 | 36/52-54mm | C |
| 112-15-9656 | 36/56-58mm | D |
| 112-15-9660 | 36/60-68mm | E |
| 112-15-9456 | 40/56-58mm | D |
| 112-15-9460 | 40/60-68mm | E |



## Logical Constrained Trial Liner

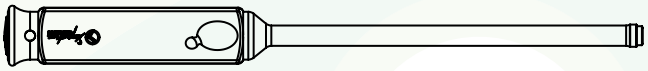
| | | |
|---|---|---|
| 112-152-537 | 22/44-46mm | A |
| 112-152-538 | 28/48-50mm | B |
| 112-152-539 | 32/52-54mm | C |
| 112-152-540 | 36/56-58mm | D |
| 112-152-541 | 40/60-68mm | E |



# Logical Optional Instruments

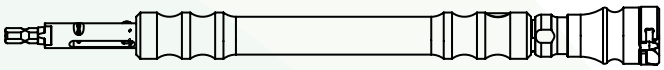
## Simple Cup Inserter

112-152-310 (No moving parts)



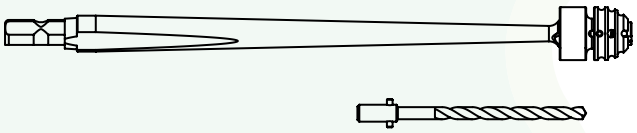
## Slim Reamer Shaft Assembly

112-152-342 (Slim grip 112-152-022)



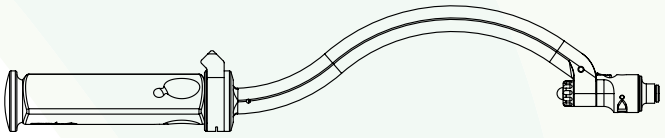
## Optimus Q Drill (Flexible Drill)

192-072-020 (Drill bits 192-072-013)



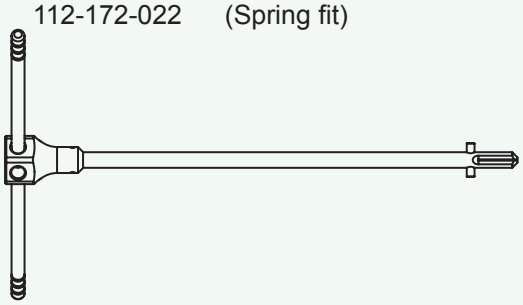
## Curved Cup Inserter

112-172-001



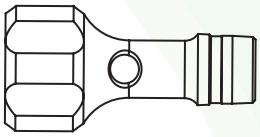
## Alignment Guide (Two parts in tray)

112-172-022 (Spring fit)



## Ceramic Liner Inserter

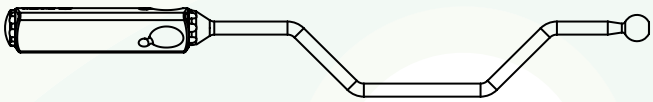
112-152-305



# Logical Optional Instruments

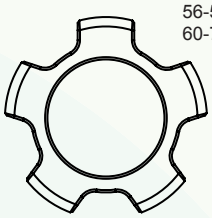
## Ceramic Liner Inserter

112-152-230



## Ceramic Liner Snap Rings

| Part Number | Shell Size | Connection Type |
|---|---|---|
| 112-152-214 | 44-46mm | A |
| 112-152-215 | 48-50mm | B |
| 112-152-216 | 52-54mm | C |
| 112-152-217 | 56-58mm | D |
| 112-152-218 | 60-70mm | E |



## Ceramic Liner Snap Rings

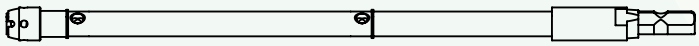
| | |
|---|---|
| 112-152-210 | Ø28mm |
| 112-152-211 | Ø32mm |
| 112-152-212 | Ø36mm |
| 112-152-213 | Ø40mm |

## Lightweight Drill Guide

112-152-419

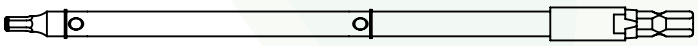
## Floxtimus Q

192-072-050



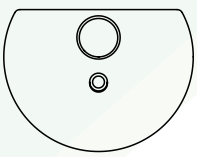
## 3.5MM Flhexible Driver

112-152-424 3.5MM Flhexible Driver
112-152-425 3.5MM Flhexible Driver - Self Retaining



## Acetal Liner Impactor

112-152-399_Acetal Liner Impactor - 28MM
112-152-400_Acetal Liner Impactor - 32MM
112-152-401_Acetal Liner Impactor - 36MM
112-152-402_Acetal Liner Impactor - 40MM

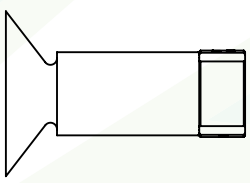


## Liner Inserter

112-152-379

## Modular Liner Inserter

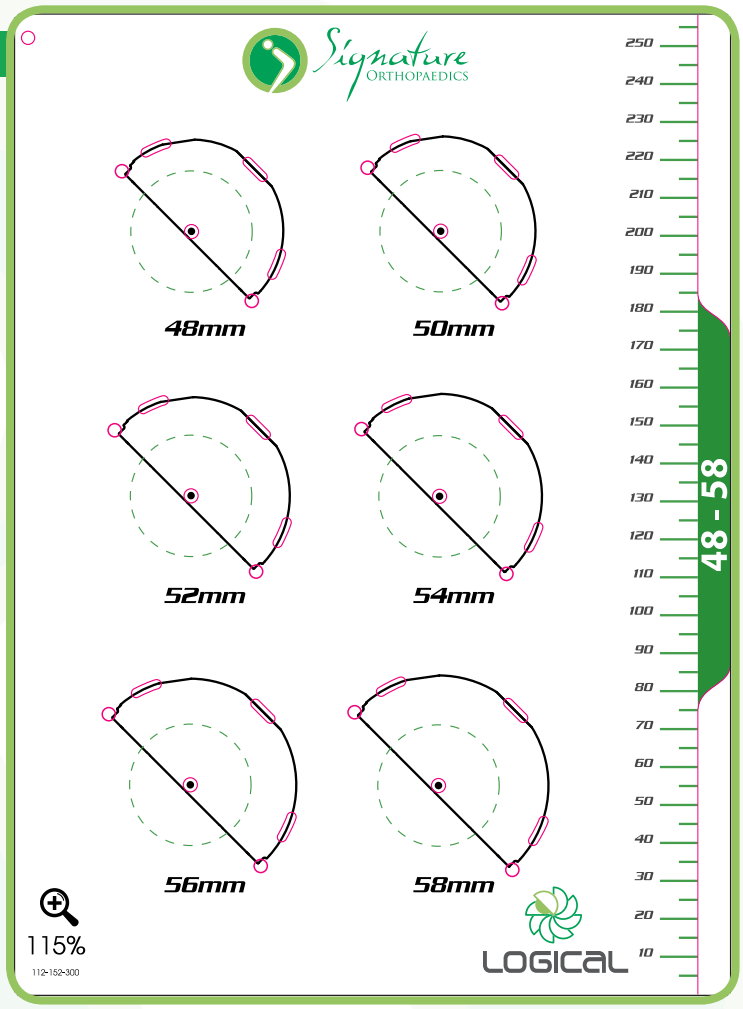
112-152-373



# Logical Preoperative Templates

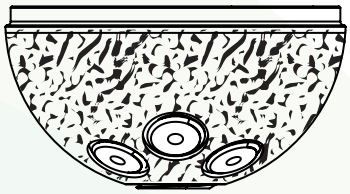
## Logical Templates

| | |
|---|---|
| 112-152-304 | 38-46mm |
| 112-152-300 | 48-58mm |
| 112-152-301 | 60-70mm |



# Logical Implants

## Logical G Series Acetabular Cups, No Hole



| | |
|---|---|
| 111-12-3044 | 44mm |
| 111-12-3046 | 46mm |
| 111-12-3048 | 48mm |
| 111-12-3050 | 50mm |
| 111-12-3052 | 52mm |
| 111-12-3054 | 54mm |
| 111-12-3056 | 56mm |
| 111-12-3058 | 58mm |
| 111-12-3060 | 60mm |
| 111-12-3062 | 62mm |
| 111-12-3064 | 64mm |
| 111-12-3066 | 66mm |
| 111-12-3068 | 68mm |
| 111-12-3070 | 70mm |

## Logical G Series Acetabular Cups, 2 Holes

| | |
|---|---|
| 111-12-3344 | 44mm |
| 111-12-3346 | 46mm |

## Logical G Series Acetabular Cups, 3 Holes

| | |
|---|---|
| 111-12-3348 | 48mm |
| 111-12-3350 | 50mm |
| 111-12-3351 | 50mm |
| 111-12-3352 | 52mm |
| 111-12-3354 | 54mm |
| 111-12-3355 | 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 |
| 111-12-3370 | 70mm |

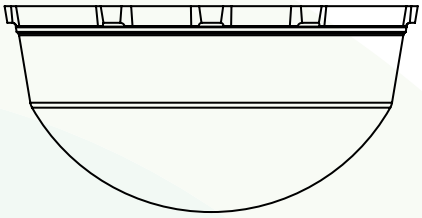
## Logical G Series Acetabular Cups, Multi Holes

| | |
|---|---|
| 111-12-3944 | 44mm |
| 111-12-3946 | 46mm |
| 111-12-3948 | 48mm |
| 111-12-3950 | 50mm |
| 111-12-3952 | 52mm |
| 111-12-3954 | 54mm |
| 111-12-3955 | 54mm |
| 111-12-3956 | 56mm |
| 111-12-3958 | 58mm |
| 111-12-3960 | 60mm |
| 111-12-3962 | 62mm |
| 111-12-3964 | 64mm |
| 111-12-3966 | 66mm |
| 111-12-3968 | 68mm |
| 111-12-3970 | 70mm |

# Logical Implants

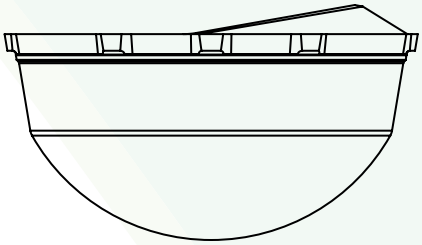
## Logical XLPE Liner Neutral

| | | |
|---|---|---|
| 111-12-5844 | 28/44-46mm | A |
| 111-12-5850 | 28/48-50mm | B |
| 111-12-5852 | 28/52-54mm | C |
| 111-12-5250 | 32/48-50mm | B |
| 111-12-5252 | 32/52-54mm | C |
| 111-12-5256 | 32/56-58mm | D |
| 111-12-5260 | 32/60-70mm | E |
| 111-12-5652 | 36/52-54mm | C |
| 111-12-5656 | 36/56-58mm | D |
| 111-12-5660 | 36/60-70mm | E |
| 111-12-5457 | 40/54mm | S |
| 111-12-5456 | 40/56-58mm | D |
| 111-12-5460 | 40/60-68mm | E |



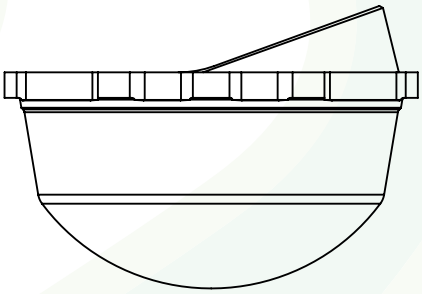
## Logical XLPE Liner 10° Hooded

| | | |
|---|---|---|
| 111-12-6844 | 28/44-46mm | A |
| 111-12-6850 | 28/48-50mm | B |
| 111-12-6852 | 28/52-54mm | C |
| 111-12-6250 | 32/48-50mm | B |
| 111-12-6252 | 32/52-54mm | C |
| 111-12-6256 | 32/56-58mm | D |
| 111-12-6260 | 32/60-70mm | E |
| 111-12-6652 | 36/52-54mm | C |
| 111-12-6656 | 36/56-58mm | D |
| 111-12-6660 | 36/60-70mm | E |
| 111-12-6457 | 40/45mm | S |
| 111-12-6456 | 40/56-58mm | D |
| 111-12-6460 | 40/60-68mm | E |



## Logical XLPE Liner 20° Hooded

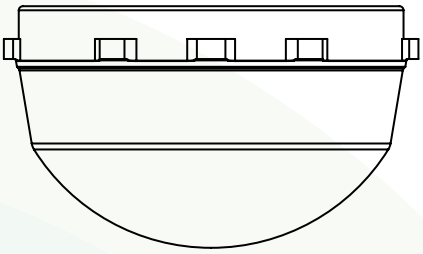
| | | |
|---|---|---|
| 111-12-0844 | 28/44-46mm | A |
| 111-12-0850 | 28/48-50mm | B |
| 111-12-0852 | 28/52-54mm | C |
| 111-12-0250 | 32/48-50mm | B |
| 111-12-0252 | 32/52-54mm | C |
| 111-12-0256 | 32/56-58mm | D |
| 111-12-0260 | 32/60-70mm | E |
| 111-12-0652 | 36/52-54mm | C |
| 111-12-0656 | 36/56-58mm | D |
| 111-12-0660 | 36/60-70mm | E |
| 111-12-0457 | 40/54mm | S |
| 111-12-0456 | 40/56-58mm | D |
| 111-12-0460 | 40/60-68mm | E |



# Logical Implants

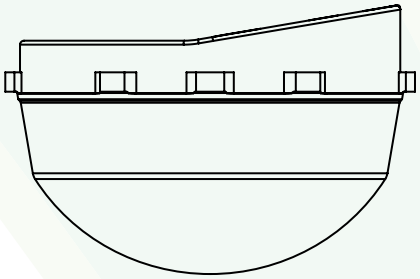
## Logical XLPE Liner Neutral Lateralised

| | | |
|---|---|---|
| 111-12-7844 | 28/44-46mm | A |
| 111-12-7850 | 28/48-50mm | B |
| 111-12-7852 | 28/52-54mm | C |
| 111-12-7250 | 32/48-50mm | B |
| 111-12-7252 | 32/52-54mm | C |
| 111-12-7256 | 32/56-58mm | D |
| 111-12-7260 | 32/60-70mm | E |
| 111-12-7652 | 36/52-54mm | C |
| 111-12-7656 | 36/56-58mm | D |
| 111-12-7660 | 36/60-70mm | E |
| 111-12-7457 | 40/54mm | S |
| 111-12-7456 | 40/56-58mm | D |
| 111-12-7460 | 40/60-68mm | E |



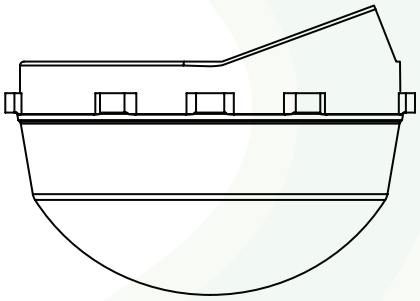
## Logical XLPE Liner 10° Hooded Lateralised

| | | |
|---|---|---|
| 111-12-8844 | 28/44-46mm | A |
| 111-12-8850 | 28/48-50mm | B |
| 111-12-8852 | 28/52-54mm | C |
| 111-12-8250 | 32/48-50mm | B |
| 111-12-8252 | 32/52-54mm | C |
| 111-12-8256 | 32/56-58mm | D |
| 111-12-8260 | 32/60-70mm | E |
| 111-12-8652 | 36/52-54mm | C |
| 111-12-8656 | 36/56-58mm | D |
| 111-12-8660 | 36/60-70mm | E |
| 111-12-7457 | 40/54mm | S |
| 111-12-8456 | 40/56-58mm | D |
| 111-12-8460 | 40/60-68mm | E |



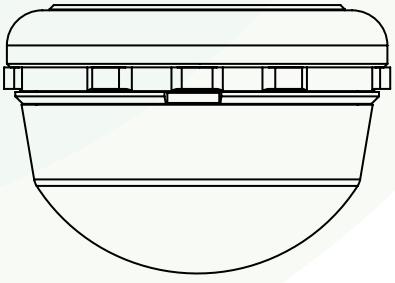
## Logical XLPE Liner 20° Hooded Lateralised

| | | |
|---|---|---|
| 111-12-9844 | 28/44-46mm | A |
| 111-12-9850 | 28/48-50mm | B |
| 111-12-9852 | 28/52-54mm | C |
| 111-12-9250 | 32/48-50mm | B |
| 111-12-9252 | 32/52-54mm | C |
| 111-12-9256 | 32/56-58mm | D |
| 111-12-9260 | 32/60-70mm | E |
| 111-12-9652 | 36/52-54mm | C |
| 111-12-9656 | 36/56-58mm | D |
| 111-12-9660 | 36/60-70mm | E |
| 111-12-7457 | 40/54mm | S |
| 111-12-9456 | 40/56-58mm | D |
| 111-12-9460 | 40/60-68mm | E |



## Logical XLPE Liner Constrained

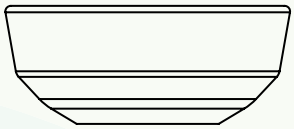
| | | |
|---|---|---|
| 111-12-9201 | 28/48-50mm | B |
| 111-12-9202 | 32/52-54mm | C |
| 111-12-9203 | 36/56-58mm | D |
| 111-12-9204 | 40/60-68mm | E |



# Logical Implants

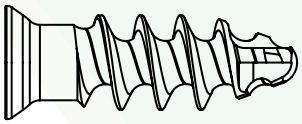
## Logical Ceramic Liner *Not available in USA

| | | |
|---|---|---|
| 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 | 32/60-70mm | E |
| 111-12-1009 | 36/52-54mm | C |
| 111-12-1010 | 36/56-58mm | D |
| 111-12-1011 | 36/60-70mm | E |
| 111-12-1012 | 40/56-58mm | D |
| 111-12-1013 | 40/60-68mm | E |



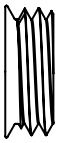
## Acetabular Fixation Screws, Ø6.5mm

| | |
|---|---|
| 111-12-9115 | 15mm |
| 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

111-12-9001



Signature Orthopaedics
7 Sirius Rd
Lane Cove West, Sydney, 2066
NSW, Australia

CE 0123