



**ZCA<sup>®</sup>**  
**All-Poly**  
**Acetabular Cup**

Surgical Technique



**zimmer**  
Personal Fit. Renewed Life.™



## Introduction

ZCA All-Poly Acetabular Cups are designed for cemented fixation. All cups can be inserted with the same dedicated instrumentation. The cups have a minimum thickness of 6mm at the pole, with the exception of 32mm ID x 49mm OD Standard and Longevity Snap-In Cups.\* Each cup has four 3mm cement spacers to help maintain a uniform cement mantle.<sup>1</sup>

Preoperative planning is essential to a good outcome. There are four styles of ZCA All-Poly Cups. Initial choice of cup style can be made preoperatively, based upon examination of the patient, radiographs, and use of templates. Final assessment of cup size is made intraoperatively.

- A** Neutral Cup – Available in four ID sizes (22mm, 26mm, 28mm, 32mm).
- B** Inclined Face Cup – A 10° inclined face is designed to help prevent dislocation in the area in which the elevation is placed. Available in four ID sizes (22mm, 26mm, 28mm, 32mm).
- C** Flanged Cup\*\* – The flange helps to establish a stable acetabular rim and additional cement pressurization.<sup>2</sup> Available with neutral or inclined face in three ID sizes (22mm, 26mm, 28mm).
- D** Snap-In Cup – Provides additional constraint of the femoral head within the cup to help minimize the risk of dislocation. Available in a 32mm ID neutral face cup.



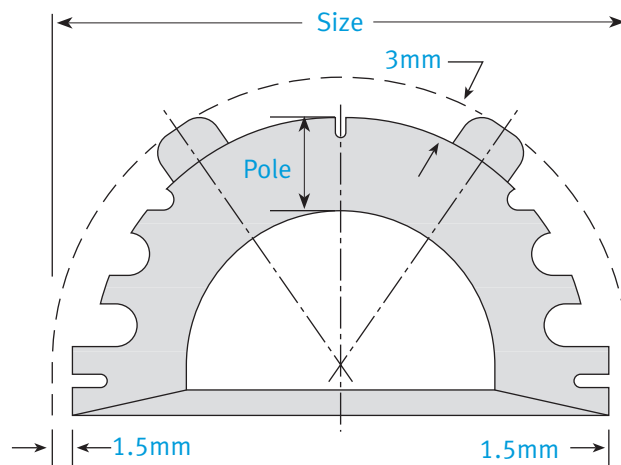
\*\* Not available for commercial distribution in the U.S.

## ZCA All-Poly Acetabular Cup Sizing

The ZCA Cup diameter is measured over the cement spacers. Therefore, the **last reamer used should match the cup diameter**. If odd-size reamers are unavailable, choose a cup diameter size which is 1mm less than the last reamer used. The cement mantle thickness is the same as the cement spacer height, which is 3mm.

Size = Diameter of reamed acetabulum (nominal diameter of debris-retaining reamer). This is also the size labeling on the package.

**Note: Cup sizes are available in increments of 2mm, as reflected in catalogue numbers.**



\* 32mm x 49mm Standard Polyethylene Snap-In Cups (00-8005-946-32) have minimum thickness of 5.65mm at the pole, 32mm x 49mm Longevity® Snap-In Cups (00-8065-946-32) have minimum thickness of 5.44mm at the pole.

- 1 Lichtinger TK, Muller RT. Improvement of the cement mantle of the acetabular component with bone cement spacers – a retrospective analysis of 200 cemented cups. Arch Orthop Trauma Surg. 1998;118:75-77.
- 2 Hodgkinson JP, Maskell AP. Flanged acetabular components in cemented Charnley hip arthroplasty – ten-year follow-up of 350 patients. J Bone Joint Surg (Br). 1993;75-B:464-467.

# 1 Acetabular Preparation

Ensure that the rim of the acetabulum is fully exposed. Identify the margins of the acetabulum using blunt and sharp Hohmann-type retractors or similar instruments. Excise any peripheral osteophytes and membranes.

Prepare the acetabulum with progressively larger hemispherical reamers. Hold reamer steady and apply pressure in the same direction in which the cup will be implanted. The acetabulum should be reamed down to cancellous subchondral bone.



Combine drill bit – 6, 10, or 13mm – with the self-centering Acetabular Drill and create keyholes in the acetabulum that allow for additional cement purchase.



# 2 Acetabular Sizing

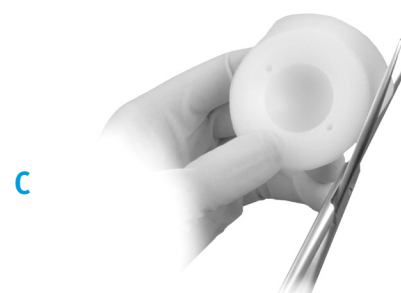
Select the ZCA Cup outside diameter that matches the size of the last acetabular reamer used. If the last reamer used was an even dimension, choose the cup size that is 1mm less than the last reamer used. For example, if a 54mm reamer was used, choose a 53mm OD cup.

**Note: Cup diameter includes the cement spacers.**

To check bone coverage, use the Cup Pusher Shaft with the desired size ZCA Cup Provisional attached (A).

**Note: The provisional has a neutral face. If the Inclined Face Cup or the Inclined Flanged Cup will be used, determine desired cup orientation. For reference, mark the acetabulum where additional coverage may be needed (B).**

Optional: The Flanged Cup may be trimmed with scissors to help ensure flange coverage of minor defects (C).

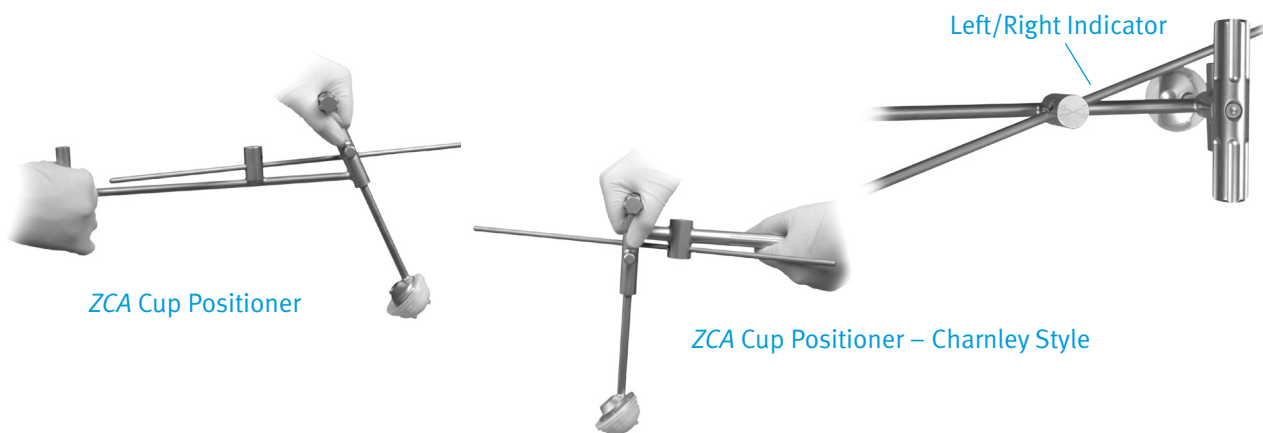


## 3 Cup Positioning and Alignment

Select the appropriate ZCA Cup Positioner – Charnley Style for a lateral or anterolateral approach, or ZCA Cup Positioner for a posterior or posterolateral approach. If a 32mm ID cup will be used, the standard 32mm Cup Positioner **must** be used. The Charnley-Style Cup Positioner is held with the handle cephalad. The ZCA Cup Positioner handle is held in a caudad direction. Both positioners have a base plate with prongs to which the acetabular cup is attached.

Insert the Alignment Rod into the hole marked right or left to match the leg that is being operated. The positioners orient the cup in 45° of abduction and 20° of anteversion when the alignment rod is held parallel to the long axis of the patient.

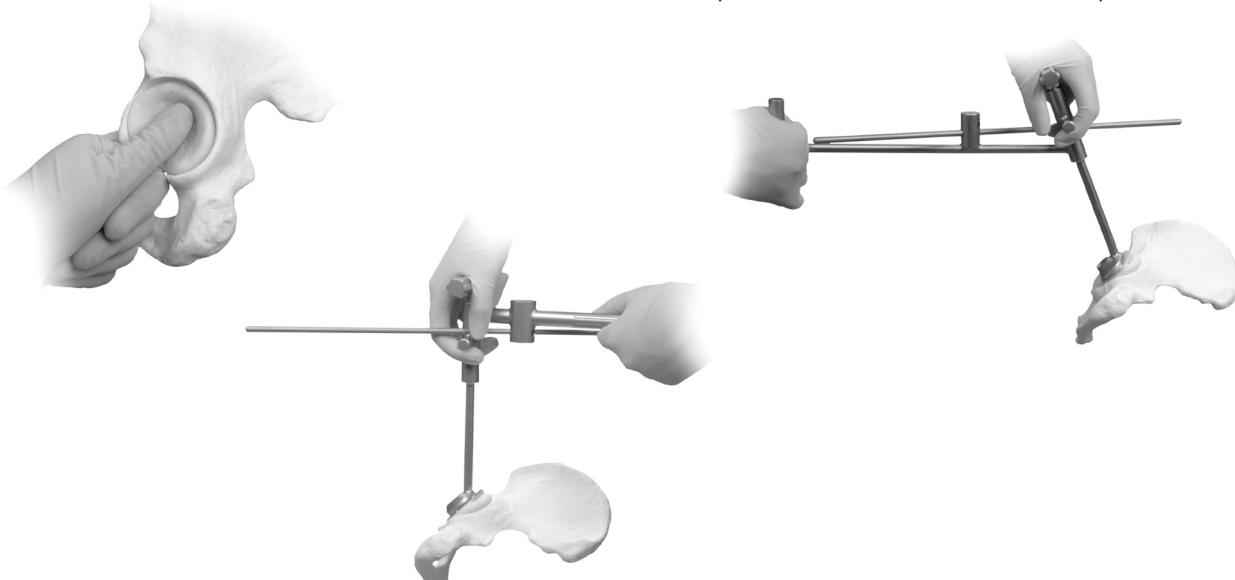
**Note: If using a cup with an inclined face, appropriate adjustment must be made to ensure proper orientation with instrumentation.**



## 4 Cup Insertion

Prior to inserting the implant, lavage and dry the acetabulum. Mix bone cement and pack it into the created keyholes first. Then pack cement into acetabulum.

Mount the ZCA Cup on the selected cup positioner and place the cup into the acetabulum. If using a cup with an inclined face, be sure to orient it in the proper direction. Depress the handle to release the implant.

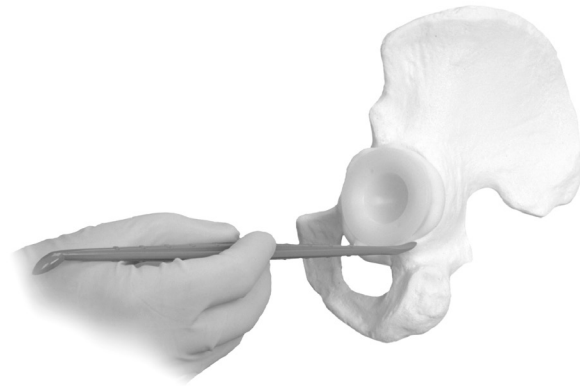


## 5 Final Cup Position

Maintain pressure against the ZCA Cup using the Pusher Head Shaft attached to the properly sized provisional head. Apply continuous pressure during bone cement polymerization. Cement can then be trimmed to contour the acetabulum.



**Note:** The Snap-In Cup requires use of the 28mm provisional head. A 32mm provisional head would require a complete snap-in engagement that could accidentally move the implant in the cement.

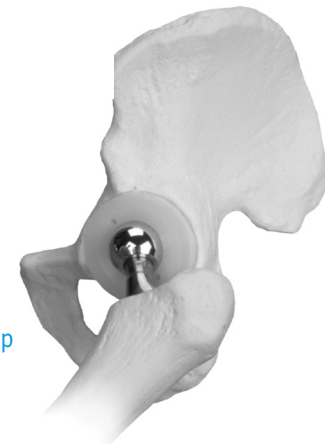
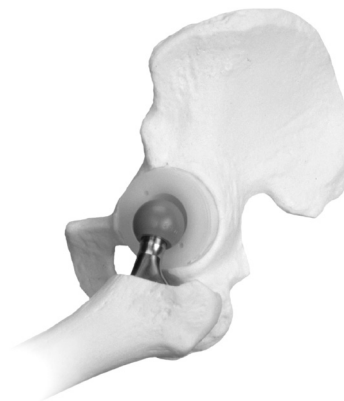


## 6 Reduction

Trim excess cement and remove debris from the interior of the cup before reducing the hip. Perform a trial reduction with an implanted stem and trial head after cement has cured and prior to final reduction.

**Warning:** To reduce the Snap-In Cup, the acetabular cup and femoral component must both be implanted before the femoral head is snapped into the cup. To engage the head in the cup, some version of the femur with respect to the face of the cup may be required. Ease the femoral head into the cup until it snaps in place. Ensure that the two components are fully engaged and there is no component impingement. Check range of motion before closing.

**Note:** Care should be taken to avoid notching, scratching, or striking the prosthesis. A roughened or marred provisional could result in accelerated wear of the polyethylene liner or sudden failure of the prosthesis.



Snap-In Cup

## Ordering Information

### Zimmer Standard Polyethylene

Cat No.	Size
<b>22mm Neutral Spacer</b>	
00-8005-540-22 through 00-8005-558-22	43mm OD through 61mm OD
<b>26mm Neutral Spacer</b>	
00-8005-542-26 through 00-8005-558-26	45mm OD through 61mm OD
<b>28mm Neutral Spacer</b>	
00-8005-544-28 through 00-8005-558-28	47mm OD through 61mm OD
<b>32mm Neutral Spacer</b>	
00-8005-546-32 through 00-8005-558-32	49mm OD through 61mm OD
<b>22mm 10° Inclined Face Spacer</b>	
00-8005-640-22 through 00-8005-658-22	43mm OD through 61mm OD
<b>26mm 10° Inclined Face Spacer</b>	
00-8005-642-26 through 00-8005-658-26	45mm OD through 61mm OD
<b>28mm 10° Inclined Face Spacer</b>	
00-8005-644-28 through 00-8005-658-28	47mm OD through 61mm OD
<b>32mm 10° Inclined Face Spacer</b>	
00-8005-646-32 through 00-8005-658-32	49mm OD through 61mm OD
<b>22mm Neutral Flanged Spacer*</b>	
00-8005-740-22 through 00-8005-758-22	43mm OD through 61mm OD
<b>26mm Neutral Flanged Spacer*</b>	
00-8005-742-26 through 00-8005-758-26	45mm OD through 61mm OD
<b>28mm Neutral Flanged Spacer*</b>	
00-8005-744-28 through 00-8005-758-28	47mm OD through 61mm OD
<b>22mm 10° Inclined Face Flanged Spacer*</b>	
00-8005-840-22 through 00-8005-858-22	43mm OD through 61mm OD
<b>26mm 10° Inclined Face Flanged Spacer*</b>	
00-8005-842-26 through 00-8005-858-26	45mm OD through 61mm OD
<b>28mm 10° Inclined Face Flanged Spacer*</b>	
00-8005-844-28 through 00-8005-858-28	47mm OD through 61mm OD
<b>32mm Snap-In Spacer</b>	
00-8005-900-32	Snap-in Spacer Set
00-8005-946-32 through 00-8005-958-32	49mm OD through 61mm OD

### Longevity® Highly Crosslinked Polyethylene

Cat No.	Size
<b>22mm Neutral Spacer</b>	
00-8065-540-22 through 00-8065-558-22	43mm OD through 61mm OD
<b>26mm Neutral Spacer</b>	
00-8065-542-26 through 00-8065-558-26	45mm OD through 61mm OD
<b>28mm Neutral Spacer</b>	
00-8065-544-28 through 00-8065-558-28	47mm OD through 61mm OD
<b>32mm Neutral Spacer</b>	
00-8065-546-32 through 00-8065-558-32	49mm OD through 61mm OD
<b>22mm 10° Inclined Face Spacer</b>	
00-8065-640-22 through 00-8065-658-22	43mm OD through 61mm OD
<b>26mm 10° Inclined Face Spacer</b>	
00-8065-642-26 through 00-8065-658-26	45mm OD through 61mm OD
<b>28mm 10° Inclined Face Spacer</b>	
00-8065-644-28 through 00-8065-658-28	47mm OD through 61mm OD
<b>32mm 10° Inclined Face Spacer</b>	
00-8065-646-32 through 00-8065-658-32	49mm OD through 61mm OD
<b>22mm Neutral Flanged Spacer*</b>	
00-8065-740-22 through 00-8065-758-22	43mm OD through 61mm OD
<b>26mm Neutral Flanged Spacer*</b>	
00-8065-742-26 through 00-8065-758-26	45mm OD through 61mm OD
<b>28mm Neutral Flanged Spacer*</b>	
00-8065-744-28 through 00-8065-758-28	47mm OD through 61mm OD
<b>32mm Neutral Flanged Spacer*</b>	
00-8065-746-32 through 00-8065-758-32	49mm OD through 61mm OD
<b>22mm 10° Inclined Face Flanged Spacer*</b>	
00-8065-840-22 through 00-8065-858-22	43mm OD through 61mm OD

Cat No.	Size
<b>26mm 10° Inclined Face Flanged Spacer*</b>	
00-8065-842-26 through 00-8065-858-26	45mm OD through 61mm OD
<b>28mm 10° Inclined Face Flanged Spacer*</b>	
00-8065-844-28 through 00-8065-858-28	47mm OD through 61mm OD
<b>32mm 10° Inclined Face Flanged Spacer*</b>	
00-8065-846-32 through 00-8065-858-32	49mm OD through 61mm OD
<b>32mm Snap-In Spacer</b>	
00-8065-900-32	Snap-in Spacer Set
00-8065-946-32 through 00-8065-958-32	49mm OD through 61mm OD

Cat No.	Description
<b>00-8005-400-00</b>	<b>ZCA Instrument Set (includes the following:)</b>
00-8005-260-00	Cup Pusher Shaft
00-8005-260-22	Cup Pusher Head, 22mm
00-8005-260-26	Cup Pusher Head, 26mm
00-8005-260-28	Cup Pusher Head, 28mm
00-8005-260-32	Cup Pusher Head, 32mm
00-1814-005-00	Cutting Scissors
00-8000-214-00	Acetabular Drill, 6mm
00-8000-215-00	Acetabular Drill, 13mm
00-8000-216-00	Acetabular Drill, 10mm
00-5785-079-00	Alignment Guide
<b>00-8005-300-00</b>	<b>ZCA Cup Provisional Set (includes the following:)</b>
00-8005-300-43 through 00-8005-300-61	ZCA Cup Provisional, 43mm through ZCA Cup Provisional, 61mm
<b>00-8005-096-00</b>	<b>ZCA Tray Assembly**</b>
<b>00-8005-095-00</b>	<b>ZCA Sterilization Case Assembly**</b>
<b>00-8005-210-00</b>	<b>ZCA Cup Positioner, Charnley Style,<sup>†</sup> fits 22, 26, 28mm cups</b>
<b>00-8005-250-00</b>	<b>ZCA Cup Positioner,<sup>†</sup> fits 22, 26, 28mm cups</b>
<b>00-8005-230-00</b>	<b>ZCA Cup Positioner,<sup>†</sup> fits 32mm cup only</b>

\* Neutral Flanged Spacer Cups and 10° Inclined Face Flanged Spacer Cups are not available for sale in the U.S.

\*\* Holds instruments and provisionals.

† One positioner will fit into Tray Assembly.

**Note: To receive the entire system, order all part numbers in bold.**

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