

## Poly and Ceramic



# Design surgeon list

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# Indications and contraindications

## Indications for use

The R3° Polyethylene and Ceramic Acetabular System is indicated for use in skeletally mature patients requiring primary total hip arthroplasty due to non-inflammatory arthritis (degenerative joint disease) such as osteoarthritis, avascular necrosis, or traumatic arthritis.

### Contraindications

- Insufficient quantity or quality of bone support; metabolic bone disease; osteoporosis
- Neurological or muscular conditions that would place extreme load upon the hip joint or cause joint instability
- Active joint infections or chronic systemic infection
- Obese patients where obesity is defined as BMI > 40
- Skeletal immaturity
- Known allergy to any of the implant materials



## Nota Bene:

The technique description herein is made available to the healthcare professional to illustrate the manufacturer's suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the specific patient.

Be advised of the Warnings and Precautions when using this system particularly of the Intraoperative and Postoperative considerations noted in the product's Package Insert.

The following is an abbreviated technique description for the R3° Poly and Ceramic Acetabular System. The purpose of this technique is to provide the user with important information and tips about the implants and instruments in this system. It is expected that the user is familiar with and understands the demands of total hip surgery. However, for appropriate training on the R3 Poly and Ceramic Acetabular System, please read this surgical technique manual and the accompanying package insert. Consult your Smith & Nephew Sales Representative for a review of the system implants and instrumentation.

Of particular importance, once the ceramic liner has been impacted into its mating shell, it should not be reassembled to the shell as early failure may occur; however the R3 locking mechanism allows the user to assemble a new R3 ceramic liner to a previously assembled R3 acetabular shell intraoperatively, or a new R3 poly liner to a previously assembled R3 acetabular shell either intraoperatively or during a revision surgery.



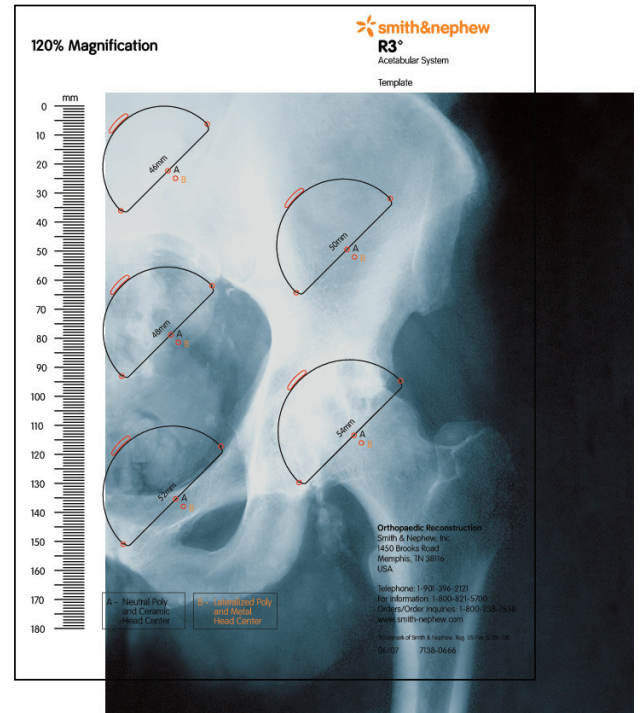
# Preoperative planning

Preoperative X-Rays should include an AP of the pelvis centered over the symphysis and an AP and lateral of the affected hip.

Templating can be done on the affected side, but it is important that the contralateral hip also be templated to verify the size.

To ensure a congruent fit, the acetabular component should be medialized to the medial aspect of the acetabulum, as indicated by the teardrop.

The center of rotation also should be marked for subsequent reference.



# Acetabular exposure

Complete exposure of the acetabulum is required, regardless of the type of approach. Use the approach with which you are most familiar and achieve the best surgical results.

First, resect the acetabular labrum and place a blunt retractor anteriorly.

After identifying the transverse acetabular ligament, place a blunt retractor around the inferior margin of the acetabulum.

Depending on the exposure, a third retractor can be placed posteriorly following the excision of the labrum.

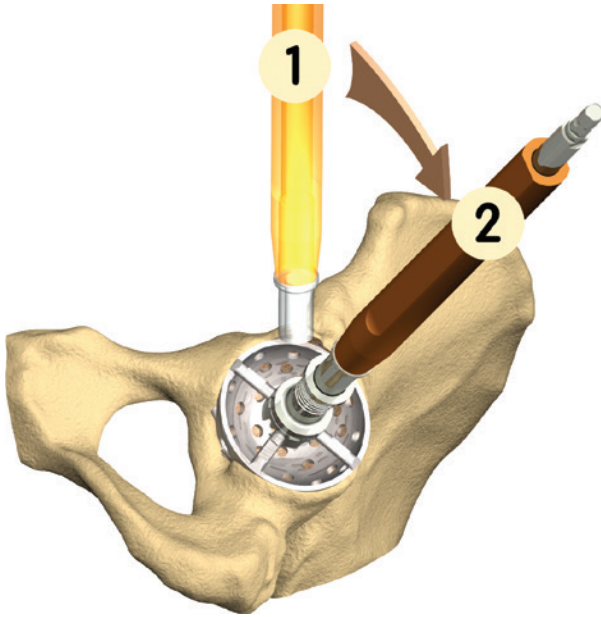
Remove all overhanging soft tissue and osteophytes in order to visualize the entire acetabular socket.

The acetabulum should be medialized to restore the normal center of hip rotation.

### Surgical tips:

- To minimize the need of assistance, each of the acetabular retractors can be tied directly to a Charnley retractor.
- Dividing the transverse acetabular ligament will allow reaming to begin inferiorly, limiting the tendency of the reamer to migrate superiorly.
- Removal of soft tissue and overhanging osteophytes from the foveal notch aids visualization of the quadrilateral plate and the depth that the acetabulum should be reamed.

# Acetabular reaming



Select an acetabular reamer that is considerably smaller than the templated size of the cup. Generally, reaming 6–8mm lower than the templated size is suitable.

Position the initial reamer in a vertical direction (1) to ensure the reamer is taken down to the medial wall.

Direct the second reamer and all subsequent reamers in approximately 45° of abduction and 20° of anteversion or at the surgeon's desired acetabular cup orientation for final position of the acetabular component. (2)

Preserve subchondral bone to provide good support for the prosthesis. This might mean the reamer will not be medialized all the way to the inner wall.

Frequently palpate the posterior and anterior walls of the acetabulum during the reaming process as these walls will determine the largest acetabular size that can be accommodated. Avoid allowing the reamer to drift posteriorly where the bone might be less dense and the path of least resistance for the reamer.

To press-fit an R3° acetabular shell the acetabulum can either be under-reamed by 1mm or may be reamed line-to-line depending on the bone quality and size of the acetabulum.

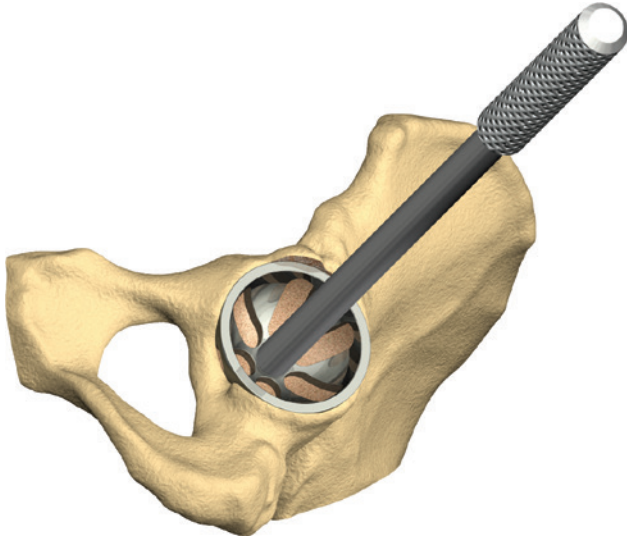
## Surgical tips:

- Each successive reamer must be fully seated within the acetabulum. Failure to do so will result in lateralization of the trial and exposure of the porous coating. If lateralization occurs, go back to a smaller reamer and begin again, checking each size to ensure that the reamers are fully seated.
- Increasing the reamer size by 2mm is recommended, although in smaller patients 1mm increments may be preferred.

## Instrument tips:

- The acetabular reamer has an open back, which helps visualize reaming and allows easy access to bone chips. This style of reamer is hemispherical and when fully seated it should be covered by the rim of the acetabulum.
- Gently rock reamer handle back and forth approximately 5° for last size used only to ensure rim is accurate for the desired press-fit.

# Acetabular trialing



After the preparation of the acetabulum, the trial shell should be inserted to verify size and position of the cup. Use a trial acetabular shell that is the same diameter as the last reamer used. The surgeon should note the appropriate orientation of the acetabular trial to position the cup correctly. The trial should be congruent with the reamed acetabular cavity and bottom out without significant force required to seat it.

A trial liner insert cannot be inserted into a trial shell for trial reduction.

If trial reduction using a trial insert is desired at this time, then the preparation of the femur should occur up until the trial reduction stage. The surgeon then has the option of inserting a trial acetabular liner (preferred) in the acetabular implant for subsequent leg length, offset and stability assessments or the real acetabular insert.

Select appropriate type and size component based on anatomical and biomechanical factors such as patient age and activity levels, weight, bone and muscle conditions.

Generally the largest cross-section component that will allow adequate bone support to be maintained is preferred. Muscle looseness and/or malpositioning of the components may result in loosening, subluxation, dislocation, fracture of components and/or bone. Firmly seat all components and check for component looseness during surgery.

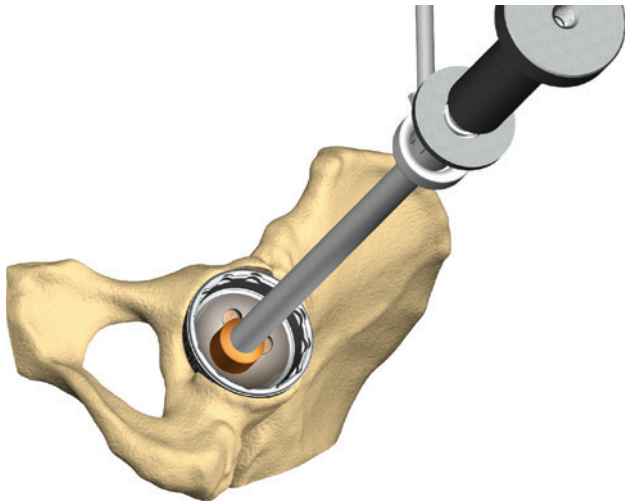
## **Surgical tip:**

- The bone at the edge of the trial shell can be marked with an electric cauterly to help in final component positioning.

## **Instrument tip:**

- The trial shells are the exact size specified. They can be used to assess the accuracy of reaming or can be press-fit into the acetabulum if using a larger size than the final reamer.

# Acetabular shell insertion



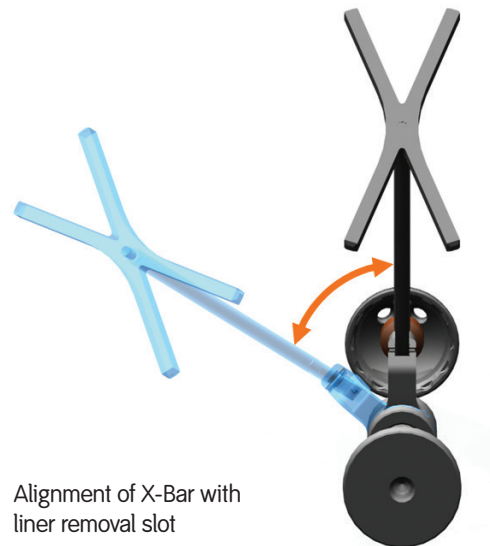
Select the appropriate acetabular shell. Attach the shell to the shell positioner/impactor and then attach the shell orientation guide (X-Bar) to the positioner. Insert the shell into the acetabulum.

Rotate the X-Bar shaft so that it is in line with the liner removal slot of the acetabular shell. For the three hole cup this positions the three holes in the superior direction.

Align the shell positioner/impactor so that the vertical bar of the attached X-Bar is perpendicular to the long axis of the body and the appropriate crossbar (left or right) is parallel with the long axis of the body. This will provide approximately 45° of abduction and 15° of anteversion.

The X-Bar is to be used as a guide and is not adjustable. It is suggested to reference 45° of abduction and 20° of anteversion. If the surgeon's desired acetabular cup orientation is not 45° of abduction and 20° of anteversion, the surgeon will need to adjust accordingly for his/her desired orientation.

Firmly tap the inserter with a mallet until the cup is fully seated.



Alignment of X-Bar with liner removal slot

Gently toggle the impactor handle to assess the stability and contact of the shell.

Remove the X-Bar, then disengage the impactor handle and look through the impactor hole to judge the distance between the medial wall and the shell.

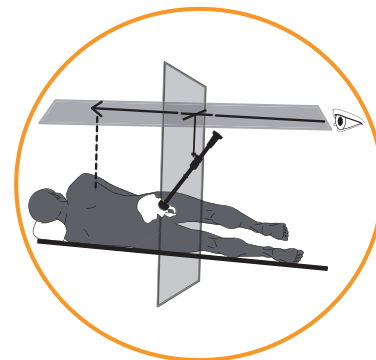
If the cup is firmly seated, there should be no gap between the shell and the medial wall and no apparent movement in the component.

## Surgical tips:

- The change in pitch that occurs as the shell is seated against the medial wall is often audible. A depth gauge can be inserted through the screw holes and apex hole to determine the adequacy of shell seating.
- The use of the slap hammer may be helpful in extracting the shell for repositioning.

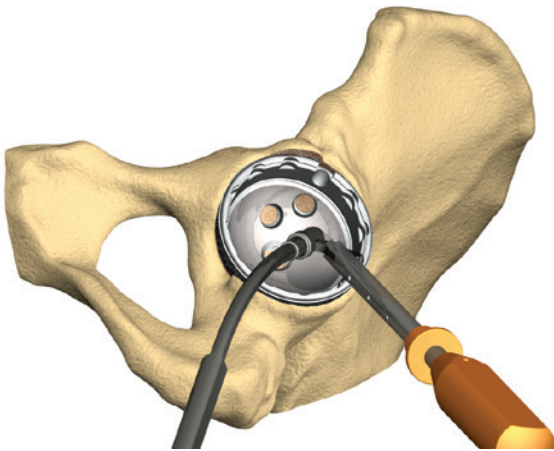
## Instrument tip:

- The plastic tip on the cup impactor is removable for cleaning.





**Specific to shells for R3° acetabular ceramic liners:** The position of the acetabular shell is critical to provide the maximum longevity of the implant. The surgeon should use the suggested position values as a guideline while making every effort possible to avoid rim contact between the shell and stem. Proper range of motion is critical for implant longevity. If any repositioning of the shell is required, it should only be performed using the shell positioner. Any use of a punch, osteotome or other instrument on the shell's rim could result in damage to the taper section and compromise the integrity of the shell and ceramic liner mating and lead to liner fracture. It is important to protect the shell's rim and inner taper from any damage during implantation.



If appropriate, bone screws may be placed for additional acetabular shell fixation. If placing bone screws it is important to avoid neurovascular complications by proper screw placement, avoiding the anterior/superior and anterior/inferior quadrants.

For screw fixation, each screw hole must be predrilled. Using the variable angle drill guide, adjust the angle of the tip to align with the selected screw hole and press firmly in the shell. After drilling the hole, use the depth gauge to verify appropriate screw length(s).

Use the screw forceps to hold the screw. Attach the screw to the screwdriver shaft. Then introduce the screw into the hole and screw it into place using the ratcheting screwdriver handle. **Make sure the screw is fully seated within the screw hole so that it will not impinge on the acetabular shell/liner.**

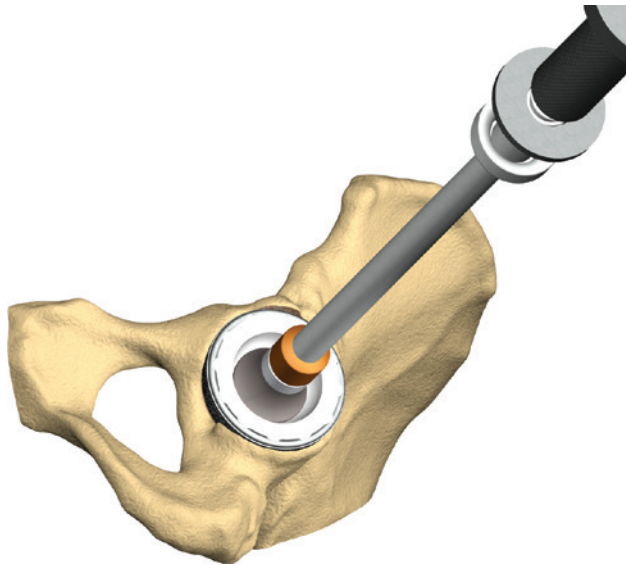
# Acetabular liner insertion

A trial reduction should be performed with the final shell and broach in place to appropriately assess head length, stem offset, liner style and position. With XLPE liners, use of 'skirted' modular heads should be avoided when possible to maximize range of motion.

Before inserting the R3° acetabular liner, lavage any unused holes and insert the hole covers. Using the angled hole cover inserter, place screw hole covers over any remaining screw holes and then impact with the peg impactor. Cover the apex hole with the threaded hole cover. Using the straight screwdriver, screw in the hole cover until it stops and is flush with the inner diameter of the shell.

For XLPE liner insertion, screw the appropriate sized liner impactor head on the end of the cup impactor handle and ensure that the tabs on the liner are aligned with the indentions in the shell. Impact firmly with the mallet until the liner is fully seated.

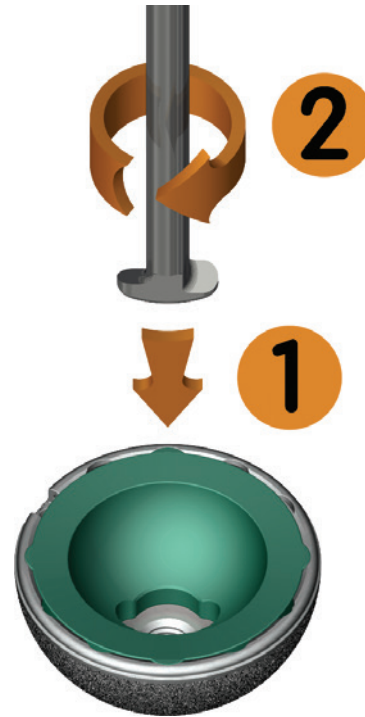
Inspect the liner/shell interface for proper seating. The liner should sit flush with the face of the shell.



Acetabular Poly Liner Insertion

## Instrument tips:

- The liner trials are designed with flexible locking tabs around the periphery that are a quick-snap design. The trial liners are removed with the trial liner removal tool via the removal slot at the apex of the trial liner and a clockwise twist of the removal tool.



## Surgical tips:

- Running a finger around the circumference of the shell and a visual check will help determine if the liner is flush with the shell face.
- The XLPE liner requires an impaction force between 60 and 120 pounds (27 - 54 kilograms), increasing with the diameter of the shell.
- The XLPE liners can be removed and repositioned once without compromising the locking mechanism of the liner. To remove R3 liners, insert the liner removal tool fully into the removal slot and pry or impact the liner loose.

### R3° Ceramic Insertion

R3 ceramic liners come pre-assembled with a disposable single-use alignment guide. The alignment guide is provided to assist with ensuring proper orientation of the liner prior to impaction. The alignment guide assembly is introduced by hand and sits flush on the face of the shell. The liner is checked for proper orientation through verification of proper liner seating in the shell. The seating of the liner should be confirmed by both a visual check to see that the alignment guide is sitting on the shell face and a manual check with the fingers to feel that the alignment guide does not rock on the face of the shell. (See page 13 for pictorial description of ceramic liner insertion and impaction).

**Do not impact the liner if it is not oriented properly, as this can damage the ceramic liner.**

In the event that the preassembled alignment guide is disengaged from the liner, the alignment guide should be reassembled to the liner before implantation. This is accomplished by taking the alignment guide and placing it upside down on the back table. The liner can then be placed upside down on the alignment guide such that the peripheral rim is sitting on the alignment guide. Simply push the liner onto the guide until the insertion ring locks snugly on the liner. The assembly is ready for placement in the shell.

Once orientation has been confirmed, impact the liner into place using the appropriate sized liner impactor head placed on the shell positioner/impactor. Once impacted, the alignment guide will disengage onto the shell positioner/impactor and should be removed at that time.\*

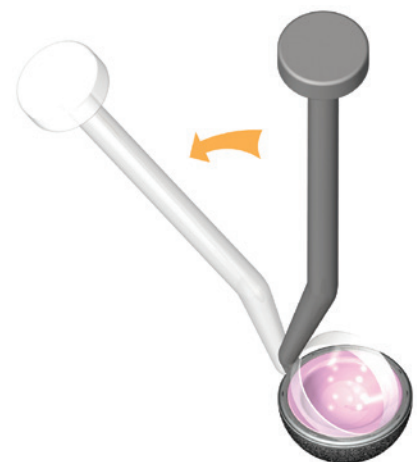
Should an adjustment of an R3 ceramic liner be necessary after initial impaction, a new R3 ceramic insert must be used. The ceramic liner can be removed by placing the liner removal tool in the removal slot and prying or impacting the liner loose, if necessary.

#### \* Cautionary statement

***Be sure to remove the disposable hard bearing alignment guide after liner insertion. It is not intended for implantation and should not be re-used or re-sterilized.***

#### Surgical tip:

- It may prove helpful to rotate the liner/alignment guide slightly to ensure soft tissues and osteophytes are clear.



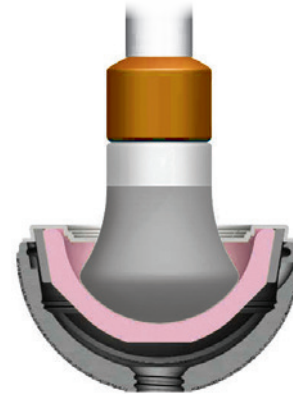
Removal of liner with liner removal tool

## Acetabular liner insertion *(continued)*

After the shell is implanted into the acetabulum, the surgeon inserts the liner with the attached alignment guide into the shell.



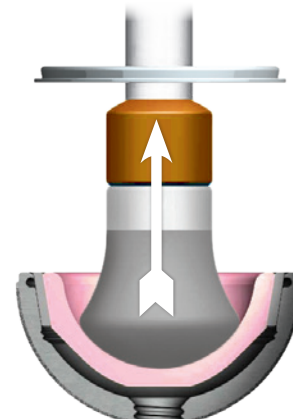
After the surgeon inserts the liner, the alignment guide sits flat against the top face of the shell.



The cup impactor with impactor head is placed through the center of the alignment guide. The surgeon then impacts the liner into the shell.



The alignment guide will disengage onto the shaft of the shell impactor once the liner is properly seated inside the shell. The alignment guide can now be removed from the impactor for disposal.



Use extreme care in handling and storage of ceramic implant components. Damage to components may induce internal stresses that are not obvious to the observer, and it may lead to premature failure of the component. Before use of ceramic implants, carefully examine each component for indications of damage that may have occurred during shipping or prior in-hospital handling. All surfaces should be smooth without pitting, scratches or other surface irregularities.

The ceramic liner and ceramic head should not be implanted if the liner or head is damaged (if damaged as a result of the shipping process, if dropped on the floor or if scratched by an instrument) or if the stem taper is damaged, as this can significantly affect the structural integrity of the components. Replace the ceramic liner if the liner is chipped, cracked or otherwise damaged during the implant procedure or postoperative timeframe.

**Once the ceramic liner has been impacted into its mating shell, it should not be reassembled to the shell; however, the R3 locking mechanism allows the user to assemble a new R3 ceramic liner or new R3 poly liner to a previously assembled R3 acetabular shell intraoperatively, or to assemble an R3 poly liner to an existing R3 acetabular shell during a revision surgery.**

**Surgical tips:**

- Ensure all mating tapers are clean and dry before assembly.

# Femoral head impaction

Position the Smith & Nephew femoral head on the taper and initially seat by hand. Then place the head impactor on the head and firmly impact with a mallet to seat the head on the taper. Only Smith & Nephew ceramic femoral heads can be used with the R3° ceramic acetabular liners. Use 32mm heads with 32mm liners only, and 36mm heads with 36mm liners only. A sizing mismatch may result in premature implant failure. Do not mix the ceramic liner or ceramic head with any other manufacturer's acetabular shell or stem, respectively. The Delta ceramic on Delta ceramic combination is approved for use in the US with SYNERGY° (Surgical Technique: 7138-0349), ANTHOLOGY° (Surgical Technique: 00811), POLARSTEM° (Surgical Technique: 01217), or SL-PLUS° (Surgical Technique: 7138-1446) stems.

**Do not disassemble and reassemble the ceramic head and metal femoral stem because the locking mechanism may become damaged. Once the head is impacted, the ridges machined into the metal stem taper deform. If, for any reason, the ceramic femoral head is removed, the metal stem taper cannot be reused with a ceramic component.**

If the ceramic ball head is removed from the femoral component that will be left in place during a revision surgery, it is recommended that a metal or OXINIUM° ball head be used with corresponding polyethylene liner and metal shell (see Acetabular shell insertion above). Do not assemble a new ceramic ball head on a used taper during the revision as the ceramic ball head may fracture from irregularities on the femoral component taper. However, in the case of revision due to ceramic fracture of ceramic components (ceramic ball head or ceramic liner), it is recommended that neither metal nor OXINIUM ball heads be used as remaining fragments increase the risk of accelerated wear and reduced implant life of the replacement ball heads and polyethylene liner. This will necessitate the removal and replacement of the femoral component to provide a suitable femoral taper to attach the new ceramic ball head with corresponding polyethylene liner and metal shell. Additionally, during revision due to ceramic fracture, remove all loose identifiable fragments and thoroughly irrigate and lavage the operative site.

# Postoperative Care

Physician should provide appropriate postoperative directions and warnings to patients regarding their care. Weight-bearing status should be individualized with the non- or partial weight bearing period determined.

Patients should be warned against unassisted activity, particularly use of toilet facilities and other activities requiring excessive motion of the hip such as sitting in low chairs, crossing legs, low bending at waist, sharp twisting hip motion, etc.

Adequate support should be provided to the operative leg when moving the patient. While placing the patient on bedpans, changing dressings, clothing, or similar activities, precautions should be taken to avoid placing excessive load on the operative leg.

Periodic X-Rays are recommended for close comparison with immediate postoperative conditions to detect long-term evidence of changes in position, loosening, bending and/or cracking of components or bone loss. Patient reports of squeaking or clicking should be carefully evaluated as they may indicate position changes in the components compromising the durability of the implants.

# Shell and liner offerings

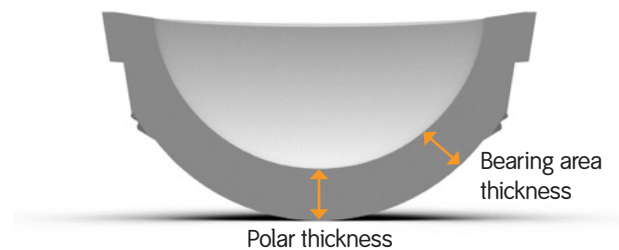
Cups	XLPE						Ceramic		
	22	28	32	36	40	44	28	32	36
40	●								
42	●								
44	●	●							
46		●	●						
48		●	●					●	
50		●	●	●				●	
52		●	●	●					●
54		●	●	●					●
56		●	●	●	●				●
58		●	●	●	●				●
60		●	●	●	●	●			●
62			●	●	●	●			●
64				●	●	●			●
66				●	●	●			●
68				●	●	●			●
70				●	●	●			●
72				●	●	●			●
74				●	●	●			●
76				●	●	●			●
78				●	●	●			●
80				●	●	●			●



# Poly thickness chart

Shell OD	Poly OD	Poly Thickness Polar Region mm	Poly Thickness Load-Bearing Region mm
40	22	5.9	6.1
42	22	6.9	7.1
44	22	7.9	8.1
44	28	5.0	5.0
46	28	6.0	6.1
46	32	5.0	4.7
48	28	7.0	7.1
48	32	5.0	5.1
50	28	8.0	8.1
50	32	6.0	6.1
50	36	5.0	4.7
52	28	9.0	9.1
52	32	7.0	7.1
52	36	5.0	5.1
54	28	10.0	10.1
54	32	8.0	8.1
54	36	6.0	6.1
56	28	11.0	11.1
56	32	9.0	9.1
56	36	7.0	7.1
56	40	5.0	5.0
58	28	12.0	12.1
58	32	10.0	10.1
58	36	8.0	8.1
58	40	6.0	6.0
60	28	13.0	13.1
60	32	11.0	11.1
60	36	9.0	9.1
60	40	7.0	7.0
60	44	5.0	5.0

Shell OD	Poly OD	Poly Thickness Polar Region mm	Poly Thickness Load-Bearing Region mm
62	32	12.0	12.1
62	36	10.0	10.1
62	40	8.0	8.0
62	44	6.0	6.0
64	36	11.0	11.1
64	40	9.0	9.0
64	44	7.0	7.0
66-70	36	12.0	12.1
66-70	40	10.0	10.0
66-70	44	8.0	8.0
72-74	36	14.0	14.0
72-74	40	12.0	12.0
72-74	44	10.0	10.0
76-80	36	16.0	16.0
76-80	40	14.0	14.0
76-80	44	12.0	12.0



# Catalog

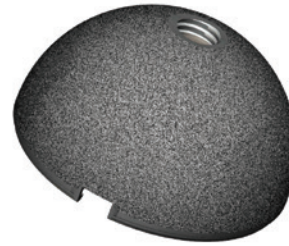
## R3° NO HOLE Acetabular Shells

### Standard size shells

Cat. no.	ODmm
7133-1846	46
7133-1848	48
7133-1850	50
7133-1852	52
7133-1854	54
7133-1856	56
7133-1858	58
7133-1860	60
7133-1862	62
7133-1864	64

### Small size shells

Cat. no.	ODmm
7133-1840	40
7133-1842	42
7133-1844	44



### Large shell sizes

Cat. No.	ODmm
7133-1866	66
7133-1868	68

## R3 THREE HOLE Acetabular Shells

### Standard size shells

Cat. no.	ODmm
7133-5546	46
7133-5548	48
7133-5550	50
7133-5552	52
7133-5554	54
7133-5556	56
7133-5558	58
7133-5560	60
7133-5562	62
7133-5564	64

### Small size shells

Cat. no.	ODmm
7133-5540	40
7133-5542	42
7133-5544	44



### Large shell sizes

Cat. No.	ODmm
7133-5566	66
7133-5568	68

## R3 MULTI HOLE Acetabular Shells

### Standard size shells

Cat. no.	ODmm
7133-8663	48
7133-8664	50
7133-8665	52
7133-8666	54
7133-8667	56
7133-8668	58
7133-8669	60
7133-8671	62
7133-8672	64

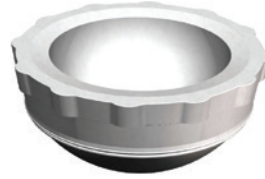
### Large size shells

Cat. no.	ODmm
7133-8673	66
7133-8674	68
7133-8675	70



### Jumbo size shells

Cat. no.	ODmm
7133-8676	72
7133-8677	74
7133-8678	76
7133-0009	78
7133-0010	80



### R3° XLPE Acetabular Liners

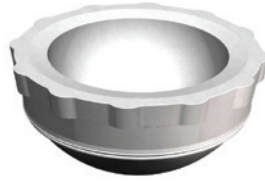
ID	OD	0° XLPE Liner Cat. no.	20° XLPE Liner Cat. no.	0° +4 XLPE Liner Cat. no.	20°+4 XLPE Liner Cat. no.
22	40	7133-4840	7133-4940	7133-5840	7133-7140
22	42	7133-4842	7133-4942	7133-5842	7133-7142
22	44	7133-4844	7133-4944	7133-5844	7133-7144

28	44	7193-5846	7193-5849		
28	46	7133-7546	7133-4946	7133-5946	7133-7746
28	48	7133-7548	7133-4948	7133-5948	7133-7748
28	50	7133-7550	7133-4950	7133-5950	7133-7750
28	52	7133-7552	7133-4952	7133-5952	7133-7752
28	54	7133-7554	7133-4954	7133-5954	7133-7754
28	56	7133-7556	7133-4956	7133-5956	7133-7756
28	58	7133-7558	7133-4958	7133-5958	7133-7758
28	60	7133-7560	7133-4960	7133-5960	7133-7760

32	46	7193-5847	7193-5850		
32	48	7133-9548	7133-7648	7133-6648	7133-7948
32	50	7133-9550	7133-7650	7133-6650	7133-7950
32	52	7133-9552	7133-7652	7133-6652	7133-7952
32	54	7133-9554	7133-7654	7133-6654	7133-7954
32	56	7133-9556	7133-7656	7133-6656	7133-7956
32	58	7133-9558	7133-7658	7133-6658	7133-7958
32	60	7133-9560	7133-7660	7133-6660	7133-7960
32	62	7133-9562	7133-7662	7133-6662	7133-7962

36	50	7193-5848	7193-5851		
36	52	7133-2752	7133-5752	7133-6952	7133-8552
36	54	7133-2754	7133-5754	7133-6954	7133-8554
36	56	7133-2756	7133-5756	7133-6956	7133-8556
36	58	7133-2758	7133-5758	7133-6958	7133-8558
36	60	7133-2760	7133-5760	7133-6960	7133-8560
36	62	7133-2762	7133-5762	7133-6962	7133-8562
36	64	7133-2764	7133-5764	7133-6964	7133-8564
36	66/70	7133-0766	7133-1266	7133-1566	7133-2666

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**R3° XLPE Acetabular Liners  
(continued)**

ID	OD	0° XLPE liner Cat. no.	20° XLPE liner Cat. no.	0° +4 XLPE liner Cat. no.	20°+4 XLPE liner Cat. no.
40	56	7133-8679	7133-8687	7133-8695	7133-8704
40	58	7133-8680	7133-8688	7133-8696	7133-8705
40	60	7133-8681	7133-8689	7133-8697	7133-8706
40	62	7133-8682	7133-8690	7133-8698	7133-8707
40	64	7133-8683	7133-8691	7133-8699	7133-8708
40	66-70	7133-8684	7133-8692	7133-8701	7133-8709
40	72-74	7133-8685	7133-8693	7133-8702	7133-8711
40	76-80	7133-1094	7133-1104	7133-1113	7133-1116

44	60	7133-1096	7133-1106	7133-0011	7133-1118
44	62	7133-1097	7133-1107	7133-0012	7133-1119
44	64	7133-1098	7133-1108	7133-0013	7133-1121
44	66-70	7133-1099	7133-1109	7133-0014	7133-1122
44	72-74	7133-1101	7133-1110	7133-0016	7133-1123
44	76-78	7133-1102	7133-1111	7133-0017	7133-1124

**R3 US BioloX® delta Ceramic Liners\***



Ceramic liner cat. no.	ID	OD
7132-5148	32	48
7132-5150	32	50
7132-5152	36	52
7132-5154	36	54
7132-5156	36	56
7132-5158	36	58
7132-5160	36	60
7132-5162	36	62
7132-5164	36	64
7132-5166	36	66/68

\*For use with delta Ceramic Heads Only

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## R3° Trial Shells

### Standard size trial shells

Cat. no.	ODmm
7136-0745	45
7136-0746	46
7136-0747	47
7136-0748	48
7136-0749	49
7136-0750	50
7136-0751	51
7136-0752	52
7136-0753	53
7136-0754	54
7136-0755	55
7136-0756	56
7136-0757	57
7136-0758	58
7136-0759	59
7136-0760	60
7136-0761	61
7136-0762	62
7136-0763	63
7136-0764	64

### Small size trial shells

Cat. no.	ODmm
7136-0739	39
7136-0740	40
7136-0741	41
7136-0742	42
7136-0743	43
7136-0744	44



### Large size trial shells

Cat. no.	ODmm
7136-0765	65
7136-0766	66
7136-0767	67
7136-0768	68
7136-6524	69
7136-6525	70

### Jumbo size trial shells

Cat. no.	ODmm
7136-6526	71
7136-6527	72
7136-6528	73
7136-6529	74
7136-6530	75
7136-6531	76
7136-2019	77
7136-2020	78
7136-2021	79
7136-2022	80

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**R3° Poly Trial Liners**

ID	OD	0° XLPE trial liner Cat. no.	20° XLPE trial liner Cat. no.	0° +4 XLPE trial liner Cat. no.	20° +4 XLPE trial liner Cat. no.
22	40	7136-0540	7136-5340	7136-6140	7136-8640
22	42	7136-0542	7136-5342	7136-6142	7136-8642
22	44	7136-0544	7136-5344	7136-6144	7136-8644

28	46	7136-0546	7136-6446	7136-8346	7136-8746
28	48	7136-0548	7136-6448	7136-8348	7136-8748
28	50	7136-0550	7136-6450	7136-8350	7136-8750
28	52	7136-0552	7136-6452	7136-8352	7136-8752
28	54	7136-0554	7136-6454	7136-8354	7136-8754
28	56	7136-0556	7136-6456	7136-8356	7136-8756
28	58	7136-0558	7136-6458	7136-8358	7136-8758
28	60	7136-0560	7136-6460	7136-8360	7136-8760

32	48	7136-5148	7136-6548	7136-8448	7136-8848
32	50	7136-5150	7136-6550	7136-8450	7136-8850
32	52	7136-5152	7136-6552	7136-8452	7136-8852
32	54	7136-5154	7136-6554	7136-8454	7136-8854
32	56	7136-5156	7136-6556	7136-8456	7136-8856
32	58	7136-5158	7136-6558	7136-8458	7136-8858
32	60	7136-5160	7136-6560	7136-8460	7136-8860
32	62	7136-5162	7136-6562	7136-8462	7136-8862

36	52	7136-5252	7136-7952	7136-8552	7136-9152
36	54	7136-5254	7136-7954	7136-8554	7136-9154
36	56	7136-5256	7136-7956	7136-8556	7136-9156
36	58	7136-5258	7136-7958	7136-8558	7136-9158
36	60	7136-5260	7136-7960	7136-8560	7136-9160
36	62	7136-5262	7136-7962	7136-8562	7136-9162
36	64	7136-5264	7136-7964	7136-8564	7136-9164
36	66-70	7136-5266	7136-7966	7136-8566	7136-9166
36	72-74	7136-6571	7136-6574	7136-6577	7136-6580
36	76-80	7136-2312	7136-2314	7136-2316	7136-2318

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### R3° Poly Trial Liners

ID	OD	0° XLPE trial liner Cat. no.	20° XLPE trial liner Cat. no.	0° +4 XLPE trial liner Cat. no.	20°+4 XLPE trial liner Cat. no.
40	56	7136-3420	7136-3422	7136-2030	7136-2035
40	58	7136-2023	7136-2026	7136-2031	7136-2036
40	60	7136-2024	7136-2027	7136-2032	7136-2037
40	62	7136-3421	7136-2028	7136-2033	7136-2038
40	64	7136-2025	7136-2029	7136-2034	7136-2039
40	66-70	7136-6569	7136-6572	7136-6575	7136-6578
40	72-74	7136-6570	7136-6573	7136-6576	7136-6579
40	76-80	7136-2311	7136-2313	7136-2315	7136-2317

44	60	7136-6081	7136-6094	7136-6087	7136-6101
44	62	7136-6082	7136-6095	7136-6088	7136-6102
44	64	7136-6083	7136-6096	7136-6089	7136-6103
44	66-70	7136-6084	7136-6097	7136-6091	7136-6104
44	72-74	7136-6085	7136-6098	7136-6092	7136-6105
44	76-80	7136-6086	7136-6099	7136-6093	7136-6106

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**R3° Screw in Trial Liner Set  
(28x44, 32x46, 36x50): 71358060**

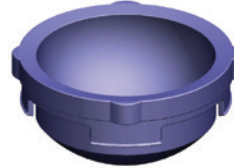
Cat. no.	Description
7193-5852	SCREW-IN R3 0DEG 28MM TRL ACET LNR 44MM
7193-5853	SCREW-IN R3 0DEG 32MM TRL ACET LNR 46MM
7193-5854	SCREW-IN R3 0DEG 36MM TRL ACET LNR 50MM
7193-5855	SCREW-IN R3 20DEG 28MM TRL ACET LNR 44MM
7193-5856	SCREW-IN R3 20DEG 32MM TRL ACET LNR 46MM
7193-5857	SCREW-IN R3 20DEG 36MM TRL ACET LNR 50MM
7193-5858	R3 28X44 32X46 36X50 TRL LNR TRY
7193-5859	R3 28X44 32X46 36X50 TRL LNR TRY LID





### R3° Ceramic Trial Liners

ID	OD	Cat. no.
32	48	7136-9748
32	50	7136-9750
36	52	7136-9752
36	54	7136-9754
36	56	7136-9756
36	58	7136-9758
36	60	7136-9760
36	62	7136-9762
36	64	7136-9764
36	66/68	7136-9766



### R3 Liner Impactor Heads

Cat. no.	Size mm
7136-6428*	28
7136-6432*	32
7136-6436*	36
7136-6438*	38-42
7136-6444*	44-48
7136-6451*	50-54



\*Exclusively for liner impaction












### R3 MIS Instruments

Cat. no.	Description
7136-8569	Offset Shell Impactor
7136-6052	Offset X-Bar
7136-3077	Offset Impactor Tip
7136-4073	Offset Reamer Handle



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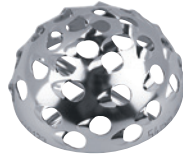
# Catalog *(continued)*

<p>R3° Straight Shell Impactor  <b>Cat. no.</b> 7136-4450</p>	
<p>R3 Impactor Replacement Tip  <b>Cat. no.</b> 7136-8570</p>	
<p>R3 Depth Gauge  <b>Cat. no.</b> 7136-4451</p>	
<p>X-Bar  <b>Cat. no.</b> MT-2201</p>	
<p>Screw Forceps  <b>Cat. no.</b> 7136-2298</p>	
<p>Ball Joint Screwdriver Shaft  <b>Cat. no.</b> 7136-2295</p>	
<p>R3 Variable Angle Drill Guide  <b>Cat. no.</b> 7136-4477</p>	
<p>Reamer Handle  <b>Cat. no.</b> 7136-2279</p>	
<p>Flexible Screw Drills  <b>Cat. no.</b>      <b>Length mm</b>  7136-2915    15  7136-2925    25  7136-2935    35  7136-2950    50</p>	
<p>Captured Flexible Screwdriver  Shaft  <b>Cat. no.</b> 7136-2291</p>	
<p>Captured U-Joint Screwdriver  Shaft  <b>Cat. no.</b> 7136-2292</p>	
<p>R3 Surgical Templates (not  shown)  <b>Cat. no.</b> 7138-0666</p>	

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R3° Trial Liner Removal Tool <b>Cat. no. 7136-4455</b>	
R3 Liner Removal Tool <b>Cat. no. 7136-6021</b>	
Hole Cover Impactor <b>Cat. no. 73-2117</b>	
Trial Shell Handle <b>Cat. no. 7136-2297</b>	
Flexible Screwdriver Shaft <b>Cat. no. 7136-2290</b>	
Ratchet Handle <b>Cat. no. 7136-2294</b>	
Small Slap Hammer <b>Cat. no. 7136-7541</b>	
Hole Cover Inserter <b>Cat. no. 73-2133</b>	
Straight Screwdriver Shaft <b>Cat. no. 7136-2293</b>	

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**Reamer Domes**

**Standard size**

Cat. no.	Size mm
7136-2742	42
7136-2743	43
7136-2744	44
7136-2745	45
7136-2746	46
7136-2747	47
7136-2748	48
7136-2749	49
7136-2750	50
7136-2751	51
7136-2752	52
7136-2753	53
7136-2754	54
7136-2755	55
7136-2756	56
7136-2757	57
7136-2758	58
7136-2759	59
7136-2760	60
7136-2761	61
7136-2762	62
7136-2763	63
7136-2764	64





**Small size**

Cat. no.	Size mm
7136-2738	38
7136-2739	39
7136-2740	40
7136-2741	41

**Large size**

Cat. no.	Size mm
7136-2765	65
7136-2766	66
7136-2767	67
7136-2768	68
7136-2769	69
7136-2770	70
7136-2771	71
7136-2772	72
7136-2773	73
7136-2774	74
7136-2775	75
7136-2776	76
7136-2777	77
7136-2778	78
7136-2779	79
7136-2780	80

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R3°/REFLECTION° Watertight Threaded Hole Cover <b>Cat. no.</b> 7133-0001	
R3/REFLECTION Threaded Hole Cover <b>Cat. no.</b> 7133-6500	
Spherical Head Screws <b>Cat. no.</b> <b>Length mm</b>	
7133-2515            15	
7133-2520            20	
7133-2525            25	
7133-2530            30	
7133-2535            35	
7133-2540            40	
7133-2545            45	
7133-2550            50	
7133-2555            55	
7133-2560            60	
7133-2565            65	
7133-2570            70	
R3 Screw Hole Cover <b>Cat. no.</b> 7136-9894	
Small Outer Case <b>Cat. no.</b> 7112-9401	
Lid for Outer Case <b>Cat. no.</b> 7112-9402	
R3 Trial Shell Tray <b>Cat. no.</b> 7136-2213	
R3 Jumbo Trial Liner Tray <b>Cat. no.</b> 7136-1076	
R3 Main Instrument Tray <b>Cat. no.</b> 7136-2211	
R3 MIS Instrument Tray <b>Cat. no.</b> 7136-2219	
R3 Primary Reamer Dome Tray <b>Cat. no.</b> 7136-2212	
R3 CDH Trial Tray <b>Cat. no.</b> 7136-1077	
R3 Disposable Trial Tote <b>Cat. no.</b> 7136-0656	

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## R3° US BioloX® delta 12/14 Femoral Heads

Cat. no.	Size mm
7132-5171	32 S/+0
7132-5172	32 M/+4
7132-5173	32 L/+8
7132-5174	36 S/+0
7132-5175	36 M/+4
7132-5176	36 L/+8





\*For US Market Only

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