Surgical Technique

smith&nephew

R3°

Acetabular System

INTENDED FOR NON-US USE ONLY

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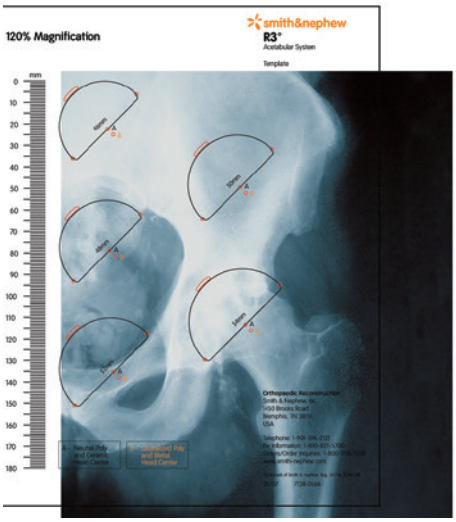
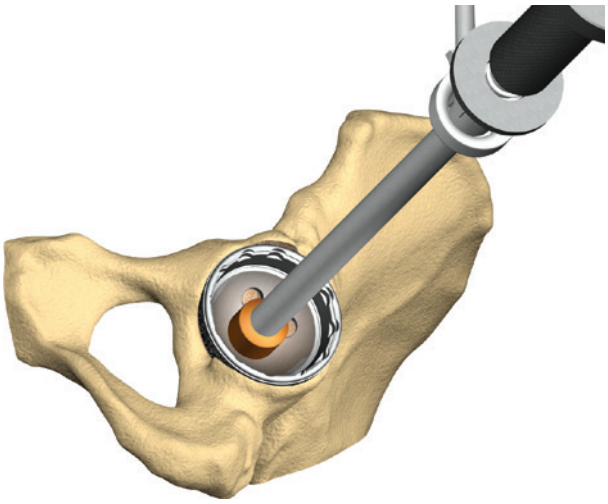
Nota Bene: *The technique description herein is made available to the healthcare professional to illustrate the authors' suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the patient. For more information on the products in this surgical technique, including indications for use, contraindications, effects, precautions and warnings, please consult the products' Instructions for Use (IFU).*

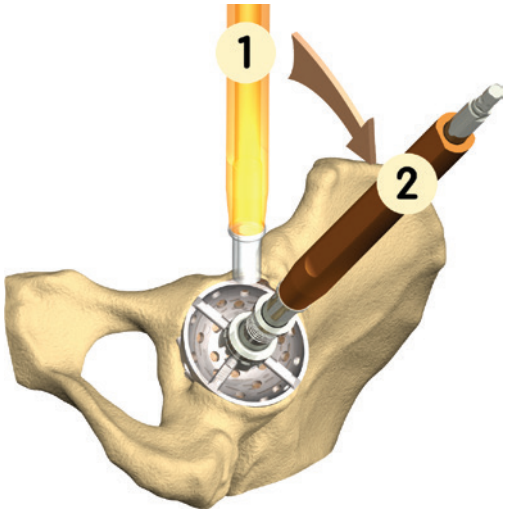
Short technique



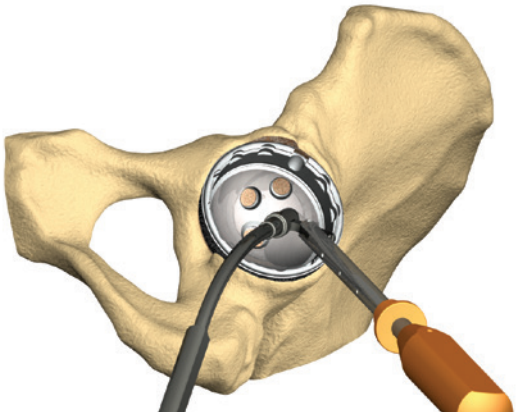
1. Preoperative planning



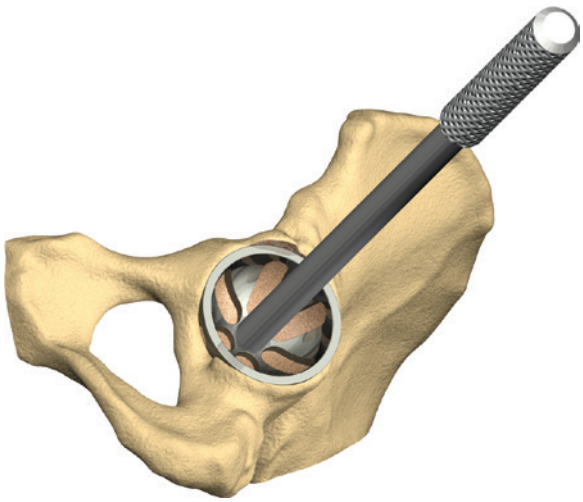
4.Shell insertion



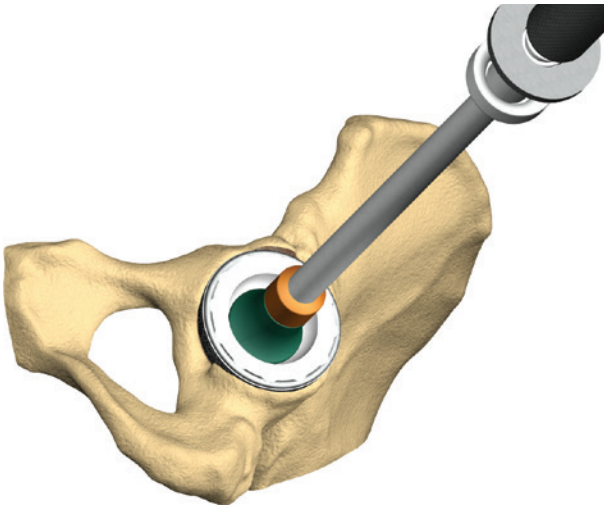
2.Acetabular reaming



5.Acetabular screw insertion



3.Acetabular trialing



6.Acetabular poly liner insertion

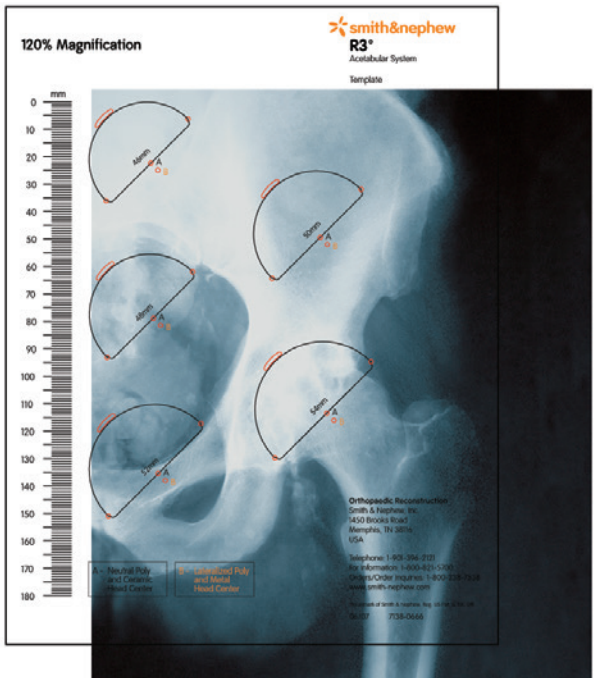
Preoperative planning

Preoperative X-Rays should include an A/P of the pelvis centered over the symphysis and an A/P 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.

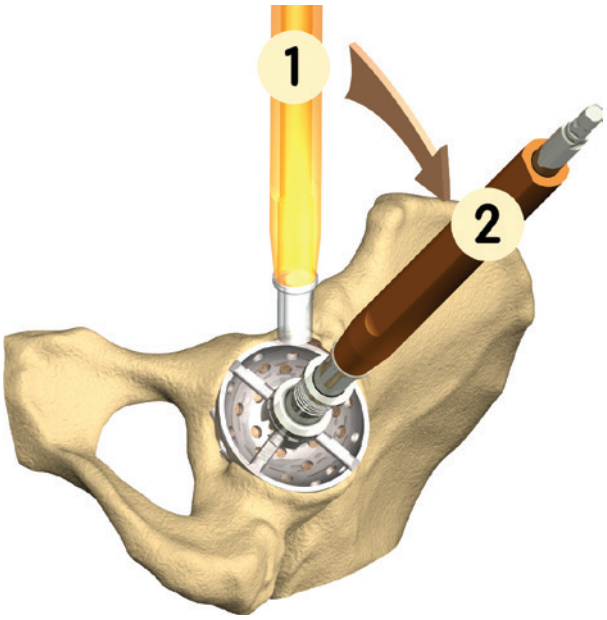
Remove all overhanging soft tissue and osteophytes in order to visualize the entire acetabular socket.

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, preventing the tendency of the reamer to migrate superiorly.
- Removal of soft tissue and overhanging osteophytes from the foveal notch aids visualization of the quadralateral 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 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. One might suggest leaving some remaining subchondral bone and removing the medial bone that is osteophyte and is covering fatty tissue.

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.

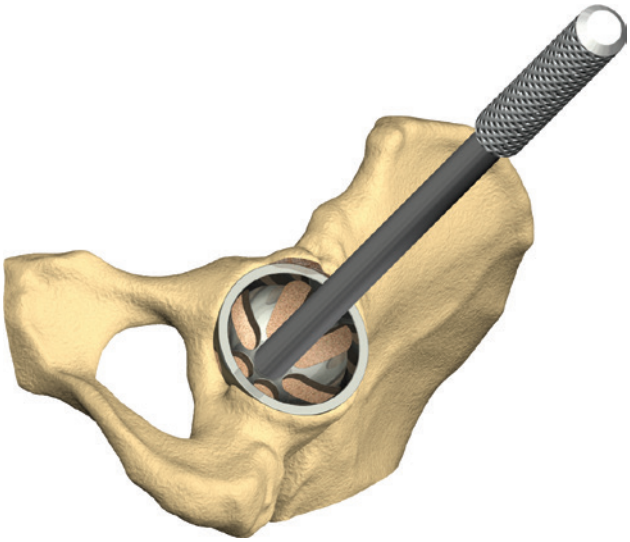
Surgical tips:

- 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.
- Mark the medial wall with an electrocautery prior to using the last reamer. If the last reamer does not remove the mark, repeat reaming, dropping back a size if necessary.

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 preparing the acetabulum, the trial shell should be inserted to verify size and position of the cup. The surgeon should note the appropriate orientation of the acetabular trial to position the cup correctly.

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.

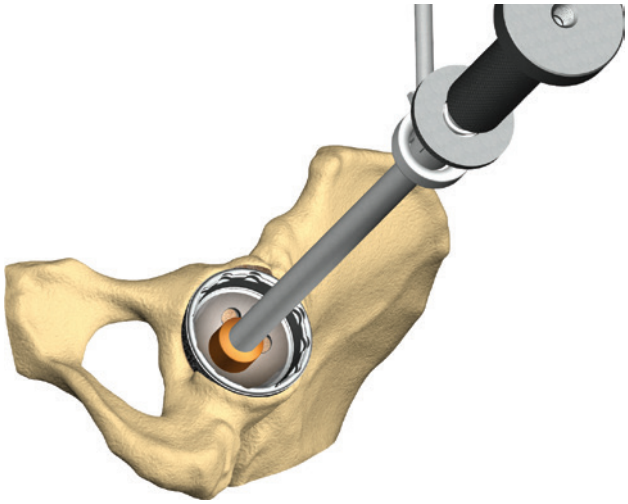
Surgical tip:

- The bone at the edge of the trial shell can be marked with an electrocautery 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 implant, attach the shell to the cup positioner/impactor and insert it into the acetabulum.

Rotate the X-Bar shaft so that it is in line with the liner removal slot. For the THREE HOLE cup, this positions the three holes in the superior direction. When implanting a MULTI HOLE shell, future access to the liner removal slot should be considered.

Position the X-Bar so that the vertical bar is perpendicular to the long axis of the body and the appropriate crossbar (left or right) aligns with the long axis of the body.

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

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.

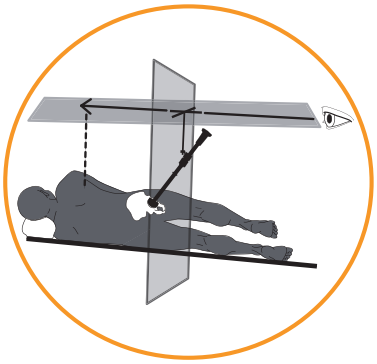
Specific to shells for R3° acetabular ceramic liners:
Proper range of motion is critical for implant longevity. If any repositioning of the shell is required, it should only be performed using the shell positioner. Any use of a punch, osteotome or other instrument on the shell's rim could result in damage 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.

Surgical tips:

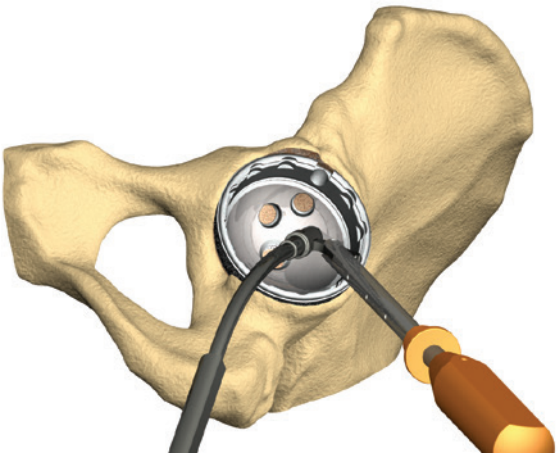
- The change in pitch that occurs as the shell is seated against the medial wall is often audible. A depth gauge can be inserted through the screw holes and apex hole to determine the adequacy of shell seating.
- Close attention should be paid to initial positioning of the R3 shell. However, the use of the slap hammer may be helpful in extracting the shell for repositioning.

Instrument tips:

- The plastic tip on the cup impactor is removable for cleaning, or replacement if damaged.
- The X-Bar references 45° of abduction and 20° of anteversion .



Acetabular screw insertion



Screw fixation is simple, fast and the most common method of assuring additional fixation. Acetabular screws work in compression, which allows the shell to fully seat in the acetabular cavity.

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 ball-joint or flexible screwdriver shaft to the end of the screw. 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.

Surgical tip:

- Screws have been shown to be a reliable method of assuring fixation; however, it is important to avoid neurovascular complications by proper screw placement, avoiding the anterior/superior or anterior/inferior quadrants.

R3◇ 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, if desired. 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. Ensure all soft tissue and osteophytes have been removed from the periphery of the shell to avoid interference with the liner lock.

Wipe the shell ID with a lap sponge or gauze until clean and dry. **Press the liner impactor firmly** until liner is partially locked. Then use light, repetitive impacts with the mallet until the liner is fully seated.

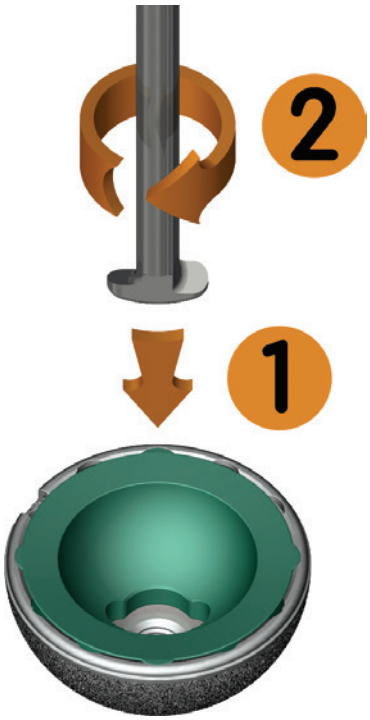
Inspect the liner/shell interface for proper seating. The liner should sit flush with the face of the shell.

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, increasing with the diameter of the shell.
- The XLPE liner 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.

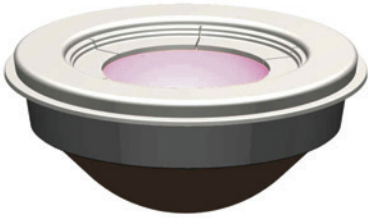
Instrument tips:

- The liner trials are designed with flexible locking tabs around the periphery that is a quick-snap design. Align tabs with indentions and snap into position. **Do not force trial.** 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.



R3 Hard Bearing insertion

R3 Hard Bearings come preassembled with a disposable single-use Hard Bearing Alignment Guide. The liner/alignment guide assembly is then introduced by hand and sits flush on the face of the shell. The liner must be checked for proper orientation. Verification of proper liner seating in the shell should be confirmed by both a visual check to see that the insertion ring is sitting on the shell face and a manual check with the fingers to feel that the ring does not rock on the face of the shell. Do not impact the liner if it is not oriented properly, as this can damage the shell and/or locking mechanism. 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.*



Surgical tip:

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

*** Cautionary Statement**
Be sure to remove the disposable Hard Bearing Alignment Guide. It is not intended for implantation.

In the event that the Hard Bearing Alignment Guide is disengaged from the liner, the alignment guide should be reassembled to the liner before implantation. This is accomplished by taking the disposable 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.

Specific to R3◇ ceramic liners

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.

Only Smith & Nephew ceramic femoral heads can be used with the R3 ceramic acetabular liners. Do not mix the ceramic liner or ceramic head with any other manufacturer's acetabular shell or stem, respectively. Use the appropriate size head and liner only. A sizing mismatch may result in premature implant failure. Once the liner or the head are impacted, the ridges machined into the metal 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 R3 ceramic liner is removed, a new R3 ceramic liner must be used.

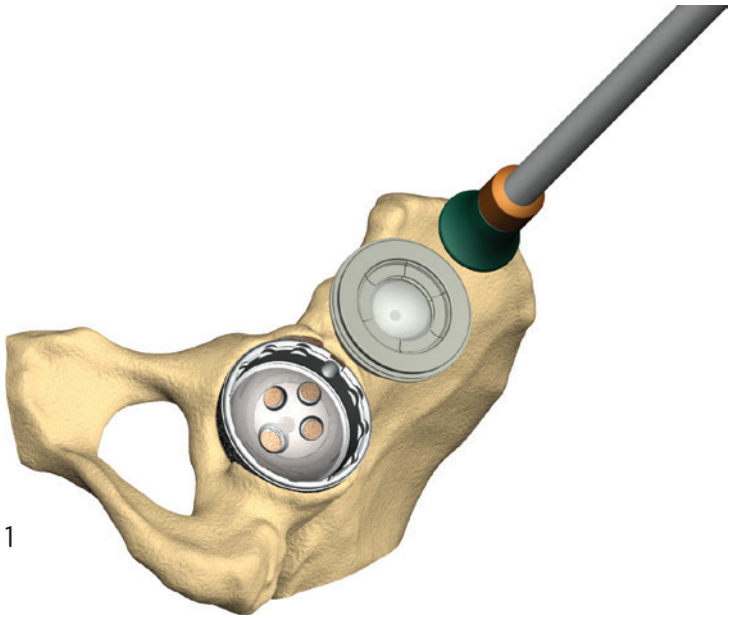
Surgical tip:

- Should a correction or revision of a R3 ceramic liner be necessary, 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 if necessary) the liner loose.

Head compatibility with liners

XLPE Liners may be used with CoCr, OXINIUM◇ and ceramic heads. Constrained Liners may be used with CoCr, and OXINIUM heads. Ceramic liners may only be used with ceramic heads.Use the appropriate size head for the liner as a sizing mismatch may result in premature implant failure.

Hard Bearing Liner insertion



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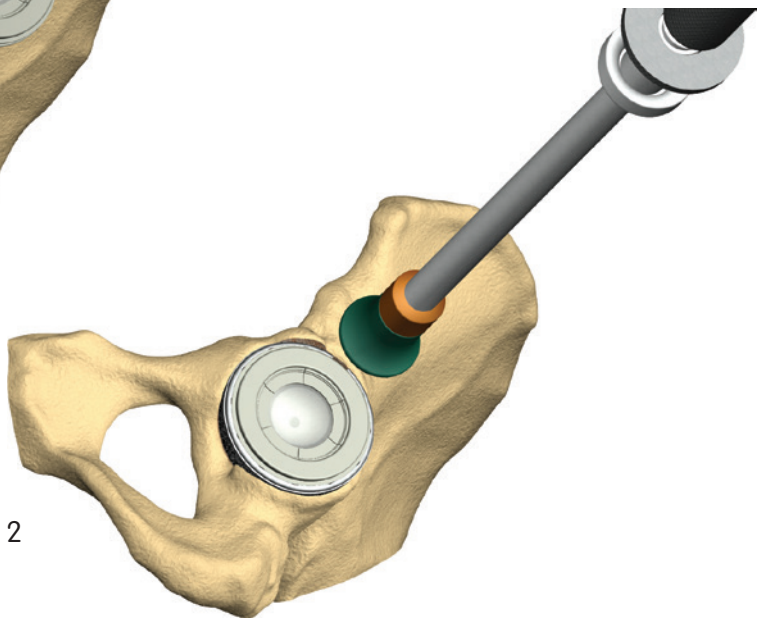

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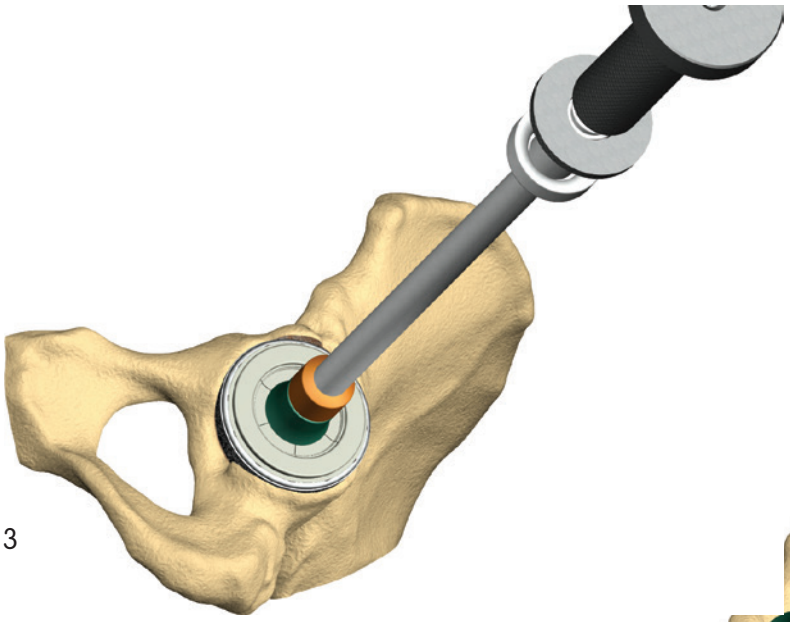

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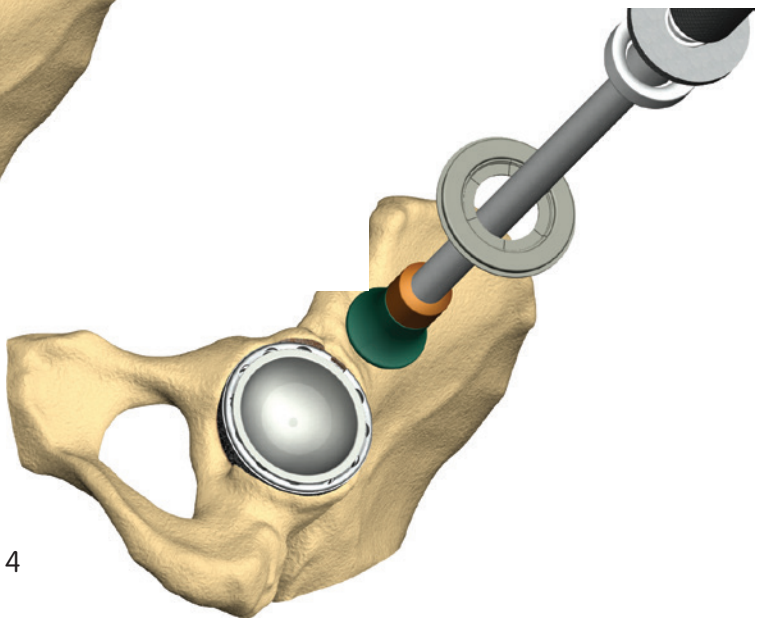

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Shell and liner offerings

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

Range of motion[1,2†*]

(SPECTRON® stem [size 3], +4 head offset)

REFLECTION® Acetabular System with XLPE liner				
	22mm	28mm	32mm	36mm
0°	133°	142°	145°	148°
20°	112°	122°	126°	128°

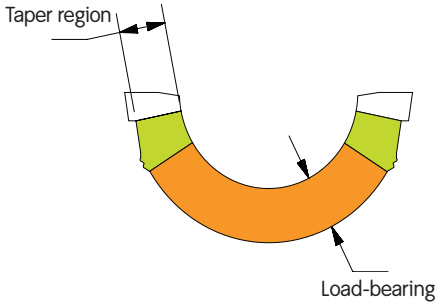
R3® Acetabular System with XLPE liner						
	22mm	28mm	32mm	36mm	40mm	44mm
0°	140°	150°	154°	157°	157°	157°
20°	132°	134°	136°	138°	138°	138°

* Individual results in patients may vary.
† Based on computer modelling.

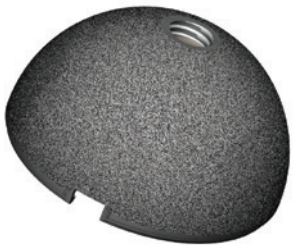
Poly thickness chart

Shell OD	Poly OD	Poly Thickness Taper Region mm	Poly Thickness Load-Bearing Region mm
40	22	5.5	6.1
42	22	6.5	7.1
44	22	7.5	8.1
46	28	5.4	6.1
48	28	6.4	7.1
48	32	4.3	5.1
50	28	7.3	8.1
50	32	5.3	6.1
52	28	8.3	9.1
52	32	6.3	7.1
52	36	4.3	5.1
54	28	9.3	10.1
54	32	7.3	8.1
54	36	5.3	6.1
56	28	10.3	11.1
56	32	8.3	9.1
56	36	6.3	7.1
56	40	4.6	5.0
58	28	11.3	12.1
58	32	9.3	10.1
58	36	7.3	8.1
58	40	5.3	6.0
60	28	12.3	13.1
60	32	10.3	11.1
60	36	8.3	9.1
60	40	6.5	7.0
60	44	4.3	5.0

Shell OD	Poly OD	Poly Thickness Taper Region mm	Poly Thickness Load-Bearing Region mm
62	32	11.3	12.1
62	36	9.3	10.1
62	40	7.5	8.0
62	44	5.3	6.0
64	36	10.3	11.1
64	40	8.4	9.0
64	44	6.4	7.0
66-70	36	11.3	12.1
66-70	40	9.3	10.0
66-70	44	7.2	8.0
72-74	36	13.8	14.0
72-74	40	11.8	12.0
72-74	44	9.8	10.0
76-80	36	15.8	16.0
76-80	40	13.8	14.0
76-80	44	11.8	12.0



R3° NO HOLE Acetabular Shells



Standard size shells

Cat. no.	ODmm
71331846	46
71331848	48
71331850	50
71331852	52
71331854	54
71331856	56
71331858	58
71331860	60
71331862	62
71331864	64

Small size shells

Cat. no.	ODmm
71331840	40
71331842	42
71331844	44

Large size shells

Cat. no.	ODmm
71331866	66
71331868	68

R3 NO HOLE HA Acetabular Shells

Standard size shells

Cat. no.	ODmm
71332246	46
71332248	48
71332250	50
71332252	52
71332254	54
71332256	56
71332258	58
71332260	60
71332262	62
71332264	64

Small size shells

Cat. no.	ODmm
71332240	40
71332242	42
71332244	44

Large size shells

Cat. no.	ODmm
71332266	66
71332268	68

R3 THREE HOLE Acetabular Shells

Standard size shells

Cat. no.	ODmm
71335546	46
71335548	48
71335550	50
71335552	52
71335554	54
71335556	56
71335558	58
71335560	60
71335562	62
71335564	64

Small size shells

Cat. no.	ODmm
71335540	40
71335542	42
71335544	44

Large size shells

Cat. no.	ODmm
71335566	66
71335568	68

R3° THREE HOLE HA Acetabular Shells

Standard size shells

Cat. no.	ODmm
71331946	46
71331948	48
71331950	50
71331952	52
71331954	54
71331956	56
71331958	58
71331960	60
71331962	62
71331964	64

Small size shells

Cat. no.	ODmm
71331940	40
71331942	42
71331944	44

Large size shells

Cat. no.	ODmm
71331966	66
71331968	68

R3 MULTI HOLE Acetabular Shells

Standard size shells

Cat. no.	ODmm
71338663	48
71338664	50
71338665	52
71338666	54
71338667	56
71338668	58
71338669	60
71338671	62
71338672	64

Large size shells

Cat. no.	ODmm
71338673	66
71338674	68
71338675	70

Jumbo size shells

Cat. no.	ODmm
71338676	72
71338677	74
71338678	76
71330009	78
71330010	80

R3 HA MULTI HOLE Acetabular Shells

Standard size shells

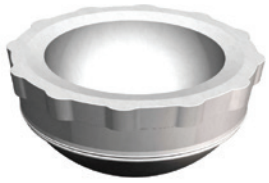
Cat. no.	ODmm
71338733	48
71338734	50
71338735	52
71338736	54
71338737	56
71338738	58
71338739	60
71338740	62
71338741	64

Large size shells

Cat. no.	ODmm
71338742	66
71338743	68
71338744	70

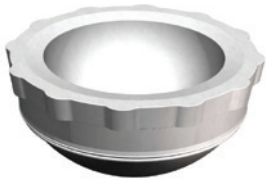
Jumbo size shells

Cat. no.	ODmm
71338745	72
71338747	74
71338749	76
71331138	78
71331139	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	71334840	71334940	71335840	71337140
22	42	71334842	71334942	71335842	71337142
22	44	71334844	71334944	71335844	71337144
28	46	71337546	71334946	71335946	71337746
28	48	71337548	71334948	71335948	71337748
28	50	71337550	71334950	71335950	71337750
28	52	71337552	71334952	71335952	71337752
28	54	71337554	71334954	71335954	71337754
28	56	71337556	71334956	71335956	71337756
28	58	71337558	71334958	71335958	71337758
28	60	71337560	71334960	71335960	71337760
32	48	71339548	71337648	71336648	71337948
32	50	71339550	71337650	71336650	71337950
32	52	71339552	71337652	71336652	71337952
32	54	71339554	71337654	71336654	71337954
32	56	71339556	71337656	71336656	71337956
32	58	71339558	71337658	71336658	71337958
32	60	71339560	71337660	71336660	71337960
32	62	71339562	71337662	71336662	71337962
36	52	71332752	71335752	71336952	71338552
36	54	71332754	71335754	71336954	71338554
36	56	71332756	71335756	71336956	71338556
36	58	71332758	71335758	71336958	71338558
36	60	71332760	71335760	71336960	71338560
36	62	71332762	71335762	71336962	71338562
36	64	71332764	71335764	71336964	71338564
36	66-70	71330766	71331266	71331566	71332666
36	72-74	71338686	71338694	71338703	71338712
36	76-80	71331103	71331112	71331114	71338946



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	71338679	71338687	71338695	71338704
40	58	71338680	71338688	71338696	71338705
40	60	71338681	71338689	71338697	71338706
40	62	71338682	71338690	71338698	71338707
40	64	71338683	71338691	71338699	71338708
40	66-70	71338684	71338692	71338701	71338709
40	72-74	71338685	71338693	71338702	71338711
40	76-80	71331094	71331104	71331113	71331116
44	60	71331096	71331106	71330011	71331118
44	62	71331097	71331107	71330012	71331119
44	64	71331098	71331108	71330013	71331121
44	66-70	71331099	71331109	71330014	71331122
44	72-74	71331101	71331110	71330016	71331123
44	76-80	71331102	71331111	71330017	71331124

R3° INTL Delta Ceramic Liners*

ID	OD	Cat. no.
32	48	71331748
32	50	71331750
36	52	71331752
36	54	71331754
36	56	71331756
36	58	71331758
36	60	71331760
36	62	71331762
36	64	71331764
36	66/68	71331766

*For Use with Smith & Nephew BIOLOX® Delta and BIOLOX Forte Ceramic Heads only.

R3° Trial Shells

Standard size trial shells

Cat. no.	ODmm
71360745	45
71360746	46
71360747	47
71360748	48
71360749	49
71360750	50
71360751	51
71360752	52
71360753	53
71360754	54
71360755	55
71360756	56
71360757	57
71360758	58
71360759	59
71360760	60
71360761	61
71360762	62
71360763	63
71360764	64

Small size trial shells

Cat. no.	ODmm
71360739	39
71360740	40
71360741	41
71360742	42
71360743	43
71360744	44

Large size trial shells

Cat. no.	ODmm
71360765	65
71360766	66
71360767	67
71360768	68
71366524	69
71366525	70

Jumbo size trial shells

Cat. no.	ODmm
71366526	71
71366527	72
71366528	73
71366529	74
71366530	75
71366531	76
71362019	77
71362020	78
71362021	79
71362022	80

R3° Poly Trial Liners

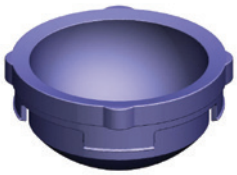
ID	OD	0° XLPE trial liner Cat. no.	20° XLPE trial liner Cat. no.	0° +4 XLPE trial liner Cat. no.	20°+4 XLPE trial liner Cat. no.
22	40	71360540	71365340	71366140	71368640
22	42	71360542	71365342	71366142	71368642
22	44	71360544	71365344	71366144	71368644
28	46	71360546	71366446	71368346	71368746
28	48	71360548	71366448	71368348	71368748
28	50	71360550	71366450	71368350	71368750
28	52	71360552	71366452	71368352	71368752
28	54	71360554	71366454	71368354	71368754
28	56	71360556	71366456	71368356	71368756
28	58	71360558	71366458	71368358	71368758
28	60	71360560	71366460	71368360	71368760
32	48	71365148	71366548	71368448	71368848
32	50	71365150	71366550	71368450	71368850
32	52	71365152	71366552	71368452	71368852
32	54	71365154	71366554	71368454	71368854
32	56	71365156	71366556	71368456	71368856
32	58	71365158	71366558	71368458	71368858
32	60	71365160	71366560	71368460	71368860
32	62	71365162	71366562	71368462	71368862
36	52	71365252	71367952	71368552	71369152
36	54	71365254	71367954	71368554	71369154
36	56	71365256	71367956	71368556	71369156
36	58	71365258	71367958	71368558	71369158
36	60	71365260	71367960	71368560	71369160
36	62	71365262	71367962	71368562	71369162
36	64	71365264	71367964	71368564	71369164
36	66-70	71365266	71367966	71368566	71369166
36	72-74	71366571	71366574	71366577	71366580
36	76-80	71362312	71362314	71362316	71362318

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	71363420	71363422	71362030	71362035
40	58	71362023	71362026	71362031	71362036
40	60	71362024	71362027	71362032	71362037
40	62	71363421	71362028	71362033	71362038
40	64	71362025	71362029	71362034	71362039
40	66-70	71366569	71366572	71366575	71366578
40	72-74	71366570	71366573	71366576	71366579
40	76-80	71362311	71362313	71362315	71362317
44	60	71366081	71366094	71366087	71366101
44	62	71366082	71366095	71366088	71366102
44	64	71366083	71366096	71366089	71366103
44	66-70	71366084	71366097	71366091	71366104
44	72-74	71366085	71366098	71366092	71366105
44	76-80	71366086	71366099	71366093	71366106

R3° Ceramic Snap in Trial Liners

ID	OD	Cat. no.
32	48	71369748
32	50	71369758
36	52	71369752
36	54	71369754
36	56	71369756
36	58	71369758
36	60	71369760
36	62	71369762
36	64	71369764
36	66/68	71369766



R3 Liner Impactor Heads

Cat. no.	Size mm
71366428*	28
71366432*	32
71366436*	36
71366438*	38-42
71366444*	44-48
71366451*	50-54

*Exclusively for liner impaction

Note: When using a 22mm Liner, you will need to order a Reflection 22mm Impactor Head (71362222) separately.

R3 MIS Instruments

Cat. no.	Description
71368569	Offset Shell Impactor
71366052	Offset X-Bar
71363077	Offset Impactor Tip
71364073	Offset Reamer Handle

Catalog

R3° Straight Shell Impactor **Cat. no.** 71364450	
R3 Impactor Replacement Tip **Cat. no.** 71368570	
R3 Depth Gauge **Cat. no.** 71364451	
X-Bar **Cat. no.** MT-2201	
Screw Forceps **Cat. no.** 71362298	
Ball Joint Screwdriver **Cat. no.** 71362295	
R3 Variable Angle Drill Guide **Cat. no.** 71364477	
Reamer Handle **Cat. no.** 71362279	
Flexible Screw Drills **Cat. no.** **Length mm** 71362915 15 71362925 25 71362935 35 71362950 50	
Captured Flexible Screwdriver Shaft **Cat. no.** 71362291	
Captured U-Joint Screwdriver Shaft **Cat. no.** 71362292	
R3 Surgical Templates sizes 40-68 (not shown) **Cat. no.** 71380666	
R3 Surgical Templates sizes 70-80 (not shown) **Cat. no.** 71381508	

R3° Trial Liner Removal Tool **Cat. no.** 71364455	
R3 Liner Removal Tool **Cat. no.** 71366021	
Hole Cover Impactor **Cat. no.** 73-2117	
Trial Shell Handle **Cat. no.** 71362297	
Flexible Screwdriver **Cat. no.** 71362290	
Ratchet Handle **Cat. no.** 71362294	
Small Slap Hammer **Cat. no.** 71367541	
REFLECTION° Mallet **Cat. no.** 71362106	
Hole Cover Inserter **Cat. no.** 73-2133	
Straight Screwdriver Shaft **Cat. no.** 71362293	
Power Adaptors (not shown) **Cat. no.** 71362781 Synthes 71362782 Asculap 71362783 Hudson	

Reamer Domes

Standard size		Small size	
Cat. no.	**Size mm**	**Cat. no.**	**Size mm**
71362742	42	71362738	38
71362743	43	71362739	39
71362744	44	71362740	40
71362745	45	71362741	41
71362746	46		
71362747	47	**Large size**	
71362748	48	**Cat. no.**	**Size mm**
71362749	49	71362765	65
71362750	50	71362766	66
71362751	51	71362767	67
71362752	52	71362768	68
71362753	53	71362769	69
71362754	54	71362770	70
71362755	55	71362771	71
71362756	56	71362772	72
71362757	57	71362773	73
71362758	58	71362774	74
71362759	59	71362775	75
71362760	60	71362776	76
71362761	61	71362777	77
71362762	62	71362778	78
71362763	63	71362779	79
71362764	64	71362780	80

R3®/REFLECTION® Threaded Hole Cover **Cat. no.** 71336500	
Spherical Head Screws **Cat. no.** / **Length mm** 71332515 / 15 71332520 / 20 71332525 / 25 71332530 / 30 71332535 / 35 71332540 / 40 71332545 / 45 71332550 / 50 71332555 / 55 71332560 / 60 71332565 / 65 71332570 / 70	
R3 Screw Hole Cover **Cat. no.** 71369894	
Small Outer Case **Cat. no.** 71129401 (not shown)	
Lid for Outer Case **Cat. no.** 71129402 (not shown)	
R3 Trial Shell Tray **Cat. no.** 71362213 (not shown)	
R3 Main Instrument Tray **Cat. no.** 71362211 (not shown)	
R3 MIS Instrument Tray **Cat. no.** 71362219 (not shown)	
R3 Primary Reamer Dome Tray **Cat. no.** 71362212 (not shown)	
R3 CDH Trial Tray **Cat. no.** 71361077 (not shown)	

Catalog

R3◇ Jumbo Trial Shell & Reamer Set **Cat. no.** 71362230
R3 XL Revision Reamer Set **Cat. no.** 71362160
R3 XL Revision Trial Shell Set **Cat. no.** 71362170
R3 Jumbo Trial Liner Set 66-70mm **Cat. no.** 71362090
R3 XL 0 Deg. Trial Liner Set 71-80mm **Cat. no.** 71362180
R3 XL 20 Deg. Trial Liner Set 71-80mm **Cat. no.** 71362190
R3 0 Deg. Multi ID Trial Liner Set 46-64mm Cat. no. 71360675
R3 20 Deg. Multi ID Trial Liner Set 46-64mm **Cat. no.** 71360681
R3 0 Deg. +4 Multi ID Trial Liner Set 46-64mm **Cat. no.** 71360676
R3 20 Deg. +4 Multi ID Trial Liner Set 46-64mm **Cat. no.** 71360683
R3 Ceramic Trial Liner Set 48-64mm **Cat. no.** 71360685
R3 0° 40mm Trial Liner Tray **Cat. no.** 71360782
R3 20° 40mm Trial Liner Tray **Cat. no.** 71360783
R3 0° +4 40mm Trial Liner Tray **Cat. no.** 71360784
R3 20° +4 40mm Trial Liner Tray **Cat. no.** 71360786
R3 0° and 20° 44mm Permanent Trial Liner Tray 60-70mm **Cat. no.** 71366981
R3 0° and 20° +4 44mm Permanent Trial Liner Tray 60-70mm **Cat. no.** 71366982
R3 0° and 20° +4 44mm Permanent Trial Liner Tray 72-80mm **Cat. no.** 71366983

Notes

Notes

References

1. Barrack RL, Thornberry RL, Ries MD, Lavernia C, Tozakoglou E. The Effect of Component Design on Range of Motion to Impingement in Total Hip Arthroplasty. AAOS Instructional Course Lectures. 2001;50:275 - 280.

2. Thornberry RL, Lavernia CJ, Barrack RL, Tozakoglou E. The Effects of Neck Geometry in Acetabular Design on Motion to Impingement. Paper presented at: AAHKS Eighth Annual Meeting; 1998.

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