



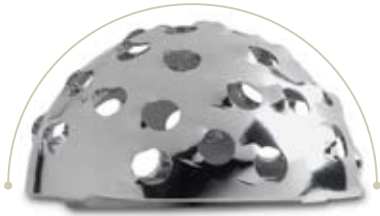
Zimmer®
Continuum™
Acetabular
System

Surgical Technique

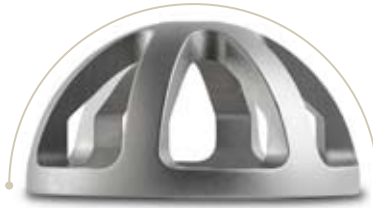


Bringing together proven technologies.





Acetabular Reamer
54mm Reamer has a 54mm O.D.



Shell Provisional
54mm Provisional has a 54mm O.D.



Acetabular Cup
54mm *Continuum* Cup has a 54mm O.D.

Introduction

- The labeled outside diameter (O.D.) of the acetabular cup represents the true hemispherical diameter of the Implant. An appropriate undersized reamer must be used to prepare the acetabulum if a press-fit condition is desired.
- The amount of press fit used should be determined at the time of surgery and be based on bone quality.
- Shell Implants are labeled with the exterior size and a corresponding two letter code (e.g. 54 JJ). The matching Liner Implants are identified with the matching letter code and head diameter (e.g. JJ 28, JJ 32 or JJ 36).

Templating

- The primary goal of templating is to estimate the size and position of the acetabular Implant.
- To increase the accuracy of templating, digital imaging or x-rays with magnification markers should be used. The magnification of the x-rays and the templates should be compared when sizing the Implant.

Templating should start with the A/P radiograph (**Fig. 1**)

- The component should be positioned no more medial than the Cotyloid Notch or against the radiographic tear drop.
- To avoid vertical cup placement a line drawn along the cup template opening should intersect the obturator foramen.
- It may be helpful to cross-check the acetabular component size on the lateral radiograph, which can provide a view of the hemispherical subchondral bone.
- The largest component that meets these requirements should be selected. However, the final decision on component size should be made during surgery, when all aspects of the acetabulum can be fully visualized.

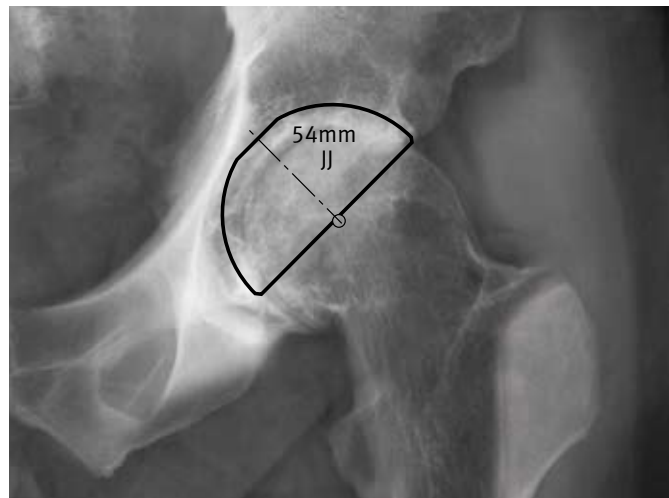


Fig. 1

AP Templating View.

Acetabular Reaming

- From templating and preoperative planning, determine the desired head position.
- Start with a smaller reamer, then progress to the next largest size until exposing bleeding cancellous bone.

N **Note:** Take extra care to avoid eccentric reaming by holding the reamer steady. Apply constant pressure in the recommended final Implant orientation of 45 degrees of abduction and 20 degrees of forward flexion.

Caution: Throughout the entire procedure, take care in handling sharp Implants or Instruments.

Shell Provisional Insertion and Alignment

- Proper care must be taken to assess bone quality and to determine the appropriate Implant size and type.
- Place the Shell Inserter Adapter, with or without Rotational Control, onto the tip of either the Straight or Offset Hybrid Shell Inserter.
- Insert a Ball Head Hex Driver through the window and into the locking Screw at the tip of the Inserter. **(Fig. 2)**
- Place the selected size Shell Provisional over the tip of the Adapter so the square tip of the Adapter mates with the square recess at the pole of the Provisional. **(Fig. 3)**
- While holding the Shell Provisional in place, securely thread the Locking Screw into the Polar Hole of the Shell Provisional.
- Attach the Alignment Frame to the Inserter and tighten the thumb Screw.

See the following diagrams for use instructions on the lateral and supine approaches (Pages 14, 15, 16, 17).



Fig. 2

Attaching the Shell Provisional to the Inserter Handle using the Hex-Head Driver.



Fig. 3

The Shell Inserter with Adaptor mating with the Provisional Shell.

N **Note: The Alignment Support Frame on the Shell Inserter will not be vertical to the floor and should not be used as a positioning guide. (Fig. 4) The arms on the Guide are used to correctly position the Provisional Shell and/or Implant.**

- With the Shell Provisional in the appropriate alignment, use a mallet to impact the handle of the Inserter.
- When the Shell Provisional is fully seated, turn the Driver counterclockwise to loosen the attachment Screw on the Inserter.
- Remove the Inserter.

The Shell Provisional has fenestrations to assess proper cup seating inside the acetabulum.

Provisional Liner Insertion

Inserting the Provisional Liner

- Select the Provisional Liner size that matches the selected Provisional Shell.
- The selected Shell Provisional will be identified through a size and a two letter code (e.g. 50 HH). There are different inner diameter Implant sizes available for each Shell size. The Provisional Liner will be identified by letter code matching the Shell diameter and desired inner diameter (e.g. 32 HH).
- Use a Hex-head Driver to insert the Provisional Locking Screw through the Polar Hole of the Provisional Liner. The Provisional Locking Screw will have a silver ring. The smallest Liners in head sizes 36 and 40 (HH 36 and JJ 40) do not have a Locking Screw and seat with a peg feature.
- Insert the Provisional Liner by hand into the Shell Provisional.

N **Note: Do not impact the Provisional Liner as damage may occur.**

- Thread the Locking Screw into the Polar Hole of the Shell Provisional.

Trial Range of Motion

- Insert a head/neck Provisional onto the Implanted Stem or Rasp Cone Provisional and perform a trial reduction.
- Check for stability and range of motion.
- Remove the Provisional components.

N **Note: Refer to Zimmer's product compatibility website, www.productcompatibility.zimmer.com, to determine compatibility among all selected components.**



Fig. 4

Do not use the support frame to align the Provisional Shell or Shell Implant.

Implant Insertion

- As previously mentioned, there are two Adaptors for the Inserter Handles. The Adapter with Rotational control locks to prevent the Implant from rotating freely on the Inserter handle. If this Adapter is used with a Cluster Hole Shell, the dark etch on the Adapter should be in line with the alignment frame on the Inserter to allow for Cluster Hole placement in the posterior superior and posterior inferior quadrants.

N Note: The Shell Inserter Adapter without Rotational Control will allow the Implant to rotate freely on the Inserter. Use this Adapter when it is necessary to position the Screw Holes in a specific location within the acetabulum.

- The Shell Inserter Adapter with Rotational control has two pins that will fit into slots at the tip of the Inserter. These pins are not found on the Shell Inserter Adapter without Rotational Control.
- Insert a Ball Hex Head Driver through the opening and into the locking Screw at the tip of the Inserter.
- Place the Implant over the tip of the Adapter so the square tip of the Adapter mates with the square recess at the pole of the Implant.
- While holding the Implant in place, securely thread the locking Screw into the Polar Hole of the Implant. Excessive torque forces may cause damage to the thread of the Polar Hole.
- Ensure that the patient is in the correct position for the selected surgical approach.
- Attach the Alignment Frame to the Inserter and tighten the thumb Screw.
- With the final prosthesis connected to the Shell Inserter, insert the Implant into the prepared acetabulum.
- To achieve 45 degrees of abduction and 20 degrees of forward flexion:
 - When using the Lateral Alignment Guide, ensure that the Lateral Frame is parallel to the floor, and that the anterior rod of the Alignment Frame is in line with the patient's torso. (Fig. 20 page 14)
 - When using the Supine Alignment Guide, align the Lateral Arm of the guide with the long axis of the body. (Fig. 22 page 16)

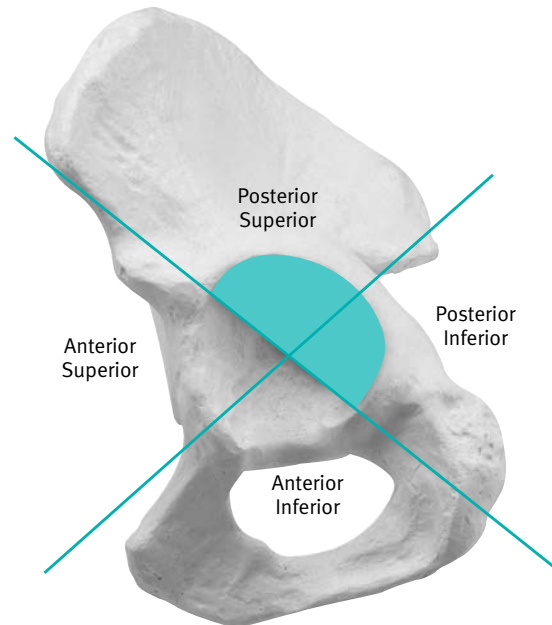


Fig. 5

Correct location for Screw placement in shaded regions.

N Note: The potential for neurologic and vascular injury can be minimized if the posterior quadrants are used for transacetabular Screw placement.* The Shell should be positioned to allow Screw placement in the posterior superior and/or posterior inferior quadrants of the acetabulum. (Fig. 5) The Continuum Screw Holes are located closer to the Polar region as compared to the Trabecular Metal™ Shell.

* Wasielewski RC, Cooperstein LA, Kruger MP, Rubash HE. Acetabular anatomy and the transacetabular fixation of screws in total hip arthroplasty. *J Bone Joint Surg.* 1990;72-A(4):501-508.

- With the Implant in the appropriate position and alignment, use a mallet to impact the handle of the Inserter.
- When the Implant is fully seated, turn the Driver counterclockwise to loosen the attachment Screw on the Inserter.
- Remove the Inserter.

N **Note:** The impact required to seat the Implant is dictated by the bone quality.

N **Note:** Do not lever on the Shell or the cup Inserter to reposition the Implant, as damage may occur to the threads or inner diameter of the Shell.

Screw Insertion

If Screw placement is desired:

- Carefully following these steps for Screw insertion can help to minimize Screw push through or torque out after initial Implantation.
- Drill a pilot hole, using either a Modular or one-piece Flex Drill.
- If using the Modular Flex Drill attach the selected bit using the Hex Wrench. (Fig. 6) Check the bit to ensure that it is not dull.
- Position the Adjustable Drill Guide and Flex Drill into the selected Screw Hole. (Fig. 7)
- For sclerotic bone, an option may be to tap the Screw hole.
 - Attach the Modular Tap Shaft into the Modular Handle by pulling back on the snap-lock collet and aligning the hole in the shaft with the etched line on the collet.
 - Attach the appropriate Tap to the Modular Tap Shaft.
 - Bicortical tapping the entire depth should be done with care by turning the Tap Handle clockwise.



Fig. 6

Attaching the bit to the Flex Drill with the Hex Wrench.



Fig. 7

Inserting the Adjustable Drill Guide and Modular Flex Shaft into the Shell.

After drilling the pilot or tapping the Screw hole:

- Use the Depth Gauge to measure the depth of the Screw hole. (Fig. 8)
- Select the appropriate length *Trilogy*® Screw.
- Use a Screwdriver to insert it into the selected Screw hole. Screws cannot be inserted into the Polar Hole at the Dome of the Shell. (Fig. 9)
- Check to ensure that the heads of inserted Screws are below the inner diameter of the cup. Screw heads that protrude into the inner Shell can prevent adequate seating of the Insert. (Fig. 10)
- Place additional Screws as necessary.
- Carefully evaluate the bone quality, and avoid over tightening the Screws.
- To remove a Screw, engage the Screw with a Hex-head Driver and turn it counter clock wise.

Warning: Avoid Screw placement through the Shell into the anterior inferior and anterior superior quadrants of the acetabulum to prevent injury to the neurovascular structures.



Fig. 8

Using the Depth Gauge to measure the screw hole depth.

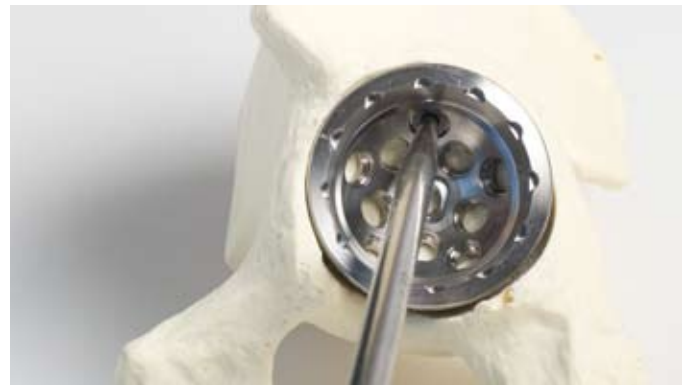


Fig. 9

Using a screwdriver to insert the screws.



Fig. 10

Checking to ensure that the screws are properly seated.

Optional Screw Hole Plugs

Screw Hole Plug

- Place a Screw Hole Plug on the appropriate Hex-head Driver to insure it is perpendicular to the Screw Hole Plug.
- Align the Plug and Screw Hole until the Plug clearly drops into the Hole.

N **Note:** The Screw Hole Plugs are slightly oval in shape and engage by providing an interference fit.

- To lock the Plug, turn it in either direction. The Plug will lock in place with a partial turn.
- To remove the Hole Plug, turn in the opposite direction to release the friction fit. (Fig. 11)

Provisional Liner Positioning

- Clean and dry the cup with a sterile cloth, wipe or sponge to remove third body debris.
- Clear all soft tissue from around the perimeter of the Shell and assess visualization.
- Use a Hex-head Driver to insert the Provisional Locking Screw through the Polar Hole of the Provisional Liner. The smallest Liners in head size 36mm and 40mm (HH 36 and JJ 40) do not have a Locking Screw and seat with a peg feature.
- Insert the Provisional Liner into the Implanted Shell by hand.

N **Note:** Do not impact the Provisional Liner as damage may occur.

- Use a Hex-head Driver to thread the Provisional Locking Screw through the Polar Hole of the Provisional Liner.
- When the appropriate Liner selection is confirmed, remove the Provisional Locking Screw.
- Remove the Provisional Liner.

Optional Dome Hole Plugs

- Insert a Plug into the Polar Hole and thread it into place.
- When correctly inserted the Plug will be slightly inset relative to the interior surface of the Shell, but it will be slightly proud within the recessed square at the pole. (Fig. 12)
- Take care not to overtighten the Dome Hole Plug.

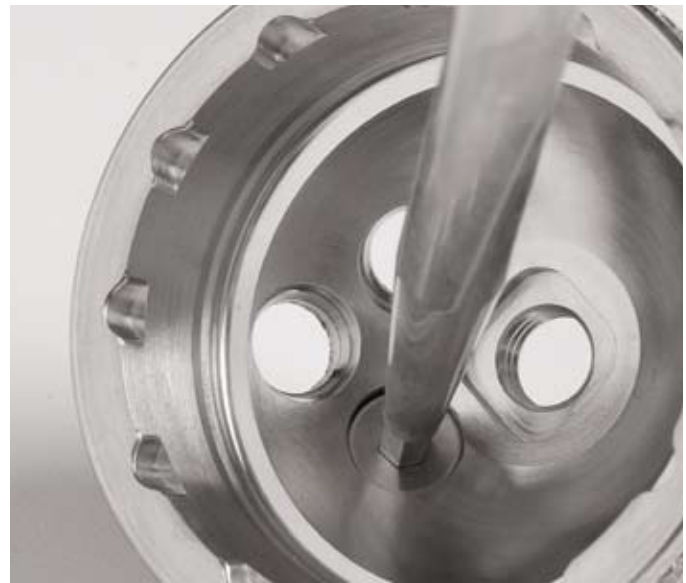


Fig. 11

Screw Hole Plug insertion.



Fig. 12

Correct seating of the Polar Hole Plug.

Liner Insertion Instrument

Metasul® or BIOLOX®* delta Liners

- Prior to inserting the hard bearing liner, ensure the interior of the Shell and the Liner and Liner Insertion Tool are clean and dry. Also inspect the Shell to ensure that no damage occurred to the taper, Dome hole Plugs or Screw hole Plugs.
- *Metasul* or *BIOLOX* delta Liners can be inserted by hand or using the Liner Insertion Tool.
- If using the Liner Insertion Tool, follow these Assembly Instructions:
 - Insert the suction tip onto the shaft of the Instrument up to the etch line. Ensure that the shaft is bottomed out in the suction tip.
 - Saline or water can be used to lubricate the suction cup for easier assembly.
- Engage Liner and Liner Insertion Tool by depressing the suction cup in the liner.
- Insert the liner into the Shell.
- Remove the liner inserter tool by lifting up on the interior rod to release the vacuum. (Fig. 13)

N **Note:** Do not impact the liner insertion Instrument. This is indicated on the Instrument using the following symbol.



- Select the correct size Hard Bearing Rim Impactor or Dome Impactor, which will match the implant head size (28mm, 32mm, 36mm or 40mm).
- Align the pins on either the straight or curved Universal Handle with the keyhole slot on the underside of the Adapter. (Fig. 14)
- Push the Impactor onto the handle and twist it in either direction to lock it in place.



Fig. 13

Disengaging the Liner Insertion Instrument.



Fig. 14

Dome Impactor Adapter.

- Center either the *Metasul* or *BIOLOX* delta liner by rocking the impactor handle prior to impaction. (Fig. 15) This will decrease the likelihood of incorrect liner seating.
- Palpate the liner to ensure it is uniformly seated prior to impaction.
- Place the Hard Bearing rim impaction Adapter on the liner.
- Firmly strike the Universal Handle once with a mallet to fully seat the liner.
- Verify that the liner is properly inserted. When fully inserted, it should be flush and level to the face of the Shell. (Fig. 16)

N **Note:** Larger sized *Metasul* and *BIOLOX* delta Liners may be difficult to handle and assemble given their greater weight.



Fig. 15

Rocking Impactor Handle to center Hard Bearing Liner.



Fig. 16

Verify that the Hard Bearing Liner is properly seated into the Shell.

Longevity® Polyethylene Liner

- Prior to inserting the *Longevity* Liner, ensure that the Shell interior is clean and dry
- Place the final polyethylene liner into the implanted Shell by hand, or use the Liner Insertion Tool.
- If inserting by hand, spin the liner until scallops engage.

N **Note:** Before impaction, the polyethylene liner will not be flush with the rim of the Shell.

N **Note:** Smaller inner diameter *Longevity* Liners (i.e. 22mm) may not freely disengage from the Liner Insertion Tool.

- Select the proper size Dome Impaction Adapter and attach it to the Universal Handle.
 - Align the pins on the Universal Handle with the keyhole slot on the underside of the Adapter.
 - Push the impaction Adapter onto the handle and twist in either direction to lock it in place.
- Place the impaction Adapter on the liner and strike the liner until it is fully seated.
- Verify that the liner is properly inserted by palpating at the rim. (Fig. 17)
- If liner is not fully seated, additional impactions may be required.

Final Reduction

Perform a final reduction and assess range of motion, hip stability, and limb length.

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.
- Once the acetabular Shell taper has been deformed through assembly of a hard bearing insert (*BIOLOX* delta or *Metasul* insert), the Shell should not be used with another hard bearing insert. The safety and effectiveness of the taper locking mechanism has not been established for multiple hard bearing liner insertions.



Fig. 17

Verify that the Poly Liner is properly seated into the Shell.

- In the case of revisions, involving possible breakage of ceramic components, the recommendation is to use a ceramic on polyethylene or a ceramic on ceramic articulations. It is not recommended to use a metal on polyethylene or metal on metal pairing in these cases because left over ceramic third-body particles may cause greater wear of the bearing surface.**
- After removing a liner cup, assess the stability and positioning of the newly positioned liner through trial reduction.

**Matziolis G, Perka C, Disch A. Massive metallosis after revision of a fractured ceramic head onto a metal head. *Arch. Orthop Trauma Surg.* 2003; 123: 48-50.

Liner Removal (continued)

Metasul or BIOLOX delta Liners

- Attach the Liner Insertion Instrument to the Hard Bearing Liner by pressing the Suction Cup in the Liner.
- Attach the Hard Bearing Liner Removal Adapter to the Universal Handle by aligning the pins on the Universal Handle with the keyhole slot on the underside of the Adapter.
- Place the tip of the Removal Adapter on the face of the implant Shell with the alignment tab between the outside edge of the Shell and the bone, between scallops on the thickest portion of the Shell. (Fig. 18)
- Place the tip of the Removal Adapter entirely flush onto the edge of the metal Shell. (Fig. 19)
- Firmly strike the Universal Handle once with a mallet to dislodge the Liner from the Shell while pulling on the Liner Insertion Instrument.

N **Note:** The Hard Bearing Liner Remover should not contact the liner during impaction.

Polyethylene Liner (Bone Screw Method)

- Locate two 50mm bone Screws
- Drive one Screw a few turns into the face of the liner near the Dome
- The second Screw is placed on the opposite side of the insert also near the Dome of the Shell
- Alternate advancing each Screw with a few turns until the liner is lifted out of the Shell

Polyethylene Liner (Osteotome Method)

- The insert may also be removed by creating a slot in an area between the inner diameter and the outer rim. A curved osteotome may then be placed into the slot to lever the insert away from the Shell.
- Special care should be taken not to lever against the polyethylene locking mechanism or taper region on the Shell.

Intraoperative Shell Removal

- To remove a Shell, place an Adapter on the end of the inserter handle.
- Place the inserter with attached Adapter into the Shell Polar Hole.
- Turn the locking Screw clockwise to secure the locking Screw.
- Remove the inserter and Shell.



Fig.18

Proper placement of the Hard Bearing Removal Instrument.

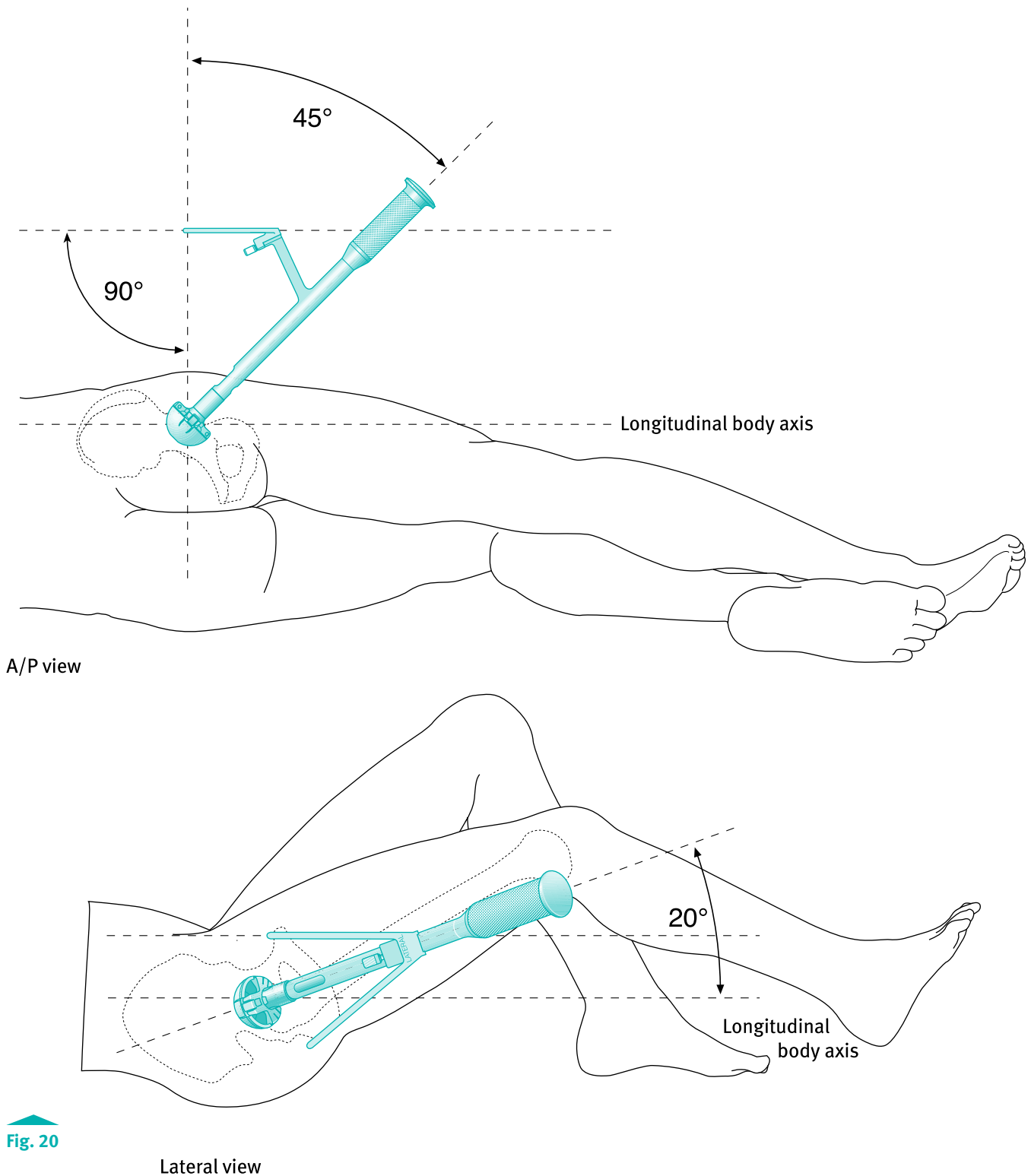


Fig.19

Proper seating of the Hard Bearing Removal Adapter.

Lateral Patient Positioning “A-Frame”

- Insert the Shell Provisional or Implant into the prepared acetabulum.
- To achieve 45 degrees of abduction and 20 degrees of forward flexion, ensure that the Alignment Frame is parallel to the floor and the anterior rod of the Alignment Frame is in line with the longitudinal body axis. (Fig. 20)



Lateral Patient Positioning “Gunsight”

- The “Gunsight” alignment extension needs to be parallel with the longitudinal body axis to achieve a 45° inclination (abduction). A 10° or 20° anteversion can be achieved depending on the type of alignment guide chosen by the surgeon. (Fig. 21)

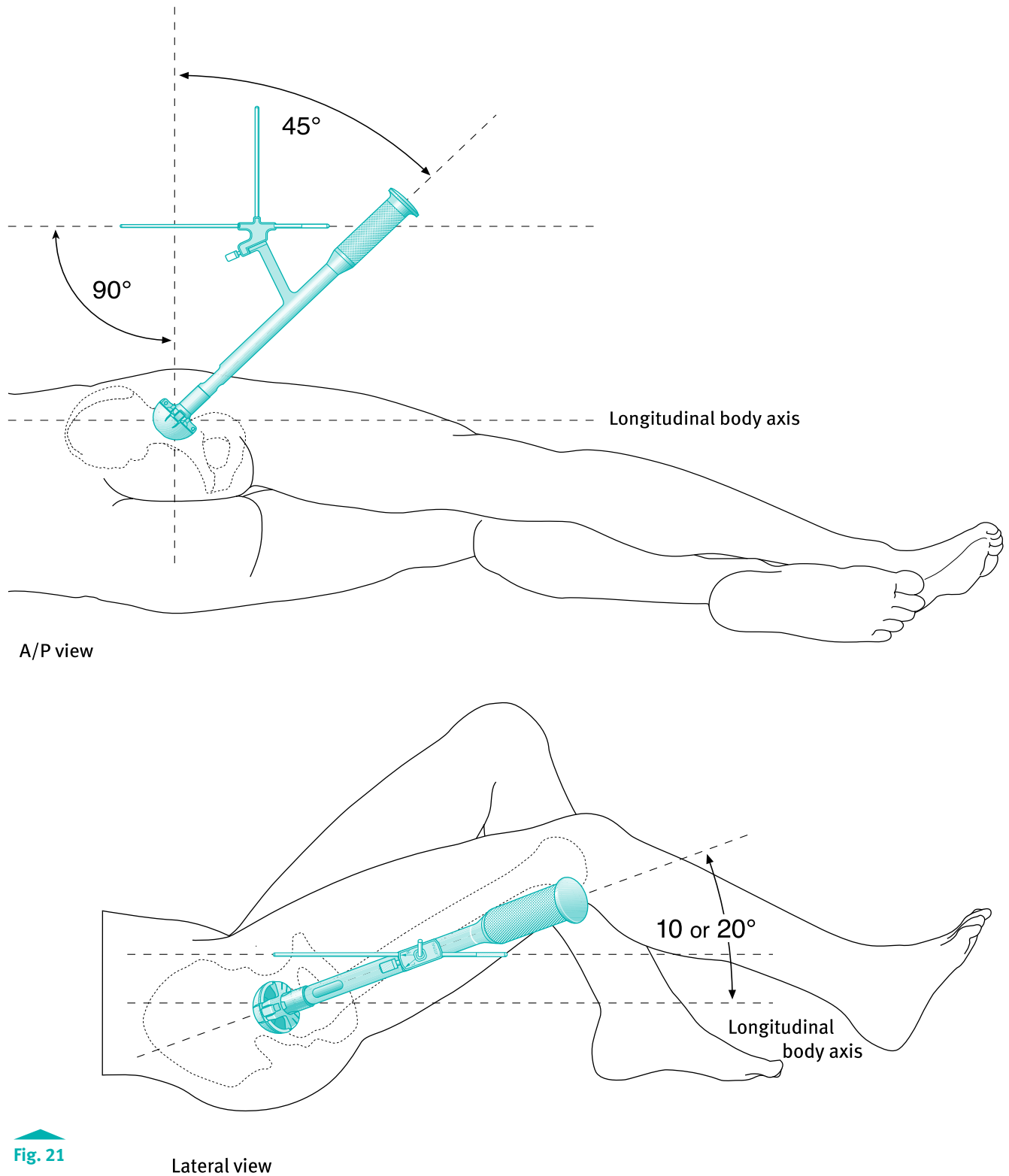


Fig. 21

Lateral view

Supine Patient Positioning “A-Frame”

- Insert the Shell Provisional or Implant into the prepared acetabulum.
- To achieve 45 degrees of abduction and 20 degrees of forward flexion, ensure that the Alignment Frame is parallel to the floor.
- The lateral arm needs to be parallel with the longitudinal body axis. (Fig. 22)

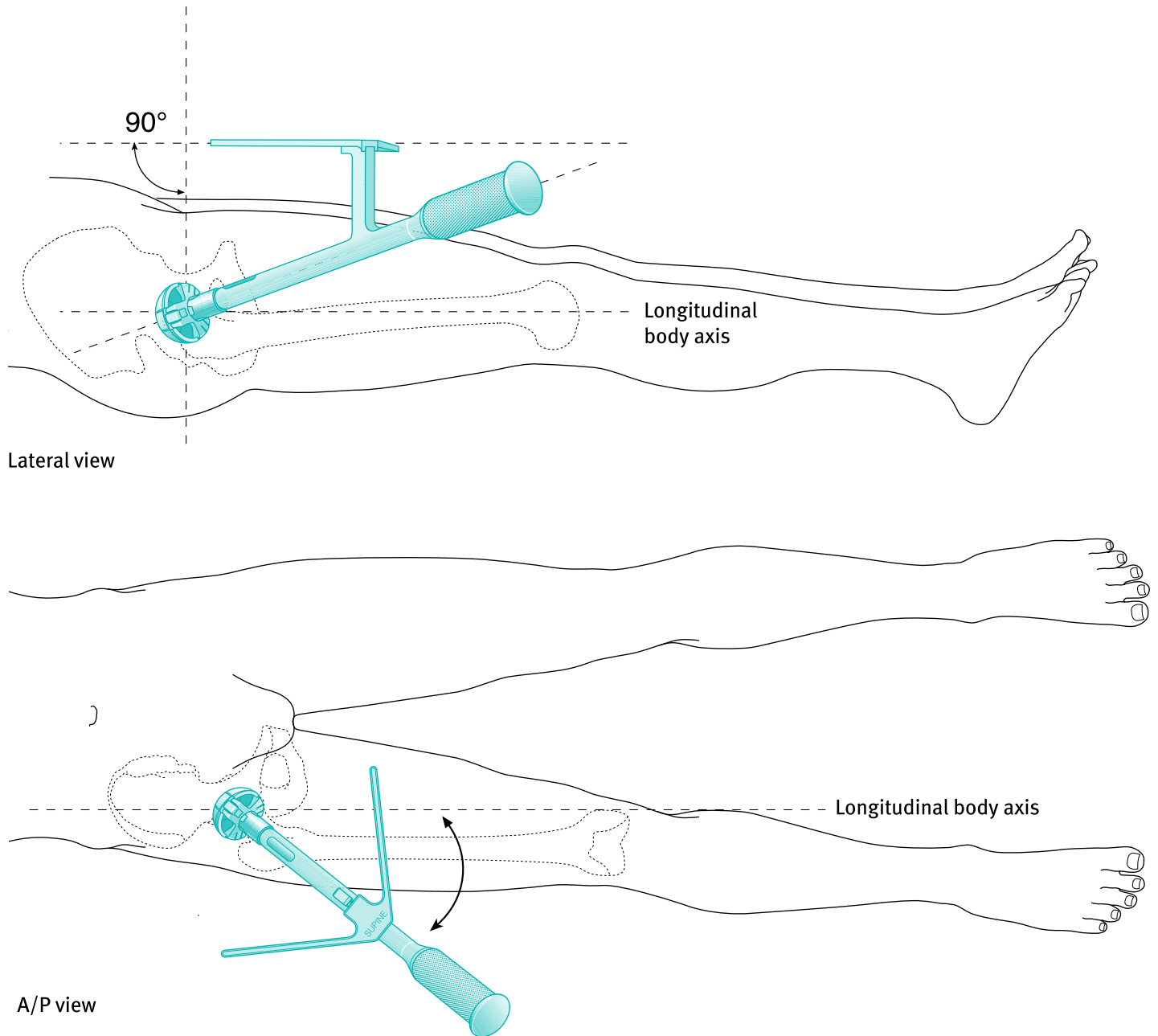


Fig. 22

Supine Patient Positioning “Gunsight”

- The “Gunsight” alignment extension needs to be parallel with the longitudinal body axis to achieve a 45° inclination (abduction). A 10° or 20° anteversion can be achieved depending on the type of alignment guide chosen by the surgeon. (Fig. 23)

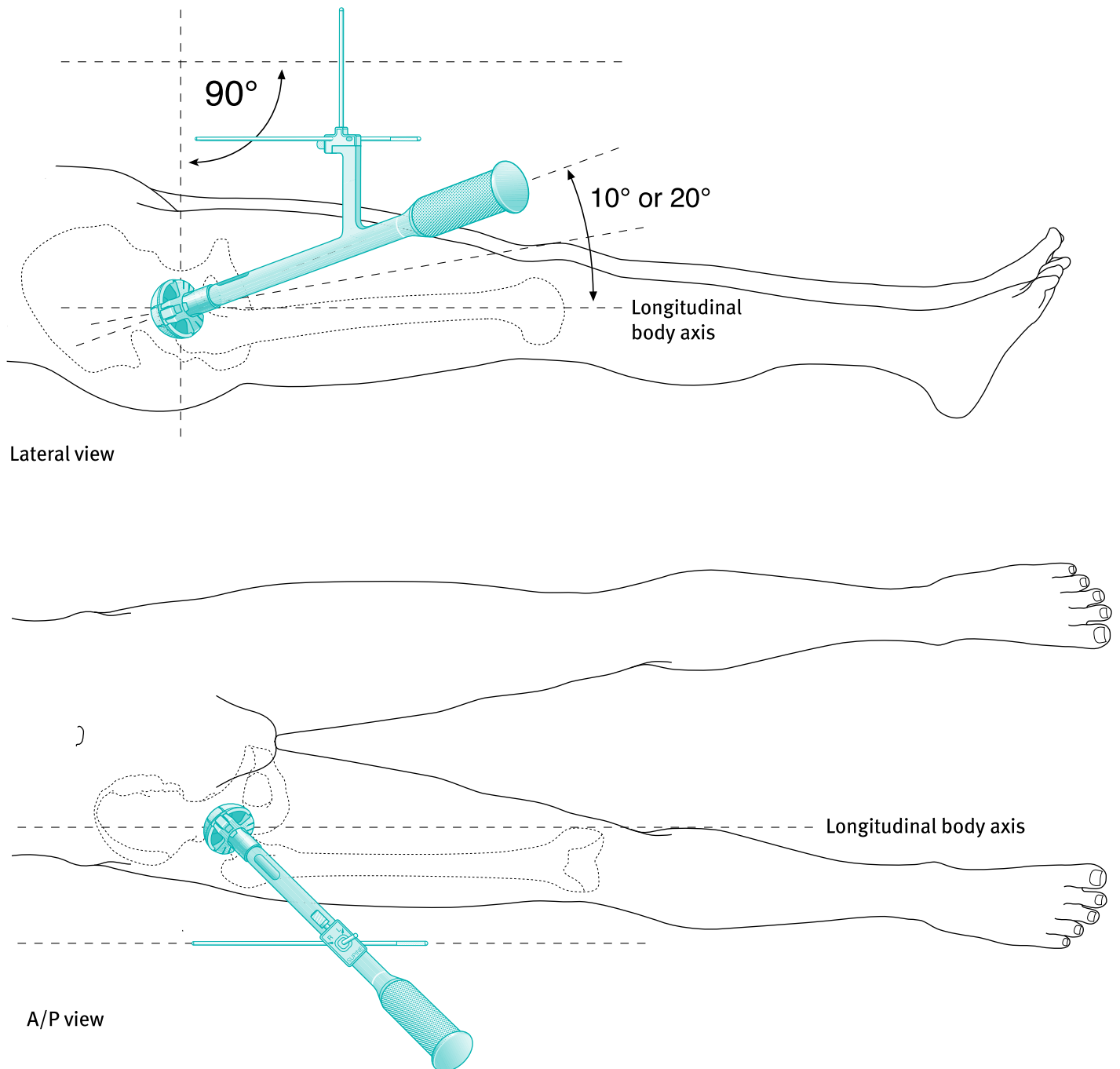


Fig. 23

Shell & Liner Sizing Chart

Shell Size in mm	48	50	52	54	56	58	60	62	64	66	68
Continuum Shells	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QU
Longevity Highly Crosslinked PE	28mm Neutral										
	32mm Neutral										
			36mm Neutral								
				40mm Neutral							
BIOLOX delta Composite Ceramic Liners	28mm										
	32mm										
			36mm								
			40mm								
Metasul Metal Liners	28mm										
	32mm										
		36mm									
			40mm								

Implants

Continuum Shell, Uni Hole

Item Number	Description
00-8757-048-00	Continuum Shell, Uni, 48 GG
00-8757-050-00	Continuum Shell, Uni, 50 HH
00-8757-052-00	Continuum Shell, Uni, 52 II
00-8757-054-00	Continuum Shell, Uni, 54 JJ
00-8757-056-00	Continuum Shell, Uni, 56 KK
00-8757-058-00	Continuum Shell, Uni, 58 LL
00-8757-060-00	Continuum Shell, Uni, 60 MM
00-8757-062-00	Continuum Shell, Uni, 62 NN
00-8757-064-00	Continuum Shell, Uni, 64 OO
00-8757-066-00	Continuum Shell, Uni, 66 PP
00-8757-068-00	Continuum Shell, Uni, 68 QU

Continuum Shell, Cluster Hole

00-8757-048-01	Continuum Shell, Cluster, 48 GG
00-8757-050-01	Continuum Shell, Cluster, 50 HH
00-8757-052-01	Continuum Shell, Cluster, 52 II
00-8757-054-01	Continuum Shell, Cluster, 54 JJ
00-8757-056-01	Continuum Shell, Cluster, 56 KK
00-8757-058-01	Continuum Shell, Cluster, 58 LL
00-8757-060-01	Continuum Shell, Cluster, 60 MM
00-8757-062-01	Continuum Shell, Cluster, 62 NN
00-8757-064-01	Continuum Shell, Cluster, 64 OO
00-8757-066-01	Continuum Shell, Cluster, 66 PP
00-8757-068-01	Continuum Shell, Cluster, 68 QU

Continuum Shell, Multi Hole

00-8757-048-02	Continuum Shell, Multi, 48 GG
00-8757-050-02	Continuum Shell, Multi, 50 HH
00-8757-052-02	Continuum Shell, Multi, 52 II
00-8757-054-02	Continuum Shell, Multi, 54 JJ
00-8757-056-02	Continuum Shell, Multi, 56 KK
00-8757-058-02	Continuum Shell, Multi, 58 LL
00-8757-060-02	Continuum Shell, Multi, 60 MM
00-8757-062-02	Continuum Shell, Multi, 62 NN
00-8757-064-02	Continuum Shell, Multi, 64 OO
00-8757-066-02	Continuum Shell, Multi, 66 PP
00-8757-068-02	Continuum Shell, Multi, 68 QU

Continuum Hole Plugs

00-8757-000-01	Dome Hole Plug - Single Pack
00-8757-000-02	Screw Hole Plug - Three Pack
00-8757-000-03	Dome (1) & Screw (3) Hole Plug Pack

Longevity Highly-crosslinked Liner, Neutral, 28mm

00-8751-008-28	HXPE Liner, Neutral, 48 GG x28
00-8751-009-28	HXPE Liner, Neutral, 50 HH x28
00-8751-010-28	HXPE Liner, Neutral, 52 II x28
00-8751-011-28	HXPE Liner, Neutral, 54 JJ x28
00-8751-012-28	HXPE Liner, Neutral, 56 KK x28
00-8751-013-28	HXPE Liner, Neutral, 58 LL x28
00-8751-014-28	HXPE Liner, Neutral, 60 MM x28
00-8751-015-28	HXPE Liner, Neutral, 62 NN x28
00-8751-016-28	HXPE Liner, Neutral, 64 OO x28
00-8751-017-28	HXPE Liner, Neutral, 66 PP x28
00-8751-018-28	HXPE Liner, Neutral, 68 QU x28

Longevity Highly-crosslinked Liner, Neutral, 32mm

Item Number	Description
00-8751-008-32	HXPE Liner, Neutral, 48 GG x32
00-8751-009-32	HXPE Liner, Neutral, 50 HH x32
00-8751-010-32	HXPE Liner, Neutral, 52 II x32
00-8751-011-32	HXPE Liner, Neutral, 54 JJ x32
00-8751-012-32	HXPE Liner, Neutral, 56 KK x32
00-8751-013-32	HXPE Liner, Neutral, 58 LL x32
00-8751-014-32	HXPE Liner, Neutral, 60 MM x32
00-8751-015-32	HXPE Liner, Neutral, 62 NN x32
00-8751-016-32	HXPE Liner, Neutral, 64 OO x32
00-8751-017-32	HXPE Liner, Neutral, 66 PP x32
00-8751-018-32	HXPE Liner, Neutral, 68 QU x32

Longevity Highly-crosslinked Liner, Neutral, 36mm

00-8751-010-36	HXPE Liner, Neutral, 52 II x36
00-8751-011-36	HXPE Liner, Neutral, 54 JJ x36
00-8751-012-36	HXPE Liner, Neutral, 56 KK x36
00-8751-013-36	HXPE Liner, Neutral, 58 LL x36
00-8751-014-36	HXPE Liner, Neutral, 60 MM x36
00-8751-015-36	HXPE Liner, Neutral, 62 NN x36
00-8751-016-36	HXPE Liner, Neutral, 64 OO x36
00-8751-017-36	HXPE Liner, Neutral, 66 PP x36
00-8751-018-36	HXPE Liner, Neutral, 68 QU x36

Longevity Highly-crosslinked Liner, Neutral, 40mm

00-8751-012-40	HXPE Liner, Neutral, 56 KK x40
00-8751-013-40	HXPE Liner, Neutral, 58 LL x40
00-8751-014-40	HXPE Liner, Neutral, 60 MM x40
00-8751-015-40	HXPE Liner, Neutral, 62 NN x40
00-8751-016-40	HXPE Liner, Neutral, 64 OO x40
00-8751-017-40	HXPE Liner, Neutral, 66 PP x40
00-8751-018-40	HXPE Liner, Neutral, 68 QU x40

Bone Screws

SCREWS are available in 5mm LENGTH increments

up to 40mm 6250-SIZE-LENGTH

Item Number	Description
00-6250-045-15	Bone Screw, 4.5x15mm, Self-Tapping Through
00-6250-045-40	Bone Screw, 4.5x40mm, Self-Tapping
00-6250-045-50	Bone Screw, 4.5x50mm, Self-Tapping
00-6250-045-60	Bone Screw, 4.5x60mm, Self-Tapping
00-6250-065-15	Bone Screw, 6.5x15mm, Self-Tapping Through
00-6250-065-40	Bone Screw, 6.5x40mm, Self-Tapping
00-6250-065-50	Bone Screw, 6.5x50mm, Self-Tapping
00-6250-065-60	Bone Screw, 6.5x60mm, Self-Tapping
00-6250-065-70	Bone Screw, 6.5x70mm, Self-Tapping
00-6250-065-80	Bone Screw, 6.5x80mm, Self-Tapping

Warning: This device is not approved for Screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic, or lumbar spine.

Implants

Metasul Taper Liner, 28mm

Item Number	Description
00-8770-008-28	Metasul Taper Liner, 48 GG x28

Metasul Taper Liner, 32mm

00-8770-008-32	Metasul Taper Liner, 48 GG x32
00-8770-009-32	Metasul Taper Liner, 50 HH x32
00-8770-010-32	Metasul Taper Liner, 52 II x32

Metasul Taper Liner, 36mm

00-8770-009-36	Metasul Taper Liner, 50 HH x36
00-8770-010-36	Metasul Taper Liner, 52 II x36
00-8770-011-36	Metasul Taper Liner, 54 JJ x36
00-8770-012-36	Metasul Taper Liner, 56 KK x36
00-8770-013-36	Metasul Taper Liner, 58 LL x36
00-8770-014-36	Metasul Taper Liner, 60 MM x36
00-8770-015-36	Metasul Taper Liner, 62 NN x36
00-8770-016-36	Metasul Taper Liner, 64 OO x36
00-8770-017-36	Metasul Taper Liner, 66 PP x36
00-8770-018-36	Metasul Taper Liner, 68 QU x36

Metasul Taper Liner, 40mm

00-8770-011-40	Metasul Taper Liner, 54 JJ x40
00-8770-012-40	Metasul Taper Liner, 56 KK x40
00-8770-013-40	Metasul Taper Liner, 58 LL x40
00-8770-014-40	Metasul Taper Liner, 60 MM x40
00-8770-015-40	Metasul Taper Liner, 62 NN x40
00-8770-016-40	Metasul Taper Liner, 64 OO x40
00-8770-017-40	Metasul Taper Liner, 66 PP x40
00-8770-018-40	Metasul Taper Liner, 68 QU x40

Metasul Femoral Head, 28mm

00-8770-028-01	Metasul Fem Hd, 12/14, 28 x -3.5
00-8770-028-02	Metasul Fem Hd, 12/14, 28 x 0
00-8770-028-03	Metasul Fem Hd, 12/14, 28 x +3.5
00-8770-028-04	Metasul Fem Hd, 12/14, 28 x +7
00-8770-028-05	Metasul Fem Hd, 12/14, 28 x +10.5

Metasul Femoral Head, 32mm

00-8770-032-01	Metasul Fem Hd, 12/14, 32 x -3.5
00-8770-032-02	Metasul Fem Hd, 12/14, 32 x 0
00-8770-032-03	Metasul Fem Hd, 12/14, 32 x +3.5
00-8770-032-04	Metasul Fem Hd, 12/14, 32 x +7
00-8770-032-05	Metasul Fem Hd, 12/14, 32 x +10.5

Metasul Femoral Head, 36mm

00-8770-036-01	Metasul Fem Hd, 12/14, 36 x -3.5
00-8770-036-02	Metasul Fem Hd, 12/14, 36 x 0
00-8770-036-03	Metasul Fem Hd, 12/14, 36 x +3.5
00-8770-036-04	Metasul Fem Hd, 12/14, 36 x +7
00-8770-036-05	Metasul Fem Hd, 12/14, 36 x +10.5

Metasul Femoral Head, 40mm

00-8770-040-01	Metasul Fem Hd, 12/14, 40 x -3.5
00-8770-040-02	Metasul Fem Hd, 12/14, 40 x 0
00-8770-040-03	Metasul Fem Hd, 12/14, 40 x +3.5
00-8770-040-04	Metasul Fem Hd, 12/14, 40 x +7
00-8770-040-05	Metasul Fem Hd, 12/14, 40 x +10.5

BIOLOX delta Ceramic Femoral Head, 28mm

Item Number	Description
00-8775-028-01	Ceramic Fem Hd, 12/14, 28 x -3.5
00-8775-028-02	Ceramic Fem Hd, 12/14, 28 x 0
00-8775-028-03	Ceramic Fem Hd, 12/14, 28 x +3.5

BIOLOX delta Ceramic Femoral Head, 32mm

00-8775-032-01	Ceramic Fem Hd, 12/14, 32 x -3.5
00-8775-032-02	Ceramic Fem Hd, 12/14, 32 x 0
00-8775-032-03	Ceramic Fem Hd, 12/14, 32 x +3.5
00-8775-032-04	Ceramic Fem Hd, 12/14, 32 x +7

BIOLOX delta Ceramic Femoral Head, 36mm

00-8775-036-01	Ceramic Fem Hd, 12/14, 36 x -3.5
00-8775-036-02	Ceramic Fem Hd, 12/14, 36 x 0
00-8775-036-03	Ceramic Fem Hd, 12/14, 36 x +3.5
00-8775-036-04	Ceramic Fem Hd, 12/14, 36 x +7

BIOLOX delta Ceramic Femoral Head, 40mm

00-8775-040-01	Ceramic Fem Hd, 12/14, 40 x -3.5
00-8775-040-02	Ceramic Fem Hd, 12/14, 40 x 0
00-8775-040-03	Ceramic Fem Hd, 12/14, 40 x +3.5
00-8775-040-04	Ceramic Fem Hd, 12/14, 36 x +7

BIOLOX delta Taper Liner, 28mm

Item Number	Description
00-8775-008-28	BIOLOX delta Taper Liner, 48 GG x28
00-8775-009-28	BIOLOX delta Taper Liner, 50 HH x28

BIOLOX delta Taper Liner, 32mm

00-8775-008-32	BIOLOX delta Taper Liner, 48 GG x32
00-8775-009-32	BIOLOX delta Taper Liner, 50 HH x32
00-8775-010-32	BIOLOX delta Taper Liner, 52 II x32
00-8775-011-32	BIOLOX delta Taper Liner, 54 JJ x32

BIOLOX delta Taper Liner, 36mm

00-8775-010-36	BIOLOX delta Taper Liner, 52 II x36
00-8775-011-36	BIOLOX delta Taper Liner, 54 JJ x36
00-8775-012-36	BIOLOX delta Taper Liner, 56 KK x36
00-8775-013-36	BIOLOX delta Taper Liner, 58 LL x36
00-8775-014-36	BIOLOX delta Taper Liner, 60 MM x36
00-8775-015-36	BIOLOX delta Taper Liner, 62 NN x36
00-8775-016-36	BIOLOX delta Taper Liner, 64 OO x36
00-8775-017-36	BIOLOX delta Taper Liner, 66 PP x36
00-8775-018-36	BIOLOX delta Taper Liner, 68 QU x36

BIOLOX delta Taper Liner, 40mm

00-8775-012-40	BIOLOX delta Taper Liner, 56 KK x40
00-8775-013-40	BIOLOX delta Taper Liner, 58 LL x40
00-8775-014-40	BIOLOX delta Taper Liner, 60 MM x40
00-8775-015-40	BIOLOX delta Taper Liner, 62 NN x40
00-8775-016-40	BIOLOX delta Taper Liner, 64 OO x40
00-8775-017-40	BIOLOX delta Taper Liner, 66 PP x40
00-8775-018-40	BIOLOX delta Taper Liner, 68 QU x40

Instrument Trays Kits

Acetabular Cup Straight Handle Instruments

Kit #KT-8790-100-00

Item Number	Description
00-8792-001-00	Full DIN Case Base
00-5900-099-00	Full DIN Case Lid
00-8790-015-32	Dome Impactor Sz 32
00-8790-015-36	Dome Impactor Sz 36
00-8790-015-40	Dome Impactor Sz 40
00-9000-002-98	Liner Insertion Instrument
00-9000-002-92	Disposable Suction Cup
00-8790-001-00	Provisional Locking Screw (6)
00-8790-010-00	Universal Handle
00-8790-003-10	Cup Inserter Adapter W/O Rot. Cont
00-8790-003-00	Cup Inserter Adapter W/ Rot Cont.
00-7804-015-20	Straight Hybrid Inserter
9375-00-032	Ball Hex Screwdriver
00-8790-007-00	Non Modular Straight Screw Driver
01-00502-008	MIS Screw Hole Plug Instrument
00-8790-013-32	HB Rim Impactor Sz 32
00-8790-013-36	HB Rim Impactor Sz 36
00-8790-013-40	HB Rim Impactor Sz 40

Optional (need to include one of the following alignment guides)

A-Frame Guides	
00-7807-015-02	Lateral Alignment Frame
00-7807-015-01	Supine Alignment Frame
Gunsight Alignment Guides	
01.00639.725	Lateral Positioning Guide 20°
01.00639.705	Positioning Guide spoke lateral
01.00639.745	Supine Positioning Guide 20°
01.00639.755	Positioning Guide spoke supine

Optional Dome Impactors

00-8790-015-28	Dome Impactor Sz 28
00-8790-013-28	HB Rim Impactor Sz 28

Acetabular Cup MIS Curved Handle Instruments

Kit # KT-8790-150-00

(Same as Kit #KT-8790-100-00, with the following curved handle Instruments replacing the straight handled Instruments)

00-8790-010-30	Curved Universal Handle
00-7804-025-20	Hybrid Offset Shell Inserter

Acetabular Cup Screw Instrumentation

Kit # KT-8790-200-00

Item Number	Description
00-8792-002-00	Full DIN Case Base
00-5900-099-00	Full DIN Case Lid
00-8790-007-01	Adjustable Drill Guide
00-6260-013-00	Screw Holding Forceps 15°
00-2360-087-00	Ratcheting Modular Handle
00-8790-005-20	Straight 3.5mm shaft
00-8790-005-25	U-joint 3.5mm shaft
00-8790-007-05	Modular Flex Shaft
75.11.00-04	Hex Wrench
00-8790-007-02	Modular Flex Drill Bit (15mm)
00-8790-007-03	Modular Flex Drill Bit (30mm)
00-8790-007-04	Modular Flex Drill Bit (45mm)
75.80.15	Depth Gauge

Optional

00-6260-008-02	Tap Guide 6.5
00-8790-005-30	Tap 6.5
00-6260-010-00	Tap Handle

Provisional Kits

Instrument Tray for Provisional Liners & Shells

Item Number	Description
00-8791-004-00	Provisional Liner Tray
00-8791-006-00	Provisional Shell Tray
00-5900-099-00	Instrument Tray Lid

Provisional Shells

00-8791-048-00	IT Provisional Shell, 48 mm
00-8791-050-00	IT Provisional Shell, 50 mm
00-8791-052-00	IT Provisional Shell, 52 mm
00-8791-054-00	IT Provisional Shell, 54 mm
00-8791-056-00	IT Provisional Shell, 56 mm
00-8791-058-00	IT Provisional Shell, 58 mm
00-8791-060-00	IT Provisional Shell, 60 mm
00-8791-062-00	IT Provisional Shell, 62 mm
00-8791-064-00	IT Provisional Shell, 64 mm
00-8791-066-00	IT Provisional Shell, 66 mm
00-8791-068-00	IT Provisional Shell, 68 mm

28mm Neutral Provisional Liners

00-8731-008-28	Prov Liner, Neutral, 48 GG x28
00-8731-009-28	Prov Liner, Neutral, 50 HH x28
00-8731-010-28	Prov Liner, Neutral, 52 II x28
00-8731-011-28	Prov Liner, Neutral, 54 JJ x28
00-8731-012-28	Prov Liner, Neutral, 56 KK x28
00-8731-013-28	Prov Liner, Neutral, 58 LL x28
00-8731-014-28	Prov Liner, Neutral, 60 MM x28
00-8731-015-28	Prov Liner, Neutral, 62 NN x28
00-8731-016-28	Prov Liner, Neutral, 64 OO x28
00-8731-017-28	Prov Liner, Neutral, 66 PP x28
00-8731-018-28	Prov Liner, Neutral, 68 QU x28

32mm Neutral Provisional Liners

Item Number	Description
00-8731-008-32	Prov Liner, Neutral, 48 GG x32
00-8731-009-32	Prov Liner, Neutral, 50 HH x32
00-8731-010-32	Prov Liner, Neutral, 52 II x32
00-8731-011-32	Prov Liner, Neutral, 54 JJ x32
00-8731-012-32	Prov Liner, Neutral, 56 KK x32
00-8731-013-32	Prov Liner, Neutral, 58 LL x32
00-8731-014-32	Prov Liner, Neutral, 60 MM x32
00-8731-015-32	Prov Liner, Neutral, 62 NN x32
00-8731-016-32	Prov Liner, Neutral, 64 OO x32
00-8731-017-32	Prov Liner, Neutral, 66 PP x32
00-8731-018-32	Prov Liner, Neutral, 68 QU x32

36mm Neutral Provisional Liners

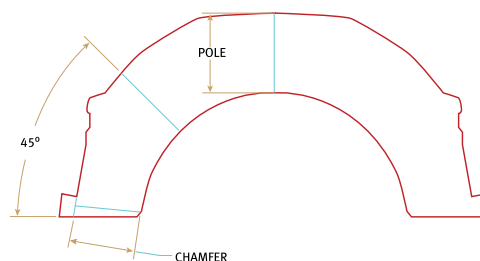
00-8731-009-36	Prov Liner, Neutral, 50 HH x36
00-8731-010-36	Prov Liner, Neutral, 52 II x36
00-8731-011-36	Prov Liner, Neutral, 54 JJ x36
00-8731-012-36	Prov Liner, Neutral, 56 KK x36
00-8731-013-36	Prov Liner, Neutral, 58 LL x36
00-8731-014-36	Prov Liner, Neutral, 60 MM x36
00-8731-015-36	Prov Liner, Neutral, 62 NN x36
00-8731-016-36	Prov Liner, Neutral, 64 OO x36
00-8731-017-36	Prov Liner, Neutral, 66 PP x36
00-8731-018-36	Prov Liner, Neutral, 68 QU x36

40mm Neutral Provisional Liners

00-8731-011-40	Prov Liner, Neutral, 54 JJ x40
00-8731-012-40	Prov Liner, Neutral, 56 KK x40
00-8731-013-40	Prov Liner, Neutral, 58 LL x40
00-8731-014-40	Prov Liner, Neutral, 60 MM x40
00-8731-015-40	Prov Liner, Neutral, 62 NN x40
00-8731-016-40	Prov Liner, Neutral, 64 OO x40
00-8731-017-40	Prov Liner, Neutral, 66 PP x40
00-8731-018-40	Prov Liner, Neutral, 68 QU x40

Longevity Polyethylene Liner Thickness Chart

Size	Pole (mm)	45° (mm)	Chamfer (mm)
28mm Neutral Liners			
00-8751-008-28	6.4	6.7	4.9
00-8751-009-28	7.3	7.7	5.7
00-8751-010-28	8.4	8.7	6.9
00-8751-011-28	9.3	9.7	7.9
00-8751-012-28	10.3	10.7	8.9
00-8751-013-28	11.4	11.7	9.9
00-8751-014-28	12.3	12.7	10.9
00-8751-015-28	13.3	13.7	12.1
00-8751-016-28	14.4	14.7	13.1
00-8751-017-28	15.3	15.7	14.1
00-8751-018-28	16.4	16.7	15.1
32mm Neutral Liners			
00-8751-008-32	4.3	4.7	2.9
00-8751-009-32	5.3	5.7	3.7
00-8751-010-32	6.4	6.7	4.9
00-8751-011-32	7.3	7.7	5.9
00-8751-012-32	8.3	8.7	6.9
00-8751-013-32	9.3	9.7	7.9
00-8751-014-32	10.3	10.7	8.9
00-8751-015-32	11.3	11.7	10.1
00-8751-016-32	12.3	12.7	11.1
00-8751-017-32	13.3	13.7	12.1
00-8751-018-32	14.4	14.7	13.1
36mm Neutral Liners			
00-8751-010-36	4.4	4.7	2.9
00-8751-011-36	5.3	5.7	3.9
00-8751-012-36	6.3	6.7	4.9
00-8751-013-36	7.4	7.7	5.9
00-8751-014-36	8.3	8.7	6.9
00-8751-015-36	9.3	9.7	8.1
00-8751-016-36	10.4	10.7	9.1
00-8751-017-36	11.3	11.7	10.1
00-8751-018-36	12.4	12.7	11.1
40mm Neutral Liners			
00-8751-012-40	4.3	4.7	2.9
00-8751-013-40	5.3	5.7	3.9
00-8751-014-40	6.3	6.7	4.9
00-8751-015-40	7.3	7.7	6.1
00-8751-016-40	8.3	8.7	7.1
00-8751-017-40	9.3	9.7	8.1
00-8751-018-40	10.4	10.7	9.1



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