



Longevity[®] Offset and Oblique Liners

Surgical Technique



Introduction

Complete Acetabular System

Joint instability is an important issue in both primary and revision Total Hip Arthroplasty. Causes of instability reported in the literature include, but are not limited to, component misalignment, soft tissue laxity and impingement.¹ Two acetabular liners designed to help address these issues are available for the *Continuum*®, *Trilogy*® IT and *Allofit*® IT* Acetabular systems.

Oblique Liner

The *Longevity* Highly Crosslinked Polyethylene Oblique Liner was designed to provide variable joint anteversion and abduction. Because the face and inner diameter of the liner are rotated 10 degrees outward, additional acetabular version and increased joint lateralization are achieved while maintaining range of motion comparable to a neutral face liner. The required joint abduction and anteversion can be dialed-in by rotating the liner in the shell.

Offset Liner

The *Longevity* Highly Crosslinked Polyethylene Offset Liner was designed to lateralize the center of rotation of the cup.

* *Allofit* IT Acetabular System is not available in the United States

Shell Insertion

For Instructions on implanting the *Continuum*, *Trilogy IT* and *Allofit IT* Acetabular Shells, please refer to the corresponding Acetabular Cup System Surgical Technique.

Supplemental Screw Fixation

In both primary and revision cases, screw fixation is highly recommended, as the use of any oblique or offset liner may lead to higher forces at the shell-to-bone interface. For instruction on placing screws into *Continuum*, *Trilogy IT* or *Allofit IT* acetabular shells, please see the corresponding Acetabular Cup System Surgical Technique.

Liner Removal

Follow standard surgical techniques for shell insertion if required. Special care should be taken not to lever against the Shell during Liner removal.

- Upon removal of any Liner, inspect the taper and polyethylene locking mechanisms for damage.
- Once the acetabular Shell taper has been deformed through assembly of a hard bearing insert, the Shell should not be used with another hard bearing insert.
- Remove any membranes from the inside of Shell or screw holes.
- Clean and inspect the Shell to ensure its integrity and stability.

Hard Bearing Liner Removal

- Attach the Liner Insertion Instrument to the Hard Bearing Liner by pressing the Suction Cup in the Liner. Ensure the Liner and Liner Insertion Instrument are clean and dry prior to attachment.
- Attach the single point Hard Bearing Remover to the Universal Handle by aligning the pins on the Universal Handle with the keyhole slot on the underside of the single point Hard Bearing Remover.
- Place the tip of the single point Hard Bearing Remover 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. 1).
- Place the tip of the single point Hard Bearing Remover entirely flush onto the edge of the metal Shell (Fig. 2).
- 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 single point Hard Bearing Remover should not contact the Liner during impaction.**

Polyethylene Liner Removal (Bone Screw Method)

- Locate a 3.2mm or 3.5mm drill bit included in the Screw Kit.
- Drill a pilot hole into the dome of the Liner between the pole and the taper region of the Shell.
- Locate a non-self tapping screw (Fig. 3).
- **A self tapping screw should NOT be used (Fig. 4).**



Fig.1
Proper placement of the Hard Bearing Removal Instrument.



Fig.2
Proper seating of the single point Hard Bearing Remover.



Fig. 3
Non-Self tapping screw

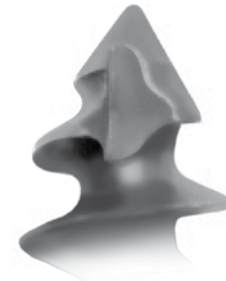


Fig. 4
Self tapping screw

- Drive the screw into the pilot hole by hand until the Liner is lifted out of the Shell (Fig. 5).
- Special care should be taken not to damage the Shell taper or locking mechanism during removal of the Liner.

Longevity Oblique Liner

Inserting the Provisional Oblique Liner

- There are two different Provisional Liners. One with a Locking Screw that is **independent** of the Provisional Liner, and one with a Locking Screw **permanently affixed** within the Provisional Liner.

N **Note: The Permanently Affixed Locking Screw should not be removed.**

- Select the Provisional Liner size that matches the selected Shell or Shell Provisional.
- The selected Shell or Shell Provisional will be identified through a size and 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).
- Both types of Provisional Liners are inserted the same way; however, the Provisional Liner with Independent Locking Screw must first be assembled by using 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. (Note: this ring will be gold if you are using the *Allofit* IT Acetabular System).
- Clean and dry the Shell or Shell Provisional with a sterile cloth, wipe or sponge to remove third-body debris.
- Insert the Provisional Liner by hand into the Shell or Shell Provisional.
- Ensure that the anti-rotation tabs on the Provisional Liner are engaged in the Shell or Shell Provisional scallops.
- The Indicator Mark on the face of the Provisional Liner corresponds to the highest elevation and to an identical mark on the Liner implant. Note the location of the Indicator Mark to ensure proper orientation during subsequent liner placement (Fig. 6).

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

- Use a Hex Driver to thread the Locking Screw into the Polar Hole of the Shell or Shell Provisional.

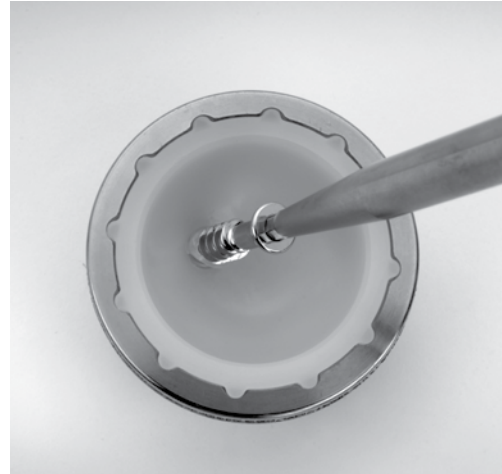


Fig.5
Screwing a non-self tapping screw into the dome of the Liner.

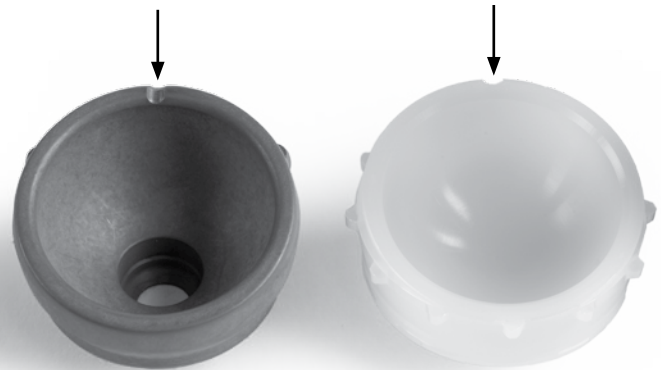


Fig. 6
Corresponding indicator marks on Provisional and Implant.

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.

Inserting the Oblique 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 Instrument.
- Orientate the polyethylene Liner utilizing the indicator mark on the face of the Liner Implant to replicate the orientation determined using the Provisional Liner.
- Ensure that the anti-rotation tabs on the Liner are engaged in the Shell scallops.

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

- Select the proper size Dome Impaction Adapter and attach it to the Universal Handle (Fig. 7).
 - Align the pins on the Universal Handle with the keyhole slot on the underside of the Impaction Adapter.
 - Push the Impaction Adapter onto the Universal Handle and twist in either direction to lock it in place.
- Verify that the Liner is in the desired position prior to impacting the Liner.
- Place the Impaction Adapter on the Liner and strike the Liner until it is fully seated.

N **Note:** Once Liner is seated within the Shell, it cannot be removed without causing damage to the Liner, necessitating removal and disposal.

N **Note:** The position of the *Longevity* Oblique Liner inner diameter can affect leg length. Proper leg length restoration should be verified prior to selecting final Liner orientation.



Fig. 7
Impactor Adapter Assembly.

Verifying Oblique Liner Seating

Verify that the *Longevity* Oblique Polyethylene Liner is properly seated by running a finger around the face of the Shell to ensure the anti-rotation tabs are flush relative to the Shell face (Fig. 8).

Longevity Offset Liner

Inserting the Provisional Offset Liner

- There are two different Provisional Liners. One with a Locking Screw that is Independent of the Provisional Liner, and one with a Locking Screw Permanently Affixed within the Provisional Liner.

N Note: The Permanently Affixed Locking Screw should not be removed.

- Select the Provisional Liner size that matches the selected Shell or Shell Provisional.
- The selected Shell or Shell Provisional will be identified through a size and 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).
- Both types of Provisional Liners are inserted the same way; however, the Provisional Liner with Independent Locking Screw must first be assembled by using a Hex-headed Driver to insert the Provisional Locking Screw through the Polar Hole of the Provisional Liner. The Provisional Locking Screw will have a silver ring. (Note: this ring will be gold if you are using the *Allofit* IT Acetabular).
- Clean and dry the Shell or Shell Provisional with a sterile cloth, wipe or sponge to remove third-body debris.
- Insert the Provisional Liner by hand into the Shell or Shell Provisional.
- Ensure that the anti-rotation tabs on the Provisional Liner are engaged in the Shell or Shell Provisional scallops.

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

- Use a Hex Driver to thread the Locking Screw into the Polar Hole of the Shell or Shell Provisional.

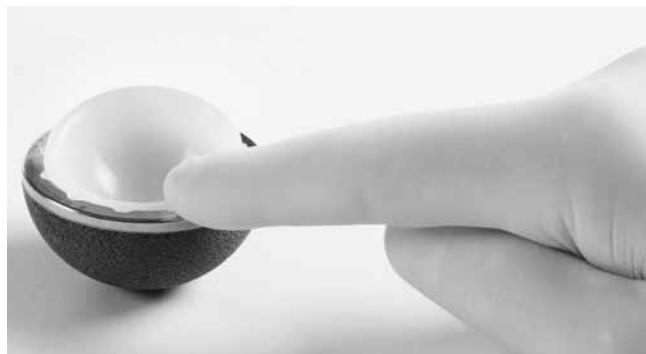


Fig. 8
Verification of Oblique Liner Seating.

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.

Inserting the Offset 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 Instrument.
- If inserting by hand, spin the Liner until the anti-rotation tabs on the liner engage in the Shell scallops. If utilizing the Liner Insertion Instrument, turn the Liner Insertion Instrument until the anti-rotation tabs on the liner engage in the Shell scallops.
- Liner sizes 28 CC - 28 GG, 32 EE - 32 II and 36 HH - 36 KK include a lip that has window cut outs to allow for visualization of two anti-rotation tabs. Utilize the window cut outs to verify proper alignment of the anti-rotation tabs in the Shell scallops.

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

- Select the proper size Dome Impactor Adapter and attach it to the Universal Handle (Fig. 9).
 - Align the pins on the Universal Handle with the keyhole slot on the underside of the Adapter.
 - Push the Impactor onto the Universal Handle and twist in either direction to lock it in place.
- Verify that the Liner is in the desired position prior to impacting the Liner.
- Place the Impactor on the Liner and strike the Liner until it is fully seated.

N **Note:** Once Liner is seated within the Shell, it cannot be removed without causing damage to the Liner, necessitating removal and disposal.

N **Note:** The position of the *Longevity* Offset Liner inner diameter can affect leg length. Proper leg length restoration should be verified prior to selecting final Liner orientation.



Fig. 9
Impactor Adapter Assembly.

Verifying Offset Liner Seating

Smaller Sized Liners

- Liner sizes 28 CC - 28 GG, 32 EE - 32 II and 36 HH - 36 KK include a lip that has window cut outs to allow for visualization of two anti-rotation tabs. Utilize the window cut outs to verify proper seating of the liner by ensuring that the anti-rotation tabs are flush relative to the Shell face (Fig. 10).

Larger Sized Liners

- Liner sizes 28 HH - 28 QU, 32 JJ - 32 VV, 36 LL - 36 VV do not have a lip which allow for visualization of the anti-rotation tabs. Run a finger around the Shell face to ensure the antirotation tabs are flush relative to the Shell face (Fig. 11).

Final Reduction (Oblique and Offset Liners)

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

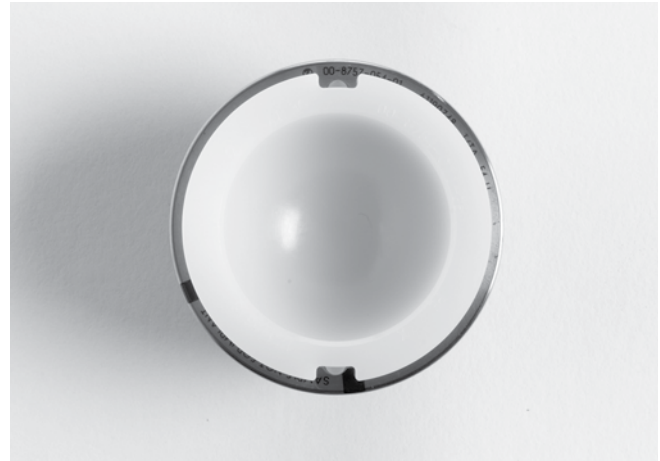


Fig. 10
Smaller size Liner with cut-outs assembled into the Shell.

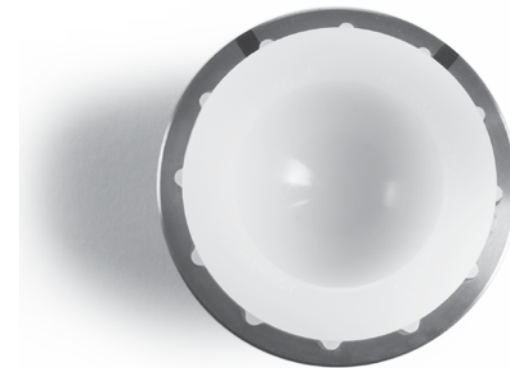


Fig. 11
Larger sized Liner with Anti-Rotation Tabs assembled into the Shell.

Longevity Offset Liners

Longevity Offset Liners 28mm

Item Number	Description
00-8754-004-28	Longevity Liner, 7mm Offset, 40 CC x 28
00-8754-005-28	Longevity Liner, 7mm Offset, 42 DD x 28
00-8754-006-28	Longevity Liner, 7mm Offset, 44 EE x 28
00-8754-007-28	Longevity Liner, 7mm Offset, 46 FF x 28
00-8754-008-28	Longevity Liner, 7mm Offset, 48 GG x 28
00-8754-009-28	Longevity Liner, 7mm Offset, 50 HH x 28
00-8754-010-28	Longevity Liner, 7mm Offset, 52 II x 28
00-8754-011-28	Longevity Liner, 7mm Offset, 54 JJ x 28
00-8754-012-28	Longevity Liner, 7mm Offset, 56 KK x 28
00-8754-013-28	Longevity Liner, 7mm Offset, 58 LL x 28
00-8754-014-28	Longevity Liner, 7mm Offset, 60 MM x 28
00-8754-015-28	Longevity Liner, 7mm Offset, 62 NN x 28
00-8754-016-28	Longevity Liner, 7mm Offset, 64 OO x 28
00-8754-017-28	Longevity Liner, 7mm Offset, 66 PP x 28
00-8754-018-28	Longevity Liner, 7mm Offset, 68 QU x 28

Longevity Offset Liners 32mm

00-8754-006-32	Longevity Liner, 7mm Offset, 44 EE x 32
00-8754-007-32	Longevity Liner, 7mm Offset, 46 FF x 32
00-8754-008-32	Longevity Liner, 7mm Offset, 48 GG x 32
00-8754-009-32	Longevity Liner, 7mm Offset, 50 HH x 32
00-8754-010-32	Longevity Liner, 7mm Offset, 52 II x 32
00-8754-011-32	Longevity Liner, 7mm Offset, 54 JJ x 32
00-8754-012-32	Longevity Liner, 7mm Offset, 56 KK x 32
00-8754-013-32	Longevity Liner, 7mm Offset, 58 LL x 32
00-8754-014-32	Longevity Liner, 7mm Offset, 60 MM x 32
00-8754-015-32	Longevity Liner, 7mm Offset, 62 NN x 32
00-8754-016-32	Longevity Liner, 7mm Offset, 64 OO x 32
00-8754-017-32	Longevity Liner, 7mm Offset, 66 PP x 32
00-8754-018-32	Longevity Liner, 7mm Offset, 68 QU x 32
00-8754-019-32	Longevity Liner, 7mm Offset, 70 RR x 32
00-8754-020-32	Longevity Liner, 7mm Offset, 72 SS x 32
00-8754-021-32	Longevity Liner, 7mm Offset, 74 TT x 32
00-8754-022-32	Longevity Liner, 7mm Offset, 76 UU x 32
00-8754-023-32	Longevity Liner, 7mm Offset, 78/80 VV x 32

Longevity Offset Liners 36mm

Item Number	Description
00-8754-009-36	Longevity Liner, 7mm Offset, 50 HH x 36
00-8754-010-36	Longevity Liner, 7mm Offset, 52 II x 36
00-8754-011-36	Longevity Liner, 7mm Offset, 54 JJ x 36
00-8754-012-36	Longevity Liner, 7mm Offset, 56 KK x 36
00-8754-013-36	Longevity Liner, 7mm Offset, 58 LL x 36
00-8754-014-36	Longevity Liner, 7mm Offset, 60 MM x 36
00-8754-015-36	Longevity Liner, 7mm Offset, 62 NN x 36
00-8754-016-36	Longevity Liner, 7mm Offset, 64 OO x 36
00-8754-017-36	Longevity Liner, 7mm Offset, 66 PP x 36
00-8754-018-36	Longevity Liner, 7mm Offset, 68 QU x 36
00-8754-019-36	Longevity Liner, 7mm Offset, 70 RR x 36
00-8754-020-36	Longevity Liner, 7mm Offset, 72 SS x 36
00-8754-021-36	Longevity Liner, 7mm Offset, 74 TT x 36
00-8754-022-36	Longevity Liner, 7mm Offset, 76 UU x 36
00-8754-023-36	Longevity Liner, 7mm Offset, 78/80 VV x 36

Offset Provisionals with Independent Locking Screws

For use with *Continuum*, *Trilogy IT* and *Allofit IT*

7mm Offset 28mm Prov. Liner Core Set KT-8794-005-28

Item Number	Description
00-8734-008-28	Prov Liner, 7mm Offset, 48 GG x 28
00-8734-009-28	Prov Liner, 7mm Offset, 50 HH x 28
00-8734-010-28	Prov Liner, 7mm Offset, 52 II x 28
00-8734-011-28	Prov Liner, 7mm Offset, 54 JJ x 28
00-8734-012-28	Prov Liner, 7mm Offset, 56 KK x 28
00-8734-013-28	Prov Liner, 7mm Offset, 58 LL x 28
00-8734-014-28	Prov Liner, 7mm Offset, 60 MM x 28
00-8734-015-28	Prov Liner, 7mm Offset, 62 NN x 28
00-8734-016-28	Prov Liner, 7mm Offset, 64 OO x 28
00-8734-017-28	Prov Liner, 7mm Offset, 66 PP x 28
00-8734-018-28	Prov Liner, 7mm Offset, 68 QU x 28
00-8792-014-00	28mm Offset Liner Sleeve

7mm Offset 32mm Prov. Liner Core Set KT-8794-005-32

00-8734-008-32	Prov Liner, 7mm Offset, 48 GG x 32
00-8734-009-32	Prov Liner, 7mm Offset, 50 HH x 32
00-8734-010-32	Prov Liner, 7mm Offset, 52 II x 32
00-8734-011-32	Prov Liner, 7mm Offset, 54 JJ x 32
00-8734-012-32	Prov Liner, 7mm Offset, 56 KK x 32
00-8734-013-32	Prov Liner, 7mm Offset, 58 LL x 32
00-8734-014-32	Prov Liner, 7mm Offset, 60 MM x 32
00-8734-015-32	Prov Liner, 7mm Offset, 62 NN x 32
00-8734-016-32	Prov Liner, 7mm Offset, 64 OO x 32
00-8734-017-32	Prov Liner, 7mm Offset, 66 PP x 32
00-8734-018-32	Prov Liner, 7mm Offset, 68 QU x 32
00-8792-015-00	32mm Offset Liner Sleeve

7mm Offset 36mm Prov. Liner Core Set KT-8794-005-36

00-8734-009-36	Prov Liner, 7mm Offset, 50 HH x 36
00-8734-010-36	Prov Liner, 7mm Offset, 52 II x 36
00-8734-011-36	Prov Liner, 7mm Offset, 54 JJ x 36
00-8734-012-36	Prov Liner, 7mm Offset, 56 KK x 36
00-8734-013-36	Prov Liner, 7mm Offset, 58 LL x 36
00-8734-014-36	Prov Liner, 7mm Offset, 60 MM x 36
00-8734-015-36	Prov Liner, 7mm Offset, 62 NN x 36
00-8734-016-36	Prov Liner, 7mm Offset, 64 OO x 36
00-8734-017-36	Prov Liner, 7mm Offset, 66 PP x 36
00-8734-018-36	Prov Liner, 7mm Offset, 68 QU x 36
00-8792-016-00	36mm Offset Liner Sleeve

7mm Offset Micro Sizes

Item Number	Description
00-8734-004-28	Prov Liner, 7mm Offset, 40 CC x 28
00-8734-005-28	Prov Liner, 7mm Offset, 42 DD x 28
00-8734-006-28	Prov Liner, 7mm Offset, 44 EE x 28
00-8734-007-28	Prov Liner, 7mm Offset, 46 FF x 28
00-8734-006-32	Prov Liner, 7mm Offset, 44 EE x 32
00-8734-007-32	Prov Liner, 7mm Offset, 46 FF x 32

7mm Offset 32mm Prov. Liners Jumbo

00-8734-019-32	Prov Liner, 7mm Offset, 70 RR x 32
00-8734-020-32	Prov Liner, 7mm Offset, 72 SS x 32
00-8734-021-32	Prov Liner, 7mm Offset, 74 TT x 32
00-8734-022-32	Prov Liner, 7mm Offset, 76 UU x 32
00-8734-023-32	Prov Liner, 7mm Offset, 78/80 VV x 32

7mm Offset 36mm Prov. Liner Jumbo Set KT-8794-305-36

00-8734-019-36	Prov Liner, 7mm Offset, 70 RR x 36
00-8734-020-36	Prov Liner, 7mm Offset, 72 SS x 36
00-8734-021-36	Prov Liner, 7mm Offset, 74 TT x 36
00-8734-022-36	Prov Liner, 7mm Offset, 76 UU x 36
00-8734-023-36	Prov Liner, 7mm Offset, 78/80 VV x 36
00-8792-026-00	36mm Offset Liner Jumbo Sleeve

Instrument Base

00-8792-031-00	Offset /Oblique Prov Liner Tray**
00-8792-000-00	Instrument Tray ***
00-8792-000-50	Jumbo Prov Liner Sleeve Base****
00-5900-099-00	Full DIN Case Lid
00-8792-004-00	Micro Tray

** Not available for distribution in the United States

*** Base utilized with Core Provisional Liner Sleeves

**** Base utilized with Jumbo Provisional Liner Sleeves

Offset Provisionals with Permanently Affixed Locking Screw

For use with *Continuum* and *Trilogy IT*

7mm Offset 28mm Prov. Liner Core Set KT-8834-005-28

Item Number	Description
00-8834-008-28	Prov Liner, 7mm Offset, 48 GG x 28
00-8834-009-28	Prov Liner, 7mm Offset, 50 HH x 28
00-8834-010-28	Prov Liner, 7mm Offset, 52 II x 28
00-8834-011-28	Prov Liner, 7mm Offset, 54 JJ x 28
00-8834-012-28	Prov Liner, 7mm Offset, 56 KK x 28
00-8834-013-28	Prov Liner, 7mm Offset, 58 LL x 28
00-8834-014-28	Prov Liner, 7mm Offset, 60 MM x 28
00-8834-015-28	Prov Liner, 7mm Offset, 62 NN x 28
00-8834-016-28	Prov Liner, 7mm Offset, 64 OO x 28
00-8834-017-28	Prov Liner, 7mm Offset, 66 PP x 28
00-8834-018-28	Prov Liner, 7mm Offset, 68 QU x 28
00-8792-014-00	28mm Offset Liner Sleeve

7mm Offset 32mm Prov. Liner Core Set KT-8834-005-32

00-8834-008-32	Prov Liner, 7mm Offset, 48 GG x 32
00-8834-009-32	Prov Liner, 7mm Offset, 50 HH x 32
00-8834-010-32	Prov Liner, 7mm Offset, 52 II x 32
00-8834-011-32	Prov Liner, 7mm Offset, 54 JJ x 32
00-8834-012-32	Prov Liner, 7mm Offset, 56 KK x 32
00-8834-013-32	Prov Liner, 7mm Offset, 58 LL x 32
00-8834-014-32	Prov Liner, 7mm Offset, 60 MM x 32
00-8834-015-32	Prov Liner, 7mm Offset, 62 NN x 32
00-8834-016-32	Prov Liner, 7mm Offset, 64 OO x 32
00-8834-017-32	Prov Liner, 7mm Offset, 66 PP x 32
00-8834-018-32	Prov Liner, 7mm Offset, 68 QU x 32
00-8792-015-00	32mm Offset Liner Sleeve

7mm Offset 36mm Prov. Liner Core Set KT-8834-005-36

00-8834-009-36	Prov Liner, 7mm Offset, 50 HH x 36
00-8834-010-36	Prov Liner, 7mm Offset, 52 II x 36
00-8834-011-36	Prov Liner, 7mm Offset, 54 JJ x 36
00-8834-012-36	Prov Liner, 7mm Offset, 56 KK x 36
00-8834-013-36	Prov Liner, 7mm Offset, 58 LL x 36
00-8834-014-36	Prov Liner, 7mm Offset, 60 MM x 36
00-8834-015-36	Prov Liner, 7mm Offset, 62 NN x 36
00-8834-016-36	Prov Liner, 7mm Offset, 64 OO x 36
00-8834-017-36	Prov Liner, 7mm Offset, 66 PP x 36
00-8834-018-36	Prov Liner, 7mm Offset, 68 QU x 36
00-8792-016-00	36mm Offset Liner Sleeve

7mm Offset Micro Sizes

Item Number	Description
00-8834-004-28	Prov Liner, 7mm Offset, 40 CC x 28
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00-8834-007-28	Prov Liner, 7mm Offset, 46 FF x 28
00-8834-006-32	Prov Liner, 7mm Offset, 44 EE x 32
00-8834-007-32	Prov Liner, 7mm Offset, 46 FF x 32

7mm Offset 32mm Prov. Jumbo Liners

00-8834-019-32	Prov Liner, 7mm Offset, 70 RR x 32
00-8834-020-32	Prov Liner, 7mm Offset, 72 SS x 32
00-8834-021-32	Prov Liner, 7mm Offset, 74 TT x 32
00-8834-022-32	Prov Liner, 7mm Offset, 76 UU x 32
00-8834-023-32	Prov Liner, 7mm Offset, 78/80 VV x 32

7mm Offset 36mm Prov. Liner Jumbo Set KT-8834-305-36

00-8834-019-36	Prov Liner, 7mm Offset, 70 RR x 36
00-8834-020-36	Prov Liner, 7mm Offset, 72 SS x 36
00-8834-021-36	Prov Liner, 7mm Offset, 74 TT x 36
00-8834-022-36	Prov Liner, 7mm Offset, 76 UU x 36
00-8834-023-36	Prov Liner, 7mm Offset, 78/80 VV x 36
00-8792-026-00	36mm Offset Liner Jumbo Sleeve

Instrument Base

00-8792-031-00	Offset /Oblique Prov Liner Tray**
00-8792-000-00	Instrument Tray***
00-8792-000-50	Jumbo Prov Liner Sleeve Base****
00-5900-099-00	Full DIN Case Lid
00-8792-004-00	Micro Tray

** Not available for distribution in the United States

*** Base utilized with Core Provisional Liner Sleeves

**** Base utilized with Jumbo Provisional Liner Sleeves

Longevity Oblique Liners

Longevity Oblique Liners 28mm

Item Number	Description
00-8755-006-28	Longevity Liner, Oblique, 44 EE x 28
00-8755-007-28	Longevity Liner, Oblique, 46 FF x 28
00-8755-008-28	Longevity Liner, Oblique, 48 GG x 28
00-8755-009-28	Longevity Liner, Oblique, 50 HH x 28
00-8755-010-28	Longevity Liner, Oblique, 52 II x 28

Longevity Oblique Liners 32mm

00-8755-008-32	Longevity Liner, Oblique, 48 GG x 32
00-8755-009-32	Longevity Liner, Oblique, 50 HH x 32
00-8755-010-32	Longevity Liner, Oblique, 52 II x 32
00-8755-011-32	Longevity Liner, Oblique, 54 JJ x 32
00-8755-012-32	Longevity Liner, Oblique, 56 KK x 32
00-8755-013-32	Longevity Liner, Oblique, 58 LL x 32
00-8755-014-32	Longevity Liner, Oblique, 60 MM x 32
00-8755-015-32	Longevity Liner, Oblique, 62 NN x 32
00-8755-016-32	Longevity Liner, Oblique, 64 OO x 32
00-8755-017-32	Longevity Liner, Oblique, 66 PP x 32
00-8755-018-32	Longevity Liner, Oblique, 68 QU x 32
00-8755-019-32	Longevity Liner, Oblique, 70 RR x 32
00-8755-020-32	Longevity Liner, Oblique, 72 SS x 32
00-8755-021-32	Longevity Liner, Oblique, 74 TT x 32
00-8755-022-32	Longevity Liner, Oblique, 76 UU x 32
00-8755-023-32	Longevity Liner, Oblique, 78/80 VV x 32

Longevity Oblique Liners 36mm

Item Number	Description
00-8755-010-36	Longevity Liner, Oblique, 52 II x 36
00-8755-011-36	Longevity Liner, Oblique, 54 JJ x 36
00-8755-012-36	Longevity Liner, Oblique, 56 KK x 36
00-8755-013-36	Longevity Liner, Oblique, 58 LL x 36
00-8755-014-36	Longevity Liner, Oblique, 60 MM x 36
00-8755-015-36	Longevity Liner, Oblique, 62 NN x 36
00-8755-016-36	Longevity Liner, Oblique, 64 OO x 36
00-8755-017-36	Longevity Liner, Oblique, 66 PP x 36
00-8755-018-36	Longevity Liner, Oblique, 68 QU x 36
00-8755-019-36	Longevity Liner, Oblique, 70 RR x 36
00-8755-020-36	Longevity Liner, Oblique, 72 SS x 36
00-8755-021-36	Longevity Liner, Oblique, 74 TT x 36
00-8755-022-36	Longevity Liner, Oblique, 76 UU x 36
00-8755-023-36	Longevity Liner, Oblique, 78/80 VV x 36

Oblique Provisionals with Independent Locking Screw

For use with *Continuum*, *Trilogy IT* and *Allofit IT*

Oblique 28mm Prov. Liners Micro

Item Number	Description
00-8735-006-28	Prov Liner, Oblique, 44 EE x 28
00-8735-007-28	Prov Liner, Oblique, 46 FF x 28

Oblique 28mm Prov. Liner Core Set KT-8795-005-28

00-8735-008-28	Prov Liner, Oblique, 48 GG x28
00-8735-009-28	Prov Liner, Oblique, 50 HH x28
00-8735-010-28	Prov Liner, Oblique, 52 II x28
00-8792-017-00	28mm Oblique Liner Sleeve

Oblique 32mm Prov. Liner Core Set KT-8795-005-32

00-8735-008-32	Prov Liner, Oblique, 48 GG x 32
00-8735-009-32	Prov Liner, Oblique, 50 HH x 32
00-8735-010-32	Prov Liner, Oblique, 52 II x 32
00-8735-011-32	Prov Liner, Oblique, 54 JJ x 32
00-8735-012-32	Prov Liner, Oblique, 56 KK x 32
00-8735-013-32	Prov Liner, Oblique, 58 LL x 32
00-8735-014-32	Prov Liner, Oblique, 60 MM x 32
00-8735-015-32	Prov Liner, Oblique, 62 NN x 32
00-8735-016-32	Prov Liner, Oblique, 64 OO x 32
00-8735-017-32	Prov Liner, Oblique, 66 PP x 32
00-8735-018-32	Prov Liner, Oblique, 68 QU x 32
00-8792-018-00	32mm Oblique Liner Sleeve

Oblique 36mm Prov. Liner Core Set KT-8795-005-36

00-8735-010-36	Prov Liner, Oblique, 52 II x 36
00-8735-011-36	Prov Liner, Oblique, 54 JJ x 36
00-8735-012-36	Prov Liner, Oblique, 56 KK x 36
00-8735-013-36	Prov Liner, Oblique, 58 LL x 36
00-8735-014-36	Prov Liner, Oblique, 60 MM x 36
00-8735-015-36	Prov Liner, Oblique, 62 NN x 36
00-8735-016-36	Prov Liner, Oblique, 64 OO x 36
00-8735-017-36	Prov Liner, Oblique, 66 PP x 36
00-8735-018-36	Prov Liner, Oblique, 68 QU x 36
00-8792-019-00	36mm Oblique Liner Sleeve

Oblique 32mm Prov. Liner Jumbo Set KT-8795-305-32

Item Number	Description
00-8735-019-32	Prov Liner, Oblique, 70 RR x 32
00-8735-020-32	Prov Liner, Oblique, 72 SS x 32
00-8735-021-32	Prov Liner, Oblique, 74 TT x 32
00-8735-022-32	Prov Liner, Oblique, 76 UU x 32
00-8735-023-32	Prov Liner, Oblique, 78/80 VV x 32
00-8792-027-00	32mm Oblique Liner Jumbo Sleeve

Oblique 36mm Prov. Liner Jumbo Set KT-8795-305-36

00-8735-019-36	Prov Liner, Oblique, 70 RR x 36
00-8735-020-36	Prov Liner, Oblique, 72 SS x 36
00-8735-021-36	Prov Liner, Oblique, 74 TT x 36
00-8735-022-36	Prov Liner, Oblique, 76 UU x 36
00-8735-023-36	Prov Liner, Oblique, 78/80 VV x 36
00-8792-028-00	36mm Oblique Liner Jumbo Sleeve

Instrument Base

00-8792-031-00	Offset /Oblique Prov Liner Tray**
00-8792-000-00	Instrument Tray ***
00-8792-000-50	Jumbo Prov Liner Sleeve Base****
00-5900-099-00	Full DIN Case Lid
00-8792-004-00	Micro Tray

** Not available for distribution in the United States

*** Base utilized with Core Provisional Liner Sleeves

**** Base utilized with Jumbo Provisional Liner Sleeves

Oblique Provisionals with Permanently Affixed Locking Screw

For use with *Continuum* and *Trilogy IT*

Oblique 28mm Prov. Liners Micro

Item Number	Description
00-8835-006-28	Prov Liner, Oblique, 44 EE x 28
00-8835-007-28	Prov Liner, Oblique, 46 FF x 28

Oblique 28mm Prov. Liner Core Set KT-8795-005-28

00-8835-008-28	Prov Liner, Oblique, 48 GG x 28
00-8835-009-28	Prov Liner, Oblique, 50 HH x 28
00-8835-010-28	Prov Liner, Oblique, 52 II x 28
00-8792-017-00	28mm Oblique Liner Sleeve

Oblique 32mm Prov. Liner Core Set KT-8835-005-32

00-8835-008-32	Prov Liner, Oblique, 48 GG x 32
00-8835-009-32	Prov Liner, Oblique, 50 HH x 32
00-8835-010-32	Prov Liner, Oblique, 52 II x 32
00-8835-011-32	Prov Liner, Oblique, 54 JJ x 32
00-8835-012-32	Prov Liner, Oblique, 56 KK x 32
00-8835-013-32	Prov Liner, Oblique, 58 LL x 32
00-8835-014-32	Prov Liner, Oblique, 60 MM x 32
00-8835-015-32	Prov Liner, Oblique, 62 NN x 32
00-8835-016-32	Prov Liner, Oblique, 64 OO x 32
00-8835-017-32	Prov Liner, Oblique, 66 PP x 32
00-8835-018-32	Prov Liner, Oblique, 68 QU x 32
00-8792-018-00	32mm Oblique Liner Sleeve

Oblique 36mm Prov. Liner Core Set KT-8835-005-36

00-8835-010-36	Prov Liner, Oblique, 52 II x 36
00-8835-011-36	Prov Liner, Oblique, 54 JJ x 36
00-8835-012-36	Prov Liner, Oblique, 56 KK x 36
00-8835-013-36	Prov Liner, Oblique, 58 LL x 36
00-8835-014-36	Prov Liner, Oblique, 60 MM x 36
00-8835-015-36	Prov Liner, Oblique, 62 NN x 36
00-8835-016-36	Prov Liner, Oblique, 64 OO x 36
00-8835-017-36	Prov Liner, Oblique, 66 PP x 36
00-8835-018-36	Prov Liner, Oblique, 68 QU x 36
00-8792-019-00	36mm Oblique Liner Sleeve

Oblique 32mm Prov. Liner Jumbo Set KT-8835-305-32

Item Number	Description
00-8835-019-32	Prov Liner, Oblique, 70 RR x 32
00-8835-020-32	Prov Liner, Oblique, 72 SS x 32
00-8835-021-32	Prov Liner, Oblique, 74 TT x 32
00-8835-022-32	Prov Liner, Oblique, 76 UU x 32
00-8835-023-32	Prov Liner, Oblique, 78/80 VV x 32
00-8792-027-00	32mm Oblique Liner Jumbo Sleeve

Oblique 36mm Prov. Liner Jumbo KT-8835-305-36

00-8835-019-36	Prov Liner, Oblique, 70 RR x 36
00-8835-020-36	Prov Liner, Oblique, 72 SS x 36
00-8835-021-36	Prov Liner, Oblique, 74 TT x 36
00-8835-022-36	Prov Liner, Oblique, 76 UU x 36
00-8835-023-36	Prov Liner, Oblique, 78/80 VV x 36
00-8792-028-00	36mm Oblique Liner Jumbo Sleeve

Instrument Base

00-8792-031-00	Offset /Oblique Prov Liner Tray**
00-8792-000-00	Instrument Tray ***
00-8792-000-50	Jumbo Prov Liner Sleeve Base****
00-5900-099-00	Full DIN Case Lid
00-8792-004-00	Micro Tray

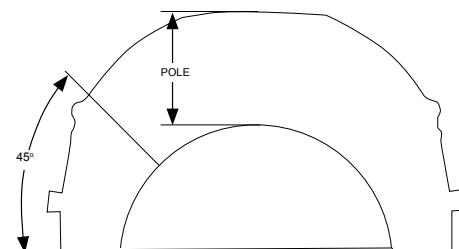
** Not available for distribution in the United States

*** Base utilized with Core Provisional Liner Sleeves

**** Base utilized with Jumbo Provisional Liner Sleeves

Longevity Offset Polyethylene Liner Thickness Chart

Longevity Liner, 7mm Offset, 28mm		Pole (mm)	45° (mm)	Lip
Item Number	Description			
00-8754-004-28	Longevity Liner, 7mm Offset, 40 CC x 28	7.5	5.5	YES
00-8754-005-28	Longevity Liner, 7mm Offset, 42 DD x 28	8.4	6.4	YES
00-8754-006-28	Longevity Liner, 7mm Offset, 44 EE x 28	9.4	7.7	YES
00-8754-007-28	Longevity Liner, 7mm Offset, 46 FF x 28	10.4	8.7	YES
00-8754-008-28	Longevity Liner, 7mm Offset, 48 GG x 28	11.4	10.5	YES
00-8754-009-28	Longevity Liner, 7mm Offset, 50 HH x 28	12.4	11.6	NO
00-8754-010-28	Longevity Liner, 7mm Offset, 52 II x 28	13.4	12.4	NO
00-8754-011-28	Longevity Liner, 7mm Offset, 54 JJ x 28	14.4	12.8	NO
00-8754-012-28	Longevity Liner, 7mm Offset, 56 KK x 28	15.4	13.8	NO
00-8754-013-28	Longevity Liner, 7mm Offset, 58 LL x 28	16.4	14.8	NO
00-8754-014-28	Longevity Liner, 7mm Offset, 60 MM x 28	17.4	15.8	NO
00-8754-015-28	Longevity Liner, 7mm Offset, 62 NN x 28	18.3	16.8	NO
00-8754-016-28	Longevity Liner, 7mm Offset, 64 OO x 28	19.4	17.9	NO
00-8754-017-28	Longevity Liner, 7mm Offset, 66 PP x 28	20.4	18.9	NO
00-8754-018-28	Longevity Liner, 7mm Offset, 68 QU x 28	21.4	19.9	NO

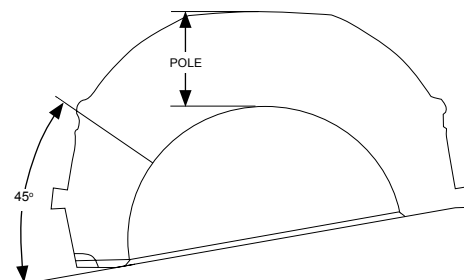


Longevity Liner, 7mm Offset, 32mm				
Item Number	Description			
00-8754-006-32	Longevity Liner, 7mm Offset, 44 EE x 32	7.4	5.7	YES
00-8754-007-32	Longevity Liner, 7mm Offset, 46 FF x 32	8.4	6.7	YES
00-8754-008-32	Longevity Liner, 7mm Offset, 48 GG x 32	9.4	8.5	YES
00-8754-009-32	Longevity Liner, 7mm Offset, 50 HH x 32	10.3	9.6	YES
00-8754-010-32	Longevity Liner, 7mm Offset, 52 II x 32	11.4	10.4	YES
00-8754-011-32	Longevity Liner, 7mm Offset, 54 JJ x 32	12.4	10.8	NO
00-8754-012-32	Longevity Liner, 7mm Offset, 56 KK x 32	13.3	11.8	NO
00-8754-013-32	Longevity Liner, 7mm Offset, 58 LL x 32	14.4	12.8	NO
00-8754-014-32	Longevity Liner, 7mm Offset, 60 MM x 32	15.4	13.8	NO
00-8754-015-32	Longevity Liner, 7mm Offset, 62 NN x 32	16.3	14.8	NO
00-8754-016-32	Longevity Liner, 7mm Offset, 64 OO x 32	17.4	15.9	NO
00-8754-017-32	Longevity Liner, 7mm Offset, 66 PP x 32	18.3	16.9	NO
00-8754-018-32	Longevity Liner, 7mm Offset, 68 QU x 32	19.4	17.9	NO
00-8754-019-32	Longevity Liner, 7mm Offset, 70 RR x 32	20.4	18.9	NO
00-8754-020-32	Longevity Liner, 7mm Offset, 72 SS x 32	21.3	19.9	NO
00-8754-021-32	Longevity Liner, 7mm Offset, 74 TT x 32	22.4	20.9	NO
00-8754-022-32	Longevity Liner, 7mm Offset, 76 UU x 32	23.4	21.9	NO
00-8754-023-32	Longevity Liner, 7mm Offset, 78/80 VV x 32	24.4	22.9	NO

Longevity Liner, 7mm Offset, 36mm				
Item Number	Description			
00-8754-009-36	Longevity Liner, 7mm Offset, 50 HH x36	8.4	7.6	YES
00-8754-010-36	Longevity Liner, 7mm Offset, 52 II x36	9.4	8.4	YES
00-8754-011-36	Longevity Liner, 7mm Offset, 54 JJ x36	10.4	8.8	YES
00-8754-012-36	Longevity Liner, 7mm Offset, 56 KK x36	11.4	9.8	YES
00-8754-013-36	Longevity Liner, 7mm Offset, 58 LL x36	12.4	10.8	NO
00-8754-014-36	Longevity Liner, 7mm Offset, 60 MM x36	13.4	11.8	NO
00-8754-015-36	Longevity Liner, 7mm Offset, 62 NN x36	14.3	12.8	NO
00-8754-016-36	Longevity Liner, 7mm Offset, 64 OO x36	15.4	13.9	NO
00-8754-017-36	Longevity Liner, 7mm Offset, 66 PP x36	16.4	14.9	NO
00-8754-018-36	Longevity Liner, 7mm Offset, 68 QU x36	17.4	15.9	NO
00-8754-019-36	Longevity Liner, 7mm Offset, 70 RR x36	18.4	16.9	NO
00-8754-020-36	Longevity Liner, 7mm Offset, 72 SS x36	19.4	17.9	NO
00-8754-021-36	Longevity Liner, 7mm Offset, 74 TT x36	20.4	18.9	NO
00-8754-022-36	Longevity Liner, 7mm Offset, 76 UU x36	21.4	19.9	NO
00-8754-023-36	Longevity Liner, 7mm Offset, 78/80 VV x36	22.4	20.9	NO

Longevity Oblique Polyethylene Liner Thickness Chart

		Pole (mm)	45° (mm)
Longevity Oblique Liner, 28mm			
Item Number	Description		
00-8755-006-28	Longevity Liner, Oblique, 44 EE x 28	6.3	5.6
00-8755-007-28	Longevity Liner, Oblique, 46 FF x 28	7.4	6.5
00-8755-008-28	Longevity Liner, Oblique, 48 GG x 28	8.6	7.7
00-8755-009-28	Longevity Liner, Oblique, 50 HH x 28	9.8	8.6
00-8755-010-28	Longevity Liner, Oblique, 52 II x 28	11.0	10.1
Longevity Oblique Liner, 32mm			
00-8755-008-32	Longevity Liner, Oblique, 48 GG x 32	6.6	5.7
00-8755-009-32	Longevity Liner, Oblique, 50 HH x 32	7.8	6.6
00-8755-010-32	Longevity Liner, Oblique, 52 II x 32	9.0	8.1
00-8755-011-32	Longevity Liner, Oblique, 54 JJ x 32	10.1	9.4
00-8755-012-32	Longevity Liner, Oblique, 56 KK x 32	11.3	10.7
00-8755-013-32	Longevity Liner, Oblique, 58 LL x 32	12.5	11.9
00-8755-014-32	Longevity Liner, Oblique, 60 MM x 32	13.6	13.2
00-8755-015-32	Longevity Liner, Oblique, 62 NN x 32	14.9	14.4
00-8755-016-32	Longevity Liner, Oblique, 64 OO x 32	16.0	15.0
00-8755-017-32	Longevity Liner, Oblique, 66 PP x 32	17.2	15.9
00-8755-018-32	Longevity Liner, Oblique, 68 QU x 32	18.4	17.1
00-8755-019-32	Longevity Liner, Oblique, 70 RR x 32	19.5	18.2
00-8755-020-32	Longevity Liner, Oblique, 72 SS x 32	20.7	19.3
00-8755-021-32	Longevity Liner, Oblique, 74 TT x 32	21.9	20.4
00-8755-022-32	Longevity Liner, Oblique, 76 UU x 32	23.1	21.5
00-8755-023-32	Longevity Liner, Oblique, 78/80 VV x 32	24.2	22.6
Longevity Oblique Liner, 36mm			
00-8755-010-36	Longevity Liner, Oblique, 52 II x 36	7.0	6.1
00-8755-011-36	Longevity Liner, Oblique, 54 JJ x 36	8.1	7.4
00-8755-012-36	Longevity Liner, Oblique, 56 KK x 36	9.3	8.7
00-8755-013-36	Longevity Liner, Oblique, 58 LL x 36	10.5	9.9
00-8755-014-36	Longevity Liner, Oblique, 60 MM x 36	11.7	11.2
00-8755-015-36	Longevity Liner, Oblique, 62 NN x 36	12.9	12.4
00-8755-016-36	Longevity Liner, Oblique, 64 OO x 36	14.0	13.0
00-8755-017-36	Longevity Liner, Oblique, 66 PP x 36	15.2	13.9
00-8755-018-36	Longevity Liner, Oblique, 68 QU x 36	16.4	15.1
00-8755-019-36	Longevity Liner, Oblique, 70 RR x 36	17.6	16.2
00-8755-020-36	Longevity Liner, Oblique, 72 SS x 36	18.7	17.3
00-8755-021-36	Longevity Liner, Oblique, 74 TT x 36	19.9	18.4
00-8755-022-36	Longevity Liner, Oblique, 76 UU x 36	21.1	19.5
00-8755-023-36	Longevity Liner, Oblique, 78/80 VV x 36	22.2	20.6



- 1 Patel PD, Potts A and Froimson MI The dislocating hip arthroplasty: prevention and treatment *Journal of Arthroplasty*, 2007 Jun; 22 (Supp 1): 86-90.

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