ELEOS™ Limb Salvage System

Surgical Technique
Hinge Knee Replacement

The ELEOS Limb Salvage System offers options for patients with significant bone loss due to cancer, trauma, or previous surgical procedures. The locking taper design has a history of clinical use in a variety of orthopaedic applications. With an array of options in a multitude of sizes, the ELEOS system provides the surgeon the ability to meet a variety of patient needs.

ONKOS SURGICAL™

HINGE KNEE SURGICAL TECHNIQUE

TABLE OF CONTENTS:

Proper surgical procedures and techniques are the responsibility of the medical professional. The following guidelines are furnished for informational purposes only. Each surgeon must evaluate the appropriateness of the procedures based on his or her personal medical training, experience and patient condition. Prior to the use of the system, the surgeon should refer to the product package insert for additional warnings, precautions, indications, contraindications and adverse effects. Instruction for use are available on www.onkossurgical.com/ELEOS/IFU

SET CONFIGURATIONS

Please refer to document CORP 04.06.20 for a full listing of implant and instrument set requirements, images, and part listings.

PRODUCT DESCRIPTION

The ELEOS Hinge Knee System consists of six components that create a hinged knee: Resurfacing Femur, Tibial Hinge Component, Axial Pin, Tibial Baseplate, Tibial Polyethylene Spacer, and Stem Extensions. A Stem Extension is required on the femur but optional for the tibia.

NOTE | A Cemented Resurfacing Patella and Block and Augments are available if needed.

The Resurfacing Femur (2500(X)00(X)) features a deepened patellar groove and a 5° valgus angle to assist in the restoration of patello- femoral kinematics, reduction of patellar subluxation and promotion of normal loading patterns. Internal/external rotation of the hinge can be controlled with a component that has a stop set for +/- 15° or a hinge component without a stop can be used.

Stem Extensions are available in lengths ranging from 30-140mm in either cemented or canal filling options **| TABLE 1**.

Table 1.

Stem Extensions – Cemented				
Stem	**Description**	**Length**	**Diameter**	**Collar**
KSC01530E	Straight Cylindrical, Fluted, Titanium (bullet tip)	30mm	15mm	None
KSC0(XX)65E	Straight Cylindrical, Fluted, Titanium	65mm	10, 12, 14, 16, 18mm	None
KSC(XX)100E	Straight Cylindrical, Fluted, Titanium	100mm	10, 12, 14, 16, 18mm	None
Stem Extensions – Canal Filling				
Stem	**Description**	**Length**	**Diameter**	**Collar**
KSP(XX)100E	Straight, Cylindrical, Splined, Slotted, Titanium	100mm	11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 23mm	None
KSP(XX)140E	Straight, Cylindrical Splined, Slotted, Titanium	140mm	11, 12, 13, 14, 15, 16, 17, 18, 19, 21mm	None

The Tibial Baseplate (2500220(X)E) is available in five sizes for optimal tibial cortical rim coverage. The Tibial Baseplate also accepts optional Block Augments (5, 10 & 15mm) that can be independently placed on the medial or lateral compartment to address specific patient bone deficiencies **| TABLE 2.**

Table 2.

BLOCK AUGMENTS		
PART #	**DESCRIPTION**	**SIZE**
KTAGB(XXX)E	ELEOS TIBIAL BLOCK AUGMENT	(1, 2, 3, 4, 5) X (5, 10, 15mm)

The Tibial Polyethylene Spacer (250012(XX)E) is available in 8, 10, 12, 16 and 20mm thicknesses.

The ELEOS Hinge Knee System offers distal femoral bone replacement of 28mm. The Resurfacing Femur is available in left and right configurations in three sizes (60, 65 and 70mm) for intraoperative flexibility.

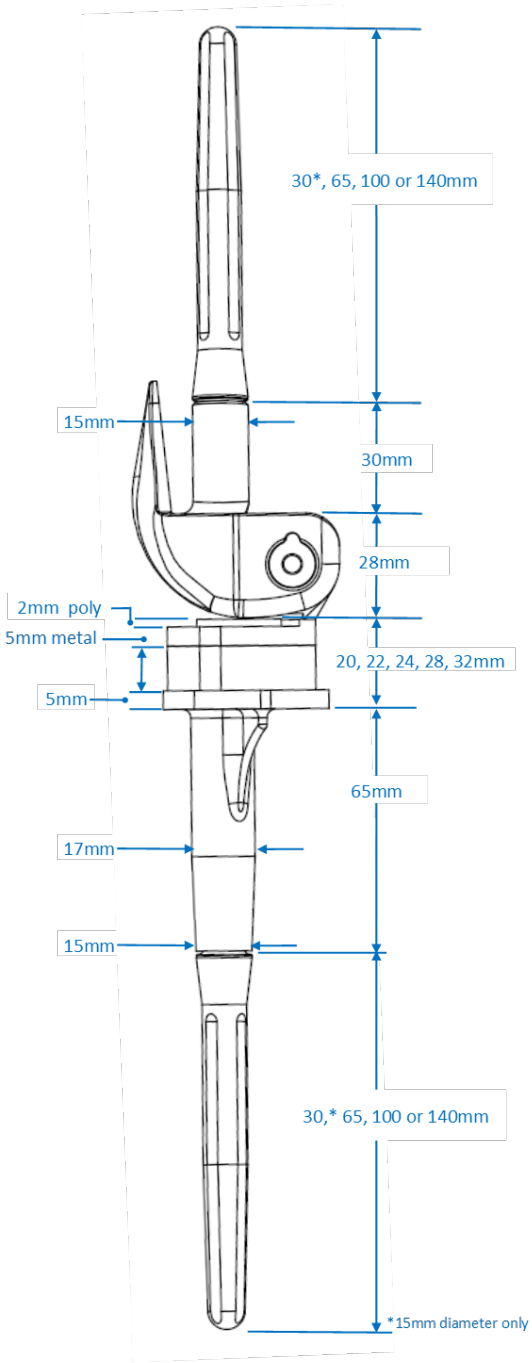
Table 3.

HINGE KNEE COMPONENT RESECTIONS

Part Number	Component	Resection
2500(X)00(X)E	Resurfacing Femur	28mm[1]
N/A	Tibial Assembly	20mm[2]

[1] Distal resection does not change. It is 28mm for all sizes. The Resurfacing Femur grows in M/L and A/P.

[2] The 20mm Tibial Resection is with an 8mm polyethylene spacer and the thickness of the Tibial Hinge Component (5mm metal and 2mm poly). The actual resection may be less depending on joint line positioning and ligament compliance.



SURGICAL TECHNIQUE STEPS

FEMORAL PREPARATION

NOTE | It is surgeon preference if the femoral resection or tibial resection is done first.

FEMORAL REAMING

Initiate an opening in the femoral canal with the Starter Drill Bit 3/8 in. The entry point is placed medial and anterior to the anteromedial corner of the intercondylar notch **| FIGURE 1**.

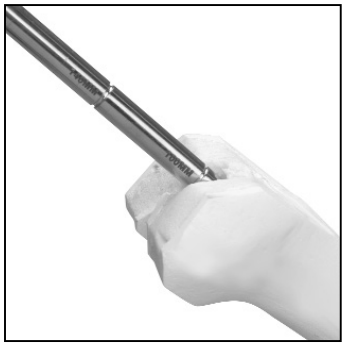


Figure 1

CAUTION | Hand reaming may be appropriate to avoid a thin femoral cortex that could result in a fracture. Care should be taken if reaming with power.

Utilize the cylindrical reamer to continue preparing the femoral canal for the stem extension.

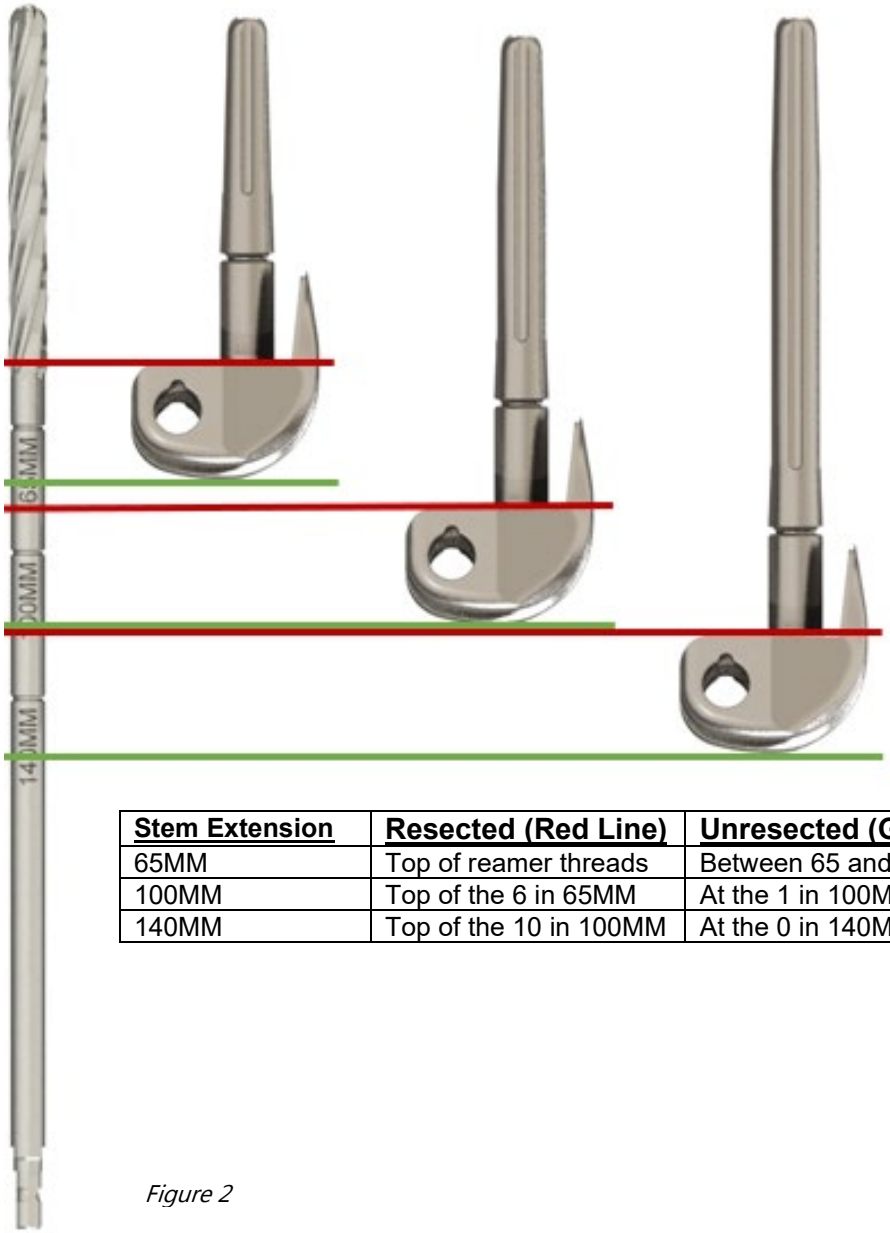
If the femoral resection has been completed, ream to the appropriate depth of the tibial construct (shown in **FIGURE 2** below in Red).

If the femoral resection has not been completed, ream approximately 20mm beyond that distance (shown in **FIGURE 2** below in Green) to account for the approriate full depth of the femoral component.

Consider an additional 20mm to account for the placement of a cement restrictor in the distal end of the prepared tibial canal.

When desired reaming is complete, ensure the Reamer provides a stable construct for additional tibial preparation.

NOTE | The Stem Extension diameters from Table 2 are equal to Reamer diameters. When determining the appropriate Cylindrical Reamer size for the desired cement mantle, the difference will represent the cement mantle. For instance, reaming to a 13mm diameter will provide a line-to-line fit with a 13mm stem. Reaming to a 14mm will provide a 0.5mm cement mantle per side, while reaming to 15mm will provide a 1mm cement mantle per side. When determining the appropriate Cylindrical Reamer size for the canal filling stems, the difference will represent the fit. For instance, reaming to a 13mm diameter will provide a line-to-line fit with a 13mm stem, while reaming to 12mm will provide a 1mm press fit.



Stem Extension	Resected (Red Line)	Unresected (Green Line)
65MM	Top of reamer threads	Between 65 and MM
100MM	Top of the 6 in 65MM	At the 1 in 100MM
140MM	Top of the 10 in 100MM	At the 0 in 140MM

Figure 2

Make sure to ream in an elliptical fashion with the first few reamers to ensure the distal bone does not dictate the path of the reamer.

> **CAUTION |** During the reaming process, the intramedullary canal of the femur should be repeatedly irrigated and aspirated to reduce the chance of fat emboli

With desired reaming complete, ensure the Reamer provides a stable construct for additional femoral preparation.

DISTAL FEMORAL ALIGNMENT

The Valgus Angle Alignment Guide should be set at 5° (left or right) to match the 5° valgus orientation of the Resurfacing Femur. Set the valgus angle to 5° and tighten the small thumb screw **A IN | FIGURE 3.** Attach the Distal Femoral Resection Guide to the Valgus Angle Alignment Guide and tighten the small screw by hand or with a screwdriver **B IN | FIGURE 3.** Slide the entire construct over the fixed Cylindrical Reamer and lock the guide to the reamer by tightening the large thumb screw **C IN | FIGURE 3.**

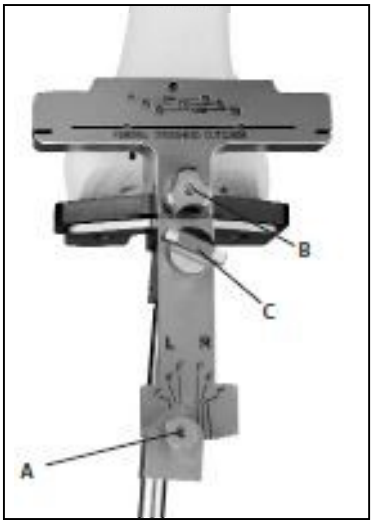


Figure 3.

DISTAL FEMORAL RESECTION

NOTE | All femoral resection slots are designed for use with a .050" (1.3mm) thick saw blade. The distal femoral resection depth is set using the 9mm Femoral Distal Spacer between the platform of the Valgus Angle Alignment Guide and the most proximal condyle if a femoral component was removed as in a revision situation **| FIGURE 4.**

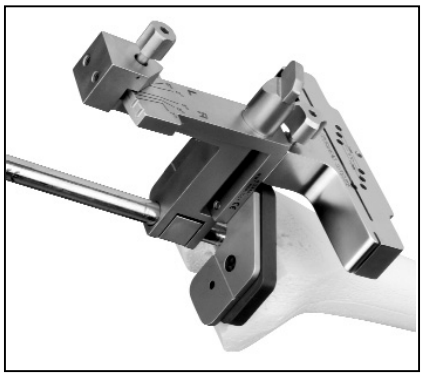


Figure 4.

The 9mm Femoral Distal Spacer accounts for the distal thickness of a primary femoral implant that was removed. Once assembled, the spacer will provide a 28mm resection along the most prominent condyle surface from the joint line.

A secondary check is available by referencing the small slots on the Distal Femoral Resection Guide. By matching the position of these slots to the transepicondylar axis, a theoretical placement of the original joint line is indicated **| FIGURE 5.**

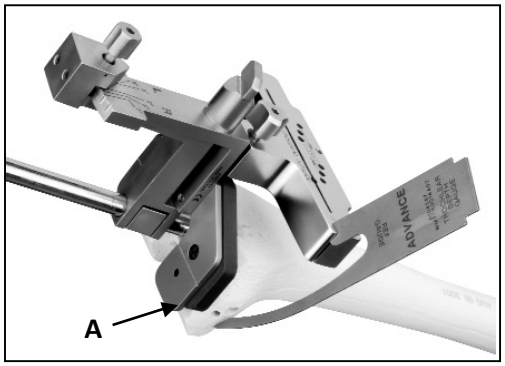


Figure 5.

CAUTION | Placing the Valgus Angle Alignment Guide paddles **A IN | FIGURE 5** or the 9mm Femoral Distal Spacer if needed flush against the distal surface, will result in a 28mm distal resection from the joint line (where the paddles touch the femur).

With the guide properly positioned, pin the Distal Femoral Resection Guide by placing 1/8" (3.2mm) Headless Fixation Pins or Drill Bits into the holes, marked "STD" **A IN | FIGURE 6**. The distal femoral resection can be performed with or without the Cylindrical Reamer and Valgus Angle Alignment Guide in place. If the guide is left, take caution to avoid the IM reamer while making the resection. To remove the guide, loosen both thumb screws **B IN | FIGURE 6** and disengage the Valgus Angle Alignment Guide from the Distal Femoral Resection Guide. Utilize the Quick Disconnect T-handle to remove the reamer. A distal resection is performed through the resection slot **C IN | FIGURE 6.**

After the resection is complete, remove the Distal Femoral Resection Guide and pins from the bone.

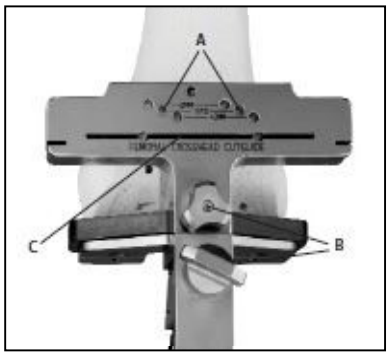


Figure 6.

FEMORAL SIZING

Femoral implant sizing can be approximated by one of the following methods: **1 |** use of trial femoral components **2 |** pre-operative radiographic evaluation of both knees.

ANTERIOR AND POSTERIOR RESECTIONS

If the Cylindrical Reamer was removed to make the distal resection, the Reamer needs to be inserted again to accommodate attachment of the Femoral A/P Resection Guide.
Select the Femoral A/P Resection Guide corresponding to the size Resurfacing Femur previously determined. Assemble the 5° IM Revision Angle Locator with the correct "Left" or "Right" marking facing the arrow on the Femoral A/P Resection Guide **A IN | FIGURE 7** and place the entire assembly over the fixed Cylindrical Reamer. Two laser marks on the face of the block indicate the M-L width of the Resurfacing Femur for a final check of femoral sizing **B IN | FIGURE 7.**

External rotation can be set by referencing either the medial and lateral epicondyles (transepicondylar axis) or A/P axis of the femur (perpendicular plane to the patella groove).

Tighten the thumbscrew **C IN | FIGURE 7** and stabilize the block using fixation pins on the medial and lateral sides of the block. The fixation holes can be predrilled with a Drill Bit. 1/8 in. Femoral resections are performed through the anterior and posterior resection slots. The anterior femoral resection is 6° divergent to the posterior resection.

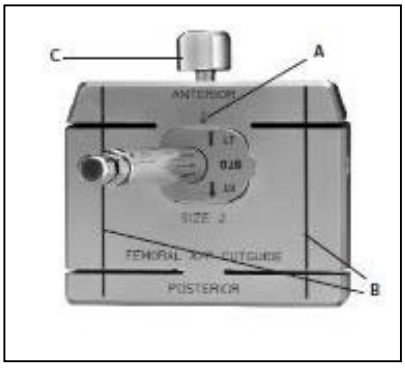


Figure 7

RESURFACING FEMUR TRIAL ASSEMBLY

Assemble the appropriate size Trial Stem Extension to the Trial Resurfacing Femur. Using the Femoral Impactor, impact the Trial Resurfacing Femur onto the prepared bone **| FIGURE 8.**

Figure 8.

TIBIAL PREPARATION

The tibial resection is performed using Intramedullary (IM) Referencing instrumentation. Consider that the tibial components (Tibial Baseplate, Tibial Poly Spacer, and Tibial Hinge Component) will add 20mm of length when using an 8mm spacer; confirm that enough tibial bone is removed.

> **NOTE |** The ELEOS Tibial implants are designed for a perpendicular tibial base orientation to the IM canal. Hence, IM instrumentation helps ensure a neutral resection.

Figure 9.

TIBIAL REAMING

A Starter Drill Bit 3/8 in. is used to initiate an opening in the proximal tibia just posterior to the anterior cruciate ligament tibial attachment.

> **NOTE |** Drill to approximately 1-1.5 inches in depth and toggle the drill to increase the opening diameter to allow the 11 in. Reamer/IM Rod to locate the central axis.

Attach the Quick Disconnect T-handle to the 11 in. Reamer/ IM Rod and ream to establish the anatomical axis of the proximal tibia **| FIGURE 9** and to allow for the assembly of the IM Tibial Alignment Guide.

> **NOTE |** If Stem Extensions are to be used, continue reaming with consecutive larger reamer diameters until the desired diameter is achieved after the tibial resection has been made. See "Tibial Stem Extension (Optional)."

> **CAUTION |** Hand reaming is recommended when a patient has poor bone quality.

TIBIAL RESECTION

Preassemble the IM Tibial Alignment guide and IM Tibial Resection guide on the back table. Remove the Quick Disconnect T-Handle from the 11in. Reamer/IM Rod.

Slide the IM Tibial Alignment and Resection Guide Assembly onto the 11in. Reamer/IM Rod until the bottom surface of the guide rests against the tibial surface **| FIGURE 10.**

Turn the locking screw to lock the guide to the 11in. Reamer/IM Rod **A IN | FIGURE 10.**

The Depth Stylus and/or Dual Reference Gauge (also known as crab claw/angel wing) can be used to set the proximal/distal position of the IM Tibial Resection guide to the desired level of tibial resection **B IN | FIGURE 10.**

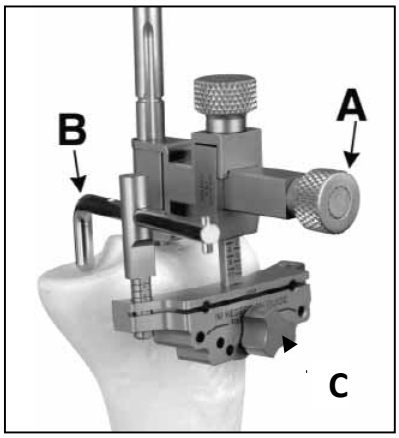


Figure 10.

> **NOTE |** The IM Tibial Resection Guide can be moved an additional 3mm down if the initial pin is placed in the "0" hole to get the desired resection level.

The Depth Stylus can be set to measure a depth of resection of 2mm or 10mm.

After desired resection level is achieved, tighten the knob on the IM Tibial Resection Guide. **C IN | FIGURE 10.**

Pin the IM Tibial Resection Guide to the proximal tibia.

After the desired alignment is achieved and pins are in place, loosen the locking screw **A IN | FIGURE 10** and knob on the IM Tibial Resection Guide **C IN | FIGURE 10.** Remove the top of the IM Tibial Alignment Guide leaving the IM Tibial Resection Guide pinned into the tibia.

Make the tibial resection and remove IM Tibial Resection Guide.

TIBIAL STEM EXTENSION (OPTIONAL)

Stem Extensions are available in either canal-filling or cemented options **| See Table 1.** If a Stem Extension is to be used, continue reaming with consecutive larger reamer diameters until the desired diameter.

Utilize the cylindrical reamer to continue preparing the tibial canal for the stem extension.

If the tibial resection has been completed, ream to the appropriate depth of the tibial construct (shown below in **FIGURE 11** in Red).

If the tibial resection has not been completed, ream approximately 20mm beyond that distance (shown in **FIGURE 11** in Green) to account for the tibial baseplate tray, general poly spacer, and tibial hinge component.

Consider an additional 20mm to account for the placement of a cement restrictor in the distal end of the prepared tibial canal.

When desired reaming is complete, ensure the Reamer provides a stable construct for additional tibial preparation.

Stem Extension	Resected (Red Line)	Unresected (Green Line)
30MM	Top of reamer threads	Between 65MM letters
65MM	Top of 65MM etching	Between 100MM letters
100MM	Top of 100MM etching	Between 140MM letters
140MM	Top of 140MM etching	20MM past top of 140MM

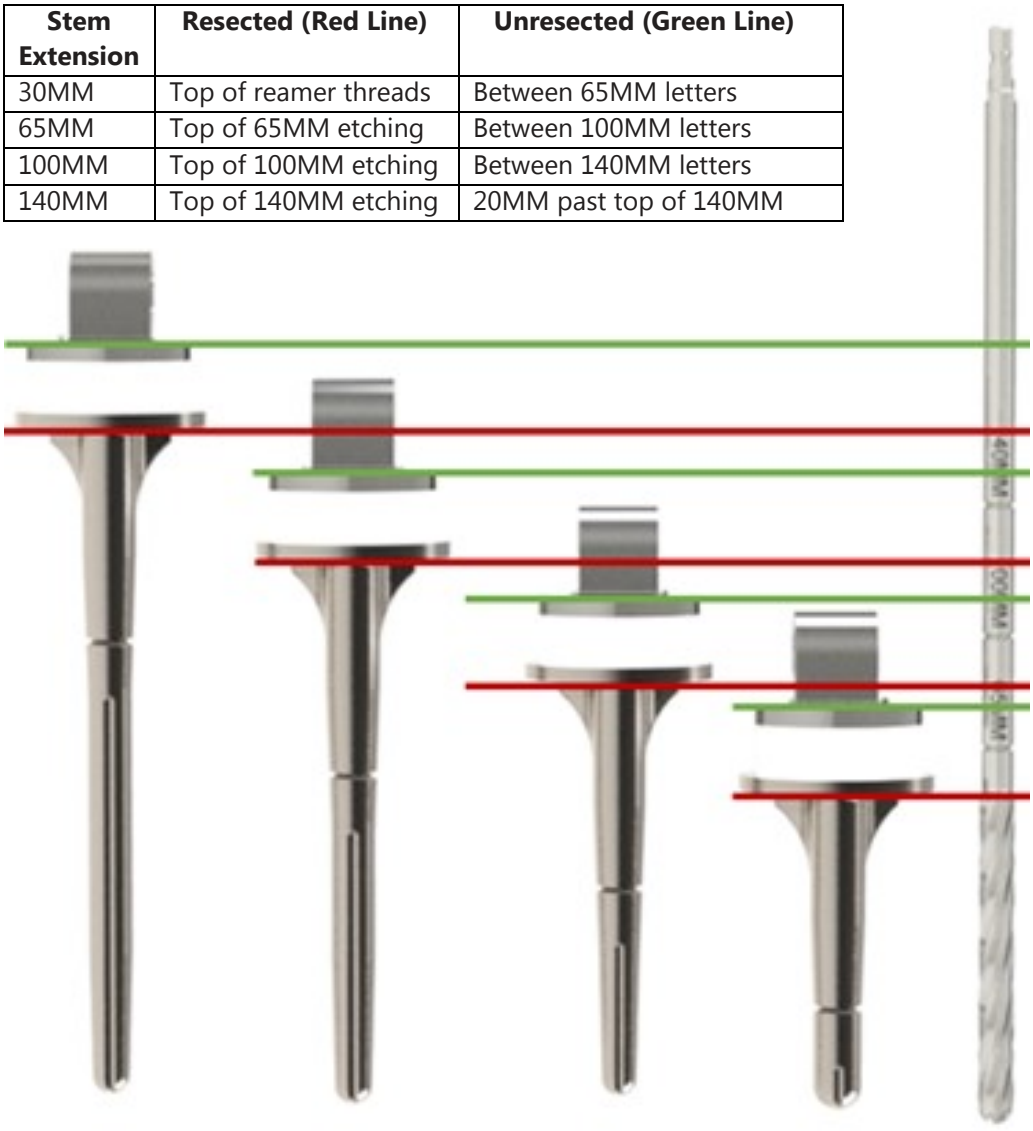


Figure 11.

CAUTION | Hand reaming may be appropriate to avoid thinning the tibial cortex which could result in a fracture.

NOTE | The Stem Extension diameters from Table 2 are equal to Reamer diameters. When determining the appropriate Cylindrical Reamer size for the desired cement mantle, the difference will represent the cement mantle. For instance, reaming to a 13mm diameter will provide a line-to-line fit with a 13mm stem. Reaming to a 14mm will provide a 0.5mm cement mantle per side, while reaming to 15mm will provide a 1mm cement mantle per side. When determining the appropriate Cylindrical Reamer size for the canal filling stems, the difference will represent the fit. For instance, reaming to a 13mm diameter will provide a line-to-line fit with a 13mm stem, while reaming to 12mm will provide a 1mm press fit.

TIBIAL BASEPLATE PREPARATION

Select the Trial Tibial Baseplate Template that provides the optimal proximal tibial bone coverage **| FIGURE 12.**

> **NOTE |** If Augments are used, see "Block Augments (Optional)" on Page 20 and attach the appropriate size and thickness Trial Augment to the Trial Tibia Baseplate Template **| FIGURE 12.**

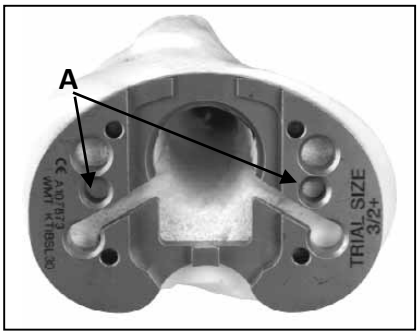


Figure 12.

Place the Trial Tibial Baseplate Template on the proximal tibia **| FIGURE 13.** If the size is appropriate, attach the Trial Tibial Base Handle/Drill Guide and External Check Rod and place the Trial Tibial Baseplate Template on the proximal tibia and pin it to the tibia using Tibial Baseplate Fixation Pins **| FIGURE 13.**

> **NOTE |** Align the distal end of the External Check Rod with the second toe.

Remove the Tibial Baseplate Handle and External Check Rod

Figure 13.

Loosely attach the Keel Punch Guide Handle to the Keel Punch Guide. Align the pegs on the bottom of the Keel Punch Guide to the center holes in the Trial Tibial Baseplate Template **A IN | FIGURE 14.**

Secure the Keel Punch Guide to the Trial Tibial Baseplate by turning the knurled handle, ensuring that the Keel Punch Guide Handle is in the correct orientation shown in **A IN | FIGURE 14.**

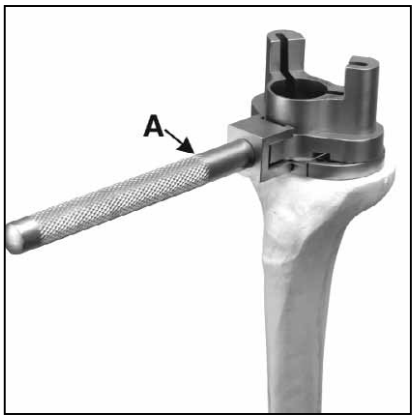


Figure 14.

TIBIAL BASEPLATE REAMING

Align the Press Fit Reamer Guide or Cemented Reamer Guide through the Keel Punch Guide **A IN | FIGURE 15.** If a thin cement mantle is preferred, utilize the Press Fit Reamer Guide and Press Fit Reamer; if a thicker cement mantle is preferred, use the Cemented Reamer Guide and Cemented Reamer.

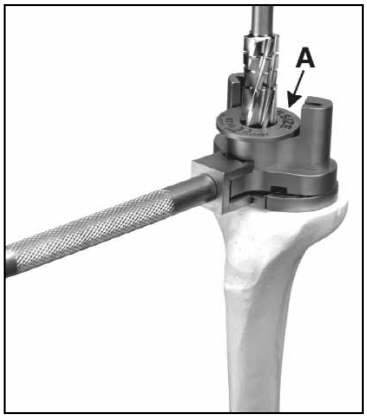


Figure 15.

Using the appropriate reamer, ream until no teeth are visible above the Reamer Guide **| FIGURE 15.**

> **NOTE |** Make certain that the Tibial Baseplate Template stays flush to the resection surface during the reaming and punching steps.

Remove the Reamer Guide from Keel Punch Guide.

TIBIAL BASEPLATE KEEL PUNCH

Using the Keel Punch Impactor and the Press Fit or Cemented Keel Punch, slide the punch through the guide until the punch is fully seated **| FIGURES 16 AND 17.** If Stem Extension reaming was performed, attach appropriate size Trial Stem Extension to the chosen Keel Punch.

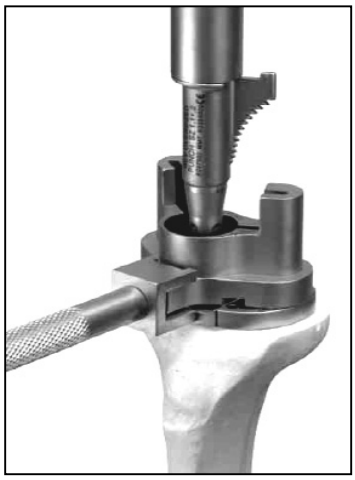


Figure 16.

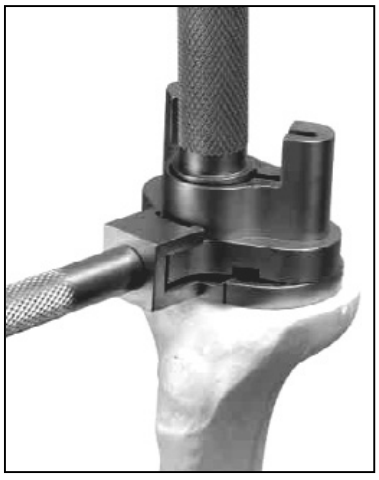


Figure 17.

Disassemble and remove all tibial preparation instruments. Use the Pin Puller to remove fixation pins.

TRIALING

TIBIAL TRIAL ASSEMBLY

Assemble the Trial Tibial Baseplate, Trial Stem Extension (optional), Trial Tibial Poly Spacer, Trial Block Augment (optional) and Trial Tibial Hinge Component according to previously determined sizes chosen **| FIGURES 18-19.**

Insert the trial tibial component assembly into the tibia **| FIGURE 18.**

Reduce the trial femoral construct onto the trial hinge component. Next, insert the Trial Axial Pin to attach the Trial Distal Femur to the Trial Tibial Hinge Component to secure the construct for trial reduction **| FIGURE 19.**

NOTE | The Axial Pin can be inserted from the medial or lateral side.

Figure 18.

Figure 19.

TRIAL REDUCTION

Perform a trial reduction. If the soft tissues require adjustment, minor changes can be accomplished by selecting alternate Tibial Poly Spacers. More significant adjustments may require changing the resection level.

COMPONENT ASSEMBLY

CAUTION | Mallet assembly must be performed over or near the support legs of a rigid back table and not on an unstable surface such as the mayo stand. Ensure the components are free from debris and dry prior to assembly. If required, wipe/dry components with a sterile lap sponge.

NOTE | Recommend using 2lb. mallet from general surgical OR instruments.

Figure 20.

FEMORAL COMPONENT

On the back table, place the Resurfacing Femur and Stem Extension in the Femoral Assembly Platform using the Trial Axial Pin, and assemble with five hard mallet blows using the Stem Assembly Impactor **| FIGURE 20.**

NOTE | Utilize the match mark on the Stem Extension so that the slot accommodates the bow of the femur**.**

Figure 21.

TIBIAL COMPONENT

If a Stem Extension is to be used, place the Tibial Baseplate on the Tibial Baseplate Assembly Platform. Assemble the Stem Extension onto the Tibial Baseplate using five hard mallet blows directly on the tip of the Stem Extension with the Stem Assembly Impactor **| FIGURE 21.**

NOTE | Make sure to remove the protective cap on the tip of the Stem Extension before assembly.

If augments are to be used see "Block Augments (Optional)."

PREPARATION OF CEMENT

Cement mixing begins and the femoral and tibial canals are cleaned using pulsating lavage and then dried with a femoral sponge or tampon. If desired, a cement restrictor (plug) can be placed in the canal. Cement is injected in a pressurized retrograde fashion.

COMPONENT INSERTION

FEMORAL COMPONENT

Place the resurfacing femur Stem Extension in the femoral canal. Guide and impact the Resurfacing Femur into the canal with the Femoral Impactor until the implant is fully seated at the resected plane **| FIGURE 22.** Remove excess cement. Proper position of the implant should be maintained until the cement cures.

Figure 22.

TIBIAL COMPONENT

A marking on the anterior portion of the Tibial Baseplate boss provides a reference to align the slot of the Stem Extension when a canal filling stem is indicated **| FIGURE 23.**

> **NOTE|** The slot on the Stem Extension **B IN | FIGURE 23** should align with the marking on the Tibial Baseplate boss **A IN | FIGURE 23**.

Place the Tibial Baseplate and Tibial Poly Spacer into the canal using the Tibial Impactor **| FIGURE 24.** Care should be taken to anchor the final components in the appropriate position until the cement has set fully.

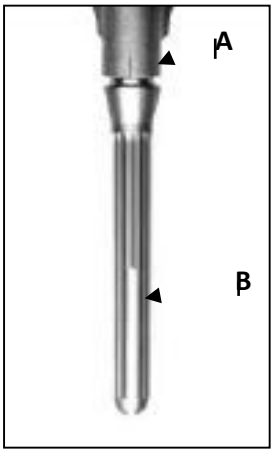


Figure 23.

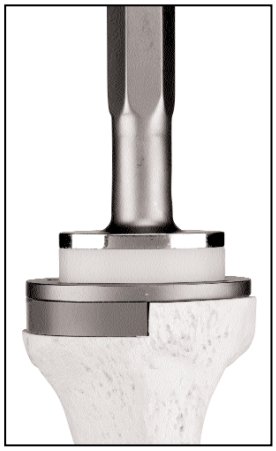


Figure 24.

TIBIAL HINGE ASSEMBLY

Figure 25.

Insert the tibial portion of the hinge assembly into the tibia **| FIGURE 25.**

Align the Resurfacing Femur with the Tibial Hinge Component **| FIGURE 26.**

Insert the Resurfacing Femur Axial Pin using the Axial Pin Inserter/Extractor. The Resurfacing Axial Pin size should match the size of the Femoral Resurfacing component chosen **| FIGURES 27-30**.

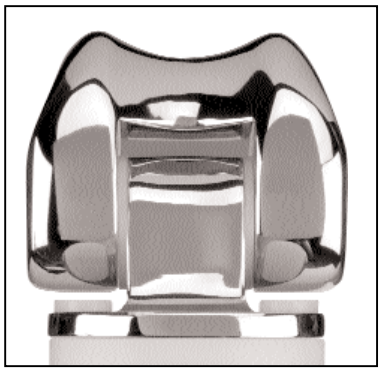


Figure 26.

The Resurfacing Femur Axial Pin can be inserted either on the medial or lateral side. The Axial Pin key must fall into the corresponding keyway in the femoral component. Make sure the Axial Pin is flush with the side of the Resurfacing Femur **| FIGURE 30.**

> **NOTE |** To help align the components, the Trial Axial Pin can be inserted part way into the opposite side of the final Resurfacing Axial Pin insertion. Then insert the Axial Pin into the other end and advance the pin forward, ejecting the Trial Axial Pin. Engage the Axial Pin until it is flush on both sides of the Resurfacing Femur.

Figure 27.

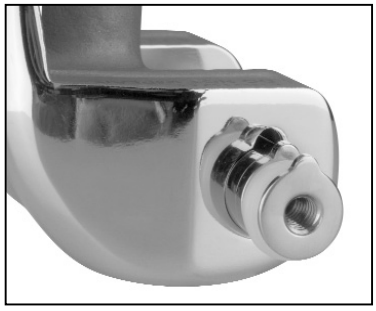


Figure 28.

Figure 29.

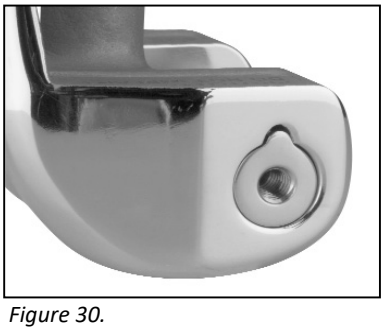


Figure 30.

BLOCK AUGMENTS (Optional)

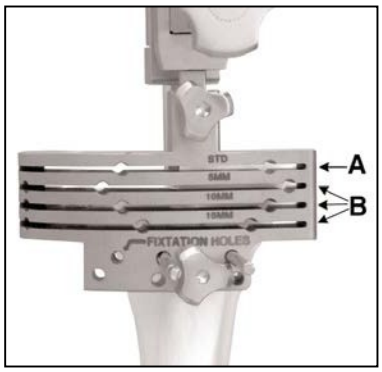


Figure 31.

During the tibial resection step of the surgical technique, if Block Augments are necessary, begin by making a proximal "clean-up" resection along the most prominent condyle through the 0mm resection slot marked “STD” in the Revision Block Augment Resection Guide **A IN | FIGURE 31.**

NOTE | The Revision Block Augment Resection Guide is available in a right and left hand version.

If block augmentation is needed, the Revision Block Augment Resection Guide provides resection slots for the 5mm, 10mm, and 15mm Augments. **B IN | FIGURE 31.**

These augments can be placed independently on the medial or lateral side of the tibia**.**

During tibial baseplate preparation, if an augment is to be used, attach the appropriate size Block Augment to the Trial Tibial Baseplate Template and proceed with tibial preparation, as specified above **| FIGURES 32-33**.

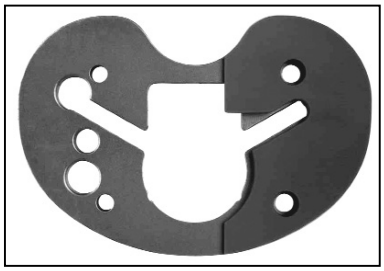


Figure 32.

Figure 33.

Using the packaged screws, assemble the Augments through the Tibial Baseplate. Plastic starter handles are provided with each augment screw and should be removed once the screw is tightened **| FIGURE 34.** A final tightening of the augment should be completed with standard 3.5mm hex head screwdriver.

Figure 34.

PATELLA RECONSTRUCTION (Optional)

Patella resurfacing is determined based on medical judgment of the clinical situation. If severe degeneration or arthritis is present on the articular surface of the patella, resurfacing may be indicated. If the patella is otherwise normal, it may be acceptable to resurface the patella or to leave it in its natural state.

RESURFACING PATELLA

The Resurfacing Patella Resection Guide can be used with or without Resurfacing Patella Resection Depth Gauges or Resurfacing Patella Minimum Thickness Gauges **| FIGURE 35**. When used without gauges, the Resurfacing Patella Resection Guide is positioned at the desired level of resection.

Securely clamp the jaws into the patella and resect the patellar bone. For a calibrated resection, the appropriate Resection Depth Gauge corresponding to the implant diameter should be attached to the top of the Resection Guide with the lock screw. Position the Resection Guide jaws parallel to the articular margin and securely clamp the guide to the bone, assuring the gauge is contacting the apex of the articular surface. The gauge can be removed to increase visibility.

Resurfacing Patella Minimum Thickness Gauges are available for preservation of 10mm or 15mm bone stock. Use of the Minimum Thickness Gauge is based on intraoperative assessment of bone quality and thickness.

Resurfacing Patella, All-Poly, Tri-Peg			
Part Number	**Description**	**Diameter**	**Thickness**
KPONTP29E	ELEOS RESURFACING PATELLA	29mm	8mm
KPONTP32E	ELEOS RESURFACING PATELLA	32mm	8mm
KPONTP35E	ELEOS RESURFACING PATELLA	35mm	8mm
KPONTP38E	ELEOS RESURFACING PATELLA	38mm	10mm
KPONTP41E	ELEOS RESURFACING PATELLA	41mm	11mm

The Resurfacing Patella Peg Drill Guide is used to size the patella and prepare holes in the bone for the implant pegs. Attach the Resurfacing Patella Drill Guide to the Patella Clamp. The Drill Guide has grooves on their surfaces indicating the patella diameter options. The Resurfacing Patella Peg Drill is used to prepare the peg holes **| FIGURE 36.**

> **NOTE |** The Resurfacing Patella have the same peg patterns between sizes and can be easily changed during trial reduction.

> **NOTE |** A Patella/Femoral Head Sizing Caliper is available for assessment of thickness.

Remove the Resurfacing Patella Drill Guide from the Patella Clamp and insert the Patella Clamp Seater in its place.

Once the patella surface is prepared, mix cement, wash and dry the bone, pressurize the cement, and insert the patella pegs into the prepared holes. Use the Patella Clamp with the Patella Clamp Seater attached to fully seat the patella. Remove residual cement and keep the Patella Clamp in place until cement is cured.

Figure 35.

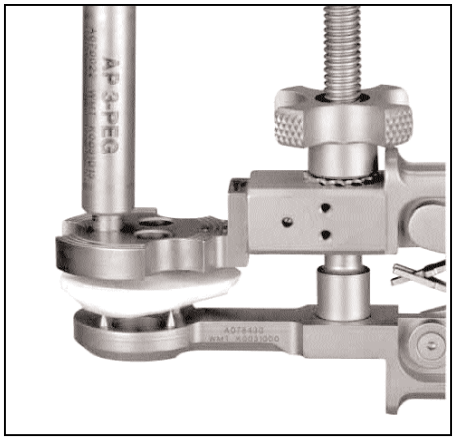


Figure 36.

COMPONENT DISASSEMBLY

To disengage the ELEOS tapers, insert the Taper Disassembly Tool into the hole on the side of the implant. Strike the end of the tool with a mallet until the components separate **| FIGURES 37 AND 38.** Support the implant during disassembly.

Alternatively, or in concert with disassembly tools, insert the Taper Disassembly Fork around the outside of the implant, below the seam between the two components to be disassembled. Strike the end of the fork to disengage the tapers **| FIGURES 39 AND 40.** Again, support the implant during disassembly.

Figure 37.

Figure 38.

Figure 39.

Figure 40.

EXPLANTATION INFORMATION

In a revision case, when stem explantation is required, use the Stem Extractor Attachment to attach to the Slap Hammer Extractor Handle to remove the stem. To disengage Stem Extensions, use the Stem Implant Extractor-Adaptor. Assemble it to the Slap Hammer Pin Extractor. Next, thread the full assembly to the Stem Extension that needs to be removed. A Trefine from general surgical instrumentation can also be used to remove the stem by placing the Trefine over the stem to ream the interface between the stem and the bone.

The ELEOS Limb Salvage System is compatible with the following MicroPort Orthopedics systems trademarked by MicroPort: Guardian, Advance, Gladiator, Lineage, and Transcend.

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