

Triathlon® with Single-Use Instrumentation

Optimize Your TKA Experience

Posterior Referencing Surgical Protocol



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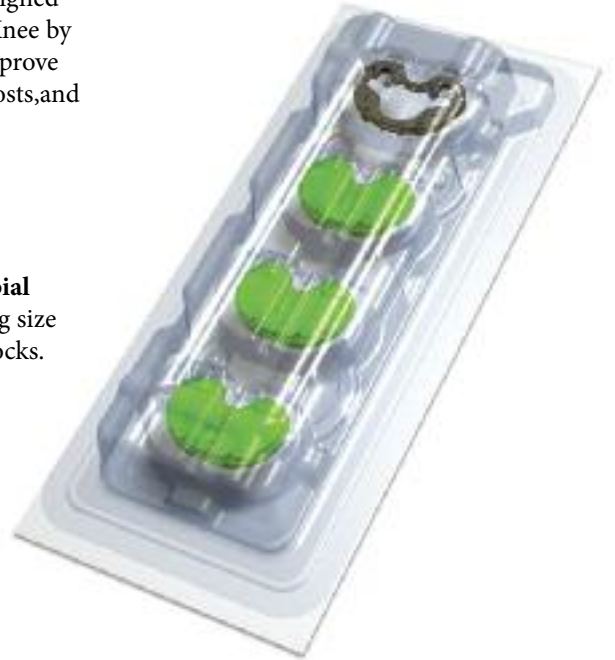
Posterior Referencing Surgical Protocol

Introduction

Triathlon Single-Use Instrumentation is a unique efficiency solution designed to complement the Triathlon® Knee by reducing instrumentation to improve operational efficiency, reduce costs, and increase procedural capacity.¹

Triathlon Single-Use Instrumentation features:

- ▶ **Single Use Femoral and Tibial Preparation Kits** – Including size specific trials and cutting blocks.
- ▶ **Streamlined Case and Tray Design** – Allowing for only two cases of reusable instruments to complete a non-navigated Triathlon surgery.²
- ▶ **Navigation Capable** – With the use of only one case of reusable instruments to complete a navigated Triathlon surgery.²



Triathlon Single-Use Instrumentation



Triathlon Single-Use Instrumentation

The Triathlon Single-Use Instrumentation features the following sterile, single use, size- specific kits.



Femoral Preparation Kits

- ▶ **Universal Femoral Trials** – Allows for trialing of both left and right Femoral Components with only one Femoral Trial.
- ▶ **Two Piece Femoral Cutting Blocks** – Made of Lexan providing a clear open face A/P resection block which may allow for greater surgeon visibility. An open face chamfer block is also included.
- ▶ **PS Box Cutting Guide** – Made of clear Lexan which may allow for greater visibility during PS Box preparation.
- ▶ **A/R Skim Cut Guide** – Made of clear Lexan to allow for positioning of the A/P block in an Anterior Referencing approach.



Tibial Preparation Kits

- ▶ **Tibial Insert Trials** – Color-coded by size for ease of identification during the procedure (featuring all insert thickness from 9mm – 19mm for Cruciate Retaining and 9mm - 25mm for Posterior Stabilized).
- ▶ **Tibial Templates** – For use with Tibial Keel Punch and trialing.



Tibial Sizer Kit

- ▶ **Tibial Sizer Kit** – Color-coded tibial sizers for sizes 1-8 allowing for sizing of the resected tibia.



Assembly Instructions

Many of the Triathlon reusable instruments have unique mechanisms incorporated to assist surgeons and OR staff in a simplified, efficient surgical experience. Therefore, assembly instructions have been included in the first section of this surgical technique to assist with instruments that may be pre-assembled on the back table, as well as other instruments that need to be assembled. All of the mechanisms that allow instruments to be adjusted and/or assembled have been color-coded. Those that correspond to femoral preparation are black, those for tibial preparation are bronze and those for patella preparation are gold.

	Black		Bronze		Gold
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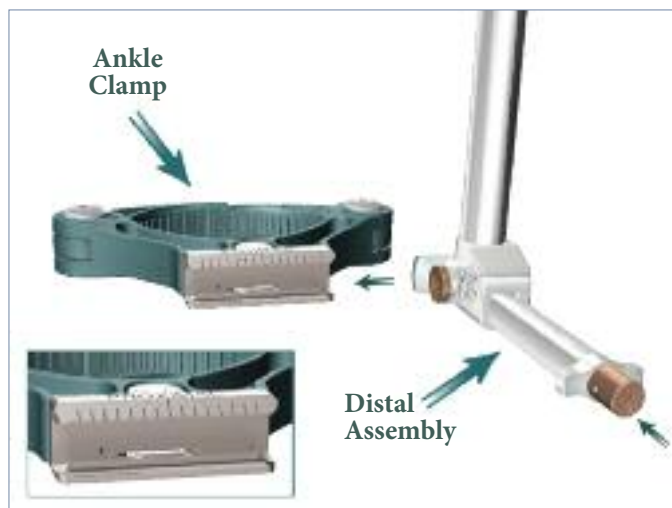
Posterior Referencing Surgical Protocol

Assembly Instructions

Tibial Alignment Ankle Clamp EM, Tibial Alignment Distal Assembly EM, MIS Tibial Alignment Proximal Rod EM, Tibial Stylus, MIS Tibial Resection Guide, and Tibial Adjustment Housing Assembly:

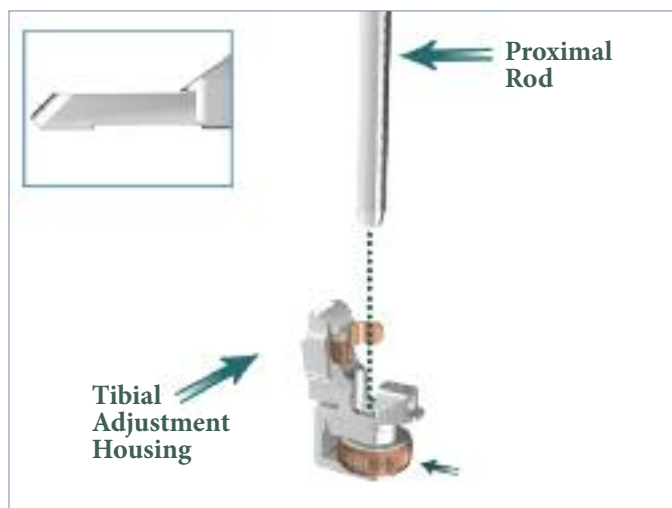
Note: The Tibial Adjustment Housing is available in 0° slope (posterior stabilized) and 3° slope (cruciate retaining):

- ▶ Press the bronze button on the Distal Assembly and slide into the grooves on the Ankle Clamp. Ensure that the side of the Ankle Clamp reading “proximal” is visible from above.



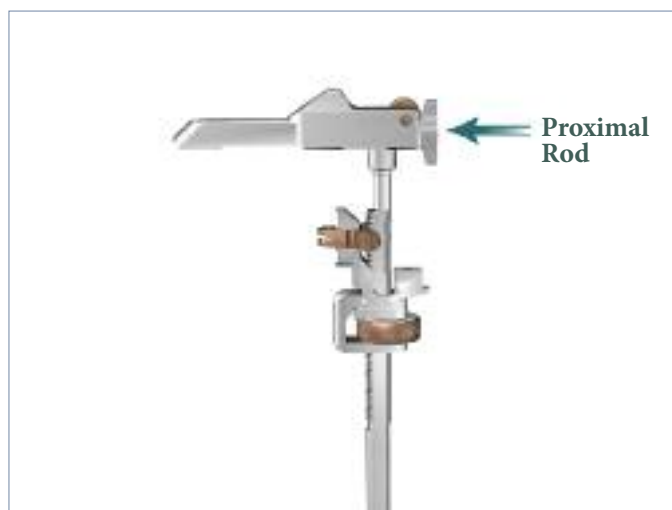
Assembly 1A

- ▶ Press the bronze wheel on the Tibial Adjustment Housing with your thumb and insert the Proximal Rod. Ensure that the two fixation pins on the superior portion of the Proximal Rod are facing posteriorly. Ensure the Proximal Rod arm extends in the same direction as the assembled Ankle Clamp.



Assembly 1B

- ▶ Slide the Proximal Rod until the Tibial Adjustment Housing engages the teeth on the Proximal Rod. Ensure that the bronze tabs are above the bronze wheel when assembling.



Assembly 1C

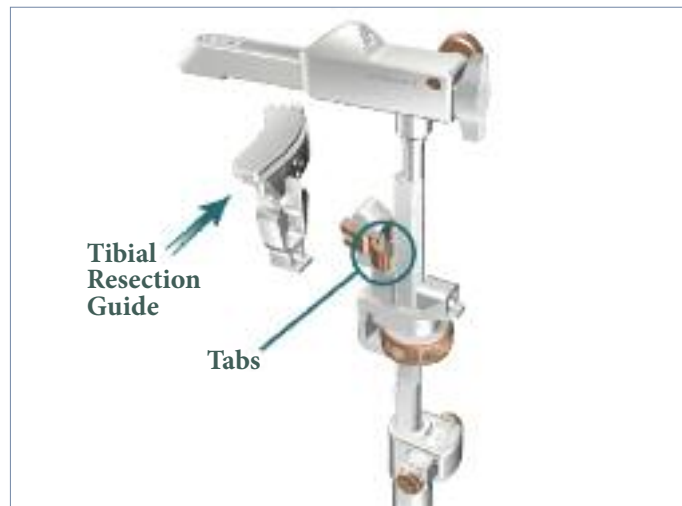
Triathlon Single-Use Instrumentation

- ▶ Insert the Proximal Rod and Tibial Adjustment Housing assembly into the hole on the top of the Distal Assembly, ensuring that the Distal Assembly Lock is in the unlocked position.



Assembly 1D

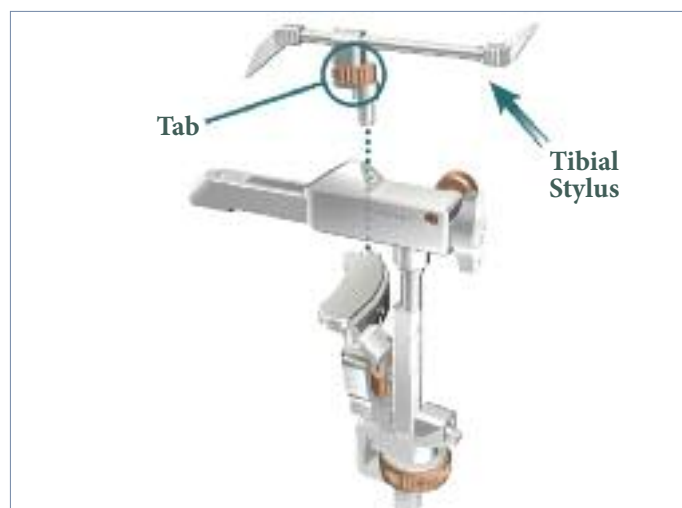
- ▶ Squeeze the bronze tabs on the Tibial Adjustment Housing and insert entire assembly into the MIS Captured or Uncaptured Tibial Resection Guide.



Assembly 1E

- ▶ Squeeze the bronze tab on the Tibial Stylus and insert the post into the appropriate side of the Tibial Resection Guide.
- ▶ Release the bronze tab to lock the Tibial Stylus in place.

(Continued)



Assembly 1F

Posterior Referencing Surgical Protocol

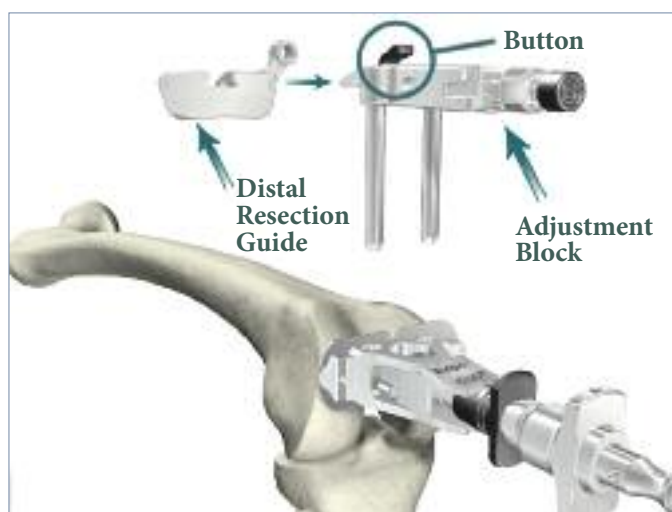
- ▶ The MIS Proximal Rod has a retractable fixation arm. Ensure that the arm position is fully extended; to extend or retract the fixation arm, depress the bronze button on the side of the MIS Proximal Rod and slide the fixation arm to the desired location.



Assembly 1G

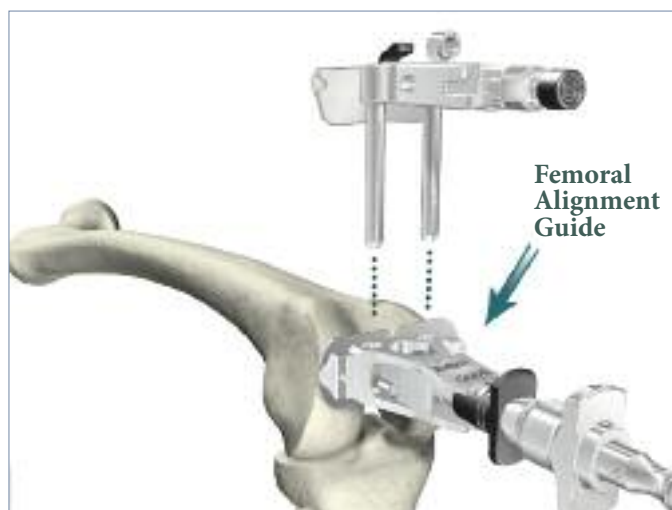
MIS Distal Resection Guide, MIS Adjustment Block and MIS Femoral Alignment Guide Assembly:

- ▶ Select the appropriate Left or Right Distal Resection Guide and assemble it onto the MIS Adjustment Block.



Assembly 2A

- ▶ Insert the two posts of the Adjustment Block into the holes on the Femoral Alignment Guide (for use on the left or right side).

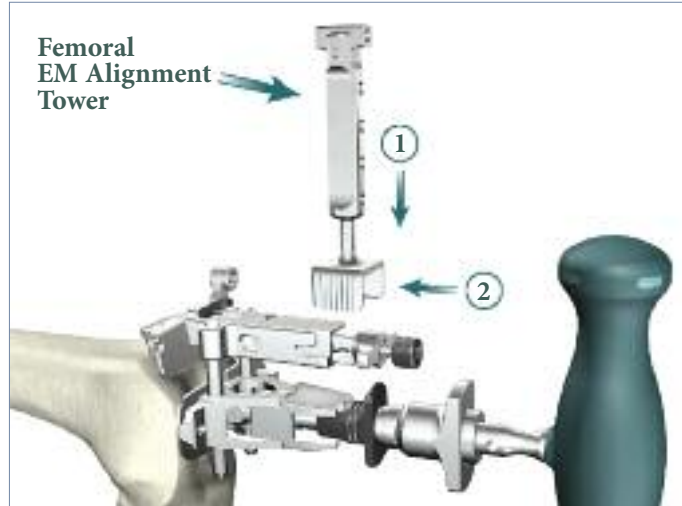


Assembly 2B

Optional

Femoral EM Alignment Tower, MIS Femoral Adjustment Block, and Universal Alignment Rod Assembly:

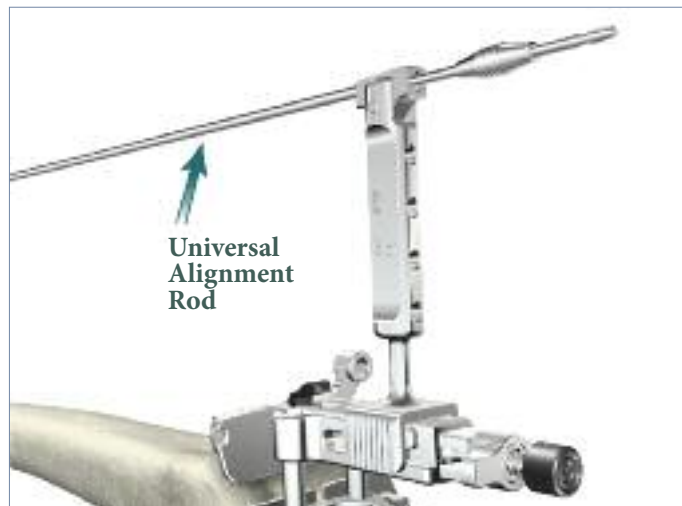
- Slide the EM Alignment Tower onto the MIS Femoral Adjustment Block.



Assembly 3A

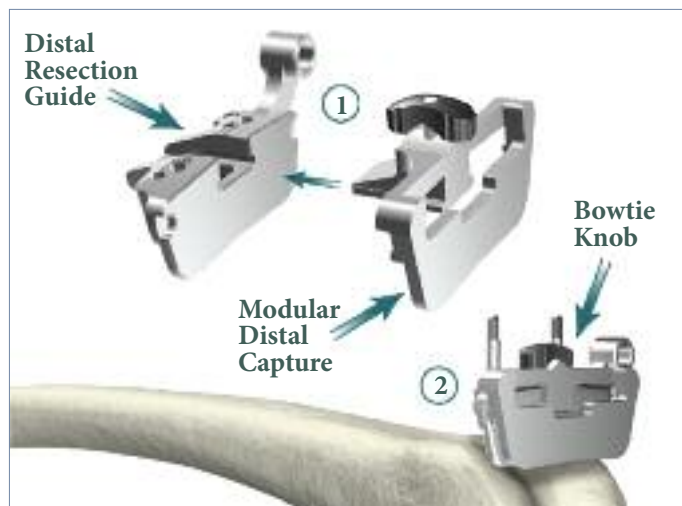
Optional

- Insert the Universal Alignment Rod through the hole on the Femoral EM Alignment Tower.



Assembly 3B

- Assembly of the optional Modular Distal Capture.
- Once in place, rotate the “bow-tie” knob to lock the capture into place.

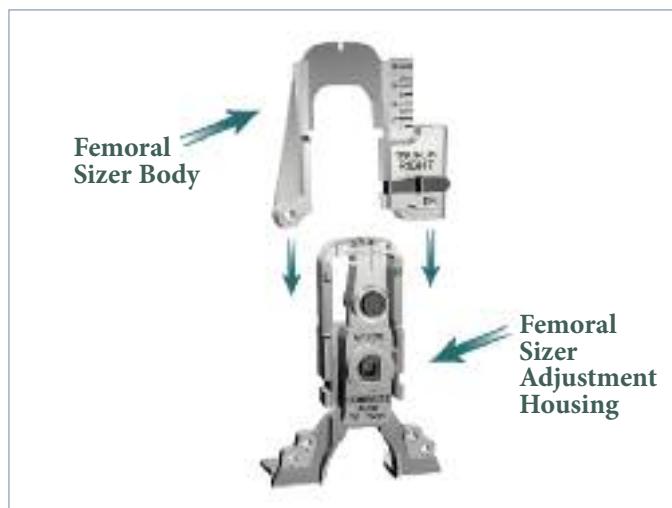


Assembly 3C

Posterior Referencing Surgical Protocol

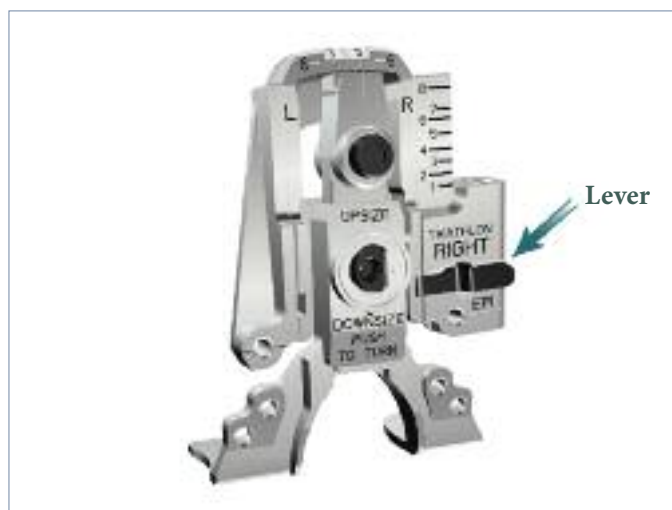
MIS Femoral A/P Sizer and MIS Femoral Stylus Assembly:

- ▶ Assemble the Left/Right modular body onto the MIS Femoral A/P Sizer Adjustment Housing by first unlocking the assembly latch, sliding the Left or Right body onto the Adjustment Housing, then turning the latch to the lock position.



Assembly 4A

- ▶ Final Assembly.



Assembly 4B

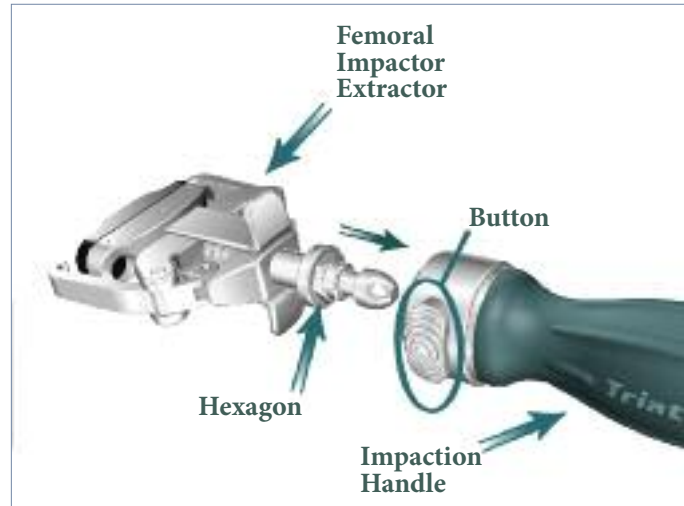
- ▶ Slide the MIS Femoral Stylus into the medial hole of the MIS Femoral A/P Sizer.
- ▶ For A/P translation, insert the male hex of the MIS Femoral Flexion Impactor into the black hex interface of the A/P Sizer Adjustment Housing. Press and rotate to adjust A/P translation up or down by up to 1.5mm.



Assembly 4C

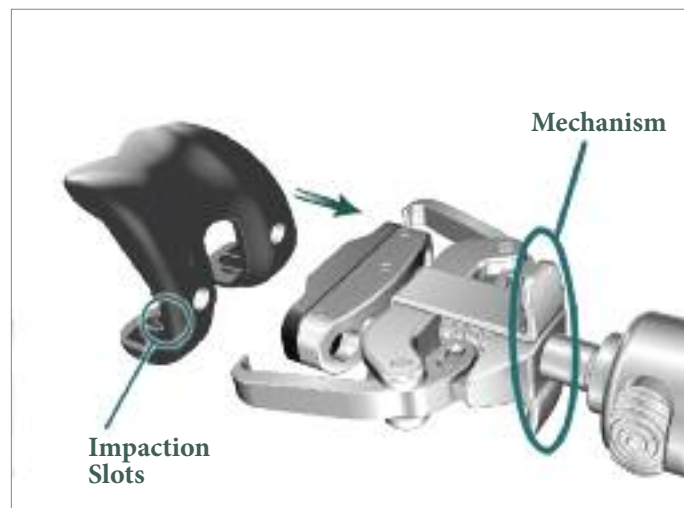
Femoral Impactor/Extractor, Impaction Handle and Femoral Trial or Femoral Component Assembly:

- ▶ Snap the Femoral Impactor/Extractor into the Impaction Handle.
- ▶ Ensure the hexagon on the Femoral Impactor/ Extractor is fully seated in the Impaction Handle. When fully seated, there will be an audible snap.



Assembly 5A

- ▶ Turn the Impaction Handle counterclockwise until there is enough space (approximately 10mm) between the black impaction surface and the ends of the jaws to insert the Femoral Trial or Femoral Component.
- ▶ Pull back on the mechanism to open the jaws. Engage the jaws into the impaction slots on the Femoral Trial or Femoral Component.
- ▶ Turn the Impaction Handle clockwise to tighten, ensuring the impaction surface locks against the distal condyles of the Femoral Trial or Femoral Component.



Assembly 5B

- ▶ Final Assembly.



Assembly 5C

Posterior Referencing Surgical Protocol

MIS Femoral Trial Extractor and Femoral Trial.

- ▶ Insert the posts of the MIS Femoral Trial Extractor into the lugholes of the Femoral Trial and squeeze the handle of the extractor to hold the Femoral Trial. Releasing the handle will release the trial.



Assembly 6A

- ▶ Final Assembly with Femoral Trial.



Assembly 6B

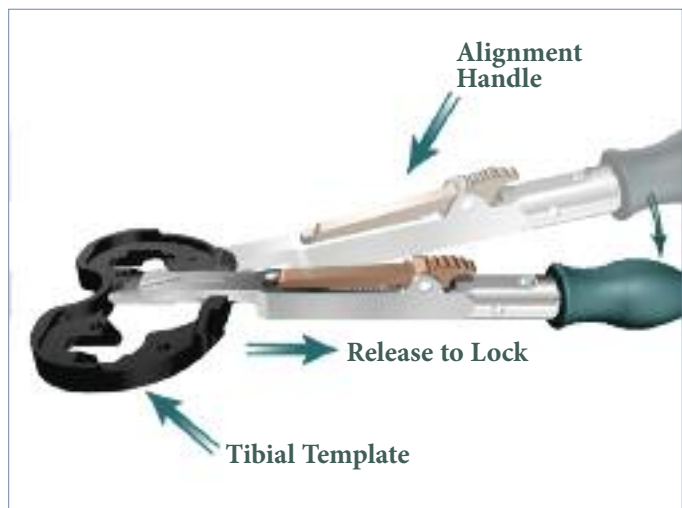
Universal Tibial Template, Alignment Handle and PS or CR Tibial Insert Trial Assembly:

- Posterior hole and channel of Universal Tibial Template.



Assembly 7A

- Press the bronze button on the Alignment Handle. Insert the spring-loaded tip of the Alignment Handle into the central posterior hole of the Universal Tibial Template. Hold the handle at a slight angle to the top surface of the template.
- Compress the spring-loaded tip by pushing it forward and lower the Alignment Handle into the channel on the anterior portion of the Universal Tibial Template. Release the spring tension and allow the Alignment Handle to engage the Universal Tibial Template.



Assembly 7B

- Release the bronze button to secure the assembly.

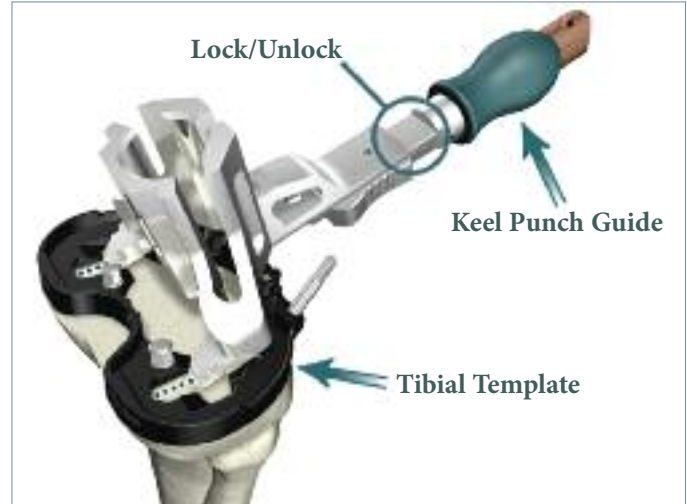


Assembly 7C

Posterior Referencing Surgical Protocol

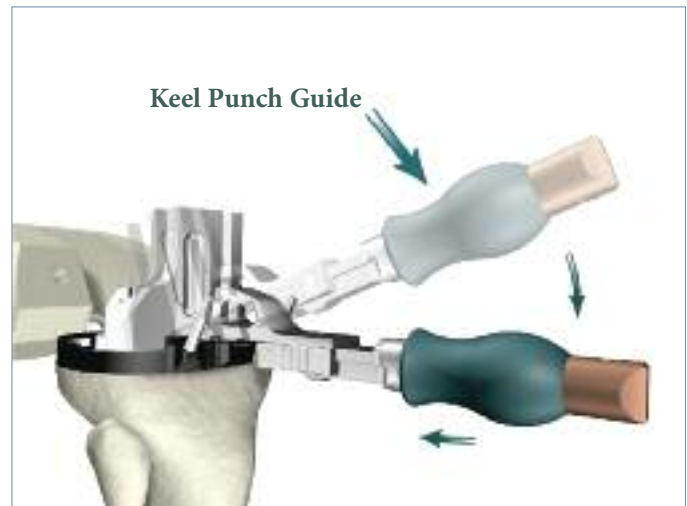
Universal Tibial Template and Keel Punch Guide Assembly:

- ▶ Ensure that the handle of the Keel Punch Guide is unlocked – pull back on the handle to unlock.
- ▶ Assemble the Keel Punch Guide to the Universal Tibial Template by inserting the Keel Punch Guide, at a slight angle to the Universal Tibial Template, into the two locating slots towards the posterior portion of the Universal Tibial Template.



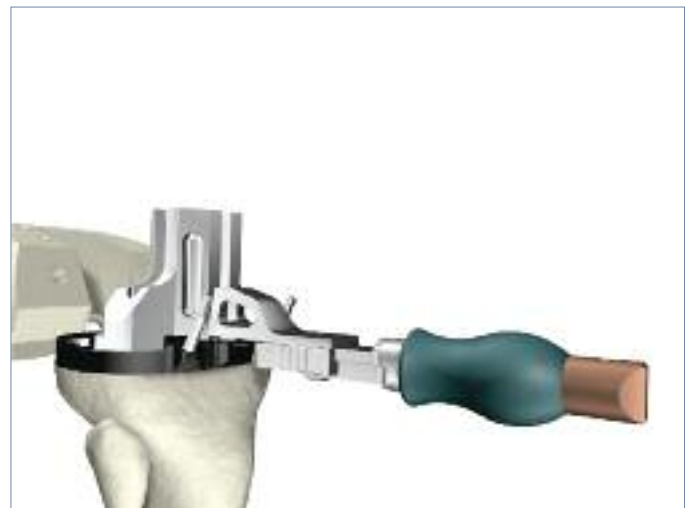
Assembly 8A

- ▶ Allow the Keel Punch Guide to sit flat on the Universal Tibial Template and push forward on the handle of the Keel Punch Guide to lock it to the Universal Tibial Template.



Assembly 8B

- ▶ Final Assembly.



Assembly 8C

Surgical Procedure

Surgical Procedure

Exposure

- ▶ A standard anterior midline incision is utilized. Any previous incision can be used or incorporated to decrease risk of skin slough.
- ▶ The capsule is entered through a modified mid-vastus approach, which makes a 6-12cm skin incision medial to the patella from just above the tibial tubercle to just above the patella.
- ▶ Use a soft tissue approach that allows adequate patella visualization and sufficient knee flexion.



Figure 1

For the purpose of this surgical technique, tibial preparation will be done first, followed by the femoral preparation. However, procedural sequence can vary according to surgeon preference.

Tibial Preparation

- ▶ Triathlon Tibial preparation utilizes an extramedullary alignment system.
- ▶ Move the leg to 90° of flexion.
- ▶ The Tibial Resection Guide, available in Left and Right configurations, is designed to avoid soft tissue impingement.



Figure 2

Triathlon Single-Use Instrumentation

Extramedullary Referencing

- The tibial resection assembly has five parts: the appropriate Tibial Resection Guide, the Ankle Clamp, the Distal Assembly, the Proximal Rod and the Tibial Adjustment Housing. These are assembled first.

Note: The Tibial Adjustment Housing is available in 0° slope (posterior stabilized) and 3° slope (cruciate retaining).

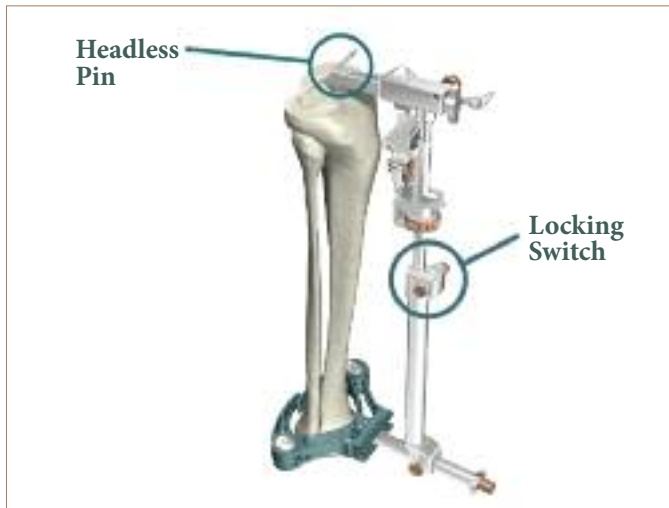


Figure 3

Instrument Bar



6541-6-700

MIS Uncaptured Tibial Resection Guide-Right



6541-6-701

MIS Uncaptured Tibial Resection Guide-Left



6541-6-702

MIS Captured Tibial Resection Guide-Right



6541-6-703

MIS Captured Tibial Resection Guide-Left



6541-2-610

Tibial Alignment Distal Assembly EM



6541-2-609

Tibial Alignment Ankle Clamp EM



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



6541-6-611

MIS Proximal Rod EM

Posterior Referencing Surgical Protocol

Flexion/Extension Alignment

- Place the ankle clamp around the ankle and unlock the locking switch (Button 2).
- Flexion/Extension alignment is correct when the long axis of the assembly parallels the mid-coronal plane of the tibia. Flexion/Extension alignment can be checked by verifying that the long axis of the assembly is parallel to the fibula.

Varus/Valgus Alignment

- Medial/Lateral offset can be adjusted by pushing the bronze button (Button 1) and sliding the assembly medially until the shaft intersects the center of the tibia.
- Once alignment is achieved, release the bronze button.



Figure 4

Rotational Alignment

- Rotate the entire assembly to ensure that the base of the assembly is aligned with the center of the ankle. The center of the ankle is generally in line with the second metatarsal.
- Once alignment is confirmed, set the bronze locking switch on the Distal Assembly to the locked position.
- The fixation arm of the MIS Tibial Alignment Proximal Rod is fully extended to reach the tibial eminence. A Headless Pin is then placed through the posterior fixation hole to lock the assembly in place.

Note: Either the anterior or posterior fixation holes may be used to set flexion/extension and rotational alignment.

Tibial Slope Adjustment

Note: If the MIS Proximal Rod is parallel to the tibia, the slope is 0° or 3° depending on which Tibial Adjustment Housing is used.

(Continued)



Figure 5

Triathlon Single-Use Instrumentation

- Tibial slope can be adjusted by pressing the anterior bronze wheel on the Distal Assembly.

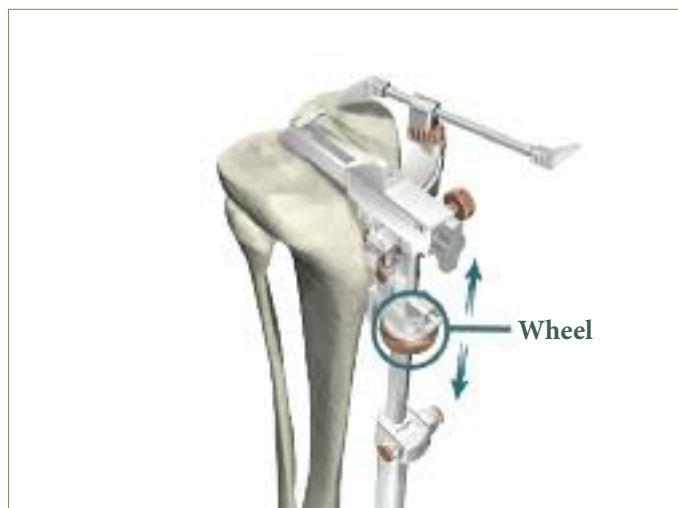


Figure 6

Establish Tibial Resection Level

- The Tibial Stylus attaches to the MIS Tibial Resection Guide with the “2” end referencing the lowest level of the affected compartment (typically, the medial side).

Note: (See Figure 7) If referencing off of the unaffected (typically, the lateral) side, insert a Headless Pin into the posterior fixation hole and remove the Headless Pin from the anterior fixation hole. Then press the bronze wheel on the side of the proximal rod and retract the head of the proximal rod posteriorly. Attach the Tibial Stylus with the “9” end extended anteriorly to reference the lowest level of the unaffected side. To save time during initial fixation of the MIS Tibial Alignment Proximal Rod, use the posterior fixation hole.

- 2mm of bone will be resected. Alternatively, if the “9” end of the Tibial Stylus is used, the amount of bone resected will be 9mm below the tip of the stylus.
- The height of the MIS Tibial Resection Guide, Tibial Stylus and Tibial Adjustment Housing can be adjusted using the bronze wheel on the Tibial Adjustment Housing. For coarse adjustment, press the bronze wheel and slide the assembly up or down. For fine adjustment, turn the bronze wheel to the right to move the assembly up the Proximal Rod or turn left to move the assembly down the Proximal Rod.
- Place two Headless Pins into the “0” angled holes, fixing the level of the Tibial Resection Guide.
- If additional stability of the guide is required, utilize the non-angled “X” pin hole.

(Continued)

Instrument Bar



6541-6-700

MIS Uncaptured Tibial Resection Guide-Right



6541-6-701

MIS Uncaptured Tibial Resection Guide-Left



6541-6-702

MIS Captured Tibial Resection Guide-Right



6541-6-703

MIS Captured Tibial Resection Guide-Left



6541-2-610

Tibial Alignment Distal Assembly EM



6541-2-609

Tibial Alignment Ankle Clamp EM



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



6541-6-611

MIS Proximal Rod EM



6541-2-429

Tibial Stylus

Posterior Referencing Surgical Protocol

- ▶ Remove all alignment instruments leaving only the Tibial Resection Guide in place.
- The Ankle Clamp, Distal Assembly, Proximal Rod and Tibial Adjustment Housing are removed. To remove the assembly:
 1. Remove the Headless Pins from the anterior and/or posterior hole(s) of the Proximal Rod.
 2. Squeeze the Bronze Tabs with one hand and hold the lower end of the Ankle Clamp Assembly with the other hand. Slide the entire assembly anteriorly, leaving just the resection guide on the bone.

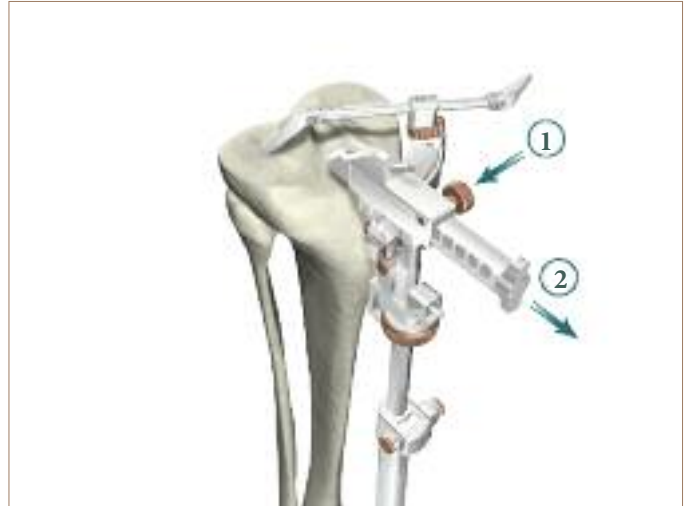


Figure 7

Tibial Resection

- ▶ Resection of the proximal tibia is now completed using either the Left or Right Captured or Uncaptured MIS Tibial Resection Guide.
- ▶ Remove the Tibial Resection Guide.



Figure 8

Triathlon Single-Use Instrumentation

Femoral Preparation - For Posterior Referencing

Femoral Intramedullary Alignment

- ▶ The Universal Driver allows for attachment of all drills and pins. The Universal Driver may be attached directly to a reamer, drill, or a Jacob's Chuck.
- ▶ Locate the IM drill hole; it is approximately 1cm anterior to the femoral attachment of the posterior cruciate ligament and slightly medial to the midline of the distal femur.
- ▶ Identification of landmarks may be aided by removal of osteophytes from the margins of the intercondylar notch.
- ▶ Attach the $\frac{3}{8}$ " IM Drill to the Universal Driver and drill into the IM canal ensuring that the drill is parallel to the shaft of the femur. The first diameter will create a tight fit around the IM Rod. If further clearance is desired, continue to drill until the larger step diameter opens the hole. This will allow the IM canal to dictate the position of the rod avoiding the need to "toggle" the drill to create clearance.



Figure 9

Instrument Bar



6541-6-700

MIS Uncaptured Tibial Resection Guide-Right



6541-6-701

MIS Uncaptured Tibial Resection Guide-Left



6541-6-702

MIS Captured Tibial Resection Guide-Right



6541-6-703

MIS Captured Tibial Resection Guide-Left



6541-2-610

Tibial Alignment Distal Assembly EM



6541-2-609

Tibial Alignment Ankle Clamp EM



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



6541-6-611

MIS Proximal Rod EM



6541-4-801

Universal Driver



6541-4-538

$\frac{3}{8}$ " IM Drill

Tibial
Instructions

Femoral
Instructions

Posterior Referencing Surgical Protocol

- ▶ Attach the T-Handle Driver to the $\frac{5}{16}$ " IM Rod. Insert the IM Rod into the MIS Femoral Alignment Guide. The MIS Femoral Alignment Guide is designed for use on either the left or right knee and may be set between 2° and 9° of valgus (Note: This is typically set between 5° and 7°). Set the instrument to the desired angle by pulling back on the black knob of the MIS Femoral Alignment Guide and placing it in the appropriate notch. Advance the rod, with attached guide, slowly up the IM canal until the desired depth is reached ensuring that the alignment guide is flush against the most prominent condyle.



Figure 10

- ▶ Snap the MIS Distal Resection Guide onto the MIS Adjustment Block and insert the posts of the MIS Adjustment Block into the two holes in the MIS Femoral Alignment Guide.
- ▶ Place the MIS Femoral Alignment Guide in contact with the more prominent distal femoral condyle and align the guide in neutral I/E rotation. The guide face has built in 3° of slope and a tick mark to reference Whiteside's Line to set I/E rotation, if desired.
- ▶ Insert $\frac{1}{8}$ " Headless Pins into the converging pinholes on the MIS Femoral Alignment Guide to aid in stabilization.



Figure 11

Triathlon Single-Use Instrumentation

- Position the leg in 45°-60° of flexion.
- The MIS Adjustment Block allows for a 2mm through 12mm resection level.
- Press the black button on the end of the MIS Adjustment Block and push/pull the carrier to set the resection to the desired level.

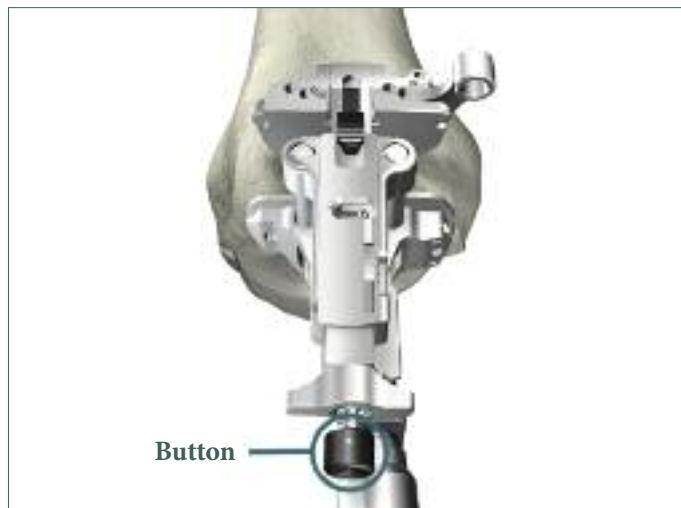


Figure 12

Instrument Bar

6541-4-801

Universal Driver



6541-4-538

3/8" IM Drill



6541-4-800

T-Handle Driver



6541-4-516

5/16" IM Rod



6541-5-629

MIS Femoral Alignment Guide



6541-5-721

MIS Distal Resection Guide - Left



6541-5-722

MIS Distal Resection Guide - Right



6541-5-601

MIS Femoral Adjustment Block



6541-4-003

Headless Pins - 3"



Posterior Referencing Surgical Protocol

- ▶ The Triathlon MIS Knee System Instruments allow for a clear view of the bone that is being resected to ensure the appropriate level is set.
- ▶ Slide the Adjustment Block Assembly posteriorly within the Femoral Alignment Guide until the Distal Resection Guide contacts the anterior surface of the femur.



Figure 13

Optional

- ▶ Prior to pinning the Distal Resection Guide to the femur, an optional external alignment check may be performed. Attach the Femoral EM Alignment Tower to the MIS Femoral Adjustment Block and insert a Universal Alignment Rod into the handle.
- ▶ Alignment is correct when the rod intersects the center of the femoral head and roughly parallels the axis of the femur in the lateral view.



Figure 14

Triathlon Single-Use Instrumentation

- Once alignment is confirmed, remove the Femoral EM Alignment Tower and the Universal Alignment Rod.
- Pin the Distal Resection Guide to the anterior femur using Headless Pins. Insert the pins into the Headless Pin Driver (which is inserted into the Universal Driver) and drill through the set of holes marked “0” on the Distal Resection Guide. The pins are automatically released from the driver as it is pulled back.

Note: Ensure that 1/2" of the pin is protruding from all guides after insertion. This will aid in pin removal.



Figure 15

Instrument Bar



6541-7-808 (Optional)
MIS Femoral EM Alignment Tower



6541-5-601
MIS Femoral Adjustment Block



6541-4-602 (Optional)
Universal Alignment Rod



6541-5-721
MIS Distal Resection Guide - Left



6541-5-722
MIS Distal Resection Guide - Right



6541-4-801
Universal Driver



6541-4-809
Headless Pin Driver

Posterior Referencing Surgical Protocol

- ▶ After the Distal Resection Guide is pinned in place, remove Headless Pins from the Femoral Alignment Guide and remove the IM Rod. The Femoral Alignment Guide and the Adjustment Block may be removed by pressing the black button on top of the Adjustment Block.
- ▶ Pinning through the “X” pin hole will aid in further securing the guide.

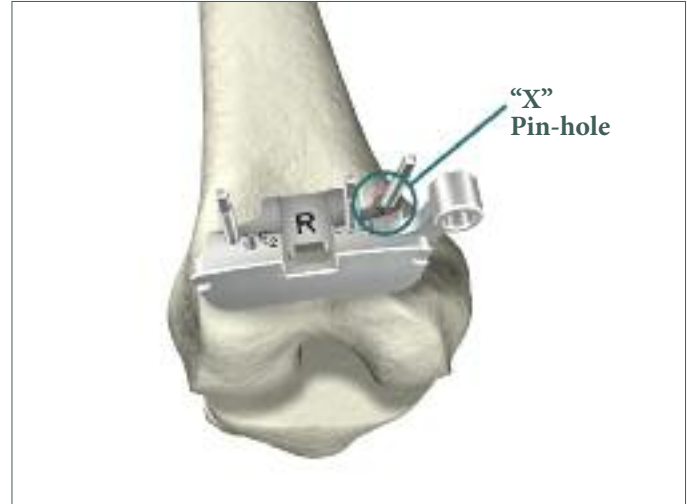


Figure 16

Distal Femoral Resection

- ▶ Make the distal resection.
- ▶ The distal resection level may be altered by repositioning the Distal Resection Guide in the 2 holes. This will remove an additional 2mm of bone.
- ▶ Once the final resection level is determined, the distal femoral resection is made. An optional Modular Distal Capture may be attached to the Distal Resection Guide.
- ▶ The Triathlon MIS Knee System Instruments are designed to provide control of the saw blade during bone resections. When using captures or cutting through slots, a .050" (1.25mm) thick blade is used.



Figure 17

Triathlon Single-Use Instrumentation

- ▶ Remove the Headless Pins in the Femoral Alignment Guide using the Pin Puller.
- ▶ Remove the Femoral Alignment Guide and check the resection for flatness.

Note: If the “X” pin hole is used, the pin must be removed prior to repositioning or removing the Distal Resection Guide.



Figure 18

Instrument Bar

6541-5-721

MIS Distal Resection Guide - Left



6541-5-722

MIS Distal Resection Guide - Right



6541-4-801

Universal Driver



6541-4-809

Headless Pin Driver



6541-5-723

MIS Modular Distal Capture



6541-4-003

Headless Pins - 3"



6633-7-605

Pin Puller



Posterior Referencing Surgical Protocol

Femoral A/P Sizing

- Pre-assemble the MIS Femoral Sizer Body (Left or Right) onto the MIS Femoral Sizer Adjustment Housing.
- Place the MIS Femoral Sizer Assembly onto the resected distal femur, sliding the feet of the Sizer under the posterior condyles.
- External rotation (0-6° Left or Right) is set by depressing the black button on the top of the Femoral A/P Sizer and rotating mediolateral.
- The Femoral Sizer should be pinned in place through the fixation holes with Headed Pins.

Note: The MIS Femoral Stylus uses two sizing references. First, read the A/P scale by viewing the position of the indicator lip of the femoral stylus against the A/P scale on the medial side of the A/P sizer. Second, adjust the superior/inferior position of the stylus to match the first A/P scale reading. Check to verify the two sizing references match. If the A/P scale reading then changes, reset the S/I stylus position to the newly indicated reading. Repeat steps until the two readings converge.

- It is important that the Femoral Stylus point rest on bone and not soft tissue.

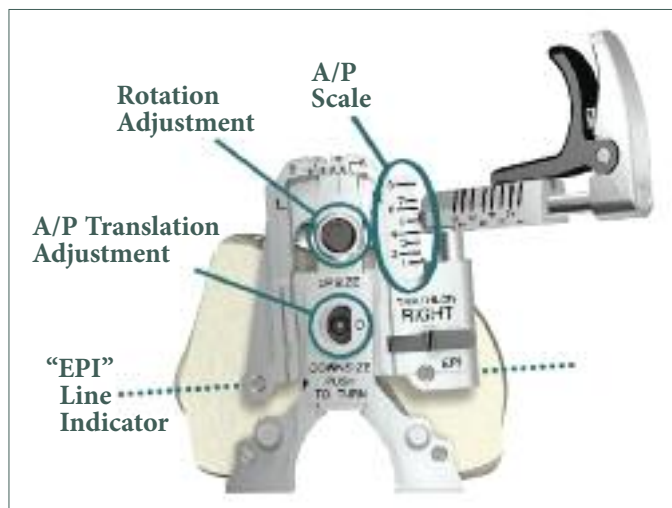


Figure 19

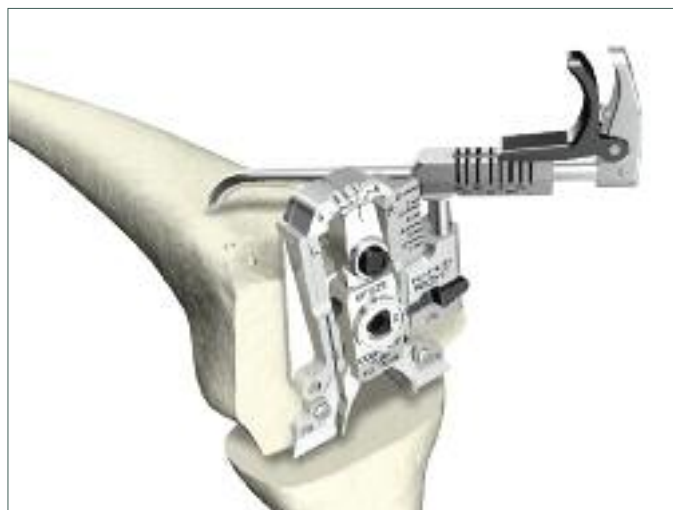


Figure 20

Triathlon Single-Use Instrumentation

- Assemble the MIS Femoral Stylus to the MIS Femoral Sizer and extend the stylus over the lateral flange to rest on the anterior cortex of the femur at the desired run-out point of the anterior resection.



Figure 21

Instrument Bar



6541-5-500

MIS AP Sizer Adjustment Housing



6541-5-508

MIS AP Sizer Body - Left



6541-5-509

MIS AP Sizer Body - Right



6541-5-510

MIS Femoral Stylus



6541-4-515

Headed Nails - 1 1/2"

Posterior Referencing Surgical Protocol

Note: If the femoral stylus reads in-between sizes, an optional A/P translation feature may be used. Simply use the Hex Driver found on the reverse side of the Femoral Flexion Impactor to translate the A/P Femoral Sizer up or down 1.5mm. (Triathlon Primary prosthesis grows in the anterior direction exactly 3mm between sizes.)

- A tertiary check to verify external rotation is to assess the A/P axis with the Blade Runner through the slot in the top of the guide.

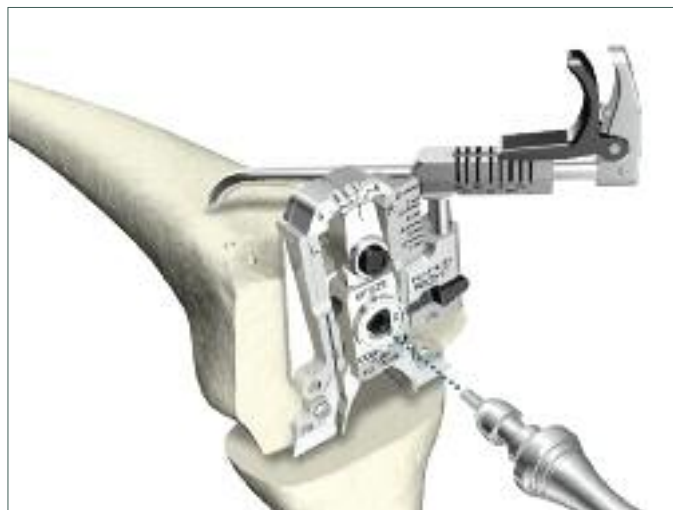


Figure 22

- Once size confirmation is complete, attach the 1/8" Peg Drill to the Universal Driver and create fixation pin holes (for the 4:1 Cutting Block) through the holes on the face of the Femoral Sizer marked "EPI."
- Remove the Headed Nails using the Headed Nail Extractor.



Figure 23

Triathlon Single-Use Instrumentation

Femoral AP Resection

Note: Only the Only Stryker Precision Saw Blade can be used with Stryker Precision Cutting Guides and PS Box Guide. can be used with Triathlon Single-Use Instrumentation cutting blades and PS Box Guide.

Note: Sagittal saw cannot be used.

- Locate the 1/8" holes drilled through the A/P Sizer.
- Place Headless Pins into the holes by hand.



Figure 24

Instrument Bar



6541-5-500

MIS AP Sizer Adjustment Housing



6541-5-508

MIS AP Sizer Body - Left



6541-5-509

MIS AP Sizer Body - Right



6541-5-510

MIS Femoral Stylus



6541-7-811

MIS Femoral Flexion Impactor



6541-4-515

Headed Nails - 1 1/2"



6541-4-300

Headed Nail Impactor/Extractor



6541-4-801

Universal Driver



6541-4-518

1/8" Peg Drill



6541-4-003

Headless Pins - 3"

Posterior Referencing Surgical Protocol

- Place the appropriate size AP Resection Guide over the Headless Pins.



Figure 25

- For additional fixation, drive two Headless Pins into “X” pins holes in the block while pressing the guide onto bone and holding guide down with your thumb.

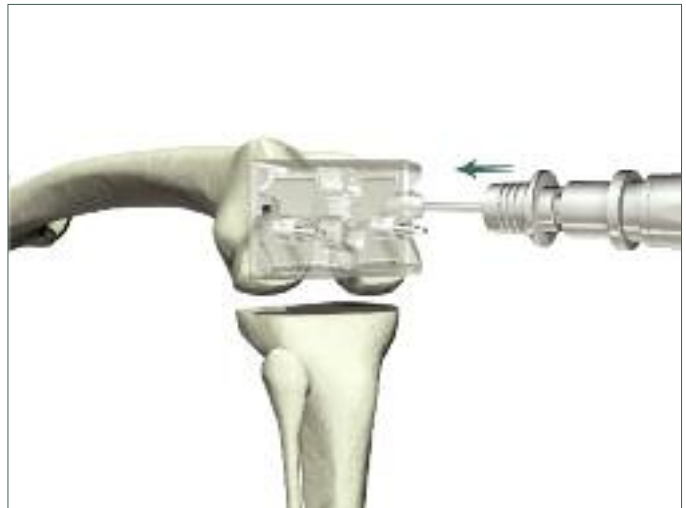


Figure 26

Triathlon Single-Use Instrumentation

- ▶ The order of the bone cuts are as follows:
 1. Anterior Cortex
 2. Posterior Condyles
- ▶ Place the saw on the cut surface and define the plane (ensure that the cutting blade is co-planar with the cutting surface). Before squeezing the trigger make sure that the teeth of the blade are not touching the bone. Start the cut slowly at the blade and cutting surface to ensure that the cutting action is co-planar.
- ▶ Cut just through the cortical rim in one position and then retract the blade and start the cut again in a slightly different position adjacent to the first cut (a slight pecking motion would best describe the approach).
- ▶ Progressively increase the depth of the cut by plunging and retracting in approximately 10mm increments (check that the blade is co-planar throughout this step).



Figure 27

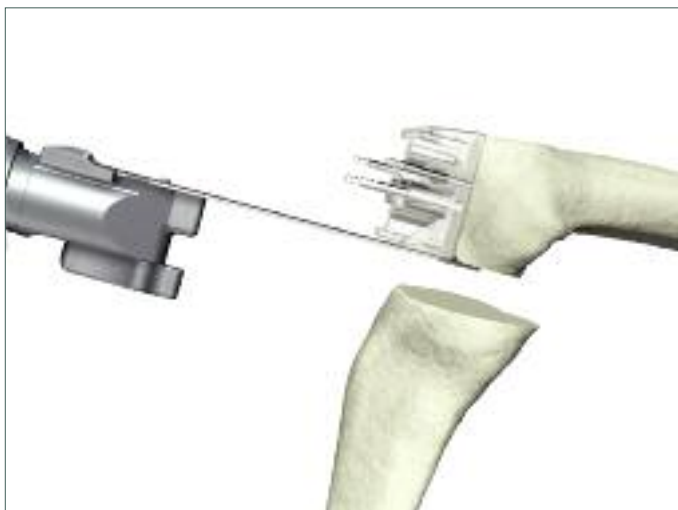


Figure 28

Instrument Bar

6541-4-003

Headless Pins - 3"



See Catalog

Triathlon Single-Use
Instrumentation Femoral Prep Kit

Femoral AP Resection Guide

6541-4-801

Universal Driver



Posterior Referencing Surgical Protocol

- Remove the Headless Pins from the guide using the Headless Pin Extractor and remove the guide from the bone.

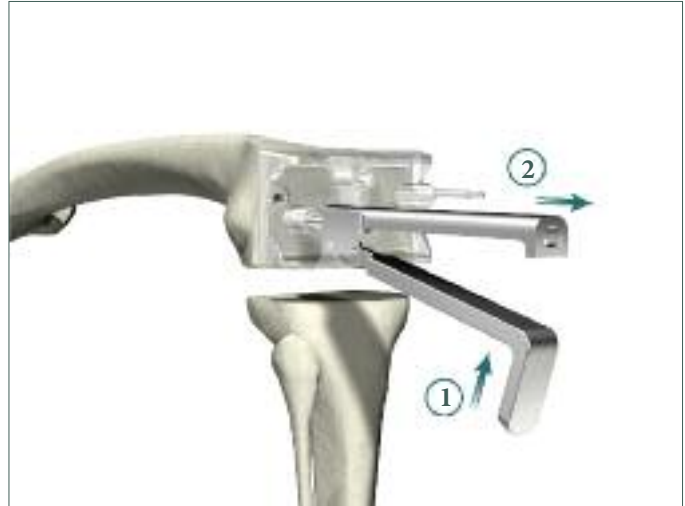


Figure 29

Femoral Chamfer Resection

- Attach Femoral Chamfer Resection Guide by lining up the guide with the pinholes that were created in the previous step.



Figure 30

Triathlon Single-Use Instrumentation

- Impact the guide onto the bone with a mallet (be sure to impact over the axis of the pins).



Figure 31

- For an additional tactile feel, either one or two fingers may be used on the shaft of the Stryker Precision sawblade.



Instrument Bar



See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit

Femoral AP Resection Guide



6633-7-605

Pin Puller



See Catalog
Triathlon Single-Use
Instrumentation Femoral Kit

Femoral Chamfer Resection Guide

Posterior Referencing Surgical Protocol

- ▶ The order of the cuts will be as follows:
 1. Anterior Chamfer
 2. Posterior Chamfer
- ▶ Start slowly and progressively cut with a light pecking motion that will generate a slit in the bone that aids in the generation of a completely flat co-planar surface.



Figure 32

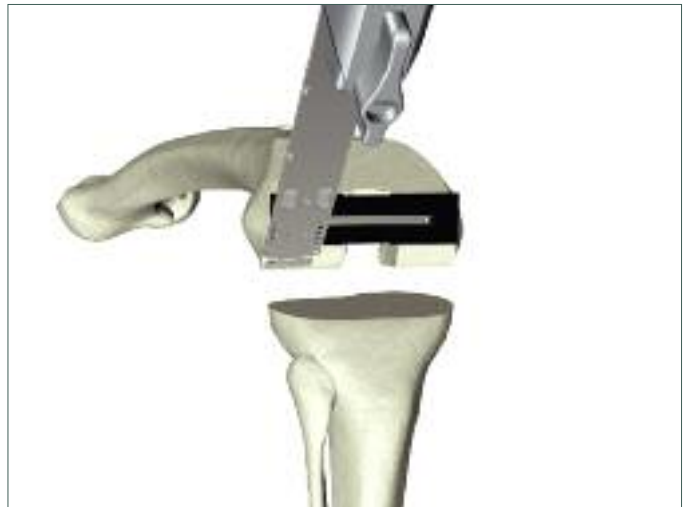


Figure 33

Triathlon Single-Use Instrumentation

- Remove the Femoral Chamfer Resection Guide with the Triathlon Posterior Osteophyte Removal Tool (Optional) or a 1/2" or smaller osteotome.
- Please be aware that this guide may be more difficult to remove in harder bone.

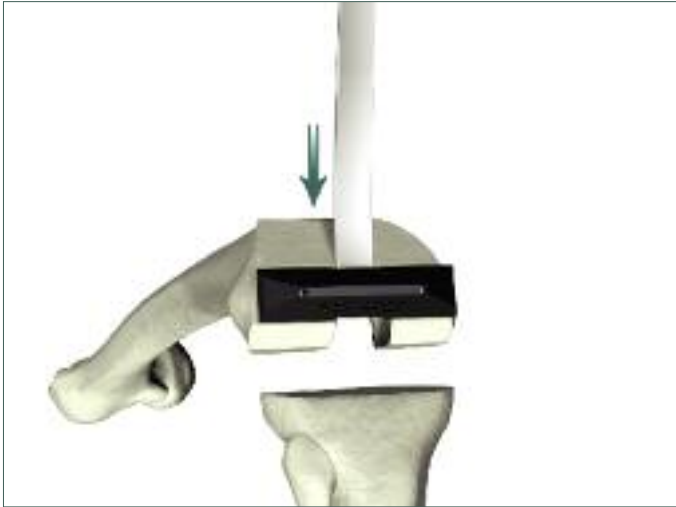


Figure 34



Instrument Bar

See Catalog
Triathlon Single-Use
Instrumentation Femoral Kit
Femoral Chamfer Resection Guide



Posterior Referencing Surgical Protocol

PS Box Preparation

- If the surgeon has chosen a PS knee, then the intercondylar notch must be resected. In order to accomplish this, the PS Box Cutting Guide is placed onto the distal femur. Since the width of the distal portion of the guide represents the exact width of the implant, it should be centered and placed in the desired position flush with the distal resection. The box guide is then pinned to the femur using the Headless Pins through the holes on the anterior surface, as well as the distal surface of the cutting guide.



Figure 35

- The intercondylar region can be resected in two ways. The surgeon may elect to resect the proximal portion of the intracondylar notch using the Box Chisel. First, using the inside surfaces of the box opening as guides, score the posterior cortex on both sides of the posterior portion of the intercondylar notch using the Triathlon Single-Use Instrumentationsaw.



Figure 36

Triathlon Single-Use Instrumentation

- The chisel is assembled to the Impaction Handle and then is placed within the slot of the PS Box Cutting Guide with the surface marked “distal” towards the distal portion of the femur. The chisel is then fully engaged with a mallet and left in place. The rest of the box is then cut. The Box Chisel is then removed.

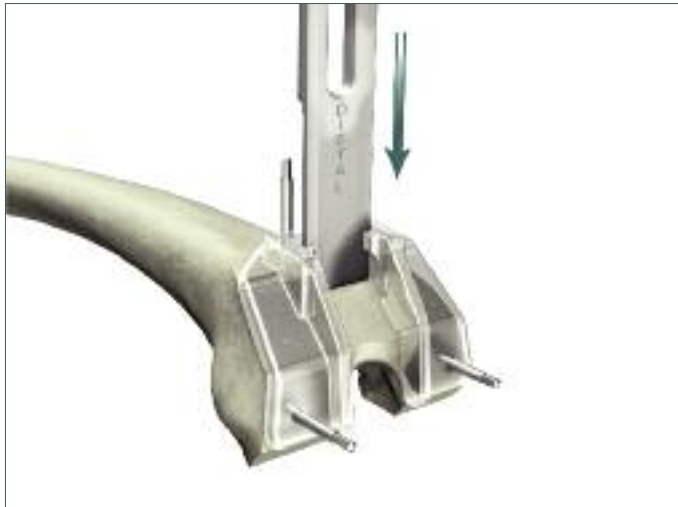


Figure 37

Instrument Bar



See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit

PS Box Cutting Guide

6541-4-003

Headless Pins - 3"



6541-4-709

Box Chisel



6541-4-810

Impaction Handle



Posterior Referencing Surgical Protocol

- Alternatively, the Precision saw can be used to resect the medial and lateral borders of the intercondylar notch to the proximal portion of the cutting guide. A thin, narrow oscillating saw is then used through the proximal slot to resect the distal portion of the femur. The cuts are connected and the intracondylar bone is removed. Care should be taken to avoid injury to the tibial plateau and either a retractor should be used to lift the distal femur from below or the tibial plateau can be protected with the tibial plateau protector provided with the Triathlon instrumentation (optional with Precision).
- The 1/8-inch pins are then removed and the PS Box Cutting Guide is then removed.

Note: In order to prepare a proper rectangular box, care should be taken not to bias the saw blade. Preparation of a proper rectangular shape will facilitate an accurate implantation of the PS component with minimal bone resection.



Figure 38



Femoral Trial Assessment

(The remaining portion of the technique should be used for a Posterior Stabilized or Cruciate Retaining knee.)

- Assemble the appropriate size symmetrical PS or CR Femoral Trial to the Femoral Impactor Extractor with the Impaction Handle (**See Assembly 5**), or use the Femoral Trial Extractor pictured in Figure 39.



Figure 39

Triathlon Single-Use Instrumentation

- Impact the PS or CR Femoral Trial onto the prepared distal femur. Use the Impaction Handle to ensure the Femoral Trial is aligned with the distal plane.



Figure 40

Instrument Bar



See Catalog
Triathlon Single-Use
InstrumentationFemoral Prep Kit
PS Box Cutting Guide

6541-4-003
Headless Pins - 3"



6541-4-709
Box Chisel



6541-4-810
Impaction Handle



6541-4-803
Slap Hammer



See Catalog
Triathlon Single-Use
InstrumentationFemoral Prep Kit
CR Universal Femoral Trial



See Catalog
Triathlon Single-Use
InstrumentationFemoral Prep Kit
PS Universal Femoral Trial



6541-7-807
MIS Femoral Trial Extractor



6541-4-807
Femoral Impactor/Extractor



- ▶ Remove the Femoral Impactor/Extractor and Impaction Handle and assess the fit of the PS or CR Femoral Trial. Care must be taken to ensure that all of the osteophytes beyond the end of the posterior femoral condyles are removed.
 - Cruciate Retaining Knee: Attach the 1/4" Peg Drill to the Universal Driver and create the Modular Femoral Distal Fixation Peg holes. Attach the Posterior Osteophyte Removal Tool to the Impaction Handle and remove posterior osteophytes.

Note: If it is difficult to reach the posterior condyles in a tight knee, the tibial resection can be made, allowing for easier removal of osteophytes.

- Posterior Stabilized Knee: If the Modular Femoral Distal Fixation Pegs are to be used, use the 1/4" Peg Drill, attached to the Universal Driver to prepare the distal femoral peg holes.
- ▶ The assessment of the fit of the Femoral Trial is similar for both the CR and PS implants. The appropriate size femoral implant trial is applied to the Femoral Trial Impactor/Extractor. The Femoral Trial is then impacted onto the prepared distal femur and the Impactor/Extractor is removed. The fit of the Femoral Trial is checked to ensure that there is a flush fit.
- ▶ The Triathlon CR knee has integral medial and lateral femoral pegs. Therefore, if a CR implant is chosen, the 1/4 inch peg drill is assembled to the Universal Driver and distal fixation peg holes are drilled through the holes in condyles of the Femoral Trial.
- ▶ The cemented posteriorly stabilized femoral component does not come with integral pegs but rather modular capability. Should the surgeon choose to use distal fixation pegs, the holes are drilled in a similar fashion. Once this has been accomplished, the trial may be removed. At this point, the tibia, if not already prepared, must be prepared for the tibial implant. Keeping the Femoral Trial in place assures adequate exposure, but it may be removed for tibial preparation if desired.



Figure 41

Triathlon Single-Use Instrumentation

- Attach the Femoral Impactor/Extractor or the Femoral Trial Impactor to the PS or CR Femoral Trial and remove from the femur.



Figure 42

Tibial Component Sizing

- Retractors are placed to expose the tibial plateau. The Femoral Trial may be left in place. The appropriate size Universal Tibial Template is assembled using the Alignment Handle. The assembly is placed on the resected tibial plateau and positioned to contact the cortical rim but no overhang should exist.
- The Triathlon Single-Use Instrumentation includes color-coded tibial sizers for proper sizing of the tibial resection.
- Choose the appropriate tibial sizer to measure the resected tibia and note the size. The size that is chosen will determine the size of your Tibial Preparation Kit.



Figure 43

Instrument Bar

See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit
CR Universal Femoral Trial



See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit
PS Universal Femoral Trial



6541-4-525
1/4" Peg Drill



6541-4-801
Universal Driver



6541-7-807
MIS Femoral Trial Extractor



See Catalog
Triathlon Single-Use
Instrumentation Tibial Sizer Kit
Tibial Sizer



6541-4-807
Femoral Impactor/Extractor



Tibial
Instructions

Femoral
Instructions

Posterior Referencing Surgical Protocol

- Once the rotational assessment is determined and the alignment in the coronal and sagittal plane is confirmed, the tibial template is fixed to the tibia using Headed Nails or Headless Pins.
- Another option is to leave the tibial template unsecured and apply a Tibial Insert Trial. Once the tibial insert is applied, the knee is placed through a range of motion and the center of the tibial template is marked on the tibia in extension.
- Regardless of the method used, once the proper position is determined, the tibial template is secured using the Headed Nails or Headless Pins. Once that is accomplished, the tibial keel must be prepared.

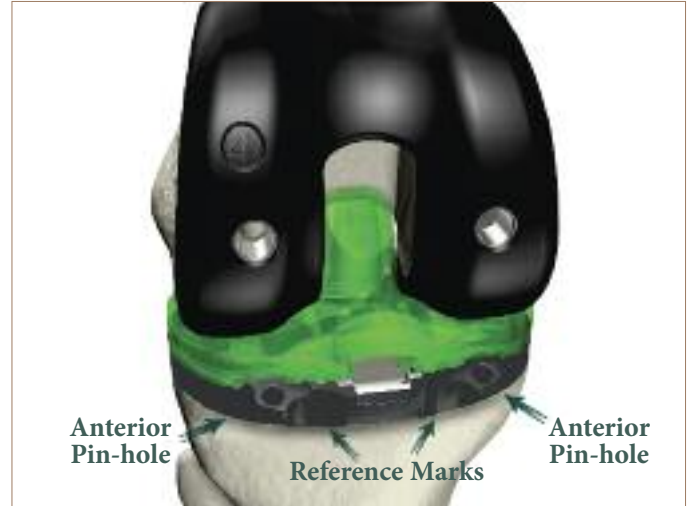


Figure 44



Figure 45

Triathlon Single-Use Instrumentation

Tibial Keel Preparation

- The tibial Keel Punch Guide is assembled to the universal template by inserting it at a slight angle to the top of the template into the two locating slots in the posterior portion of the Universal Tibial Template. The Keel Punch is then allowed to sit flat on the Universal Tibial Template and the handle is pushed forward to lock the Keel Punch Guide to the template.

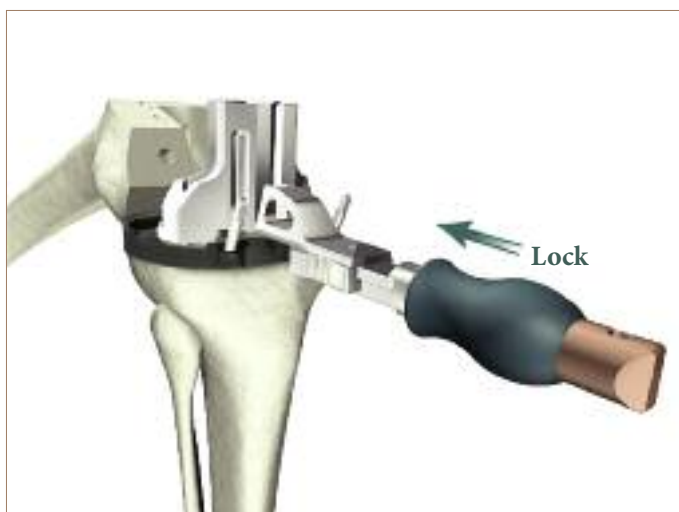


Figure 46

Instrument Bar

See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit

CR Universal Femoral Trial



See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit

PS Universal Femoral Trial



See Catalog
Triathlon Single-Use
Instrumentation Tibial Kit

Tibial Insert Trial



See Catalog
Triathlon Single-Use
Instrumentation Tibial Kit

Tibial Template



6541-4-515

Headed Nails - 1 1/2"



6541-4-575

Headed Nails - 3/4"



6541-4-300

Headed Nail Impactor/Extractor



6633-7-605

Pin Puller



Size 1, 2, 3 - 6541-2-713

Size 4, 5, 6, 7, 8 - 6541-2-748

Keel Punch Guide



Posterior Referencing Surgical Protocol

- Once this is secured, the appropriate size Keel Punch is placed into the Keel Punch Guide. A mallet is used to impact the punch into the tibia.
- If a cemented component is to be used, the Keel Punch should be impacted until it fully sits into the guide ensuring that it is flat against the bone. If an uncemented implant is used, the surgeon may elect to make only a slight impression into the tibia, with approximately 1/3 to 1/2 of the Tibial Keel Punch, allowing for a press-fit of the tibial keel into the tibia.

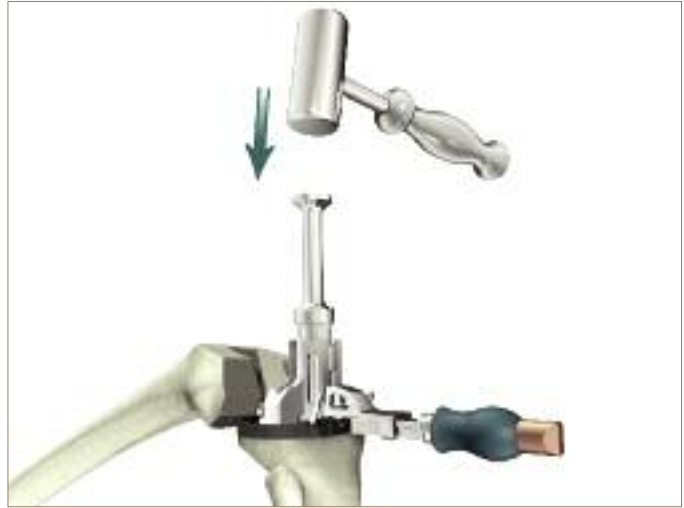


Figure 47

- Once the desired depth is achieved, the Keel Punch Guide handle is lifted up and rotated anteriorly. The handles of the Keel Punch Guide and Keel Punch are then squeezed together to cantilever the punch out of the tibia. The Keel Punch is removed along with the Keel Punch Guide.



Figure 48

Triathlon Single-Use Instrumentation

Patella Preparation

- The thickness of the patella should be determined by using the patella caliper. Once the thickness is determined and the approximate width is estimated, the surgeon can determine the thickness of the component to be used. The Triathlon patella implant becomes somewhat thicker with increased width. Implants range from 8 to 11mm of width, to an asymmetric thickness of 29 to 40mm and a symmetric thickness of 27 to 39mm.



Figure 49

Instrument Bar

See Catalog
**Triathlon Single-Use
InstrumentationTibial Kit**
Tibial Template



Size 1, 2, 3 - **6541-2-713**
Size 4, 5, 6, 7, 8 - **6541-2-748**
Keel Punch Guide



Sizes 1, 2, 3 - **6541-2-013**
Sizes 4, 5, 6 - **6541-2-046**
Sizes 7, 8 - **6541-2-078**
Keel Punch



7650-1454
Patella Caliper



6633-7-605
Pin Puller



**Tibial
Instructions**

**Patella
Instructions**

Posterior Referencing Surgical Protocol

- ▶ The Triathlon Single-Use Instrumentation System allows a surgeon to perform the patella resection in a free-hand manner based on his/her typical procedure.



Figure 50

- ▶ At this point, the medial/lateral width of the patella is measured and the appropriate size Patella Template is chosen. Care should be taken to avoid any overhang.
- ▶ Once the appropriate size template is applied, the clamp is secured and the patella drill is used to drill the three holes of the patella. The drill is engaged to the full depth. Once all three drill holes are made, the Patella Clamp is removed by depressing the release trigger and the template by pressing the gold button.

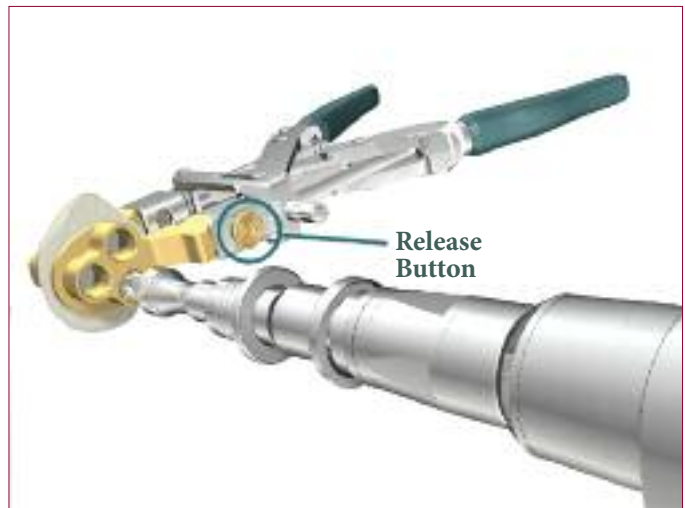


Figure 51

Patella Trial Assessment

- ▶ Once the patella has been drilled, the patella trial is applied. If there is any overhang, a smaller implant is chosen. The surgeon can elect to use either a symmetric or asymmetric implant. An asymmetric implant improves patella tracking by medializing the dome of the patella.
- ▶ The patella trial is applied and the knee is placed through a range of motion. It is acceptable to place a tenaculum on the edge of the quadriceps tendon and pull proximally to stabilize the extensor mechanism especially if one has used a tendon splitting medial parapatella approach. No external pressure should be applied nor should any medial force be applied.
- ▶ The patella should track satisfactorily throughout the range of motion without any tilting or subluxation. If tilting or subluxation occurs, the rotation and alignment of the femoral and tibial components should be checked. If they are satisfactory, a lateral retinacular release should be considered. Prior to a lateral retinacular release, the surgeon could consider deflating the tourniquet to reduce any external pressure on the quadriceps mechanism causing 'false' subluxation.
- ▶ Once patella tracking has been determined to be satisfactory, final implantation may be accomplished.



Figure 52

29mm - **6541-3-617**
32mm - **6541-3-618**
35mm - **6541-3-619**
38mm - **6541-3-620**
40mm - **6541-3-621**



Asymmetric Patella Drill Template

27mm - **6541-3-627**
29mm - **6541-3-629**
31mm - **6541-3-631**
33mm - **6541-3-633**
36mm - **6541-3-636**
39mm - **6541-3-639**



Symmetric Patella Drill Template

6541-3-801

Patella Clamp Base



6541-3-600

Patella Clamp



6541-3-524

All-Poly Patella Drill w/Stop



6541-4-801

Universal Driver



See Catalog

Symmetric Patella Trial



See Catalog

Asymmetric Patella Trial



See Catalog

PS Tibial Insert Trial



See Catalog

CR Tibial Insert Trial



See Catalog

PS Femoral Trial



See Catalog

CR Femoral Trial



Final Preparation and Implantation

The trial components are removed. The knee should be thoroughly irrigated of all debris. This may be best accomplished by a pulsating lavage. If cemented implants are used, the bone may be further prepared using a hemostatic agent and then dried again. Any “high” spots may be removed using an osteotome, oscillating saw, or bone file.

Tibia

- ▶ **Cementless:** The knee is flexed and the tibia is exposed with appropriate retractors. The peri-apatite coated tibial implant is then impacted into the tibia. The implant must be stable and flush with the bone, with no gaps present.
- ▶ **Cemented:** A batch of methyl-methacrylate Simplex cement is mixed. The tibial component is coated with cement, as well as the upper tibia and the Keel Punch area. The tibial component is impacted and excess cement is removed.



Figure 53



Figure 54

Triathlon Single-Use Instrumentation

Femur

- ▶ **Cementless:** The Femoral Component is impacted, again assuring that the implant is flush with the bone with no gaps. Care must be taken to avoid scratching any of the real implants. If there is any question about stability of the implants, a cemented implant should be considered.
- ▶ **Cemented:** Cement is applied to the Femoral Component and the cut surface of the femur and the Femoral Component is impacted. Excess cement is removed.



Figure 55



Figure 56

Instrument Bar

6541-4-810

Impaction Handle



6541-4-805

Baseplate Impactor/Extractor



See Catalog

Primary Tibial Baseplate - Cemented



See Catalog

Low Profile Tibial Baseplate



See Catalog

Primary Tibial Baseplate - Cementless



6541-4-812

Tibial Baseplate Impactor



6541-4-807

Femoral Impactor/Extractor



See Catalog

PS Femoral Component



See Catalog

CR Femoral Component



6541-7-811

MIS Femoral Flexion Impactor



Component
Implantation

Posterior Referencing Surgical Protocol

Symmetric or Asymmetric Patella

- ▶ **Cementless:** The peri-apatite coated patellar implant is pressed into the patella using the Patella Clamp. The implant must be stable and flush with the bone.
- ▶ **Cemented:** The cement is applied to both the implant and the cut surface of the bone and the implant applied and held with the Patella Clamp. All excess cement is removed. After the cement is hard, the clamp is removed and the knee is again examined.

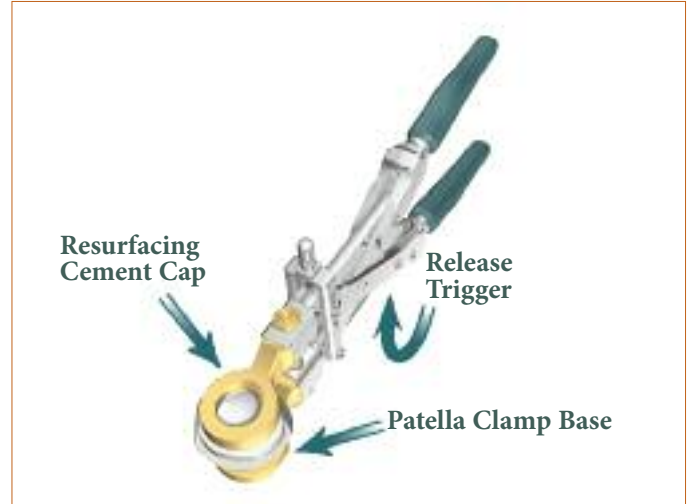


Figure 57

Closure

- ▶ The knee is then reduced and again placed through a range of motion where all aspects are checked again. Once the surgeon is satisfied with the reconstruction, the knee is closed in a routine fashion. A drain may or may not be used at the surgeon's discretion. The quadriceps expansion is then repaired using strong interrupted slowly absorbable sutures. The subcutaneous tissue is closed with smaller absorbable sutures, and the skin is closed with surgical staples or sutures. The wound is cleansed, dried and a large bulky dressing is applied. The tourniquet is deflated.



Figure 58

Triathlon Single-Use Instrumentation



Instrument Bar

6541-3-801

Patella Clamp Base



6541-3-800

Patella Cement Cap



6541-3-600

Patella Clamp



See Catalog

Symmetric Patella



See Catalog

Asymmetric Patella



See Catalog

PS Femoral Component



See Catalog

CR Femoral Component



See Catalog

PS Tibial Insert



See Catalog

CR Tibial Insert



See Catalog

Primary Tibial Baseplate - Cemented



See Catalog

Low Profile Tibial Baseplate



Indications

General Total Knee Arthroplasty (TKA) Indications include:

- Painful, disabling joint disease of the knee resulting from: noninflammatory degenerative joint disease (including osteoarthritis, traumatic arthritis, or avascular necrosis), rheumatoid arthritis or post-traumatic arthritis.
- Post-traumatic loss of knee joint configuration and function.
- Moderate varus, valgus, or flexion deformity in which the ligamentous structures can be returned to adequate function and stability.
- Revision of previous unsuccessful knee replacement or other procedure.
- Fracture of the distal femur and/or proximal tibia that cannot be stabilized by standard fracture management techniques.

Additional Indications for Posterior Stabilized (PS) Components:

- Ligamentous instability requiring implant bearing surface geometries with increased constraint.
- Absent or non-functioning posterior cruciate ligament.
- Severe anteroposterior instability of the knee joint.

The Triathlon Total Knee System beaded and beaded with Peri-Apatite components are intended for uncemented use only.

Contraindications

- Any active or suspected latent infection in or about the knee joint.
- Distant foci of infection which may cause hematogenous spread to the implant site.
- Any mental or neuromuscular disorder which would create an unacceptable risk of prosthesis instability, prosthesis fixation failure, or complications in post-operative care.
- Bone stock compromised by disease, infection or prior implantation which cannot provide adequate support and/or fixation to the prosthesis.
- Skeletal immaturity.
- Severe instability of the knee joint secondary to the absence of collateral ligament integrity and function.
- Obesity: An overweight or obese patient can produce loads on the prosthesis which can lead to failure of the fixation of the device or to failure of the device itself.

See package insert for warnings, precautions, adverse effects and other essential product information.

Patient Counseling

Surgeons should discuss all relevant contraindications, adverse effects and the need for post-implantation protection with their patients.

Triathlon® with Single-Use Instrumentation

Optimize Your TKA Experience

Anterior Referencing Surgical Protocol



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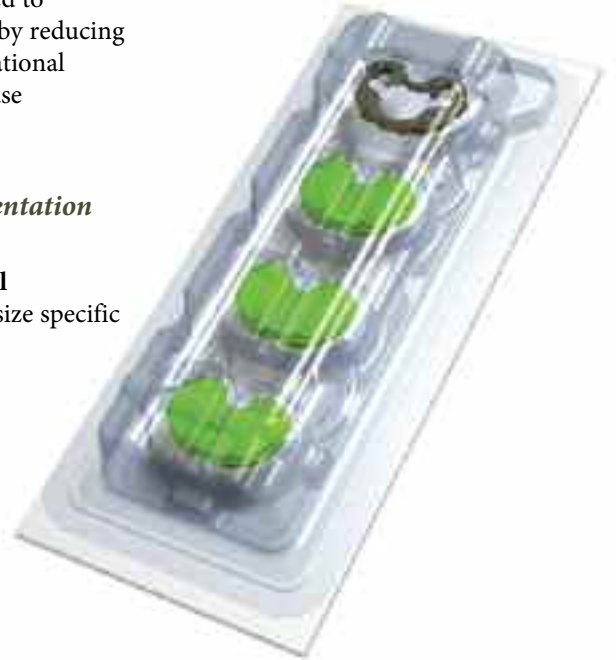
Anterior Referencing Surgical Protocol

Introduction

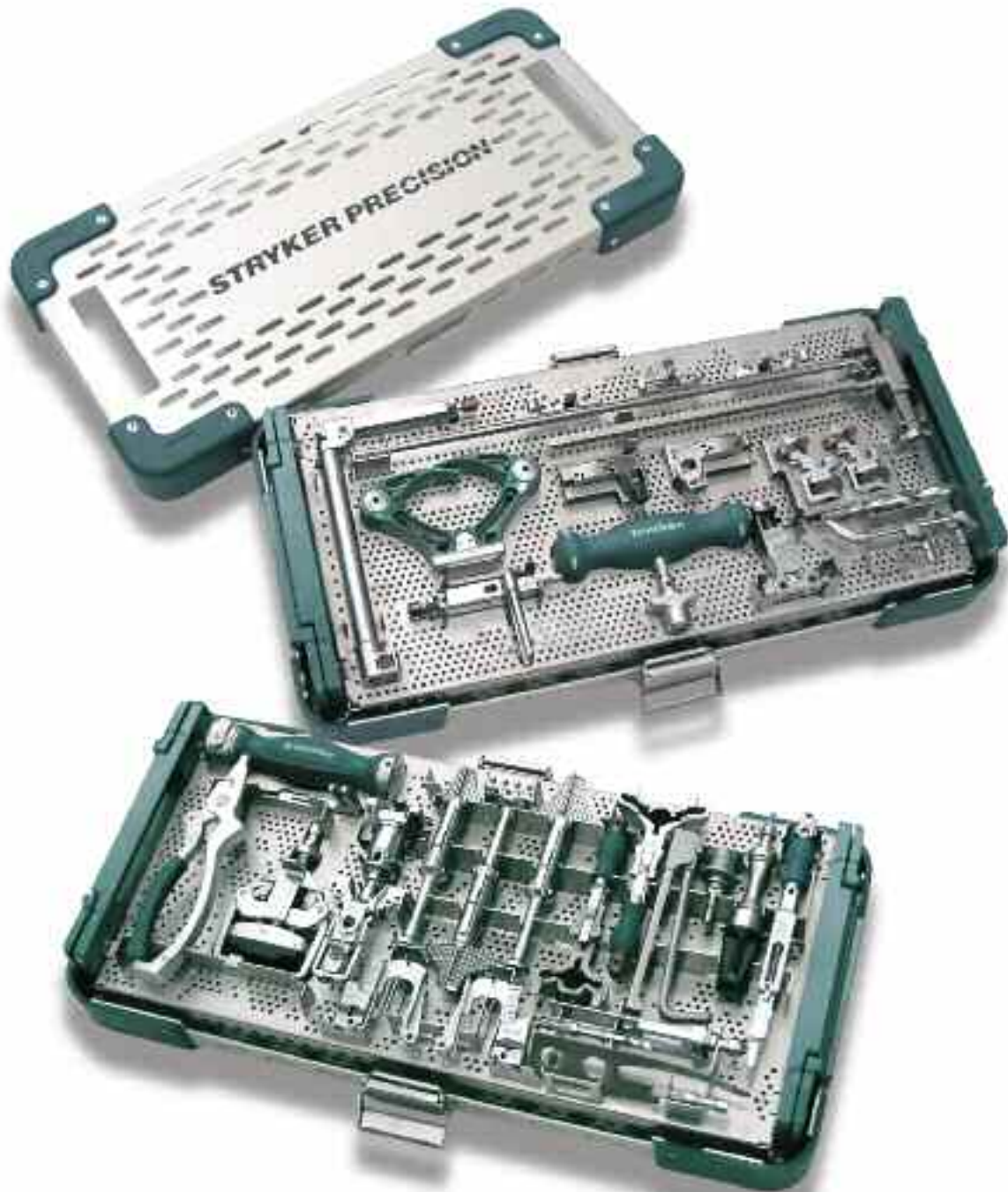
Triathlon Single-Use Instrumentation is a unique efficiency solution designed to complement the Triathlon® Knee by reducing instrumentation to improve operational efficiency, reduce costs, and increase procedural capacity.¹

Triathlon Single-Use Instrumentation features:

- ▶ **Single Use Femoral and Tibial Preparation Kits** – Including size specific trials and cutting blocks.
- ▶ **Streamlined Case and Tray Design** – Allowing for only two cases of reusable instruments to complete a non-navigated Triathlon surgery.²
- ▶ **Navigation Capable** – With the use of only one case of reusable instruments to complete a navigated Triathlon surgery.²



Triathlon Single-Use Instrumentation



Anterior Referencing Surgical Protocol

Triathlon Single-Use Instrumentation

The Triathlon Single-Use Instrumentation features the following sterile, single use, size- specific kits.



Femoral Preparation Kits

- ▶ **Universal Femoral Trials** – Allows for trialing of both left and right Femoral Components with only one Femoral Trial.

- ▶ **Two Piece Femoral Cutting Blocks** – Made of Lexan providing a clear open face A/P resection block which may allow for greater surgeon visibility. An open face chamfer block is also included.



- ▶ **PS Box Cutting Guide** – Made of clear Lexan which may allow for greater visibility during PS Box preparation.
- ▶ **A/R Skim Cut Guide** – Made of clear Lexan® to allow for positioning of the A/P block in an Anterior Referencing approach.



Tibial Preparation Kits

- ▶ **Tibial Insert Trials** – Color-coded by size for ease of identification during the procedure (featuring all insert thickness from 9mm – 19mm for Cruciate Retaining and 9mm - 25mm for Posterior Stabilized).



- ▶ **Tibial Templates** – For use with Tibial Keel Punch and trialing.

Tibial Sizer Kit

- ▶ **Tibial Sizer Kit** – Color-coded tibial sizers for sizes 1-8 allowing for sizing of the resected tibia.



Assembly Instructions

Many of the Triathlon reusable instruments have unique mechanisms incorporated to assist surgeons and OR staff in a simplified, efficient surgical experience. Therefore, assembly instructions have been included in the first section of this surgical technique to assist with instruments that may be pre-assembled on the back table, as well as other instruments that need to be assembled. All of the mechanisms that allow instruments to be adjusted and/or assembled have been color-coded. Those that correspond to femoral preparation are black, those for tibial preparation are bronze and those for patella preparation are gold.

 **Black**  **Bronze**  **Gold**

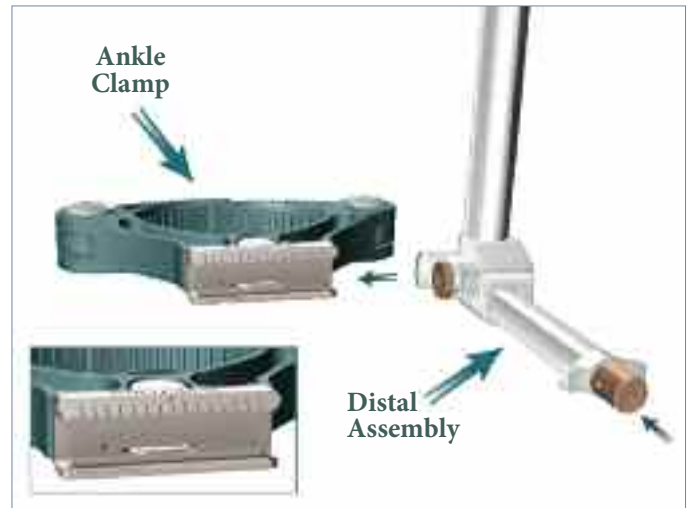
Anterior Referencing Surgical Protocol

Assembly Instructions

Tibial Alignment Ankle Clamp EM, Tibial Alignment Distal Assembly EM, MIS Tibial Alignment Proximal Rod EM, Tibial Stylus, MIS Tibial Resection Guide, and Tibial Adjustment Housing Assembly:

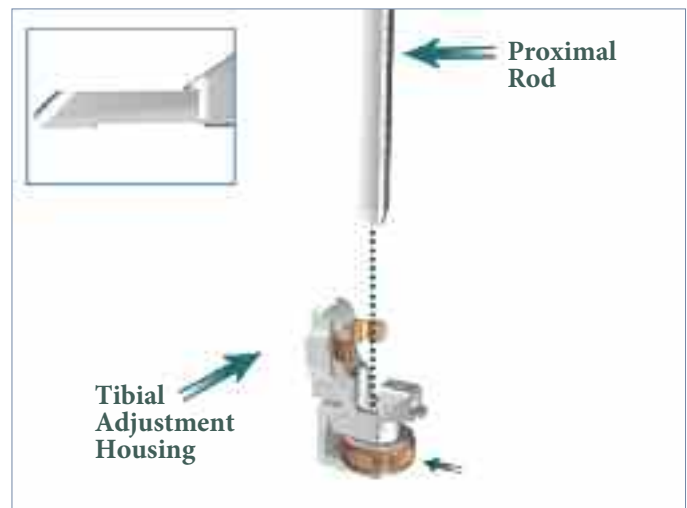
Note: The Tibial Adjustment Housing is available in 0° slope (posterior stabilized) and 3° slope (cruciate retaining):

- ▶ Press the bronze button on the Distal Assembly and slide into the grooves on the Ankle Clamp. Ensure that the side of the Ankle Clamp reading “proximal” is visible from above.



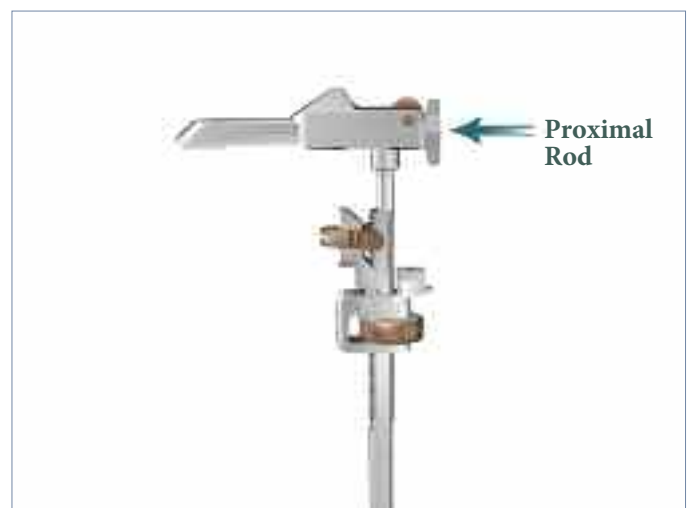
Assembly 1A

- ▶ Press the bronze wheel on the Tibial Adjustment Housing with your thumb and insert the Proximal Rod. Ensure that the two fixation pins on the superior portion of the Proximal Rod are facing posteriorly. Ensure the Proximal Rod arm extends in the same direction as the assembled Ankle Clamp.



Assembly 1B

- ▶ Slide the Proximal Rod until the Tibial Adjustment Housing engages the teeth on the Proximal Rod. Ensure that the bronze tabs are above the bronze wheel when assembling.



Assembly 1C

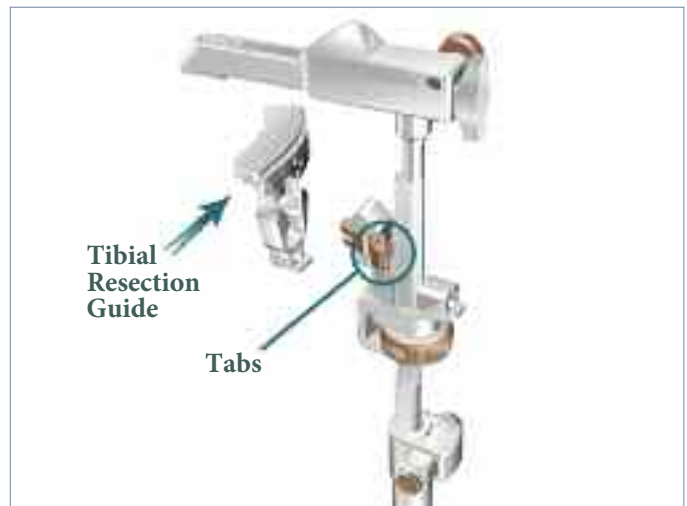
Triathlon Single-Use Instrumentation

- ▶ Insert the Proximal Rod and Tibial Adjustment Housing assembly into the hole on the top of the Distal Assembly, ensuring that the Distal Assembly Lock is in the unlocked position.



Assembly 1D

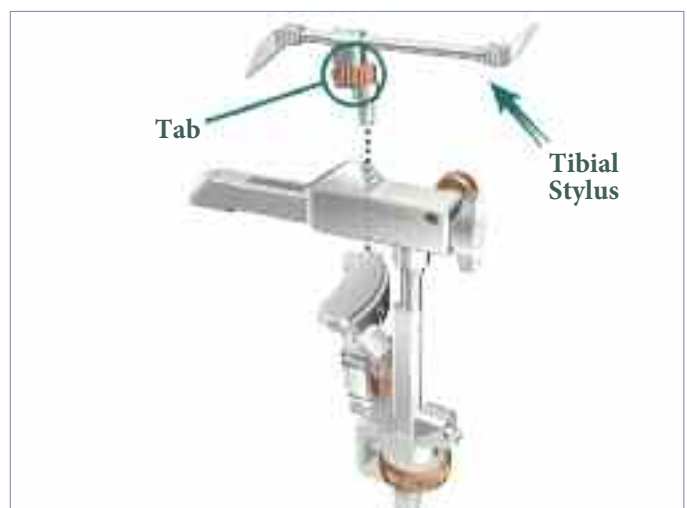
- ▶ Squeeze the bronze tabs on the Tibial Adjustment Housing and insert entire assembly into the MIS Captured or Uncaptured Tibial Resection Guide.



Assembly 1E

- ▶ Squeeze the bronze tab on the Tibial Stylus and insert the post into the appropriate side of the Tibial Resection Guide.
- ▶ Release the bronze tab to lock the Tibial Stylus in place.

(Continued)



Assembly 1F

Anterior Referencing Surgical Protocol

- ▶ The MIS Proximal Rod has a retractable fixation arm. Ensure that the arm position is fully extended; to extend or retract the fixation arm, depress the bronze button on the side of the MIS Proximal Rod and slide the fixation arm to the desired location.



Assembly 1G

Assembly Instructions Specific To Anterior Referencing

MIS Femoral Alignment Guide and Anterior Skim Cut Guide Assembly:

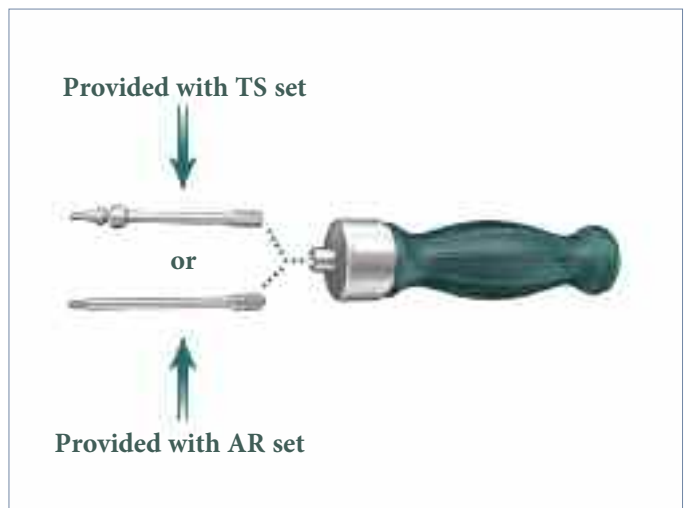
- ▶ Orient the MIS Femoral Alignment Guide such that the TKR being performed “Right” or “Left” faces anteriorly.
- ▶ Insert the Anterior Skim Cut Guide into the two anterior holes on the MIS Femoral Alignment Guide with the label “THIS SIDE TOWARDS BONE” appropriately positioned.



Assembly 2

1/8" Hex Driver Assembly:

- ▶ Snap the 1/8" Hex Drive into the Slip Torque Handle.



Assembly 3

3 Degree Posterior Condylar Reference Guide Assembly:

- ▶ Slide the 3 Degree Posterior Condylar Reference Guide hooks over the set screws.



Assembly 4

MIS Distal Resection Guide Assembly:

- ▶ Select the 8mm or 10mm MIS Distal Resection Guide.
- ▶ Assemble the Triathlon Modular Handle to the selected distal resection guide by depressing the black button on the modular handle and inserting the tip into the medial or lateral hole on the top of the distal resection guide.
- ▶ Release the black button and rotate the handle 20 degrees away from center to lock.
- ▶ Align the oval hole on the Resection Guide with the tab on the superior face of the Anterior Skim Cut Guide.
- ▶ Slide the Resection Guide towards the Skim Cut Guide to insert the tab into the oval hole.
- ▶ These guides are magnetized to facilitate correct assembly. This will be done intra-operatively by resting the Distal Resection Guide on the cut surface of the anterior femur and then sliding it into place, connecting it to the Anterior Skim Cut Guide.



Assembly 5A



Assembly 5B

Anterior Referencing Surgical Protocol

MIS Femoral Trial Extractor and Femoral Trial:

- ▶ Insert the posts of the MIS Femoral Trial Extractor into the lugholes of the Femoral Trial and squeeze the handle of the MIS Femoral Trial Extractor to hold the Femoral Trial. Releasing the handle will release the trial.



Assembly 6A

- ▶ Final Assembly with Femoral Trial.



Assembly 6B

MIS Femoral Flexion Impactor

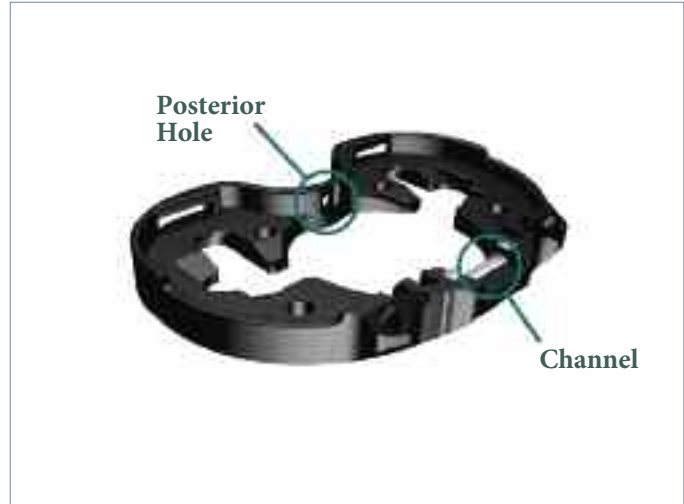
- ▶ Connect the MIS Femoral Flexion Impactor to the Impaction Handle.
- ▶ The MIS Femoral Flexion Impactor is placed on the anterior portion of the intercondylar notch of the femoral trial or implant and used to finish seating the trial or implant onto the distal femur.



Assembly 7

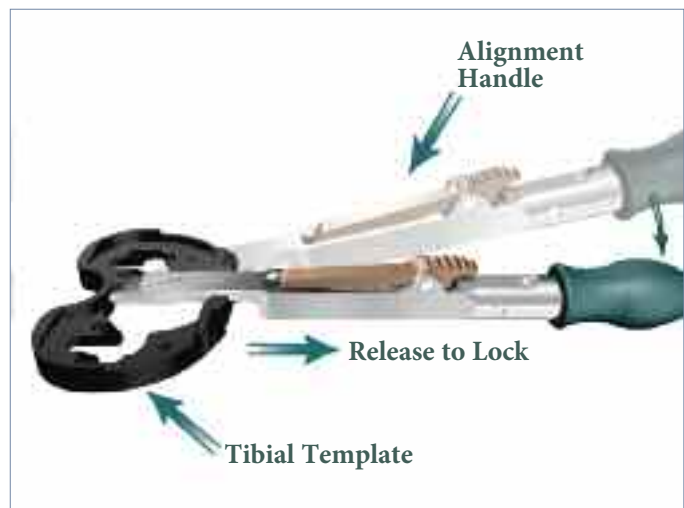
Universal Tibial Template, Alignment Handle and PS or CR Tibial Insert Trial Assembly:

- Posterior hole and channel of Universal Tibial Template.



Assembly 8A

- Press the bronze button on the Alignment Handle. Insert the spring-loaded tip of the Alignment Handle into the central posterior hole of the Universal Tibial Template. Hold the handle at a slight angle to the top surface of the template.
- Compress the spring-loaded tip by pushing it forward and lower the Alignment Handle into the channel on the anterior portion of the Universal Tibial Template. Release the spring tension and allow the Alignment Handle to engage the Universal Tibial Template.



Assembly 8B

- Release the bronze button to secure the assembly.

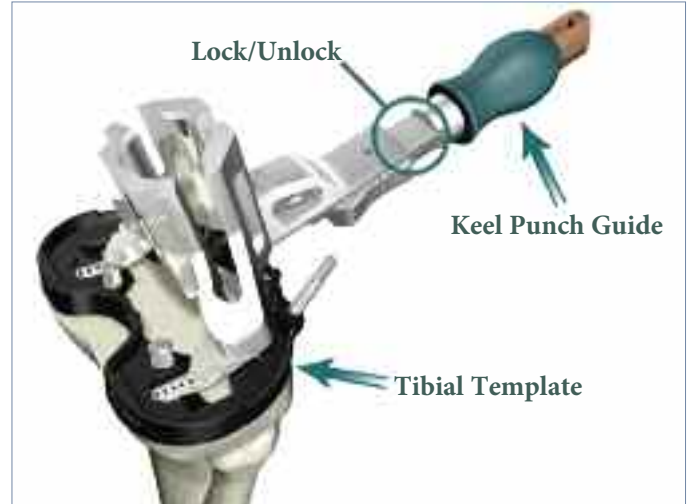


Assembly 8C

Anterior Referencing Surgical Protocol

Universal Tibial Template and Keel Punch Guide Assembly:

- ▶ Ensure that the handle of the Keel Punch Guide is unlocked – pull back on the handle to unlock.
- ▶ Assemble the Keel Punch Guide to the Universal Tibial Template by inserting the Keel Punch Guide at a slight angle to the Universal Tibial Template into the two locating slots towards the posterior portion of the Universal Tibial Template.



Assembly 9A

- ▶ Allow the Keel Punch Guide to sit flat on the Universal Tibial Template and push forward on the handle of the Keel Punch Guide to lock it to the Universal Tibial Template.



Assembly 9B

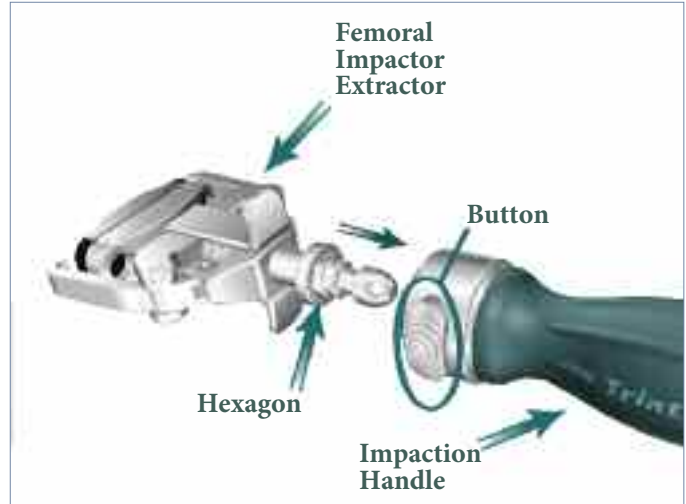
- ▶ Final Assembly.



Assembly 9C

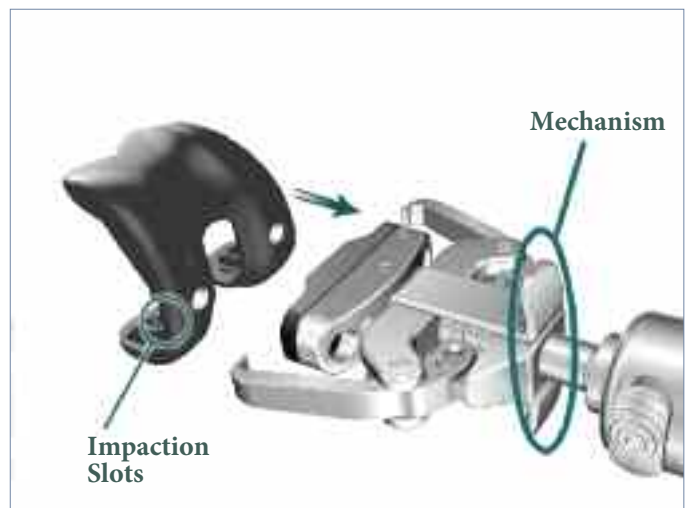
Femoral Impactor/Extractor, Impaction Handle and Femoral Trial or Femoral Component Assembly:

- ▶ Snap the Femoral Impactor/Extractor into the Impaction Handle.
- ▶ Ensure the hexagon on the Femoral Impactor/Extractor is fully seated in the Impaction Handle. When fully seated, there will be an audible snap.



Assembly 10A

- ▶ Turn the Impaction Handle counterclockwise until there is enough space (approximately 10mm) between the black impaction surface and the ends of the jaws to insert the Femoral Trial or Femoral Component.
- ▶ Pull back on the mechanism to open the jaws. Engage the jaws into the impaction slots on the Femoral Trial or Femoral Component.
- ▶ Turn the Impaction Handle clockwise to tighten, ensuring the impaction surface locks against the distal condyles of the Femoral Trial or Femoral Component.



Assembly 10B

- ▶ Final Assembly.



Assembly 10C



Surgical Procedure

Surgical Procedure

Exposure

- ▶ A standard anterior midline incision is utilized. Any previous incision can be used or incorporated to decrease risk of skin slough.
- ▶ The capsule is entered through a modified mid-vastus approach, which makes a 6-12cm skin incision medial to the patella from just above the tibial tubercle to just above the patella.
- ▶ Use a soft tissue approach that allows adequate patella visualization and sufficient knee flexion.



Figure 1

For the purpose of this surgical technique, tibial preparation will be done first, followed by the femoral preparation. However, procedural sequence can vary according to surgeon preference.

Tibial Preparation

- ▶ Triathlon Tibial preparation utilizes an extramedullary alignment system.
- ▶ Move the leg to 90° of flexion.
- ▶ The Tibial Resection Guide, available in Left and Right configurations, is designed to avoid soft tissue impingement.



Figure 2

Triathlon Single-Use Instrumentation

Extramedullary Referencing

- The tibial resection assembly has five parts: the appropriate Tibial Resection Guide, the Ankle Clamp, the Distal Assembly, the Proximal Rod and the Tibial Adjustment Housing. These are assembled first.

Note: The Tibial Adjustment Housing is available in 0° slope (posterior stabilized) and 3° slope (cruciate retaining).

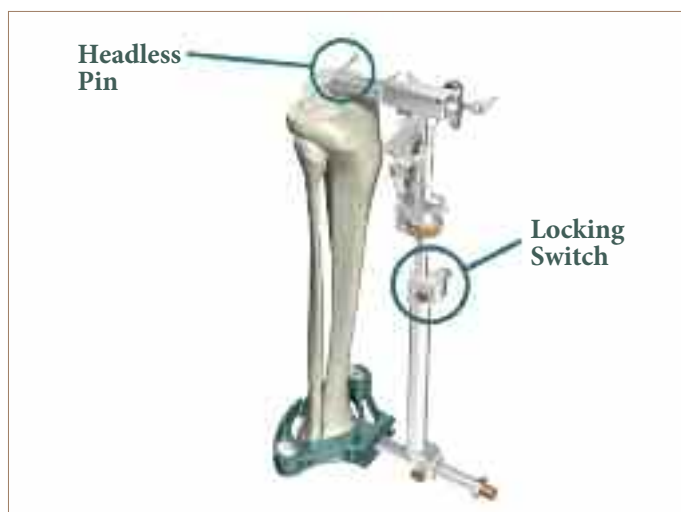


Figure 3

Instrument Bar



6541-6-700

MIS Uncaptured Tibial Resection Guide-



6541-6-701

MIS Uncaptured Tibial Resection Guide-Left



6541-6-702

MIS Captured Tibial Resection Guide-Right



6541-6-703

MIS Captured Tibial Resection Guide-Left



6541-2-610

Tibial Alignment Distal Assembly EM



6541-2-609

Tibial Alignment Ankle Clamp EM



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



6541-6-611

MIS Proximal Rod EM

Anterior Referencing Surgical Protocol

Flexion/Extension Alignment

- Place the ankle clamp around the ankle and unlock the locking switch (Button 2).
- Flexion/Extension alignment is correct when the long axis of the assembly parallels the mid-coronal plane of the tibia. Flexion/Extension alignment can be checked by verifying that the long axis of the assembly is parallel to the fibula.

Varus/Valgus Alignment

- Medial/Lateral offset can be adjusted by pushing the bronze button (Button 1) and sliding the assembly medially until the shaft intersects the center of the tibia.
- Once alignment is achieved, release the bronze button.



Figure 4

Rotational Alignment

- Rotate the entire assembly to ensure that the base of the assembly is aligned with the center of the ankle. The center of the ankle is generally in line with the second metatarsal.
- Once alignment is confirmed, set the bronze locking switch on the Distal Assembly to the locked position.
- The fixation arm of the MIS Tibial Alignment Proximal Rod is fully extended to reach the tibial eminence. A Headless Pin is then placed through the posterior fixation hole to lock the assembly in place.

Note: Either the anterior or posterior fixation holes may be used to set flexion/extension and rotational alignment.

Tibial Slope Adjustment

Note: If the MIS Proximal Rod is parallel to the tibia, the slope is 0° or 3° depending on which Tibial Adjustment Housing is used.

(Continued)



Figure 5

Triathlon Single-Use Instrumentation

- Tibial slope can be adjusted by pressing the anterior bronze wheel on the Distal Assembly.

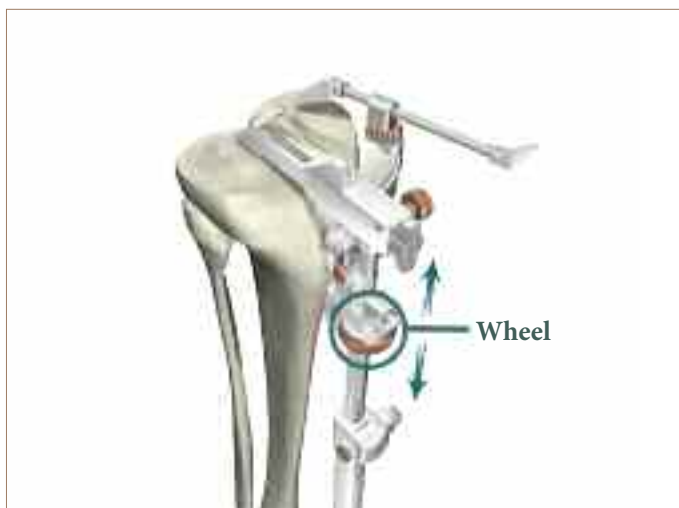


Figure 6

Establish Tibial Resection Level

- The Tibial Stylus attaches to the MIS Tibial Resection Guide with the “2” end referencing the lowest level of the affected compartment (typically, the medial side).

Note: (See Figure 7) If referencing off of the unaffected (typically, the lateral) side, insert a Headless Pin into the posterior fixation hole and remove the Headless Pin from the anterior fixation hole. Then press the bronze wheel on the side of the proximal rod and retract the head of the proximal rod posteriorly. Attach the Tibial Stylus with the “9” end extended anteriorly to reference the lowest level of the unaffected side. To save time during initial fixation of the MIS Tibial Alignment Proximal Rod, use the posterior fixation hole.

- 2mm of bone will be resected. Alternatively, if the “9” end of the Tibial Stylus is used, the amount of bone resected will be 9mm below the tip of the stylus.
- The height of the MIS Tibial Resection Guide, Tibial Stylus and Tibial Adjustment Housing can be adjusted using the bronze wheel on the Tibial Adjustment Housing. For coarse adjustment, press the bronze wheel and slide the assembly up or down. For fine adjustment, turn the bronze wheel to the right to move the assembly up the Proximal Rod or turn left to move the assembly down the Proximal Rod.
- Place two Headless Pins into the “0” angled holes, fixing the level of the Tibial Resection Guide.
- If additional stability of the guide is required, utilize the non-angled “X” pin hole.

(Continued)

Instrument Bar



6541-6-700

MIS Uncaptured Tibial Resection Guide-



6541-6-701

MIS Uncaptured Tibial Resection Guide-Left



6541-6-702

MIS Captured Tibial Resection Guide-Right



6541-6-703

MIS Captured Tibial Resection Guide-Left



6541-2-610

Tibial Alignment Distal Assembly EM



6541-2-609

Tibial Alignment Ankle Clamp EM



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



6541-6-611

MIS Proximal Rod EM



6541-2-429

Tibial Stylus

Anterior Referencing Surgical Protocol

- Remove all alignment instruments leaving only the Tibial Resection Guide in place.
- The Ankle Clamp, Distal Assembly, Proximal Rod and Tibial Adjustment Housing are removed. To remove the assembly:
 1. Remove the Headless Pins from the anterior and/or posterior hole(s) of the Proximal Rod.
 2. Squeeze the Bronze Tabs with one hand and hold the lower end of the Ankle Clamp Assembly with the other hand. Slide the entire assembly anteriorly, leaving just the resection guide on the bone.



Figure 7

Tibial Resection

- Resection of the proximal tibia is now completed using either the Left or Right Captured or Uncaptured MIS Tibial Resection Guide.
- Remove the Tibial Resection Guide.



Figure 8

Femoral Preparation

Femoral Intramedullary Alignment

- ▶ The Universal Driver allows for attachment of all drills and pins. The Universal Driver may be attached directly to a reamer, drill, or a Jacob's Chuck.
- ▶ Locate the IM drill hole; it is approximately 1cm anterior to the femoral attachment of the posterior cruciate ligament and slightly medial to the midline of the distal femur.
- ▶ Identification of landmarks may be aided by removal of osteophytes from the margins of the intercondylar notch.
- ▶ Attach the $\frac{3}{8}$ " IM Drill to the Universal Driver and drill into the IM canal ensuring that the drill is parallel to the shaft of the femur. The first diameter will create a tight fit around the IM Rod. If further clearance is desired, continue to drill until the larger step diameter opens the hole. This will allow the IM canal to dictate the position of the rod avoiding the need to "toggle" the drill to create



Figure 9

6541-6-700

MIS Uncaptured Tibial Resection Guide-



6541-6-701

MIS Uncaptured Tibial Resection Guide-Left



6541-6-702

MIS Captured Tibial Resection Guide-Right



6541-6-703

MIS Captured Tibial Resection Guide-Left



6541-2-610

Tibial Alignment Distal Assembly EM



6541-2-609

Tibial Alignment Ankle Clamp EM



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



6541-6-611

MIS Proximal Rod EM



6541-4-801

Universal Driver



6541-4-538

$\frac{3}{8}$ " IM Drill



Anterior Referencing Surgical Protocol

- ▶ The T-Handle Driver is attached to the 5/16 inch IM Rod. The rod is inserted into the anterior referencing femoral alignment assembly. This assembly will facilitate the skim cut of the femur and then the distal femoral cut. The Femoral Alignment Guide is designed for use on either the left or right knee and can be set between 2 degrees and 9 degrees of valgus. The desired angle is set by pulling back on the black knob of the Femoral Alignment Guide and placing it in the desired notch.
- ▶ Once the angle is set, the rod assembly is slowly advanced into the intramedullary canal until it engages the isthmus. The alignment guide is then placed flush up against the most prominent distal femoral condyle.



Figure 10

Before permanently fixing the Femoral Alignment Guide, the rotational position must be confirmed. This position can be referenced in any one of four ways: Whiteside's line, Epicondylar axis, cut surface of the tibia, or 3 degree of external rotation. Using more than one of these four methods is recommended.

Rotational Alignment

Option 1

- ▶ Whiteside's line defines the anterior/posterior axis of the femur and corresponds to the central sulcus of the trochlea. This may be drawn on the femur using a marker and the jig aligned with it by using 2 1/8 inch pins in the holes provided. Whiteside's line should be parallel to the pins.



Figure 11

Triathlon Single-Use Instrumentation

Instrument Bar

Option 2

- The epicondylar axis is referenced by finding the most prominent portion of the lateral epicondyle and marking it with a marker. The medial epicondyle is less defined. Therefore the synovium and soft tissue overlying the epicondyle should be removed so the epicondyle can be identified. The epicondyle should be outlined with a marker and the central point located. The medial and lateral reference points are marked and a line is drawn on the distal femur joining the two.

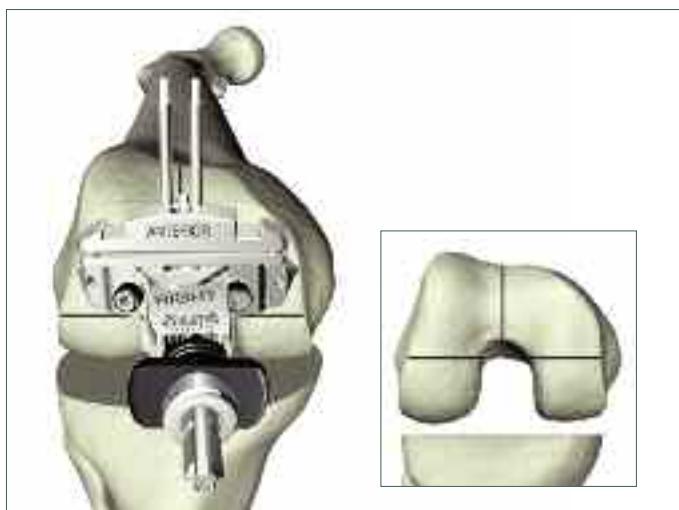


Figure 12



6541-4-800
T-Handle Driver



6541-4-516
5/16" IM Rod



6541-0-600
AR Femoral Alignment Guide



6541-0-601
AR Skim Cut Guide



6541-4-003
Headless Pins - 3"

Anterior Referencing Surgical Protocol

Option 3

- Proper femoral rotation can also be referenced by orienting the guide parallel to the cut surface of the tibia (this requires that the tibia has been cut first, or the line of resection marked). Using this method assures the surgeon of a rectangular flexion space.



Figure 13

Option 4

- Rotation can also be set empirically, placing the guide in 3 degrees of external rotation in reference to the posterior femoral condylar line. This can be easily accomplished using the hanging external rotation guide from the Femoral Alignment Guide and aligning the guide parallel to the posterior aspect of both condyles.

Once proper rotation has been set, the Headless Pins are driven through the medial and lateral side of the Femoral Alignment Guide.



Figure 14

Triathlon Single-Use Instrumentation

Instrument Bar

Anterior Skim Cut Resection

- ▶ The Anterior Skim Cut Guide can be applied to the Femoral Alignment Guide at this point. It is now necessary to determine the level of resection. This is accomplished by assembling the skim cut stylus to the Anterior Skim Cut Guide by depressing the smaller black swing trigger on the Skim Cut Stylus and placing it into the hole on the top surface of the Skim Cut Guide. The guide is then lifted anteriorly and the stylus is rotated first laterally, then down to the anterior aspect of the femur.
- ▶ Once the satisfactory point is located, the stylus point is held firmly against the femur and the anterior Skim Cut Guide is secured in that position by tightening both black locking screws using the 1/8 inch hex driver assembly.
- ▶ If the surgeon is using an MIS approach and full visualization of the anterior femur is not possible, then the tip of the stylus is slid distally to its full distal position. It can then be advanced under the skin to its proper position and secured. The length of the femoral stylus may be easily adjusted by sliding it to the appropriate position on the anterior cortex both proximally and distally, as well as medially and laterally.
- ▶ The tip of the stylus will indicate the exit point of the saw blade for the provisional skim cut and will also indicate the point of exit of the final femoral anterior resection when it is made with the femoral resection guide. The exit point can be further checked using a blade runner.



Figure 15

6541-4-516

5/16" IM Rod



6541-0-600

AR Femoral Alignment Guide



6541-0-601

AR Skim Cut Guide



6541-4-003

Headless Pins - 3"



6541-0-603

3 Degree Posterior Condylar Reference Guide



6541-0-602

AR Skim Cut Stylus



6541-4-802

1/8" Hex Drive



6541-4-825

Slip Torque Handle



Anterior Referencing Surgical Protocol

- ▶ The anterior skim cut is then made using .050 inch (1.27mm) blade. The width of the blade is determined by surgeon choice. Commonly an 18mm blade is suitable.
- ▶ Since rounded posts are built into the medial and lateral walls of the skim cut resection guide to improve medial and lateral excursion, usually the cut can be made completely. If it cannot, the resection guide is removed and the cut is completed free-hand. After the anterior skim cut resection is complete, the anterior Skim Cut Guide and the Femoral Alignment Guide is left in place. Now that the anterior skim cut has been made, the rotational alignment of the Femoral Component has been finalized.

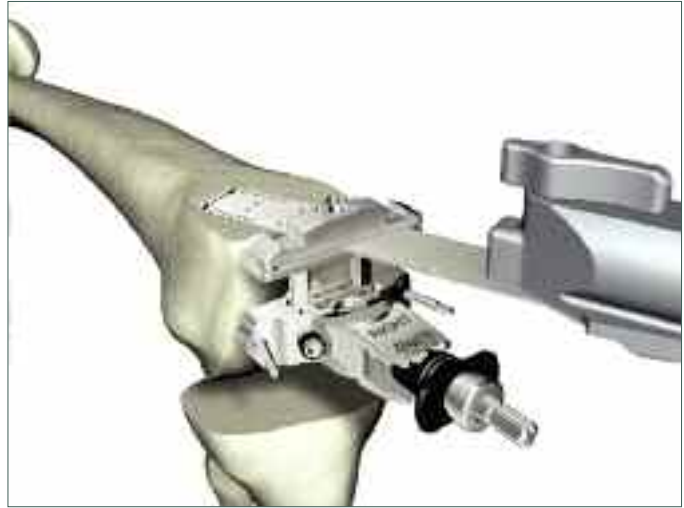


Figure 16

Distal Femoral Resection

- ▶ Depending on surgeon's preference, either an 8mm or 10mm Distal Resection Guide is applied to the Anterior Skim Cut Guide by aligning the slot on the Distal Resection Guide with the tab on the anterior skim cut resection guide. These guides are magnetized to facilitate assembly.
- ▶ Once the anterior bone is removed, assembling the Distal Resection Guide is facilitated by resting it on the cut surface of the anterior femur and then sliding it into place, connecting it into the anterior skim cut resection guide. Assembly is also facilitated by retracting the proximal soft tissues more proximally. Extension of the knee will also aid in this maneuver.
- ▶ The surgeon may also elect to use the Triathlon Modular Handle which connects to the medial hole of the distal resection guide to aid in assembly. In order to assure proper assembly, all bone fragments from the anterior femoral resection must be removed.



Figure 17

Triathlon Single-Use Instrumentation

Instrument Bar

Optional

- Final position is accomplished by pinning the Distal Resection Guide to the femur using two 1/8 x 2.5 inch Headless Pins. Placing the pins in the holes marked "0" will allow the surgeon to take 2 or 4 more mm off the distal femur later on if necessary. Prior to final fixation, an optional external Alignment Rod may be applied in order to further check the alignment, especially in the face of an extraarticular deformity or a blocked femoral canal. The Universal Alignment Tower may be attached to the Distal Resection Guide and an external Alignment Rod is inserted. Correct alignment is achieved when the rod intersects the center of the femoral head and is parallel to the axis of the femur in both the coronal and sagittal planes. The distal portion of the rod should exit in the center of the knee.

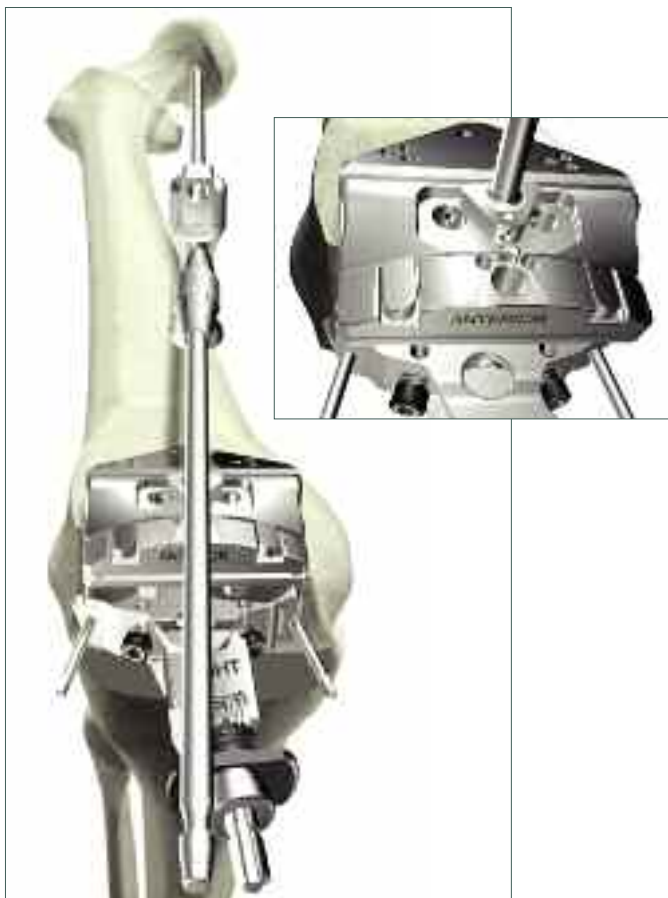


Figure 18

6541-4-516

5/16" IM Rod



6541-0-600

AR Femoral Alignment Guide



6541-0-601

AR Skim Cut Guide



6541-4-003

Headless Pins - 3"



6541-0-603

3 Degree Posterior Condylar Reference Guide



8mm - 6541-0-608

10mm - 6541-0-610

Distal Resection Guide



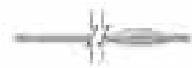
6541-4-806

Universal Alignment Handle



6541-4-602

Universal Alignment Rod



Anterior Referencing Surgical Protocol

- ▶ Once the Distal Resection Guide is pinned in place, the 1/8 inch pins securing the Femoral Alignment Guide and the anterior Skim Cut Guide are removed. The IM Rod, Femoral Alignment Guide, and anterior Skim Cut Resection Guide are removed from the femur leaving only the Distal Resection Guide in place. If desired, a 1/8 inch “X” cross pin can be used to prevent the distal cutting guide from backing off the bone. The distal femur is then resected using the same blade as for the anterior skim cut.
- ▶ Similar to the anterior skim cut resection guide, the Distal Resection Guide also has rounded posts to increase the excursion of the blade. If the full distal resection cannot be accomplished, the guide is removed and the rest of the resection is carried out in a free-hand manner. Should an additional 2 or 4mm of distal femur need to be resected, then the resection guide is replaced over the pins through either the +2 or +4 holes.
- ▶ Following resection of the distal femur, all medial and lateral osteophytes are removed to prevent impingement and tenting of the medial or lateral ligament complexes.



Figure 19

Femoral Sizing

- ▶ The proper size for the femoral implant is determined by using the anterior referencing Femoral Sizer. The wide anterior flange of the Femoral Sizer is placed on the resected anterior femur and the feet are placed under the femoral condyles so that one of the feet rests on the most prominent posterior condyle. The sizer is then placed flat against the distal femur. The central post of the sizer will indicate the proper size.
- ▶ Since this is an anterior referencing system, the anterior point is fixed and if the size is in-between two sizes, the smaller Femoral Component may be selected. This assures the proper anterior femoral size and avoids overstuffing the patellofemoral joint. Based upon the combination of results, the proper size is chosen. The Triathlon implant is designed for an improved medial/lateral and anterior/posterior fit.



Figure 20



Figure 21

Triathlon Single-Use Instrumentation

Instrument Bar

Femoral Resection

- Assemble AR Skim Guide to Femoral AP Resection Guide.



Figure 22



8mm - **6541-0-608**
10mm - **6541-0-610**
Distal Resection Guide



6541-0-620
AR Femoral Sizer



See Catalog
**Triathlon Single-Use
InstrumentationFemoral Prep Kit**
Femoral AP Resection Guide



5555-2000
**Triathlon Single-Use
InstrumentationFemoral Prep Kit**
AR Skim Cut Guide



6541-4-801
Universal Driver



6541-4-003
Headless Pins - 3"

Anterior Referencing Surgical Protocol

- ▶ Pin assembly onto bone to ensure AP Resection Guide is stabilized.
- ▶ For additional fixation, drive two Headless Pins into “X” pins holes in block while pressing the guide onto bone and holding guide down with your thumb.



Figure 23

- ▶ Remove the AR Skim Guide from Femoral AP Resection Guide.
- ▶ Continue with Femoral AP Resection and Femoral Chamfer cuts as noted above.

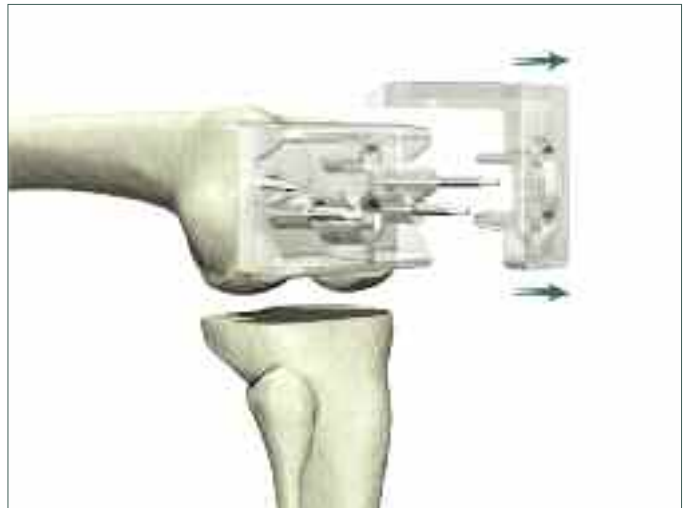


Figure 24

Triathlon Single-Use Instrumentation

- ▶ The order of the bone cuts are as follows:
 1. Anterior Cortex
 2. Posterior Condyles
- ▶ Place the saw on the cut surface and define the plane (ensure that the cutting blade is co-planar with the cutting surface). Before squeezing the trigger make sure that the teeth of the blade are not touching the bone. Start the cut slowly at the blade and cutting surface to ensure that the cutting action is co-planar.
- ▶ Cut just through the cortical rim in one position and then retract the blade and start the cut again in a slightly different position adjacent to the first cut (a slight pecking motion would best describe the approach).
- ▶ Progressively increase the depth of the cut by plunging and retracting in approximately 10mm increments (check that the blade is co-planar throughout this step).



Figure 25



Figure 26

Instrument Bar



See Catalog
**Triathlon Single-Use
Instrumentation Femoral Prep Kit**
Femoral AP Resection Guide



5555-2000
**Triathlon Single-Use
Instrumentation Femoral Prep Kit**
Femoral Skim Reference Guide



6541-4-801
Universal Driver



6541-4-003
Headless Pins - 3"

Anterior Referencing Surgical Protocol

- Remove the Headless Pins from the guide using the Headless Pin Extractor and remove the guide from the bone.



Figure 27

Femoral Chamfer Resection

- Attach the Femoral Chamfer Resection Guide by lining up the guide with the pinholes that were created in the previous step.



Figure 28

Triathlon Single-Use Instrumentation

- Impact the guide onto the bone with a mallet (be sure to impact over the axis of the pins).



Figure 29

- For an additional tactile feel, either one or two fingers may be used on the shaft of the Triathlon Single-Use Instrumentation sawblade.



Instrument Bar



See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit
Femoral AP Resection Guide



6633-7-605
Pin Puller



See Catalog
Triathlon Single-Use
Instrumentation Femoral Kit
Femoral Chamfer Resection Guide

Anterior Referencing Surgical Protocol

- ▶ The order of the cuts will be as follows:
 1. Anterior Chamfer
 2. Posterior Chamfer
- ▶ Start cut slowly and progressively with a light pecking motion that will generate a slit in the bone that aids in the generation of a completely flat co-planar surface.



Figure 30



Figure 31

Triathlon Single-Use Instrumentation

- ▶ Remove the Femoral Chamfer Resection Guide with the Triathlon Posterior Osteophyte Removal Tool (Optional) or a 1/2" or smaller osteotome.
- ▶ Please be aware that this guide may be more difficult to remove in harder bone.



Figure 32



Instrument Bar

See Catalog
Triathlon Single-Use
Instrumentation Femoral Kit
Femoral Chamfer Resection Guide



PS Box Preparation

- If the surgeon has chosen a PS knee, then the intercondylar notch must be resected. In order to accomplish this, the PS Box Cutting Guide is placed onto the distal femur. Since the width of the distal portion of the guide represents the exact width of the implant, it should be centered and placed in the desired position flush with the distal resection. The box guide is then pinned to the femur using the Headless Pins through the holes on the anterior surface, as well as the distal surface of the cutting guide.

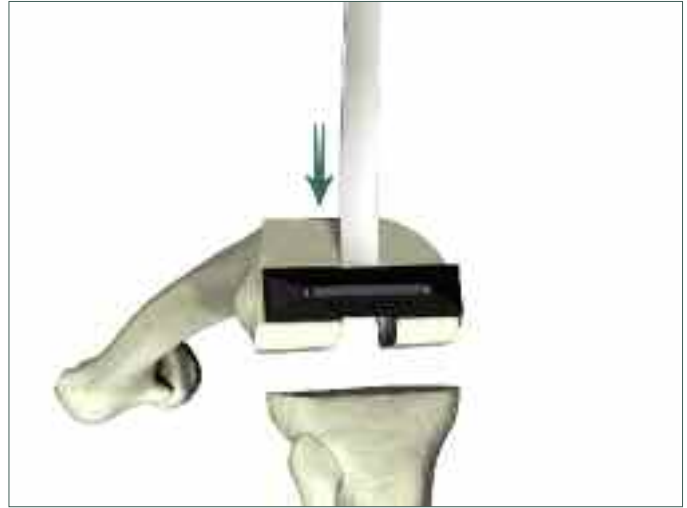


Figure 33

- The intercondylar region can be resected in two ways. The surgeon may elect to resect the proximal portion of the intracondylar notch using the Box Chisel. First, using the inside surfaces of the box opening as guides, score the posterior cortex on both sides of the posterior portion of the intercondylar notch using the Triathlon Single-Use Instrumentationsaw.



Figure 34

Triathlon Single-Use Instrumentation

- The chisel is assembled to the Impaction Handle and then is placed within the slot of the PS Box Cutting Guide with the surface marked “distal” towards the distal portion of the femur. The chisel is then fully engaged with a mallet and left in place. The rest of the box is then cut. The Box Chisel is then removed.

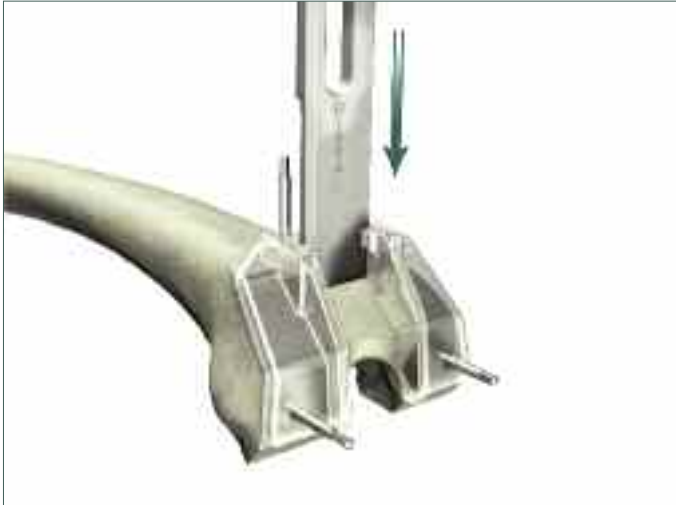


Figure 35

Instrument Bar



See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit
PS Box Cutting Guide

6541-4-003

Headless Pins - 3"



6541-4-709

Box Chisel



6541-4-810

Impaction Handle



Anterior Referencing Surgical Protocol

- ▶ Alternatively, the Triathlon Single-Use Instrumentation saw can be used to resect the medial and lateral borders of the intercondylar notch to the proximal portion of the cutting guide. A thin, narrow oscillating saw is then used through the proximal slot to resect the distal portion of the femur. The cuts are connected and the intracondylar bone is removed. Care should be taken to avoid injury to the tibial plateau and either a retractor should be used to lift the distal femur from below or the tibial plateau can be protected with the tibial plateau protector provided with the Triathlon instrumentation (optional with Stryker Precision).
- ▶ The 1/8-inch pins are then removed and the PS Box Cutting Guide is then removed.

Note: In order to prepare a proper rectangular box, care should be taken not to bias the saw blade. Preparation of a proper rectangular shape will facilitate an accurate implantation of the PS component with minimal bone resection.

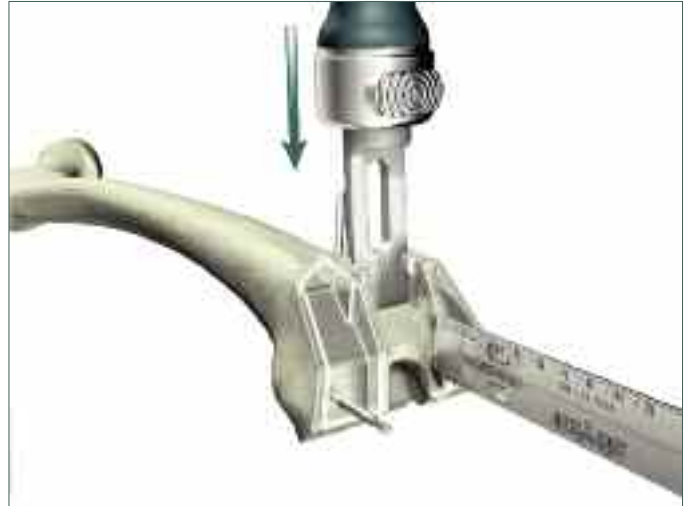


Figure 36



Femoral Trial Assessment

(The remaining portion of the technique should be used for a Posterior Stabilized or Cruciate Retaining knee.)

- ▶ Assemble the appropriate size symmetrical PS or CR Femoral Trial to the Femoral Impactor Extractor with the Impaction Handle (**See Assembly 5**), or use the Femoral Trial Extractor pictured in Figure 39.



Figure 37

Triathlon Single-Use Instrumentation

- Impact the PS or CR Femoral Trial onto the prepared distal femur. Use the Impaction Handle to ensure the Femoral Trial is aligned with the distal plane.



Figure 38

Instrument Bar



See Catalog
Triathlon Single-Use
InstrumentationFemoral Prep Kit
PS Box Cutting Guide

6541-4-003

Headless Pins - 3"



6541-4-709

Box Chisel



6541-4-810

Impaction Handle



6541-4-803

Slap Hammer



See Catalog
Triathlon Single-Use
InstrumentationFemoral Prep Kit
CR Universal Femoral Trial



See Catalog
Triathlon Single-Use
InstrumentationFemoral Prep Kit
PS Universal Femoral Trial



6541-7-807

MIS Femoral Trial Extractor



6541-4-807

Femoral Impactor/Extractor



Anterior Referencing Surgical Protocol

- ▶ Remove the Femoral Impactor/Extractor and Impaction Handle and assess the fit of the PS or CR Femoral Trial. Care must be taken to ensure that all of the osteophytes beyond the end of the posterior femoral condyles are removed.
 - Cruciate Retaining Knee: Attach the 1/4" Peg Drill to the Universal Driver and create the Modular Femoral Distal Fixation Peg holes. Attach the Posterior Osteophyte Removal Tool to the Impaction Handle and remove posterior osteophytes.

Note: If it is difficult to reach the posterior condyles in a tight knee, the tibial resection can be made, allowing for easier removal of osteophytes.

- Posterior Stabilized Knee: If the Modular Femoral Distal Fixation Pegs are to be used, use the 1/4" Peg Drill, attached to the Universal Driver to prepare the distal femoral peg holes.
- ▶ The assessment of the fit of the Femoral Trial is similar for both the CR and PS implants. The appropriate size femoral implant trial is applied to the Femoral Trial Impactor/Extractor. The Femoral Trial is then impacted onto the prepared distal femur and the Impactor/Extractor is removed. The fit of the Femoral Trial is checked to ensure that there is a flush fit.
- ▶ The Triathlon CR knee has integral medial and lateral Femoral Pegs. Therefore, if a CR implant is chosen, the 1/4 inch Peg Drill is assembled to the Universal Driver and distal fixation peg holes are drilled through the holes in the condyles of the Femoral Trial.
- ▶ The cemented posteriorly stabilized femoral component does not come with integral pegs but rather modular capability. Should the surgeon choose to use distal fixation pegs, the holes are drilled in a similar fashion. Once this has been accomplished, the trial may be removed. At this point, the tibia, if not already prepared, must be prepared for the tibial implant. Keeping the Femoral Trial in place assures adequate exposure, but it may be removed for tibial preparation if desired.



Figure 39

Triathlon Single-Use Instrumentation

- ▶ Attach the Femoral Impactor/Extractor or the Femoral Trial Impactor to the PS or CR Femoral Trial and remove from the femur.



Figure 40

Tibial Component Sizing

- ▶ Retractors are placed to expose the tibial plateau. The Femoral Trial may be left in place. The appropriate size Universal Tibial Template is assembled using the Alignment Handle. The assembly is placed on the resected tibial plateau and positioned to contact the cortical rim but no overhang should exist.
- ▶ The Triathlon Single-Use Instrumentation System includes color-coded tibial sizers for proper sizing of the tibial resection.
- ▶ Choose the appropriate tibial sizer to measure the resected tibia and note the size. The size that is chosen will determine the size of your Tibial Preparation Kit.



Figure 41

Instrument Bar

See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit
CR Universal Femoral Trial



See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit
PS Universal Femoral Trial



6541-4-525
1/4" Peg Drill



6541-4-801
Universal Driver



6541-7-807
MIS Femoral Trial Extractor



See Catalog
Triathlon Single-Use
Instrumentation Tibial Sizer Kit
Tibial Sizer



6541-4-807
Femoral Impactor/Extractor



Tibial
Instructions

Femoral
Instructions

Anterior Referencing Surgical Protocol

- Once the rotational assessment is determined and the alignment in the coronal and sagittal plane is confirmed, the tibial template is fixed to the tibia using Headed Nails or Headless Pins.
- Another option is to leave the Tibial Template unsecured and apply a Tibial Insert Trial. Once the tibial insert is applied, the knee is placed through a range of motion and the center of the Tibial Template is marked on the tibia in extension.
- Regardless of the method used, once the proper position is determined, the Tibial Template is secured using the Headed Nails or Headless Pins. Once that is accomplished, the tibial keel must be prepared.

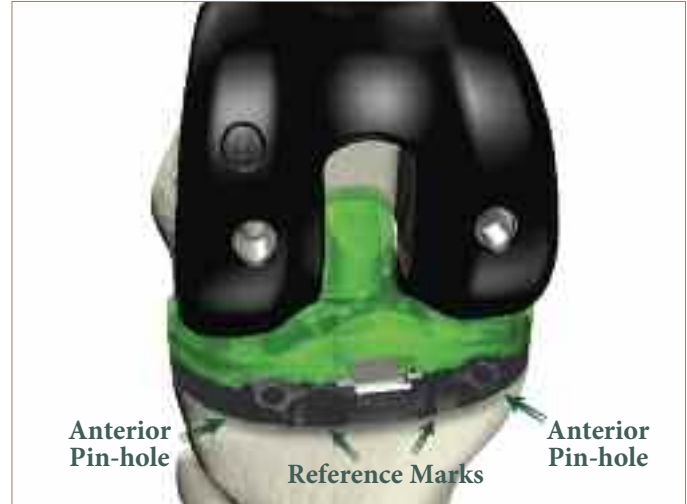


Figure 42



Figure 43

Triathlon Single-Use Instrumentation

Tibial Keel Preparation

- The Tibial Keel Punch Guide is assembled to the Universal Template by inserting it at a slight angle to the top of the template into the two locating slots in the posterior portion of the Universal Tibial Template. The Keel Punch Guide is then allowed to sit flat on the Universal Tibial Template and the handle is pushed forward to lock the Keel Punch Guide to the template.

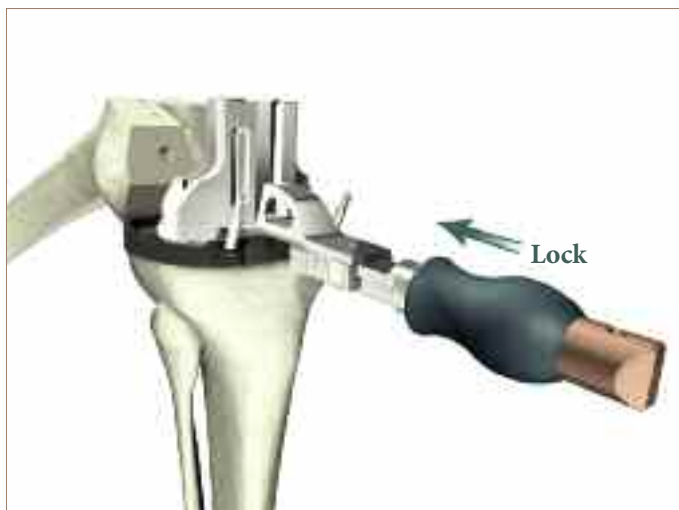


Figure 44

Instrument Bar

See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit
CR Universal Femoral Trial



See Catalog
Triathlon Single-Use
Instrumentation Femoral Prep Kit
PS Universal Femoral Trial



See Catalog
Triathlon Single-Use
Instrumentation Tibial Kit
Tibial Insert Trial



See Catalog
Triathlon Single-Use
Instrumentation Tibial Kit
Tibial Template



6541-4-515
Headed Nails - 1 1/2"



6541-4-575
Headed Nails - 3/4"



6541-4-300
Headed Nail Impactor/Extractor



6633-7-605
Pin Puller



Size 1, 2, 3 - 6541-2-713
Size 4, 5, 6, 7, 8 - 6541-2-748
Keel Punch Guide



Anterior Referencing Surgical Protocol

- Once this is secured, the appropriate size Keel Punch is placed into the Keel Punch Guide. A mallet is used to impact the punch into the tibia.
- If a cemented component is to be used, the Keel Punch should be impacted until it fully sits into the guide ensuring that it is flat against the bone. If an uncemented implant is used, the surgeon may elect to make only a slight impression into the tibia, with approximately 1/3 to 1/2 of the tibial Keel Punch, allowing for a press-fit of the tibial keel into the tibia.



Figure 45

- Once the desired depth is achieved, the Keel Punch Guide handle is lifted up and rotated anteriorly. The handles of the Keel Punch Guide and Keel Punch are then squeezed together to cantilever the punch out of the tibia. The Keel Punch is removed along with the Keel Punch Guide.



Figure 46

Triathlon Single-Use Instrumentation

Patella Preparation

- The thickness of the patella should be determined by using the Patella Caliper. Once the thickness is determined and the approximate width is estimated, the surgeon can determine the thickness of the component to be used. The Triathlon patella implant becomes somewhat thicker with increased width. Implants range from 8 to 11mm of width, to an asymmetric thickness of 29 to 40mm and a symmetric thickness of 27 to 39mm.



Figure 47

Instrument Bar

See Catalog
Triathlon Single-Use
InstrumentationTibial Kit
Tibial Template



Size 1, 2, 3 - 6541-2-713
Size 4, 5, 6, 7, 8 - 6541-2-748
Keel Punch Guide



Sizes 1, 2, 3 - 6541-2-013
Sizes 4, 5, 6 - 6541-2-046
Sizes 7, 8 - 6541-2-078
Keel Punch



7650-1454
Patella Caliper



6633-7-605
Pin Puller



Tibial
Instructions

Patella
Instructions

Anterior Referencing Surgical Protocol

- The Triathlon Single-Use Instrumentation System allows a surgeon to perform the patella resection in a free-hand manner based on his/her typical procedure.



Figure 48

- At this point, the medial/lateral width of the patella is measured and the appropriate size Patella Template is chosen. Care should be taken to avoid any overhang.
- Once the appropriate size template is applied, the clamp is secured and the patella drill is used to drill the three holes of the patella. The drill is engaged to the full depth. Once all three drill holes are made, the Patella Clamp is removed by depressing the release trigger and the template by pressing the gold button.

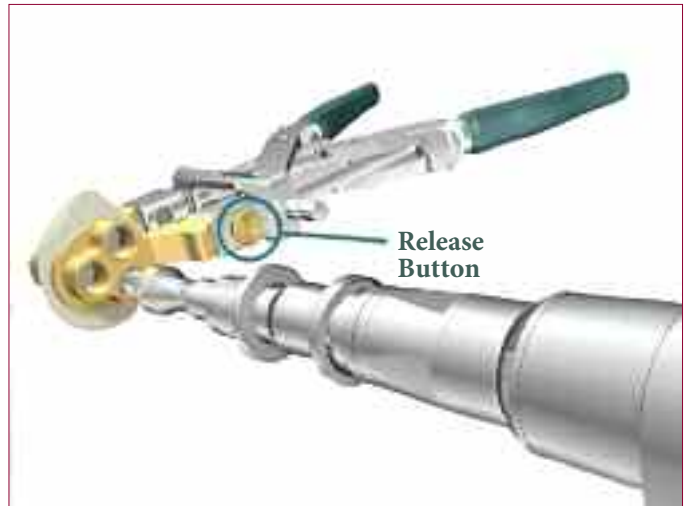


Figure 49

Patella Trial Assessment

- ▶ Once the patella has been drilled, the Patella Trial is applied. If there is any overhang, a smaller implant is chosen. The surgeon can elect to use either a symmetric or asymmetric implant. An asymmetric implant improves patella tracking by medializing the dome of the patella.
- ▶ The Patella Trial is applied and the knee is placed through a range of motion. It is acceptable to place a tenaculum on the edge of the quadriceps tendon and pull proximally to stabilize the extensor mechanism especially if one has used a tendon splitting medial parapatella approach. No external pressure should be applied nor should any medial force be applied.
- ▶ The patella should track satisfactorily throughout the range of motion without any tilting or subluxation. If tilting or subluxation occurs, the rotation and alignment of the femoral and tibial components should be checked. If they are satisfactory, a lateral retinacular release should be considered. Prior to a lateral retinacular release, the surgeon could consider deflating the tourniquet to reduce any external pressure on the quadriceps mechanism causing 'false' subluxation.
- ▶ Once patella tracking has been determined to be satisfactory, final implantation may be accomplished.



Figure 50

29mm - **6541-3-617**
 32mm - **6541-3-618**
 35mm - **6541-3-619**
 38mm - **6541-3-620**
 40mm - **6541-3-621**



Asymmetric Patella Drill Template

27mm - **6541-3-627**
 29mm - **6541-3-629**
 31mm - **6541-3-631**
 33mm - **6541-3-633**
 36mm - **6541-3-636**
 39mm - **6541-3-639**



Symmetric Patella Drill Template

6541-3-801

Patella Clamp Base



6541-3-600

Patella Clamp



6541-3-524

All-Poly Patella Drill w/Stop



6541-4-801

Universal Driver



See Catalog

Symmetric Patella Trial



See Catalog

Asymmetric Patella Trial



See Catalog

PS Tibial Insert Trial



See Catalog

CR Tibial Insert Trial



See Catalog

PS Femoral Trial



See Catalog

CR Femoral Trial



Final Preparation and Implantation

The trial components are removed. The knee should be thoroughly irrigated of all debris. This may be best accomplished by a pulsating lavage. If cemented implants are used, the bone may be further prepared using a hemostatic agent and then dried again. Any “high” spots may be removed using an osteotome, oscillating saw, or bone file.

Tibia

- ▶ **Cementless:** The knee is flexed and the tibia is exposed with appropriate retractors. The peri-apatite coated tibial implant is then impacted into the tibia. The implant must be stable and flush with the bone, with no gaps present.
- ▶ **Cemented:** A batch of methyl-methacrylate Simplex cement is mixed. The tibial component is coated with cement, as well as the upper tibia and the Keel Punch area. The tibial component is impacted and excess cement is removed.



Figure 51



Figure 52

Triathlon Single-Use Instrumentation

Femur

- ▶ **Cementless:** The Femoral Component is impacted again assuring that the implant is flush with the bone with no gaps. Care must be taken to avoid scratching any of the real implants. If there is any question about stability of the implants, a cemented implant should be considered.
- ▶ **Cemented:** Cement is applied to the Femoral Component and the cut surface of the femur and the Femoral Component is impacted. Excess cement is removed.



Figure 53



Figure 54

Instrument Bar

6541-4-810

Impaction Handle



6541-4-805

Baseplate Impactor/Extractor



See Catalog

Primary Tibial Baseplate - Cemented



See Catalog

Low Profile Tibial Baseplate



See Catalog

Primary Tibial Baseplate - Cementless



6541-4-812

Tibial Baseplate Impactor



6541-4-807

Femoral Impactor/Extractor



See Catalog

PS Femoral Component



See Catalog

CR Femoral Component



6541-7-811

MIS Femoral Flexion Impactor



Anterior Referencing Surgical Protocol

Symmetric or Asymmetric Patella

- ▶ **Cementless:** The peri-apatite coated patellar implant is pressed into the patella using the Patella Clamp. The implant must be stable and flush with the bone.
- ▶ **Cemented:** The cement is applied to both the implant and the cut surface of the bone and the implant applied and held with the Patella Clamp. All excess cement is removed. After the cement is hard, the clamp is removed and the knee is again examined.

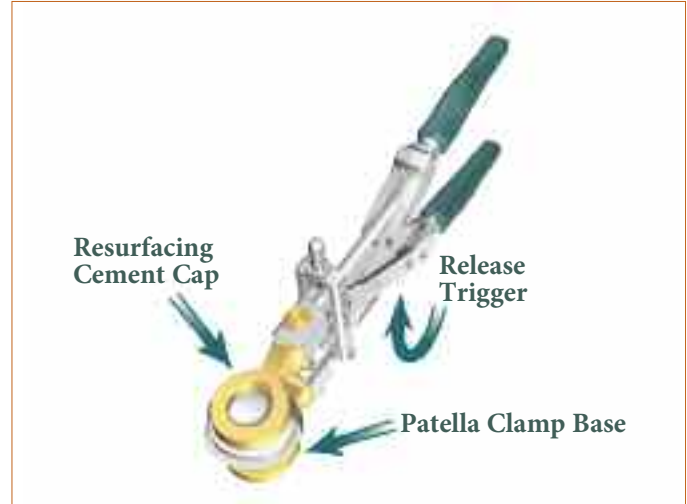


Figure 55

Closure

- ▶ The knee is then reduced and again placed through a range of motion where all aspects are checked again. Once the surgeon is satisfied with the reconstruction, the knee is closed in a routine fashion. A drain may or may not be used at the surgeon's discretion. The quadriceps expansion is then repaired using strong interrupted slowly absorbable sutures. The subcutaneous tissue is closed with smaller absorbable sutures, and the skin is closed with surgical staples or sutures. The wound is cleansed, dried and a large bulky dressing is applied. The tourniquet is deflated.



Figure 56

Triathlon Single-Use Instrumentation



Instrument Bar

6541-3-801

Patella Clamp Base



6541-3-800

Patella Cement Cap



6541-3-600

Patella Clamp



See Catalog

Symmetric Patella



See Catalog

Asymmetric Patella



See Catalog

PS Femoral Component



See Catalog

CR Femoral Component



See Catalog

PS Tibial Insert



See Catalog

CR Tibial Insert



See Catalog

Primary Tibial Baseplate - Cemented



See Catalog

Low Profile Tibial Baseplate



Indications

General Total Knee Arthroplasty (TKA) Indications include:

- Painful, disabling joint disease of the knee resulting from: non-inflammatory degenerative joint disease (including osteoarthritis, traumatic arthritis or avascular necrosis) rheumatoid arthritis or post-traumatic arthritis..
- Post-traumatic loss of knee joint configuration and function.
- Moderate varus, valgus, or flexion deformity in which the ligamentous structures can be returned to adequate function and stability.
- Revision of previous unsuccessful knee replacement or other procedure.
- Fracture of the distal femur and/or proximal tibia that cannot be stabilized by standard fracture management techniques.

Additional Indications for Posterior Stabilized (PS) Components:

- Ligamentous instability requiring implant bearing surface geometries with increased constraint.
- Absent or non-functioning posterior cruciate ligament.
- Severe anteroposterior instability of the knee joint.

The Triathlon Total Knee System beaded and beaded with Peri-Apatite components are intended for uncemented use only.

Contraindications

- Any active or suspected latent infection in or about the knee joint.
- Distant foci of infection which may cause hematogenous spread to the implant site.
- Any mental or neuromuscular disorder which would create an unacceptable risk of prosthesis instability, prosthesis fixation failure, or complications in post-operative care.
- Bone stock compromised by disease, infection or prior implantation which cannot provide adequate support and/or fixation to the prosthesis.
- Skeletal immaturity.
- Severe instability of the knee joint secondary to the absence of collateral ligament integrity and function.
- Obesity. An overweight or obese patient can produce loads on the prosthesis which can lead to failure of the fixation of the device or to failure of the device itself.

See package insert for warnings, precautions, adverse effects and other essential product information.

Patient Counseling

Surgeons should discuss all relevant contraindications, adverse effects and the need for post-implantation protection with their patients.

Catalog

Triathlon Single-Use Instrumentation

Catalog #	Description
General Instruments Kit Contents – Upper Tray	
6541-2-013	Size 1-3 Keel Punch 1
6541-2-046	Size 4-6 Keel Punch 1
6541-2-078	Size 7-8 Keel Punch 1
6541-2-713	Size 1-3 Keel Punch Guide 1
6541-2-748	Size 4-8 Keel Punch Guide 1
6541-2-807	Tibial Alignment Handle 1
6541-4-300	Headed Nail Impactor/Extractor 1
6541-4-515	Headed Nails – 1 1/2” 2
6541-4-525	1/4 “ Peg Drill 1
6541-4-575	Headed Nails – 3/4” 2
6541-4-709	Box Chisel 1
6541-4-801	Universal Driver 1
6541-4-003†	Headless Pins – 3”
6541-4-805	Baseplate Impactor/Extractor 1
OR	
6541-4-812	Tibial Baseplate Impactor 1
6541-4-807	Femoral Impactor/Extractor 1
OR	
6541-7-807	MIS Femoral Trial Extractor 1
6541-4-809	Headless Pin Driver 1
6541-4-810	Impaction Handle 1
6541-5-500	MIS AP Sizer Adjustment Housing 1
6541-5-508	MIS AP Sizer Body – Left 1
6541-5-509	MIS AP Sizer Body – Right 1
6541-5-510	MIS Femoral Stylus 1
6541-7-811	MIS Femoral Flexion Impactor 1
6633-7-605	Pin Puller 1
7551-0000	Blade Runner 1
5555-5102	General – Triathlon Stryker Precision Upper Tray
5555-5103	General – Triathlon Stryker Precision Lower Tray
5555-5202	Removable Lid Case

Catalog #	Description
General Instruments Kit Contents – Lower Tray	
5550-T-278	Symmetric Patella Trial S27mm x 8mm 1
5550-T-298	Symmetric Patella Trial S29mm x 8mm 1
5550-T-319	Symmetric Patella Trial S31mm x 9mm 1
5550-T-339	Symmetric Patella Trial S33mm x 9mm 1
5550-T-360	Symmetric Patella Trial S36mm x 10mm 1
5550-T-391	Symmetric Patella Trial S39mm x 11mm 1
OR	
5551-T-299	Asymmetric Patella Trial A29mm (S/I*) x 9mm 1
5551-T-320	Asymmetric Patella Trial A32mm (S/I*) x 10mm 1
5551-T-350	Asymmetric Patella Trial A35mm (S/I*) x 10mm 1
5551-T-381	Asymmetric Patella Trial A38mm (S/I*) x 11mm 1
5551-T-401	Asymmetric Patella Trial A40mm (S/I*) x 11mm 1
6541-3-522	Patella Drill Metal Back 1
6541-3-524	All Poly Patella Drill with Stop 1
6541-3-600	Patella Clamp 1
6541-3-617	Asymmetric Patella Drill Template – 29mm 1
6541-3-618	Asymmetric Patella Drill Template – 32mm 1
6541-3-619	Asymmetric Patella Drill Template – 35mm 1
6541-3-620	Asymmetric Patella Drill Template – 38mm 1
6541-3-621	Asymmetric Patella Drill Template – 40mm 1
OR	
6541-3-627	Symmetric Patella Drill Template – 27mm 1
6541-3-629	Symmetric Patella Drill Template – 29mm 1
6541-3-631	Symmetric Patella Drill Template – 31mm 1
6541-3-633	Symmetric Patella Drill Template – 33mm 1
6541-3-636	Symmetric Patella Drill Template – 36mm 1
6541-3-639	Symmetric Patella Drill Template – 39mm 1
6541-3-800	Patella Cement Cap 1
6541-3-801	Patella Clamp Base 1
7650-1454	Patella Caliper 1

† Not included in standard configuration, but MUST be ordered separately.

*S/I = Superior/Inferior

Triathlon Single-Use Instrumentation

Catalog #	Description	
Non-Navigation Specific Instruments Kit Contents		
6541-2-429	Tibial Stylus	1
6541-2-609	Tibial Alignment Ankle Clamp EM	1
6541-2-610	Tibial Alignment Distal Assembly EM	1
6541-2-704	Tibial Adjustment Housing – 0° Slope	1
6541-2-705	Tibial Adjustment Housing – 3° Slope	1
6541-4-516	5/16" IM Rod	1
6541-4-538	3/8" IM Drill	1
6541-4-800	T-Handle Driver	1
6541-5-601	MIS Femoral Adjustment Block	1
6541-5-629	MIS Femoral Alignment Guide	1
6541-5-721	MIS Distal Resection Guide – Left	1
6541-5-722	MIS Distal Resection Guide – Right	1
6541-5-723	MIS Modular Distal Capture	1
6541-6-611	MIS Proximal Rod EM	1
6541-6-700	MIS Uncaptured Tibial Resection Guide – Right	1
6541-6-701	MIS Uncaptured Tibial Resection Guide – Left	1
OR		
6541-6-702	MIS Captured Tibial Resection Guide – Right	1
6541-6-703	MIS Captured Tibial Resection Guide – Left	1
5555-5151	Non-Nav – Triathlon Stryker Precision Upper Tray	
5555-5152	Non-Nav – Triathlon Stryker Precision Lower Tray	
5555-5202	Removable Lid Case	

Catalog #	Description	
Anterior Referencing Specific Instruments		
6541-0-600	AR Femoral Alignment Guide	1
6541-0-601	AR Skim Cut Guide	1
6541-0-602	AR Skim Cut Stylus	1
6541-0-603	AR 3 Degree Posterior Condylar Reference Guide	1
6541-0-608	AR Distal Resection Guide – 8mm	1
6541-0-610	AR Distal Resection Guide – 10mm	1
6541-0-620	AR Femoral Sizer	1
Optional Instruments*		
6541-4-518	1/8" Peg Drill	1
6541-4-602	Universal Alignment Rod	1
6541-4-802	1/8" Hex Drive	1
6541-4-803	Slap Hammer	1
6541-4-806	Universal Alignment Handle	1
6541-4-825	Slip Torque Handle	1
6541-7-808	MIS Femoral EM Alignment Tower	1

*Not included in standard configuration, but may be ordered separately.

Triathlon Single-Use Instrumentation

Catalog #	Description
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Triathlon CR Stryker Precision Femoral Prep Kit Part Numbers

5555-4201	Triathlon CR Stryker Precision Femoral Prep Kit Size 1
5555-1201	Femoral A-P Resection Guide Size 1
5555-1401	Femoral Chamfer Resection Guide Size 1
5555-2000	Femoral Skim Reference Guide
5555-0601	Universal Femoral Trial Size 1
5555-4202	Triathlon CR Stryker Precision Femoral Prep Kit Size 2
5555-1202	Femoral A-P Resection Guide Size 2
5555-1402	Femoral Chamfer Resection Guide Size 2
5555-2000	Femoral Skim Reference Guide
5555-0602	Universal Femoral Trial Size 2
5555-4203	Triathlon CR Stryker Precision Femoral Prep Kit Size 3
5555-1203	Femoral A-P Resection Guide Size 3
5555-1403	Femoral Chamfer Resection Guide Size 3
5555-2000	Femoral Skim Reference Guide
5555-0603	Universal Femoral Trial Size 3
5555-4204	Triathlon CR Stryker Precision Femoral Prep Kit Size 4
5555-1204	Femoral A-P Resection Guide Size 4
5555-1404	Femoral Chamfer Resection Guide Size 4
5555-2000	Femoral Skim Reference Guide
5555-0604	Universal Femoral Trial Size 4
5555-4205	Triathlon CR Stryker Precision Femoral Prep Kit Size 5
5555-1205	Triathlon Femoral A-P Resection Guide Size 5
5555-1405	Triathlon Femoral Chamfer Resection Guide Size 5
5555-2000	Femoral Skim Reference Guide
5555-0605	Universal Femoral Trial Size 5
5555-4206	Triathlon CR Stryker Precision Femoral Prep Kit Size 6
5555-1206	Femoral A-P Resection Guide Size 6
5555-1406	Femoral Chamfer Resection Guide Size 6
5555-2000	Femoral Skim Reference Guide
5555-0606	Universal Femoral Trial Size 6
5555-4207	Triathlon CR Stryker Precision Femoral Prep Kit Size 7
5555-1207	Femoral A-P Resection Guide Size 7
5555-1407	Femoral Chamfer Resection Guide Size 7
5555-2000	Femoral Skim Reference Guide
5555-0607	Universal Femoral Trial Size 7
5555-4208	Triathlon CR Stryker Precision Femoral Prep Kit Size 8
5555-1208	Femoral A-P Resection Guide Size 8
5555-1408	Femoral Chamfer Resection Guide Size 8
5555-2000	Femoral Skim Reference Guide
5555-0608	Universal Femoral Trial Size 8

Catalog #	Description
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Triathlon PS Stryker Precision Femoral Prep Kit Part Numbers

5555-4301	Triathlon PS Stryker Precision Femoral Prep Kit Size 1
5555-1201	Femoral A-P Resection Guide Size 1
5555-1401	Femoral Chamfer Resection Guide Size 1
5555-2000	Femoral Skim Reference Guide
5555-0801	Universal Femoral Trial Size 1
5555-1801	PS Box Cutting Guide Size 1
5555-4302	Triathlon PS Stryker Precision Femoral Prep Kit Size 2
5555-1202	Femoral A-P Resection Guide Size 2
5555-1402	Femoral Chamfer Resection Guide Size 2
5555-2000	Femoral Skim Reference Guide
5555-0802	Universal Femoral Trial Size 2
5555-1802	PS Box Cutting Guide Size 2
5555-4303	Triathlon PS Stryker Precision Femoral Prep Kit Size 3
5555-1203	Femoral A-P Resection Guide Size 3
5555-1403	Femoral Chamfer Resection Guide Size 3
5555-2000	Femoral Skim Reference Guide
5555-0803	Universal Femoral Trial Size 3
5555-1803	PS Box Cutting Guide Size 3
5555-4304	Triathlon PS Stryker Precision Femoral Prep Kit Size 4
5555-1204	Femoral A-P Resection Guide Size 4
5555-1404	Femoral Chamfer Resection Guide Size 4
5555-2000	Femoral Skim Reference Guide
5555-0804	Universal Femoral Trial Size 4
5555-1804	PS Box Cutting Guide Size 4
5555-4305	Triathlon PS Stryker Precision Femoral Prep Kit Size 5
5555-1205	Femoral A-P Resection Guide Size 5
5555-1405	Femoral Chamfer Resection Guide Size 5
5555-2000	Femoral Skim Reference Guide
5555-0805	Universal Femoral Trial Size 5
5555-1805	PS Box Cutting Guide Size 5
5555-4306	Triathlon PS Stryker Precision Femoral Prep Kit Size 6
5555-1206	Femoral A-P Resection Guide Size 6
5555-1406	Femoral Chamfer Resection Guide Size 6
5555-2000	Femoral Skim Reference Guide
5555-0806	Universal Femoral Trial Size 6
5555-1806	PS Box Cutting Guide Size 6
5555-4307	Triathlon PS Stryker Precision Femoral Prep Kit Size 7
5555-1207	Femoral A-P Resection Guide Size 7
5555-1407	Femoral Chamfer Resection Guide Size 7
5555-2000	Femoral Skim Reference Guide
5555-0807	Universal Femoral Trial Size 7
5555-1807	PS Box Cutting Guide Size 7
5555-4308	Triathlon PS Stryker Precision Femoral Prep Kit Size 8
5555-1208	Femoral A-P Resection Guide Size 8
5555-1408	Femoral Chamfer Resection Guide Size 8
5555-2000	Femoral Skim Reference Guide
5555-0808	Universal Femoral Trial Size 8
5555-1808	PS Box Cutting Guide Size 8

Triathlon Single-Use Instrumentation

Catalog #	Description
Triathlon CR Stryker Precision Tibial Prep Kit Standard Part Numbers	
5555-3201	Triathlon CR Stryker Precision Tibial Prep Kit Standard Size 1
5555-2301	Tibial Template Size 1
5555-0201	CR Tibial Insert Trial Size 1 – 9mm
5555-0202	CR Tibial Insert Trial Size 1 – 11mm
5555-0203	CR Tibial Insert Trial Size 1 – 13mm
5555-3202	Triathlon CR Stryker Precision Tibial Prep Kit Standard Size 2
5555-2302	Tibial Template Size 2
5555-0208	CR Tibial Insert Trial Size 2 – 9mm
5555-0209	CR Tibial Insert Trial Size 2 – 11mm
5555-0210	CR Tibial Insert Trial Size 2 – 13mm
5555-3203	Triathlon CR Stryker Precision Tibial Prep Kit Standard Size 3
5555-2303	Tibial Template Size 3
5555-0215	CR Tibial Insert Trial Size 3 – 9mm
5555-0216	CR Tibial Insert Trial Size 3 – 11mm
5555-0217	CR Tibial Insert Trial Size 3 – 13mm
5555-3204	Triathlon CR Stryker Precision Tibial Prep Kit Standard Size 4
5555-2304	Tibial Template Size 4
5555-0222	CR Tibial Insert Trial Size 4 – 9mm
5555-0223	CR Tibial Insert Trial Size 4 – 11mm
5555-0224	CR Tibial Insert Trial Size 4 – 13mm
5555-3205	Triathlon CR Stryker Precision Tibial Prep Kit Standard Size 5
5555-2305	Tibial Template Size 5
5555-0229	CR Tibial Insert Trial Size 5 – 9mm
5555-0230	CR Tibial Insert Trial Size 5 – 11mm
5555-0231	CR Tibial Insert Trial Size 5 – 13mm
5555-3206	Triathlon CR Stryker Precision Tibial Prep Kit Standard Size 6
5555-2306	Tibial Template Size 6
5555-0236	CR Tibial Insert Trial Size 6 – 9mm
5555-0237	CR Tibial Insert Trial Size 6 – 11mm
5555-0238	CR Tibial Insert Trial Size 6 – 13mm
5555-3207	Triathlon CR Stryker Precision Tibial Prep Kit Standard Size 7
5555-2307	Tibial Template Size 7
5555-0243	CR Tibial Insert Trial Size 7 – 9mm
5555-0244	CR Tibial Insert Trial Size 7 – 11mm
5555-0245	CR Tibial Insert Trial Size 7 – 13mm
5555-3208	Triathlon CR Stryker Precision Tibial Prep Kit Standard Size 8
5555-2308	Triathlon Tibial Template Size 8
5555-0250	Triathlon CR Tibial Insert Trial Size 8 – 9mm
5555-0251	Triathlon CR Tibial Insert Trial Size 8 – 11mm
5555-0252	Triathlon CR Tibial Insert Trial Size 8 – 13mm

Catalog #	Description
Triathlon CR Stryker Precision Tibial Prep Kit Extended Part Numbers	
5555-3301	Triathlon CR Stryker Precision Tibial Prep Kit Extended Size 1
5555-0204	CR Tibial Insert Trial Size 1 – 16mm
5555-0205	CR Tibial Insert Trial Size 1 – 19mm
5555-3302	Triathlon CR Stryker Precision Tibial Prep Kit Extended Size 2
5555-0211	CR Tibial Insert Trial Size 2 – 16mm
5555-0212	CR Tibial Insert Trial Size 2 – 19mm
5555-3303	Triathlon CR Stryker Precision Tibial Prep Kit Extended Size 3
5555-0218	CR Tibial Insert Trial Size 3 – 16mm
5555-0219	CR Tibial Insert Trial Size 3 – 19mm
5555-3304	Triathlon CR Stryker Precision Tibial Prep Kit Extended Size 4
5555-0225	CR Tibial Insert Trial Size 4 – 16mm
5555-0226	CR Tibial Insert Trial Size 4 – 19mm
5555-3305	Triathlon CR Stryker Precision Tibial Prep Kit Extended Size 5
5555-0232	CR Tibial Insert Trial Size 5 – 16mm
5555-0233	CR Tibial Insert Trial Size 5 – 19mm
5555-3306	Triathlon CR Stryker Precision Tibial Prep Kit Extended Size 6
5555-0239	CR Tibial Insert Trial Size 6 – 16mm
5555-0240	CR Tibial Insert Trial Size 6 – 19mm
5555-3307	Triathlon CR Stryker Precision Tibial Prep Kit Extended Size 7
5555-0246	CR Tibial Insert Trial Size 7 – 16mm
5555-0247	CR Tibial Insert Trial Size 7 – 19mm
5555-3308	Triathlon CR Stryker Precision Tibial Prep Kit Extended Size 8
5555-0253	CR Tibial Insert Trial Size 8 – 16mm
5555-0254	CR Tibial Insert Trial Size 8 – 19mm

Triathlon Single-Use Instrumentation

Catalog #	Description
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Triathlon PS Stryker Precision Tibial Prep Fit Standard Part Numbers

5555-3501	Triathlon PS Stryker Precision Tibial Prep Kit Standard Size 1
5555-2301	Tibial Template Size 1
5555-0401	PS Tibial Insert Trial Size 1 – 9mm
5555-0402	PS Tibial Insert Trial Size 1 – 11mm
5555-0403	PS Tibial Insert Trial Size 1 – 13mm
5555-3502	Triathlon PS Stryker Precision Tibial Prep Kit Standard Size 2
5555-2302	Tibial Template Size 2
5555-0408	PS Tibial Insert Trial Size 2 – 9mm
5555-0409	PS Tibial Insert Trial Size 2 – 11mm
5555-0410	PS Tibial Insert Trial Size 2 – 13mm
5555-3503	Triathlon PS Stryker Precision Tibial Prep Kit Standard Size 3
5555-2303	Tibial Template Size 3
5555-0415	PS Tibial Insert Trial Size 3 – 9mm
5555-0416	PS Tibial Insert Trial Size 3 – 11mm
5555-0417	PS Tibial Insert Trial Size 3 – 13mm
5555-3504	Triathlon PS Stryker Precision Tibial Prep Kit Standard Size 4
5555-2304	Tibial Template Size 4
5555-0422	PS Tibial Insert Trial Size 4 – 9mm
5555-0423	PS Tibial Insert Trial Size 4 – 11mm
5555-0424	PS Tibial Insert Trial Size 4 – 13mm
5555-3505	Triathlon PS Stryker Precision Tibial Prep Kit Standard Size 5
5555-2305	Tibial Template Size 5
5555-0429	PS Tibial Insert Trial Size 5 – 9mm
5555-0430	PS Tibial Insert Trial Size 5 – 11mm
5555-0431	PS Tibial Insert Trial Size 5 – 13mm
5555-3506	Triathlon PS Stryker Precision Tibial Prep Kit Standard Size 6
5555-2306	Tibial Template Size 6
5555-0436	PS Tibial Insert Trial Size 6 – 9mm
5555-0437	PS Tibial Insert Trial Size 6 – 11mm
5555-0438	PS Tibial Insert Trial Size 6 – 13mm
5555-3507	Triathlon PS Stryker Precision Tibial Prep Kit Standard Size 7
5555-2307	Tibial Template Size 7
5555-0443	PS Tibial Insert Trial Size 7 – 9mm
5555-0444	PS Tibial Insert Trial Size 7 – 11mm
5555-0445	PS Tibial Insert Trial Size 7 – 13mm
5555-3508	Triathlon PS Stryker Precision Tibial Prep Kit Standard Size 8
5555-2308	Tibial Template Size 8
5555-0450	PS Tibial Insert Trial Size 8 – 9mm
5555-0451	PS Tibial Insert Trial Size 8 – 11mm
5555-0452	PS Tibial Insert Trial Size 8 – 13mm

Catalog #	Description
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Triathlon PS Stryker Precision Tibial Prep Kit Extended Part Numbers

5555-3701	Triathlon PS Stryker Precision Tibial Prep Kit Extended Size 1
5555-0404	PS Tibial Insert Trial Size 1 – 16mm
5555-0405	PS Tibial Insert Trial Size 1 – 19mm
5555-0406	PS Tibial Insert Trial Size 1 – 22mm
5555-0407	PS Tibial Insert Trial Size 1 – 25mm
5555-3702	Triathlon PS Stryker Precision Tibial Prep Kit Extended Size 2
5555-0411	PS Tibial Insert Trial Size 2 – 16mm
5555-0412	PS Tibial Insert Trial Size 2 – 19mm
5555-0413	PS Tibial Insert Trial Size 2 – 22mm
5555-0414	PS Tibial Insert Trial Size 2 – 25mm
5555-3703	Triathlon PS Stryker Precision Tibial Prep Kit Extended Size 3
5555-0418	PS Tibial Insert Trial Size 3 – 16mm
5555-0419	PS Tibial Insert Trial Size 3 – 19mm
5555-0420	PS Tibial Insert Trial Size 3 – 22mm
5555-0421	PS Tibial Insert Trial Size 3 – 25mm
5555-3704	Triathlon PS Stryker Precision Tibial Prep Kit Extended Size 4
5555-0425	PS Tibial Insert Trial Size 4 – 16mm
5555-0426	PS Tibial Insert Trial Size 4 – 19mm
5555-0427	PS Tibial Insert Trial Size 4 – 22mm
5555-0428	PS Tibial Insert Trial Size 4 – 25mm
5555-3705	Triathlon PS Stryker Precision Tibial Prep Kit Extended Size 5
5555-0432	PS Tibial Insert Trial Size 5 – 16mm
5555-0433	PS Tibial Insert Trial Size 5 – 19mm
5555-0434	PS Tibial Insert Trial Size 5 – 22mm
5555-0435	PS Tibial Insert Trial Size 5 – 25mm
5555-3706	Triathlon PS Stryker Precision Tibial Prep Kit Extended Size 6
5555-0439	PS Tibial Insert Trial Size 6 – 16mm
5555-0440	PS Tibial Insert Trial Size 6 – 19mm
5555-0441	PS Tibial Insert Trial Size 6 – 22mm
5555-0442	PS Tibial Insert Trial Size 6 – 25mm
5555-3707	Triathlon PS Stryker Precision Tibial Prep Kit Extended Size 7
5555-0446	PS Tibial Insert Trial Size 7 – 16mm
5555-0447	PS Tibial Insert Trial Size 7 – 19mm
5555-0448	PS Tibial Insert Trial Size 7 – 22mm
5555-0449	PS Tibial Insert Trial Size 7 – 25mm
5555-3708	Triathlon PS Stryker Precision Tibial Prep Kit Extended Size 8
5555-0453	PS Tibial Insert Trial Size 8 – 16mm
5555-0454	PS Tibial Insert Trial Size 8 – 19mm
5555-0455	PS Tibial Insert Trial Size 8 – 22mm
5555-0456	PS Tibial Insert Trial Size 8 – 25mm

Triathlon Single-Use Instrumentation

Catalog #	Description
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Triathlon Stryker Precision Tibial Sizer Kit Part Numbers

5555-4600	Triathlon Stryker Precision Tibial Sizer Kit
5555-4601	Tibial Sizer – # 1
5555-4602	Tibial Sizer – # 2
5555-4603	Tibial Sizer – # 3
5555-4604	Tibial Sizer – # 4
5555-4605	Tibial Sizer – # 5
5555-4606	Tibial Sizer – # 6
5555-4607	Tibial Sizer – # 7
5555-4608	Tibial Sizer – # 8

Catalog #	Description	Sizes	Qty
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Triathlon CR Femoral Component - Cemented Part Numbers

5510-F-X01	Triathlon CR Femoral Component - Left Cemented	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5510-F-X02	Triathlon CR Femoral Component - Right Cemented	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon CR Femoral Cementless Component - Beaded Part Numbers

5513-F-X01	Triathlon CR Femoral Component - Left Cementless Beaded	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5513-F-X02	Triathlon CR Femoral Component - Right Cementless Beaded	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon CR Femoral Cementless Component - Beaded w/Peri-Apatite Part Numbers

5517-F-X01	Triathlon CR Femoral Component - Left Cementless Beaded w/PA	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5517-F-X02	Triathlon CR Femoral Component - Right Cementless Beaded w/PA	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon PS Femoral Component - Cemented Part Numbers

5515-F-X01	Triathlon PS Femoral Component - Left Cemented	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5515-F-X02	Triathlon PS Femoral Component - Right Cemented	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon PS Femoral Cementless Component - Beaded Part Numbers

5514-F-X01	Triathlon PS Femoral Component - Left Cementless Beaded	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5514-F-X02	Triathlon PS Femoral Component - Right Cementless Beaded	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon PS Femoral Cementless Component - Beaded w/Peri-Apatite Part Numbers

5516-F-X01	Triathlon PS Femoral Component - Left Cementless Beaded w/PA	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5516-F-X02	Triathlon PS Femoral Component - Right Cementless Beaded w/PA	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon Single-Use Instrumentation

Catalog #	Description	Sizes	Additional Instruments Required
Primary Tibial Baseplate Options Part Numbers			
5520-B-X00	Primary Tibial Baseplate - Cemented	X = 1,2,3,4,5,6,7 and 8	
5520-M-X00	Primary MIS Baseplate - Cemented	X = 1,2,3,4,5,6,7 and 8	6541-2-113 - Size 1-3 MIS Keel Punch
			6541-2-146 - Size 4-6 MIS Keel Punch
			6541-2-178 - Size 7-8 MIS Keel Punch
5523-B-X00	Primary Tibial Baseplate - Beaded	X = 1,2,3,4,5,6,7 and 8	6541-6-013 - Sizes 1-3 Cementless Keel Punch
5526-B-X00	Primary Tibial Baseplate - Beaded with Peri-Apatite	X = 1,2,3,4,5,6,7 and 8	6541-6-046 - Sizes 4-6 Cementless Keel Punch
			6541-6-078 - Sizes 7-8 Cementless Keel Punch
5521-B-X00	Universal Baseplate	X = 1,2,3,4,5,6,7 and 8	6543-7-527 - Boss Reamer
			6543-4-818 - Torque Wrench

Catalog #	Description	Sizes	Qty
Triathlon CR Tibial Inserts - Conventional Polyethylene and X3 Part Numbers			
Conventional Polyethylene Inserts			
5530-P-X09	Triathlon CR Tibial Insert - Conventional Polyethylene 9mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5530-P-X11	Triathlon CR Tibial Insert - Conventional Polyethylene 11mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5530-P-X13	Triathlon CR Tibial Insert - Conventional Polyethylene 13mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5530-P-X16	Triathlon CR Tibial Insert - Conventional Polyethylene 16mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5530-P-X19	Triathlon CR Tibial Insert - Conventional Polyethylene 19mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
X3 Inserts			
5530-G-X09	Triathlon CR Tibial Insert - X3 9mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5530-G-X11	Triathlon CR Tibial Insert - X3 11mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5530-G-X13	Triathlon CR Tibial Insert - X3 13mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5530-G-X16	Triathlon CR Tibial Insert - X3 16mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5530-G-X19	Triathlon CR Tibial Insert - X3 19mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon Single-Use Instrumentation

Catalog #	Description	Sizes	Qty
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Triathlon CS Tibial Inserts - Conventional Polyethylene and X3 Part Numbers

Conventional Polyethylene Inserts			
5531-P-X09	Triathlon CS Tibial Insert - Conventional Polyethylene 9mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-P-X11	Triathlon CS Tibial Insert - Conventional Polyethylene 11mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-P-X13	Triathlon CS Tibial Insert - Conventional Polyethylene 13mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-P-X16	Triathlon CS Tibial Insert - Conventional Polyethylene 16mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-P-X19	Triathlon CS Tibial Insert - Conventional Polyethylene 19mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-P-X22	Triathlon CS Tibial Insert - Conventional Polyethylene 22mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-P-X25	Triathlon CS Tibial Insert - Conventional Polyethylene 25mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
X3 Inserts			
5531-G-X09	Triathlon CS Tibial Insert - X3 9mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-G-X11	Triathlon CS Tibial Insert - X3 11mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-G-X13	Triathlon CS Tibial Insert - X3 13mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-G-X16	Triathlon CS Tibial Insert - X3 16mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-G-X19	Triathlon CS Tibial Insert - X3 19mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-G-X22	Triathlon CS Tibial Insert - X3 22mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5531-G-X25	Triathlon CS Tibial Insert - X3 25mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon Single-Use Instrumentation

Catalog #	Description	Sizes	Qty
Triathlon PS Tibial Inserts - Conventional Polyethylene and X3 Part Numbers			
Conventional Polyethylene Inserts			
5532-P-X09	Triathlon PS Tibial Insert - Conventional Polyethylene 9mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-P-X11	Triathlon PS Tibial Insert - Conventional Polyethylene 11mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-P-X13	Triathlon PS Tibial Insert - Conventional Polyethylene 13mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-P-X16	Triathlon PS Tibial Insert - Conventional Polyethylene 16mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-P-X19	Triathlon PS Tibial Insert - Conventional Polyethylene 19mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-P-X22	Triathlon PS Tibial Insert - Conventional Polyethylene 22mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-P-X25	Triathlon PS Tibial Insert - Conventional Polyethylene 25mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
X3 Inserts			
5532-G-X09	Triathlon PS Tibial Insert - X3 9mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-G-X11	Triathlon PS Tibial Insert - X3 11mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-G-X13	Triathlon PS Tibial Insert - X3 13mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-G-X16	Triathlon PS Tibial Insert - X3 16mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-G-X19	Triathlon PS Tibial Insert - X3 19mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-G-X22	Triathlon PS Tibial Insert - X3 22mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size
5532-G-X25	Triathlon PS Tibial Insert - X3 25mm	X = 1,2,3,4,5,6,7 and 8	1 Each Size

Triathlon Single-Use Instrumentation

Catalog #	Description	Sizes	Qty
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Symmetric Patella - Conventional Polyethylene and X3 Part Numbers

Conventional Polyethylene Patellas			
5550-L-278	Symmetric Patella - Conventional Polyethylene	S27mm x 8mm	1
5550-L-298	Symmetric Patella - Conventional Polyethylene	S29mm x 8mm	1
5550-L-319	Symmetric Patella - Conventional Polyethylene	S31mm x 9mm	1
5550-L-339	Symmetric Patella - Conventional Polyethylene	S33mm x 9mm	1
5550-L-360	Symmetric Patella - Conventional Polyethylene	S36mm x 10mm	1
5550-L-391	Symmetric Patella - Conventional Polyethylene	S39mm x 11mm	1
X3 Patellas			
5550-G-278	Symmetric Patella - X3	S27mm x 8mm	1
5550-G-298	Symmetric Patella - X3	S29mm x 8mm	1
5550-G-319	Symmetric Patella - X3	S31mm x 9mm	1
5550-G-339	Symmetric Patella - X3	S33mm x 9mm	1
5550-G-360	Symmetric Patella - X3	S36mm x 10mm	1
5550-G-391	Symmetric Patella - X3	S39mm x 11mm	1

Asymmetric Patella - Conventional Polyethylene and X3 Part Numbers

Conventional Polyethylene Patellas			
5551-L-299	Asymmetric Patella - Conventional Polyethylene	A29mm (S/I*) x 9mm	1
5551-L-320	Asymmetric Patella - Conventional Polyethylene	A32mm (S/I*) x 10mm	1
5551-L-350	Asymmetric Patella - Conventional Polyethylene	A35mm (S/I*) x 10mm	1
5551-L-381	Asymmetric Patella - Conventional Polyethylene	A38mm (S/I*) x 11mm	1
5551-L-401	Asymmetric Patella - Conventional Polyethylene	A40mm (S/I*) x 11mm	1
X3 Patellas			
5551-G-299	Asymmetric Patella - X3	A29mm (S/I*) x 9mm	1
5551-G-320	Asymmetric Patella - X3	A32mm (S/I*) x 10mm	1
5551-G-350	Asymmetric Patella - X3	A35mm (S/I*) x 10mm	1
5551-G-381	Asymmetric Patella - X3	A38mm (S/I*) x 11mm	1
5551-G-401	Asymmetric Patella - X3	A40mm (S/I*) x 11mm	1

*S/I - Superior/Inferior

Triathlon Single-Use Instrumentation

Catalog #	Description
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Asymmetric Metal-Backed Patella – Beaded with Peri-Apatite Part Numbers

5554-L-320	Asymmetric Metal-Backed Patella – Beaded w/PA – A32mm x 10mm
5554-L-350	Asymmetric Metal-Backed Patella – Beaded w/PA – A35mm x 10mm
5554-L-381	Asymmetric Metal-Backed Patella – Beaded w/PA – A38mm x 11mm
5554-L-401	Asymmetric Metal-Backed Patella – Beaded w/PA – A40mm x 11mm

Modular Femoral Distal Fixation Peg Part Number

5575-X-000	Modular Femoral Distal Fixation Peg (2 per pack)
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References:

1. Stryker Orthopaedics -- Precision Impact Assessment, Central Sterile Supply. March 21, 2008 (Presscott Associates Ltd.)
2. Precision Instrument Weight Analysis, Technical Memo to DHF 0930, June 17, 2011

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Literature Number: **LSPK46 Rev. 1**
MS/GS 09/11

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