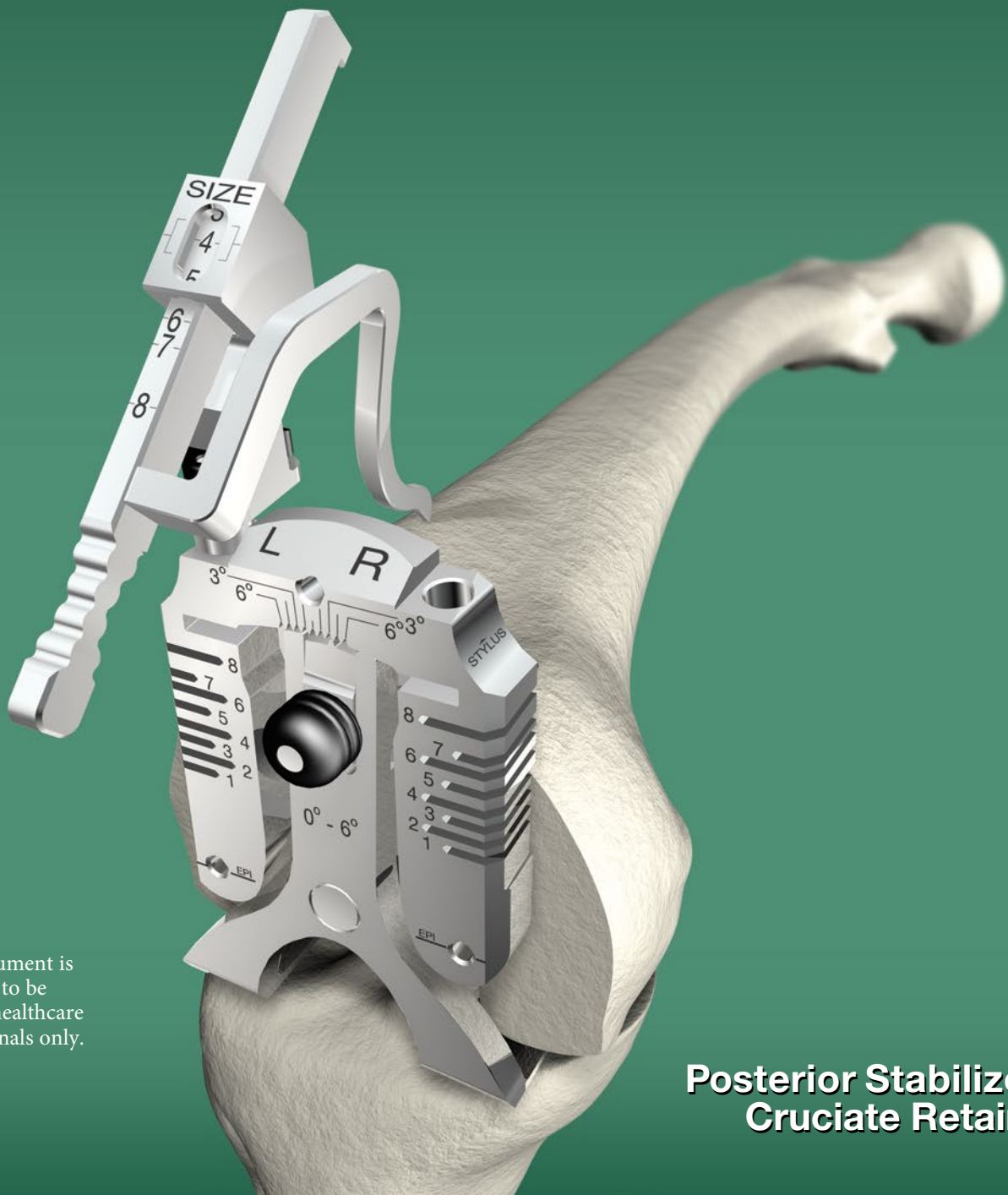


Triathlon® Knee System Surgical Protocol



This document is intended to be used by healthcare professionals only.

**Posterior Stabilized &
Cruciate Retaining**

Triathlon Knee System

Surgical Protocol

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Acknowledgments

Stryker Orthopaedics wishes to thank the global Triathlon Knee System Surgeon Panel for their dedication to the development and refinement of the Triathlon Knee System and instrumentation.



Triathlon Knee System

Surgical Protocol



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.

The Triathlon Tritanium Tibial Baseplate and Tritanium Metal-Backed Patella components are indicated for both uncemented and cemented use.

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.

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

Before using Triathlon instrumentation, verify:

- Instruments have been properly disassembled prior to cleaning and sterilization;
- Instruments have been properly assembled post-sterilization;
- Instruments have maintained design integrity; and,
- Proper size configurations are available.

For Instructions for Cleaning, Sterilization, Inspection and Maintenance of Orthopaedic Medical Devices, refer to LSTPI-B.

Surgical Procedure

Triathlon Knee System

Surgical Protocol

Femoral Preparation

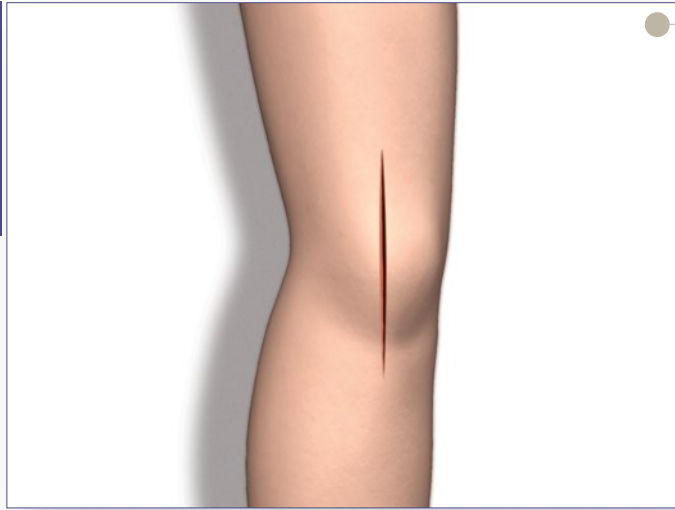


Figure 1

Exposure

- ▶ A standard anterior mid-line incision is utilized. Any previous incision can be used or incorporated to decrease the risk of skin slough.
- ▶ The capsule is entered through a medial parapatellar approach.

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 mid-line of the distal femur.
- ▶ Attach the 3/8" IM Drill to the Universal Driver and drill into the IM canal. 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.

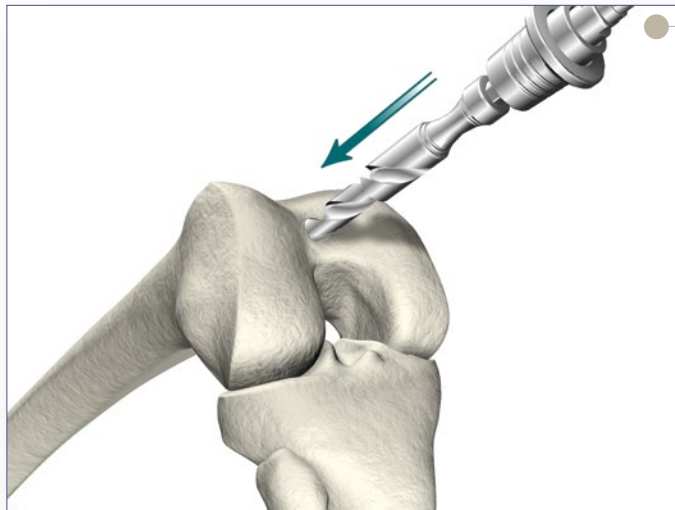


Figure 2

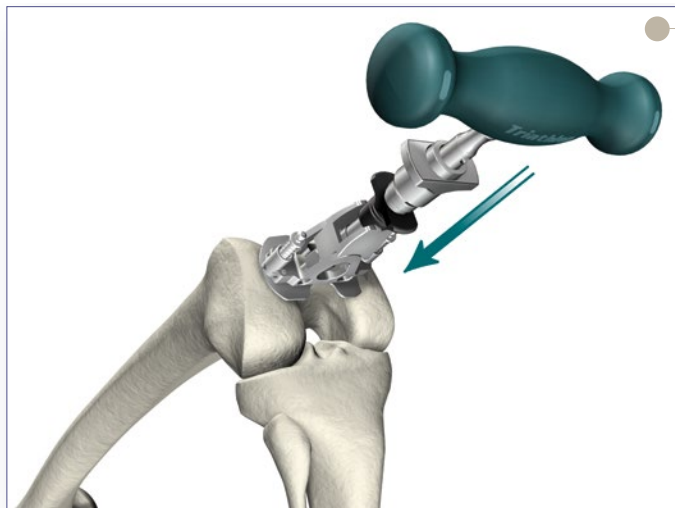


Figure 3

- ▶ Attach the T-Handle Driver to the 5/16" IM Rod. Insert the IM Rod into the Femoral Alignment Guide. The Femoral Alignment Guide is designed for use on either the left or right knee and may be set to 5, 6 or 7° of valgus. Set the instrument to the desired angle by pulling back on the black knob of the 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.

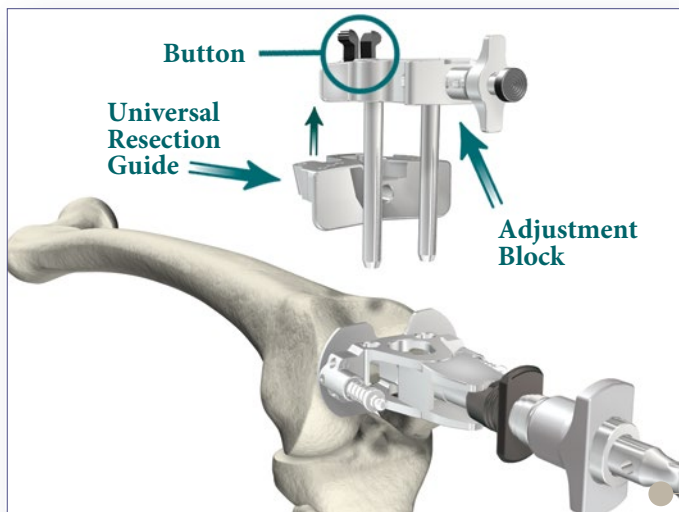


Figure 4

- ▶ Snap the Universal Resection Guide onto the Adjustment Block and insert the posts of the Adjustment Block into the two holes in the Femoral Alignment Guide.
- ▶ Place the Femoral Alignment Guide in contact with the more prominent distal femoral condyle and align the guide in neutral position.
- ▶ Impact the distal captured pins in the Femoral Alignment Guide to aid in stabilization.

Note: Impacting a distal capture pin that does not make contact with the femoral condyle may result in a change in the alignment setting.

- ▶ Pin the Distal Resection Guide to the anterior femur.

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



6541-1-657
Femoral Alignment Guide



6541-1-721
Universal Resection Guide



6541-1-600
Adjustment Block



Triathlon Knee System

Surgical Protocol

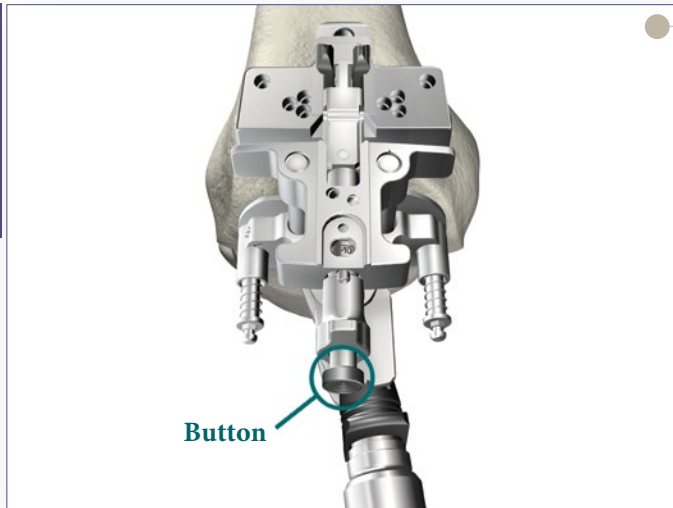


Figure 5

- ▶ The Adjustment Block allows for an 8mm (the distal thickness of the femoral component) and 10mm (used to aid in the correction of a flexion contracture) resection level. Press the black button on the end of the Adjustment Block and pull to set the resection to the desired level.
- ▶ Pin the Universal Resection Guide to the anterior femur.

Note: If the medial “O” pin hole is too close to the edge of the bone (on smaller femurs), use the holes marked “2” which are closer to the center of the bone.

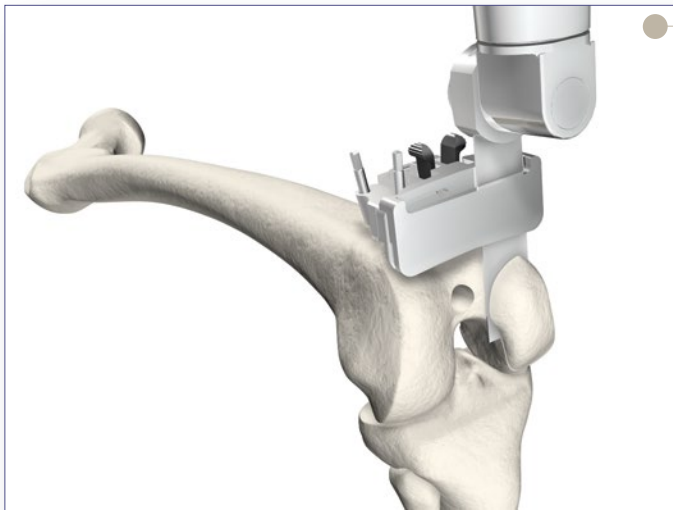


Figure 6

- ▶ After the Universal Resection Guide is pinned in place, remove the IM Rod. The Femoral Alignment Guide and the Adjustment Block may be removed by squeezing the black tabs on the Adjustment Block.
- ▶ The distal femoral resection is made. An optional Modular Capture - may be attached to the Universal Resection Guide. Squeeze the black tabs on the Modular Capture - Distal Resection to insert into the Universal Resection Guide. When using a modular capture, a .050” (1.25mm) blade is used.
- ▶ Remove the Modular Capture and check the resection for flatness. Remove the Universal Resection Guide.

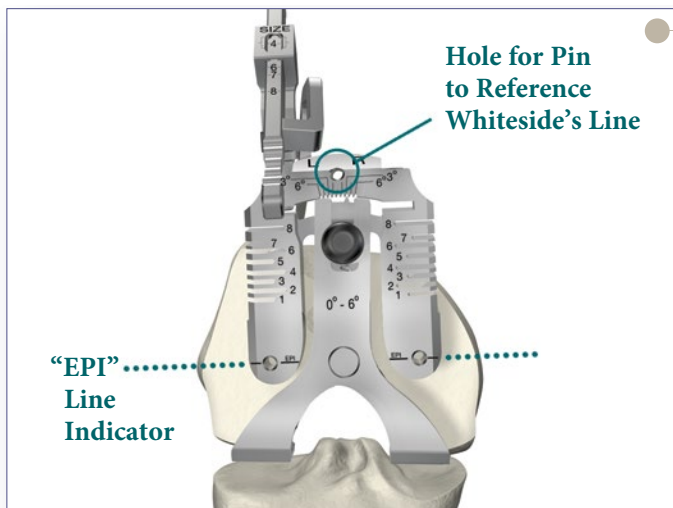


Figure 7

Femoral Sizing

- ▶ Assemble the Femoral Sizer with the Femoral Stylus in the appropriate lateral hole, setting the stylus length to an approximate size. Set the rotation to “LEFT” for a left leg and “RIGHT” for a right leg and adjust to the desired amount of external rotation.
- ▶ A secondary rotational check can be made by lining up the epicondyles with the reference lines marked “EPI”. A tertiary check is to assess Whiteside’s line with a pin through the hole in the top of the guide.
- ▶ In the event of a hypoplastic femoral condyle: Pin the Femoral Sizer through the EPI hole on the unaffected side for stability. Rotate the Femoral Sizer and assess rotation using the rotational checks mentioned above.

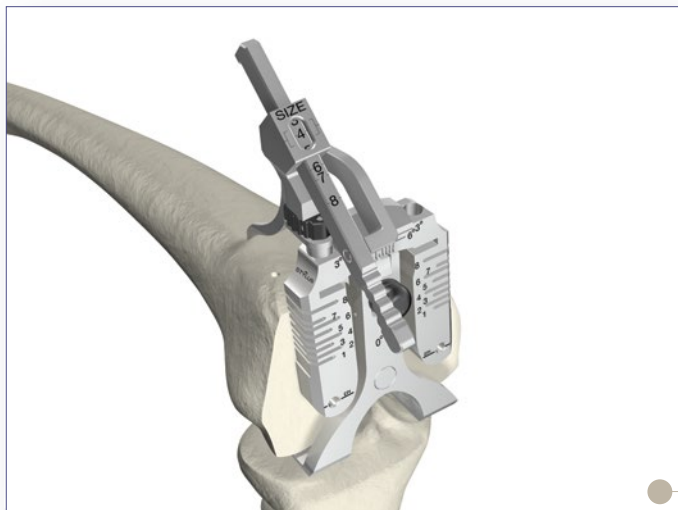


Figure 8

- Position the assembly flush on the resected distal femur, sliding the feet of the Femoral Sizer under the posterior condyles. The Femoral Stylus point should be placed on the lateral cortex.
- It is important that the Femoral Stylus point rest on bone and not on soft tissue.



Figure 9

- The size is determined by the position of the scribe mark on the Femoral Stylus shaft within the sizing window.

Instrument Bar



6541-1-600
Adjustment Block



6541-1-657
Femoral Alignment Guide



6541-1-721
Universal Resection Guide



6541-4-806
Universal Alignment Handle



6541-4-602
Universal Alignment Rods



6541-1-723
Modular Capture - Distal Resection



6541-1-603
Femoral Sizer



6541-1-605
Femoral Stylus



6541-4-003
Headless Pins - 3"

Triathlon Knee System

Surgical Protocol

Femoral Preparation

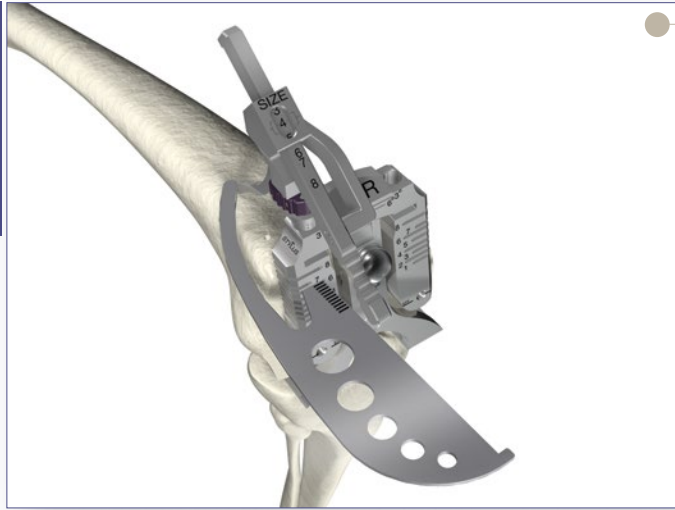


Figure 10

- ▶ It is recommended that the anterior resection level be checked to further confirm the correct size by sliding a Bladerunner through the sizing guide's size-specific anterior slots and assessing the resection.
- ▶ 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".
- ▶ Locate the fixation pegs of the appropriate size Express 4:1 Cutting Block into the pin holes created on the distal femur.

Note: Check run-out of the anterior cut. If there is a pronounced positive step, consider selecting the next smaller size 4:1 Cutting Block if the anterior femur preparation is not adequate.

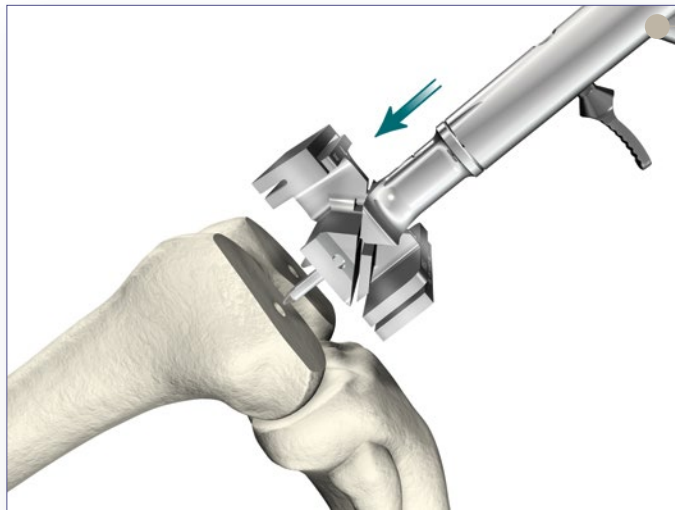


Figure 11

Femoral Anterior, Posterior and Chamfer Resections

- ▶ Complete the remaining four femoral bone resections.
- ▶ The use of a .050" (1.25mm) thick sawblade is recommended.
- ▶ The order of bone resections is not critical; however, a recommended sequence for improved stability of the 4:1 Cutting Block is:
 1. Anterior cortex.
 2. Posterior condyles.
 3. Posterior chamfer.
 4. Anterior chamfer.

Note: Cutting the anterior chamfer later helps stabilize the cutting guide.

- ▶ Remove the 4:1 Cutting Block.



Figure 12

PS Box Preparation

- ▶ If it is determined that a PS femoral component will be used, the distal femur must be prepared for the PS box.
- ▶ Place the appropriate sized PS Box Cutting Guide on the resected distal femur.

Note: The appropriate size is the same as the size 4-in-1 cutting block that was used to prepare the distal femur. For example, if a size 3 “4-in-1 Cutting Block” was used to prepare the distal femur, select the size 3 PS Box Cutting Guide.

- ▶ M/L placement of the guide is based primarily on best coverage of the distal bone and alignment of the box opening with the intercondylar notch.

Optional surgical tip: Use a CR Femoral Trial of the same size to identify the preferred M/L position of the PS Box Cutting Guide.

- Place the appropriate sized CR Femoral Trial on to the prepared femur.
 - Adjust the M/L placement of the Femoral Trial to achieve the desired position of the femoral component.
 - Using a surgical marketing pen, mark the location of the distal peg prep holes through the CR Femoral Trial.
 - Remove the CR Femoral Trial and line-up the PS Box Cutting Guide on the distal femur with the previously marked holes.
- ▶ Pin the PS Box Cutting Guide in place using Headless Pins.

Optional surgical tip: To provide the appropriate anterior/posterior and medial/lateral stability with a minimal number of pins, place one pin distally and one pin anteriorly (or both pins distally).

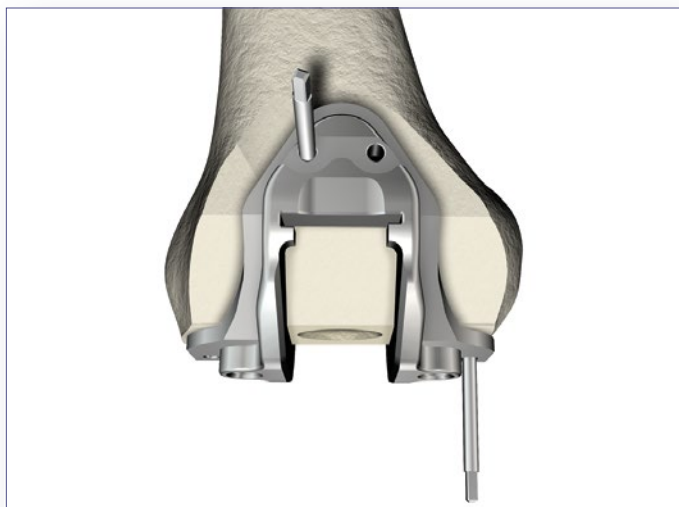


Figure 13

Instrument Bar



6541-1-603
Femoral Sizer



6541-1-605
Femoral Stylus



6541-4-400
Bladerunner



See Catalog
Express 4:1 Cutting Block



6541-7-806
MIS 4:1 Impactor/Extractor

- # 1 - 6541-5-711
- # 2 - 6541-5-712
- # 3 - 6541-5-713
- # 4 - 6541-5-714
- # 5 - 6541-5-715
- # 6 - 6541-5-716
- # 7 - 6541-5-717
- # 8 - 6541-5-718



MIS PS Box Cutting Guide



6541-4-003
Headless Pins - 3"



See Catalog
CR Femoral Trial

Triathlon Knee System

Surgical Protocol

Femoral Preparation

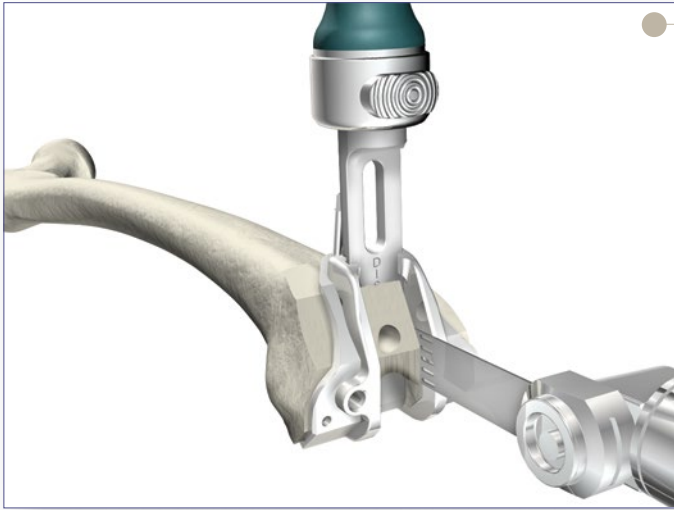


Figure 14

- There are two ways to continue the PS box preparation:

Option A: Chisel and Saw: Cut the cortical rim on both sides of the posterior-most portion of the intercondylar notch using the oscillating saw. Assemble the Box Chisel and insert into the slot. Impact the Box Chisel with a mallet until seated to the stop. Leave the Box Chisel in place to act as a reference plane. Cut the medial and lateral edges of the box with an oscillating saw to complete the bone resection as shown in Figure 14. Avoid biasing the blade during resection for optimal bone conservation.

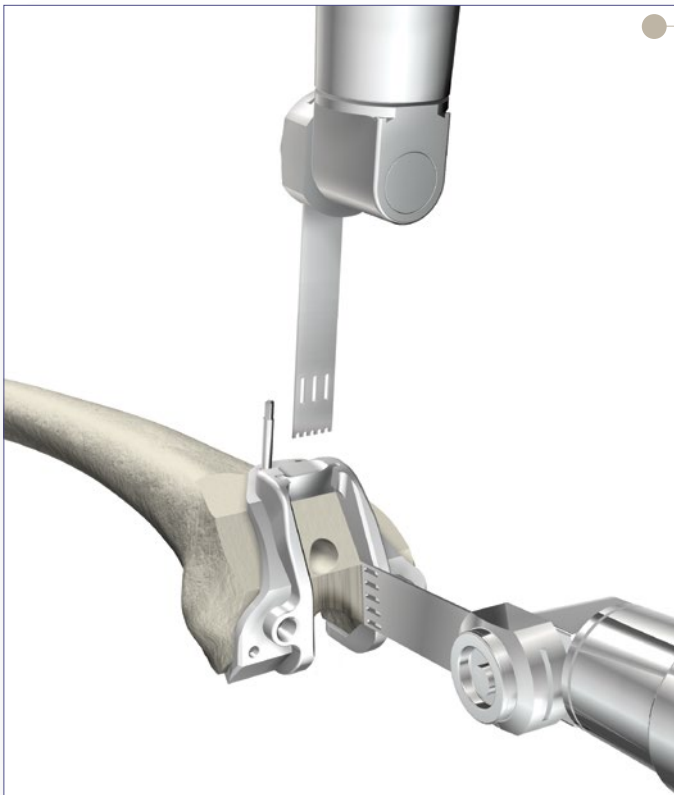


Figure 15

Option B: Saw Only: Use a reciprocating saw or a narrow oscillating saw through the proximal slot to resect the distal portion of the femur. An oscillating saw can be used to resect the medial and lateral borders of the intercondylar notch to the proximal portion of the cutting guide.

Note: After completion of options A or B, the surgeon may choose to use the optional and recommended Triathlon PS Femoral Finishing Punch to complete preparation of the box.

- Prior to trialing with a PS Femoral Trial, assure the box is prepared properly and remove all remaining bone from the prepared box.

Instrument Bar

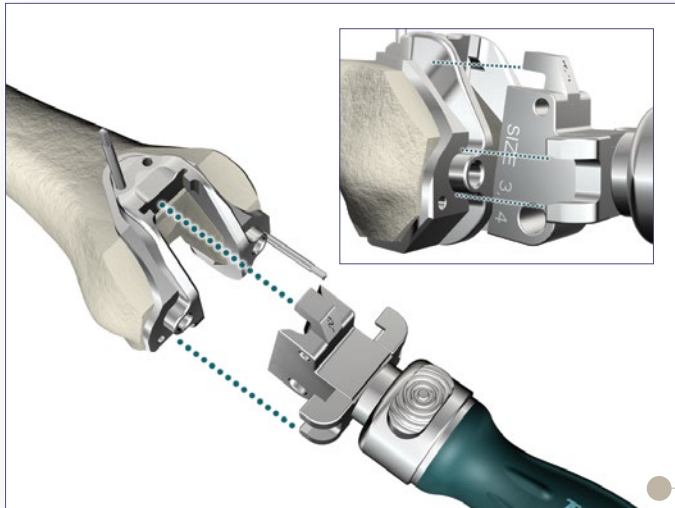


Figure 16

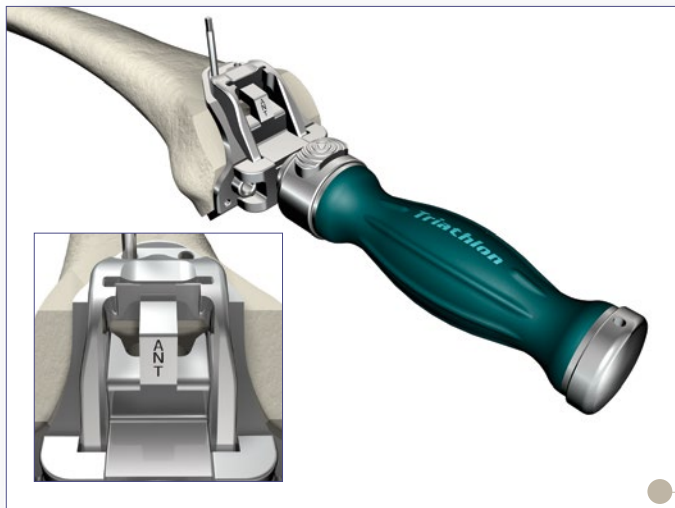


Figure 17

If the optional Triathlon PS Femoral Box Finishing Punch is chosen:

- ▶ The chisel should be fully removed from the PS Box Cutting Guide prior to using the Triathlon PS Femoral Box Finishing Punch.
- ▶ Secure the appropriate size Triathlon PS Femoral Box Finishing Punch to the Triathlon Impaction Handle. There are four Triathlon PS Femoral Box Finishing Punches (Size 1-2, Size 3-4, Size 5-6 and Size 7-8).
- ▶ Properly orient the Triathlon PS Femoral Box Finishing Punch, assuring the anterior side is facing upwards.
- ▶ Impact the Triathlon PS Femoral Box Finishing Punch through the PS Box Cutting Guide until properly seated. The Triathlon PS Femoral Box Finishing Punch is properly seated when the stop of the Finishing Punch is centered over the PS Box Cutting Guide drill holes. See Figures 17 & 18, which depicts the Triathlon PS Femoral Box Finishing Punch properly seated on the PS Box Cutting Guide. There should be a gap between the anterior nose of the Triathlon PS Femoral Box Finishing Punch and the PS Box Cutting Guide.

- # 1 - 6541-5-711
- # 2 - 6541-5-712
- # 3 - 6541-5-713
- # 4 - 6541-5-714
- # 5 - 6541-5-715
- # 6 - 6541-5-716
- # 7 - 6541-5-717
- # 8 - 6541-5-718

MIS PS Box Cutting Guide



6541-4-810

Impaction Handle



6541-4-709

Box Chisel



See Catalog

Triathlon PS Femoral Box Finishing Punch



See Catalog

PS Femoral Trial



Triathlon Knee System

Surgical Protocol



Figure 18

- ▶ Remove the Triathlon PS Femoral Box Finishing Punch with the Triathlon Slap Hammer.
- ▶ Remove pins and the PS Box Cutting Guide from the prepared distal femur.

Note: The Triathlon PS Femoral Box Finishing Punch is designed to be used with the PS Box Cutting Guide and should not be impacted onto the prepared distal femur without the PS Box Cutting Guide in place.

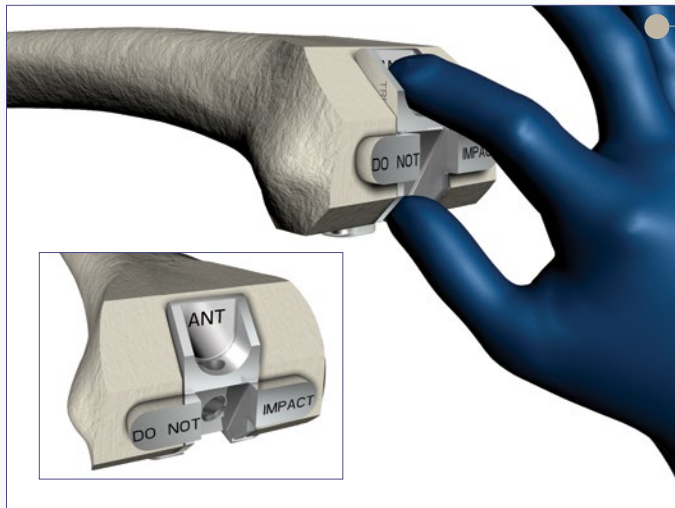


Figure 19

If the optional and recommended Triathlon PS Femoral Box Trial/Protector is chosen:

- ▶ Remove the PS Box Cutting Guide.
- ▶ Place by hand (**not through impaction**) the appropriate size Triathlon PS Femoral Box Trial/Protector into the prepared box to assure accuracy of the box preparation. There are two Triathlon PS Femoral Box Trial/Protectors (Size 1-4 and Size 5-8). See Figure 19 for proper orientation.
- ▶ The box trial/protector is fully seated when both the distal and posterior “wings” are flush with the bone.

Note: Triathlon PS Femoral Box Trial/Protector assesses the accuracy of M/L box width and box depth.

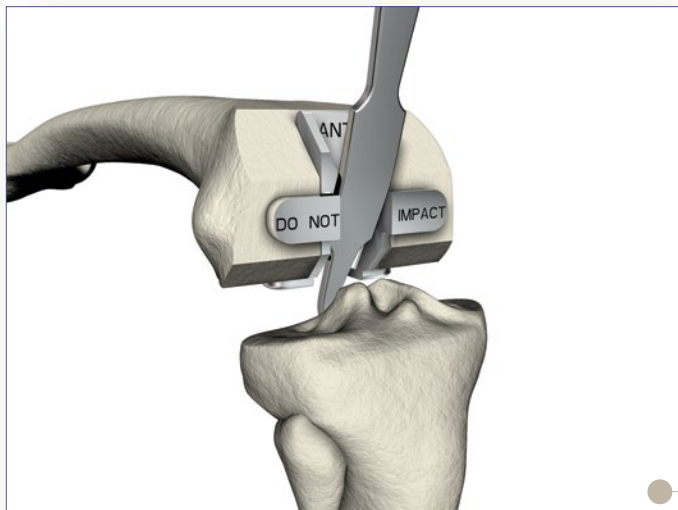


Figure 20

- ▶ To protect the prepared femoral box prior to trialing with a femoral component, place the Triathlon PS Femoral Box Trial/Protector into the prepared box by hand (**not through impaction**). Ensure the box trial is fully seated on the distal and posterior resections as described above in the box trialing step.
 - The Triathlon PS Femoral Box Trial/Protector features a slot in which a retractor can be placed to lever against the distal femur during tibial subluxation.
 - If preferred, select an extraction tool that fits into the retractor hole for ease of removal.
 - Remove the PS Femoral Box Trial/Protector prior to assembling and implanting the Triathlon PS femoral component.

Instrument Bar

- # 1 - 6541-5-711
- # 2 - 6541-5-712
- # 3 - 6541-5-713
- # 4 - 6541-5-714
- # 5 - 6541-5-715
- # 6 - 6541-5-716
- # 7 - 6541-5-717
- # 8 - 6541-5-718

MIS PS Box Cutting Guide



See Catalog

Triathlon PS Femoral Box Finishing Punch



See Catalog

Triathlon PS Femoral Box Trial/Protector



6541-4-003

Headless Pins - 3"



6541-4-809

Headless Pin Driver



6541-4-810

Impaction Handle



6541-4-801

Universal Driver



Triathlon Knee System

Surgical Protocol

Femoral Preparation

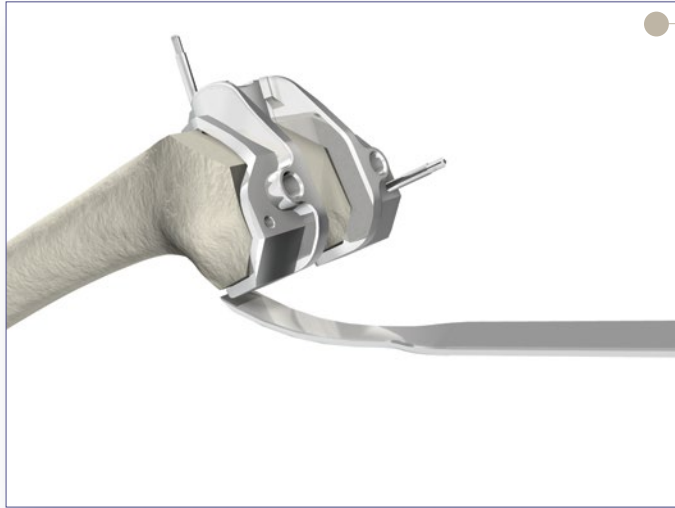


Figure 21

To avoid femoral component impingement and to improve flexion, all osteophytes beyond the posterior condyles as well as those medially and laterally may be removed with an osteotome.

Note: If it is difficult to reach the posterior osteophytes in a tight knee, the tibial resection can be made and then the osteophytes can more easily be removed.

Femoral Trial Assessment

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

Assemble the appropriate size and side (Left/Right) PS or CR Femoral Trial to the Femoral Impactor/Extractor with the Impaction Handle.

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.

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 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.

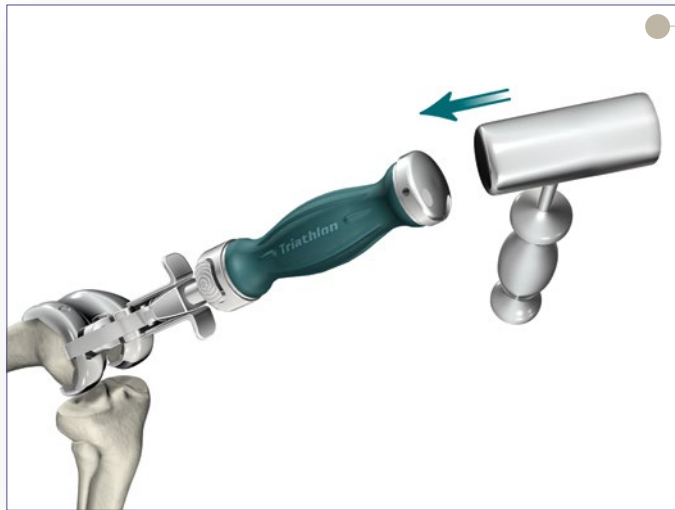


Figure 22

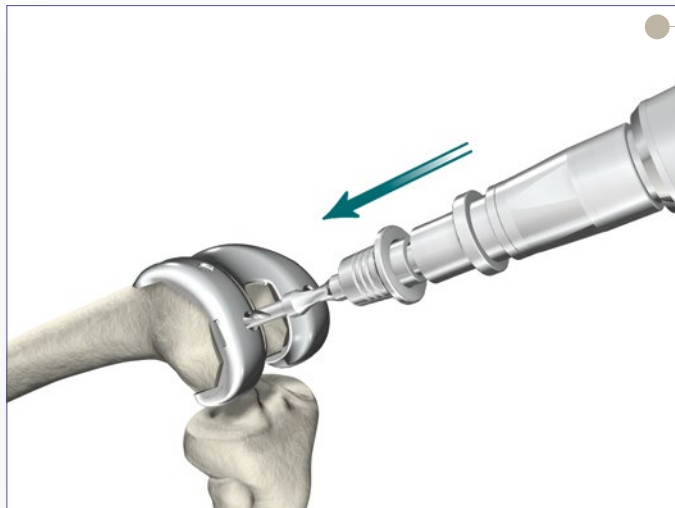


Figure 23

Posterior Stabilized Knee: If the Modular Femoral Distal Fixation Pegs are to be used, the location holes may be prepared at this stage using the 1/4" Peg Drill attached to the Universal Driver.

- The peg holes may also be prepared through the PS Box Cutting Guide.

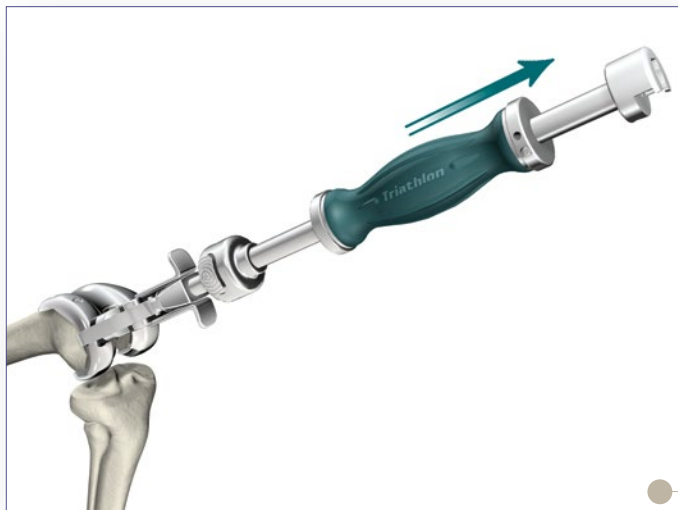


Figure 24

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

Instrument Bar

6541-4-809

Headless Pin Driver



6541-4-810

Impaction Handle



6541-4-807

Femoral Impactor/Extractor



6541-4-801

Universal Driver



See Catalog

CR Femoral Trial



See Catalog

PS Femoral Trial



6541-4-525

1/4" Peg Drill



6541-4-803

Slap Hammer



6541-4-710

Posterior Osteophyte Removal Tool



Triathlon Knee System

Surgical Protocol

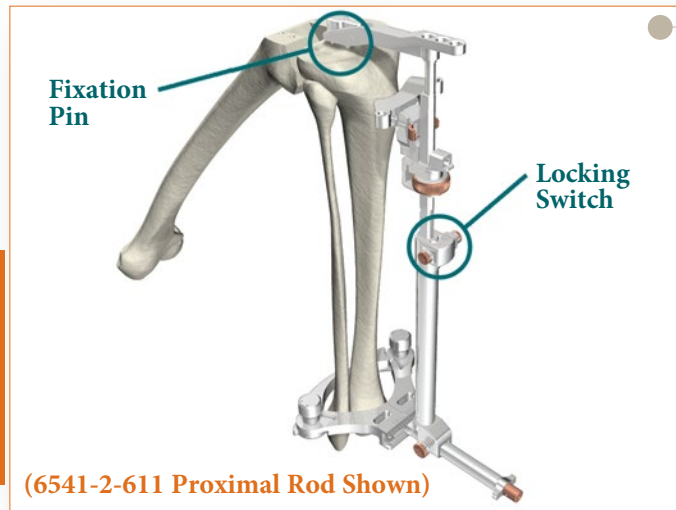


Figure 25



Figure 26

Tibial Preparation

- ▶ There are two options for tibial preparation: extra-medullary (EM) referencing alignment and intra-medullary (IM) referencing alignment.
- ▶ The Tibial Resection Guide, available in left and right configurations, and the Universal Resection Guide are designed to avoid soft tissue impingement.

Option 1 – 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 (optional) and 3° slope.

Flexion/Extension Alignment

- ▶ Place the ankle clamp around the ankle and unlock the locking switch.
- ▶ 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 tibia.

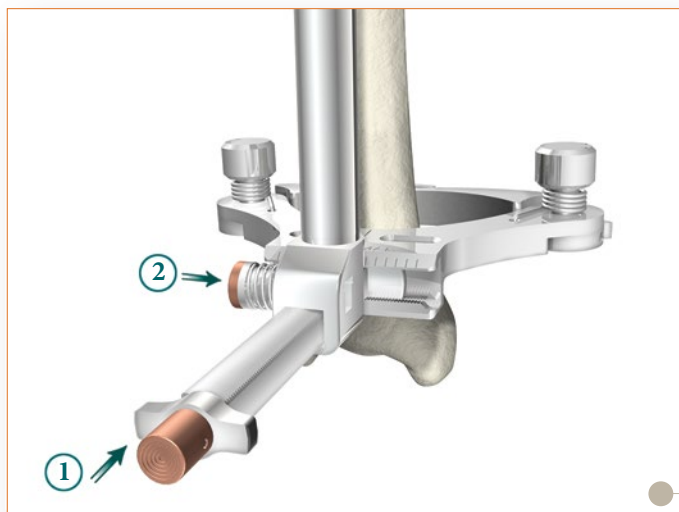


Figure 27

Varus/Valgus Alignment

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

Tibial Slope Adjustment

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

- ▶ Tibial slope can be adjusted by pressing the bronze button (2).

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.

Instrument Bar

Right 6541-2-700

Left 6541-2-701

Tibial Resection Guide



6541-2-610

Tibial Alignment Distal Assembly EM



6541-2-609

Tibial Alignment Ankle Clamp EM



6541-2-611

Tibial Alignment Proximal Rod EM



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



6541-2-611E

Express Proximal Rod EM



**Tibial
Preparation**

Triathlon Knee System

Surgical Protocol

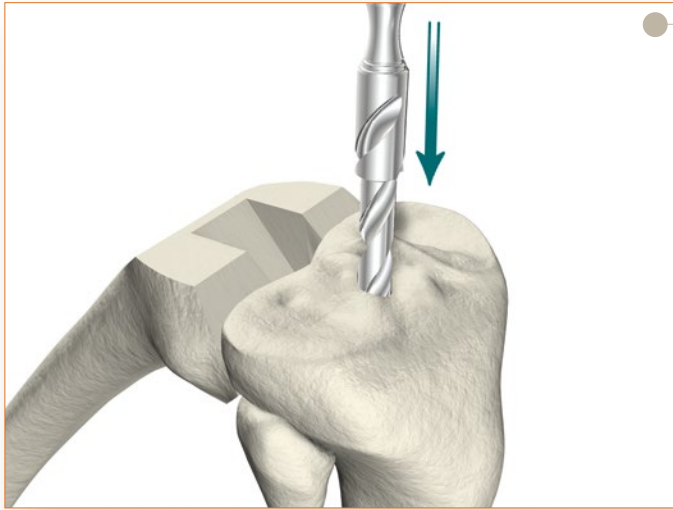


Figure 28

Option 2 – Intramedullary Referencing

- ▶ Attach the 3/8" IM Drill to the Universal Driver and create a hole in the location determined by the pre-operative X-rays.

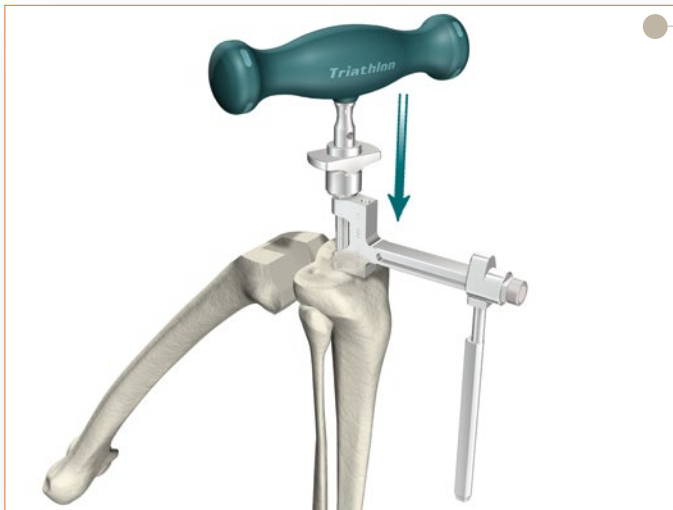


Figure 29

- ▶ Attach the T-Handle Driver to the 5/16" IM Rod and slowly pass into the canal, ensuring clearance. Remove the 5/16" IM Rod and insert it into the body of the Tibial Alignment Jig IM. The assembly is then inserted into the canal beyond the isthmus.

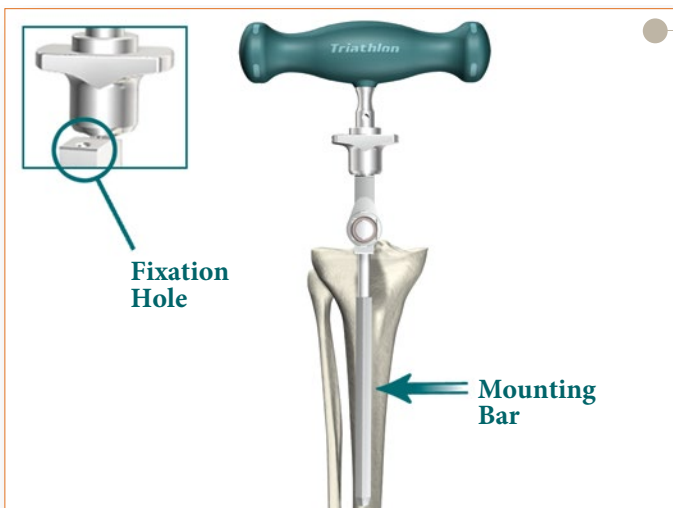


Figure 30

Rotational Alignment

With the body of the Tibial Alignment Jig IM resting on the proximal tibia, proper rotational alignment is achieved by rotating the instrument about the 5/16" IM Rod so that the vertical mounting bar is over the medial 1/3 of the tibial tubercle. A Headless Pin or the 1/8" Drill are then inserted into the fixation hole to fix rotation (See Inset).

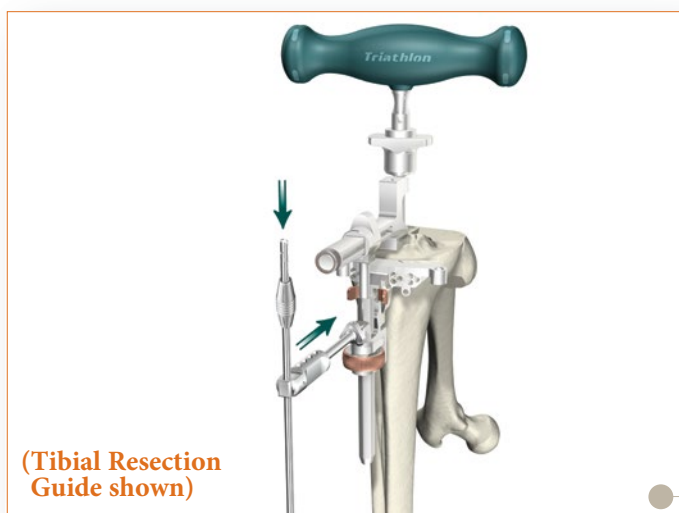


Figure 31

Varus/Valgus Alignment

- ▶ Assemble the appropriate Tibial Resection Guide (left, right or Universal Resection Guide) on the Tibial Adjustment Housing.
- Note:** The Tibial Adjustment Housing is available in 0° slope (optional) and 3° slope.
- ▶ Attach the assembly onto the mounting bar by pressing the bronze wheel on the Tibial Adjustment Housing. Attach the Universal Alignment Handle to the Tibial Resection Guide and slide a Universal Alignment Rod through the handle for sagittal assessment.
 - ▶ When alignment is confirmed, the Universal Alignment Handle should be centered over the ankle.

Instrument Bar

6541-4-538

3/8" IM Drill



6541-4-801

Universal Driver



6541-4-800

T-Handle Driver



6541-4-516

5/16" IM Rod



6541-2-600

Tibial Alignment Jig IM



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



Right 6541-2-700

Left 6541-2-701

Tibial Resection Guide



6541-4-602

Universal Alignment Rods



6541-1-721

Universal Resection Guide



Triathlon Knee System

Surgical Protocol

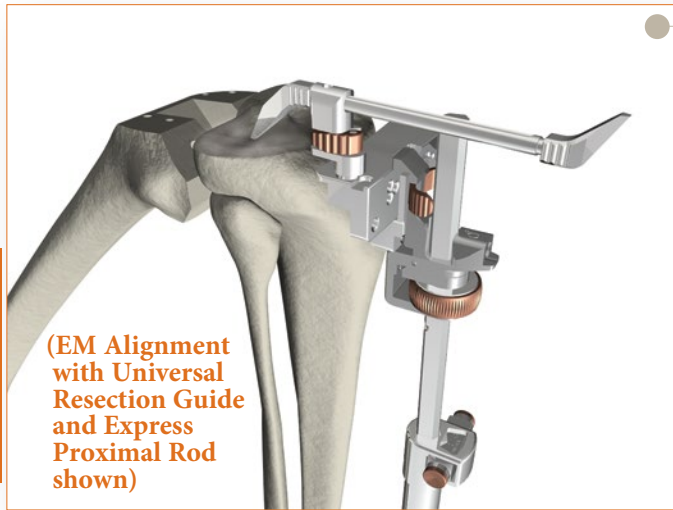


Figure 32

[The following applies to both extramedullary and intramedullary alignment.]

Establish Tibial Resection Level

- ▶ The Tibial Stylus attaches to the Tibial Resection Guide or Universal Resection Guide with the “9” end and referencing the lowest level of the unaffected compartment.
- ▶ 9mm of bone will be resected. Alternatively, if the “2” end of the Tibial Stylus is used, the amount of bone resected will be 2mm below the tip of the stylus.
- ▶ The height of the 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.
- ▶ Remove all alignment instruments leaving only the Tibial Resection Guide in place.

Note: Rotate bronze wheel one extra turn, as stylus should be under tension to ensure the minimum amount of bone necessary is resected.

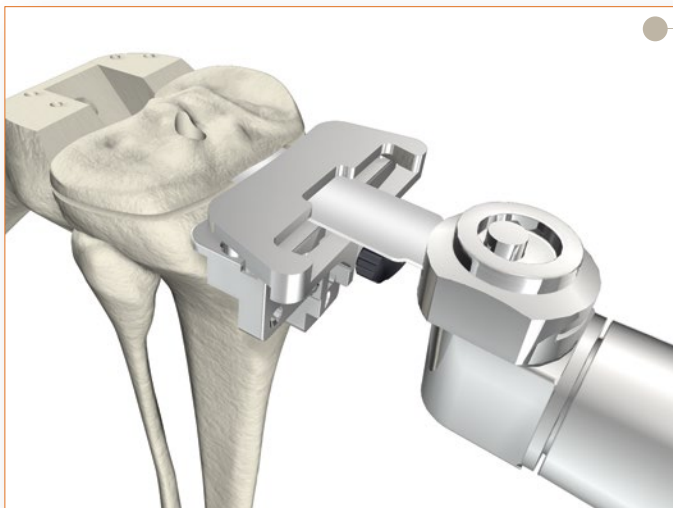


Figure 33

Tibial Resection

- ▶ Resect the proximal tibia. An optional Tibial Resection Guide Modular Capture (Left or Right) may be added.
- ▶ Remove the Tibial Resection Guide.

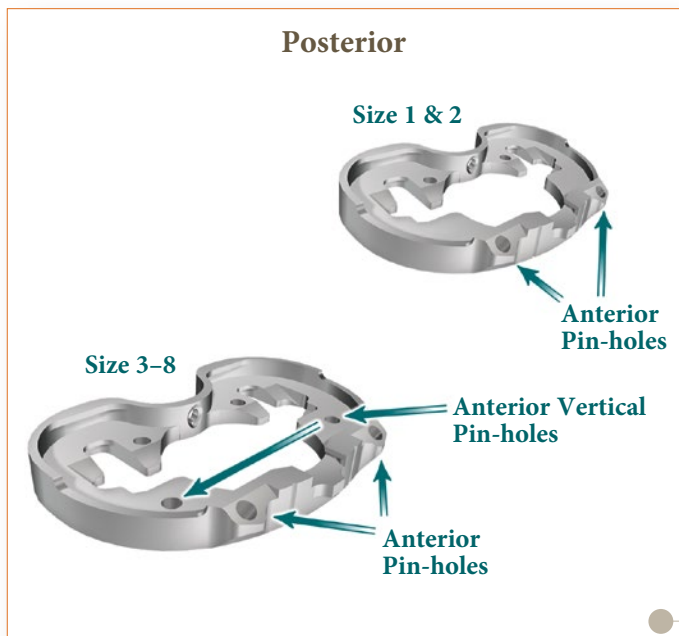


Figure 34

Tibial Component Sizing

- ▶ The Tibial Alignment Handle, Universal Tibial Template, and Tibial Insert Trial are used to size the tibia, perform a trial reduction, and assess overall component fit, ligament stability and joint range of motion.
- ▶ Once the surgeon has determined alignment, the Universal Tibial Template has multiple pin-holes that can be used to secure the template in the desired position.
- ▶ If Headed Nails are placed in the anterior-vertical pin-holes (applicable only to sizes 3, 4, 5, 6, 7 and 8) of the Universal Tibial Template, ensure that the Tibial Insert Trial is inserted posterior to the Headed Nails.

Note: Do not impact the Tibial Insert Trial. In the event that excessive resistance is encountered during insertion of the Tibial Insert Trial, remove, reposition, and reinsert the Tibial Insert Trial. Ensure all excess debris (bone and soft tissue) is cleared from the Universal Tibial Template.

- ▶ After trial reduction, the Tibial Insert Trial can be removed by hand or with the aid of a blunt instrument.

Instrument Bar

6541-2-611E

Express Proximal Rod EM



Right 6541-2-700

Left 6541-2-701

Tibial Resection Guide



0° slope 6541-2-704

3° slope 6541-2-705

Tibial Adjustment Housing



6541-4-806

Universal Alignment Handle



6541-2-611

Tibial Alignment Proximal Rod EM



6541-2-429

Tibial Stylus



6541-1-721

Universal Resection Guide



6541-1-723

Modular Capture - Distal Resection



Right 6541-2-702

Left 6541-2-703

Tibial Resection Guide Modular Capture



See Catalog

CR & PS Femoral Trials



See Catalog

Universal Tibial Template



See Catalog

CR & PS Tibial Insert Trials



Triathlon Knee System

Surgical Protocol

Tibial
Preparation

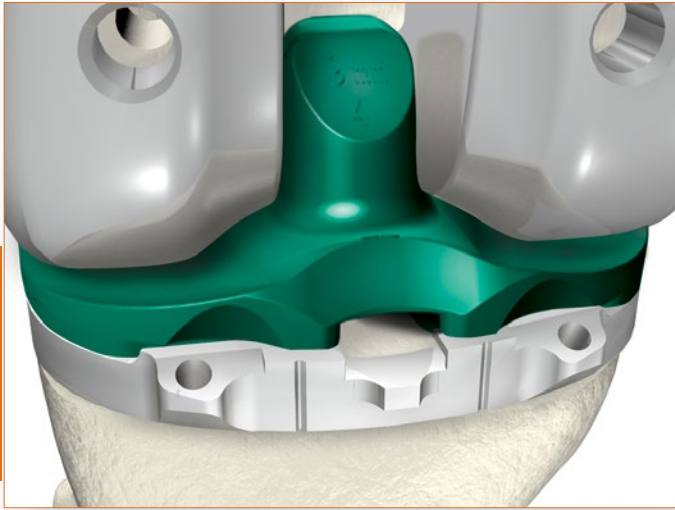


Figure 35

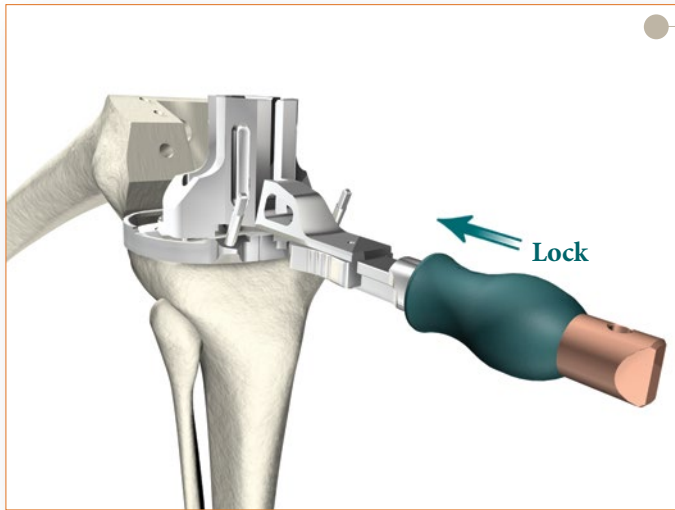


Figure 36

Tibial Keel Punching

- ▶ Assemble the Keel Punch Guide to the Universal Tibial Template by inserting at a slight angle to the top of the Universal Tibial Template (into the two locating slots toward the posterior portion of the Universal Tibial Template). Allow the Keel Punch Guide to sit flat on the Universal Tibial Template and push forward on the handle to lock the Keel Punch Guide to the Universal Tibial Template.

Instrument Bar

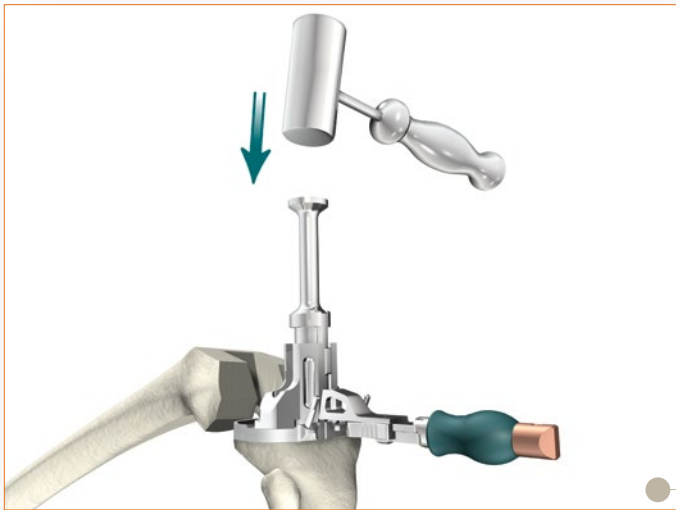


Figure 37

- Place the appropriate Keel Punch into the Keel Punch Guide. Use a mallet to impact the Keel Punch. Advance the Keel Punch until it seats fully in the Keel Punch Guide. In sclerotic bone, the use of a saw prior to the Keel Punch may be advisable.

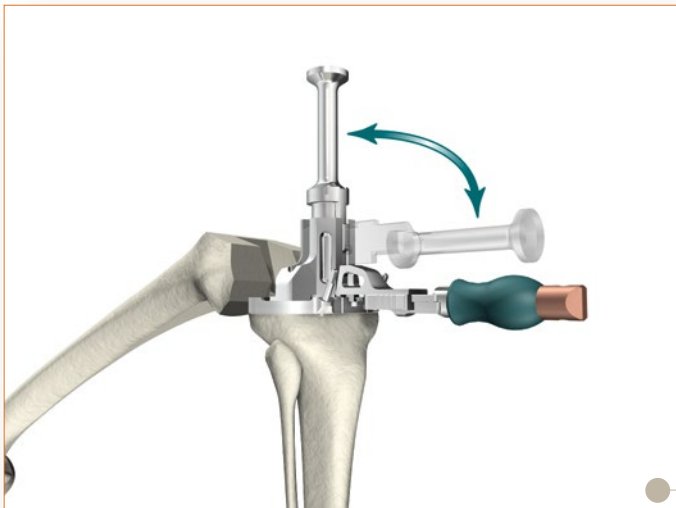


Figure 38

- To extract the Keel Punch, lift up on the Keel Punch Guide handle and pull the handle to cantilever the Keel Punch out of the tibia.
- Remove the Headless Pins with the Headless Pin Extractor and remove the Universal Tibial Template.



See Catalog
CR & PS Femoral Trials



See Catalog
Universal Tibial Template



6541-4-003
Headless Pins - 3"



6541-4-809
Headless Pin Driver



6541-4-801
Universal Driver



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



See Catalog
Keel Punch



6541-4-804
Headless Pin Extractor

Triathlon Knee System

Surgical Protocol



Figure 39

Patellar Preparation

Remove all osteophytes and synovial insertions around the patella, and measure thickness using a caliper. After determining the depth of the cut with a caliper, affix the stylus in the appropriate slot to the patella resection guide, and capture the patella between the jaws of the saw guide. Using .050" non-offset sawblade, resect the patella.

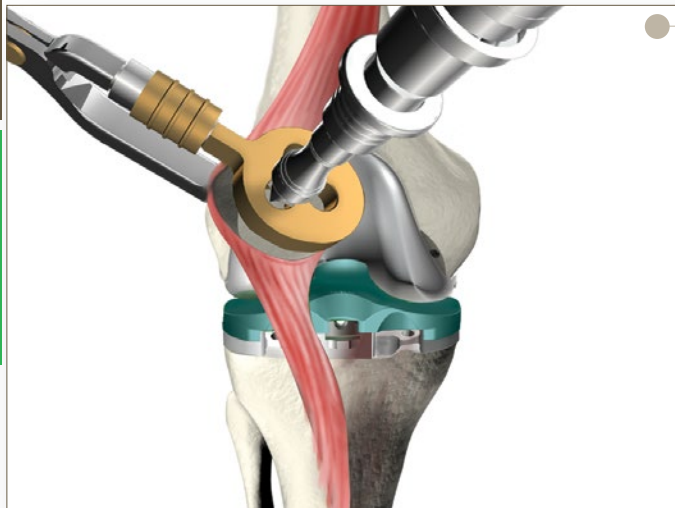


Figure 40

- ▶ Choose the appropriate size patella template and insert into the Patella Clamp.
- ▶ Center the chosen patellar drill guide over the patella with the clamp perpendicular to the trochlear groove. Drill three fixation holes with the appropriate drill (Metal-backed patella or All Poly).
- ▶ If a cemented component is to be used, prepare the resected bone surfaces for bone cement application.



Figure 41

Trial Assessment

- ▶ Remove any residual cartilage and wash away all debris. Place correct size Patella Trial (Symmetric or Asymmetric) onto the prepared patella.
- ▶ Replace all Trials and assess patellar tracking by taking the knee through a ROM. The patella should track normally throughout the ROM without tendency for tilting or lateral subluxation.

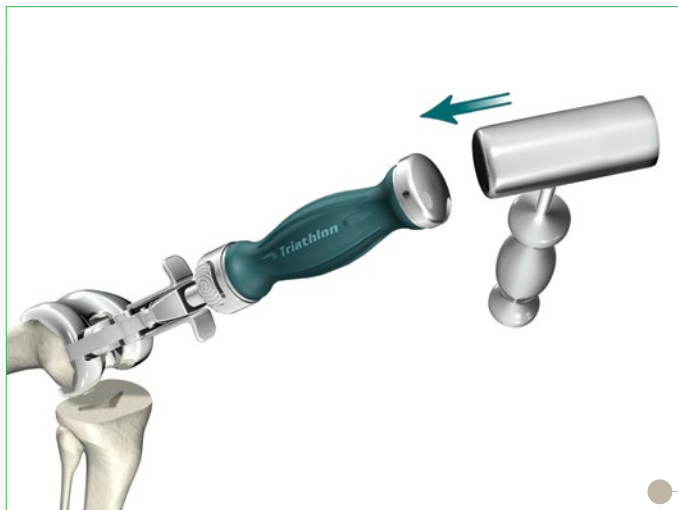


Figure 42

Component Implantation

Femoral Component - Cemented/Cementless

- ▶ Attach the Femoral Impactor Extractor to the Impaction Handle and attach to the appropriate size and side Femoral Component. Place the Femoral Component on the femur and impact it until fully seated.
 - Posterior Stabilized Knee: If Modular Femoral Distal Fixation Pegs are to be used, assemble the pegs to the Femoral Component using the 1/8" Hex Drive and the Slip Torque Handle prior to implantation.
- ▶ The Femoral Impactor can be attached to the Impaction Handle to further seat the Femoral Component onto the prepared femur.

Note: Clear all excess bone cement (Does not apply to cementless component).

Instrument Bar

6633-7-744

Patella Clamp



6633-7-738

Patella Stylus



6633-7-736

Slotted Patella Resection Guide



See Catalog

Express Symmetric & Asymmetric Patella Drill Templates



6541-3-524

All-Poly Patella Drill w/Stop



See Catalog

Symmetric & Asymmetric Patella Trials



6541-4-810

Impaction Handle



6541-4-807

Femoral Impactor/Extractor



Patella Preparation

Component Implantation

Triathlon Knee System

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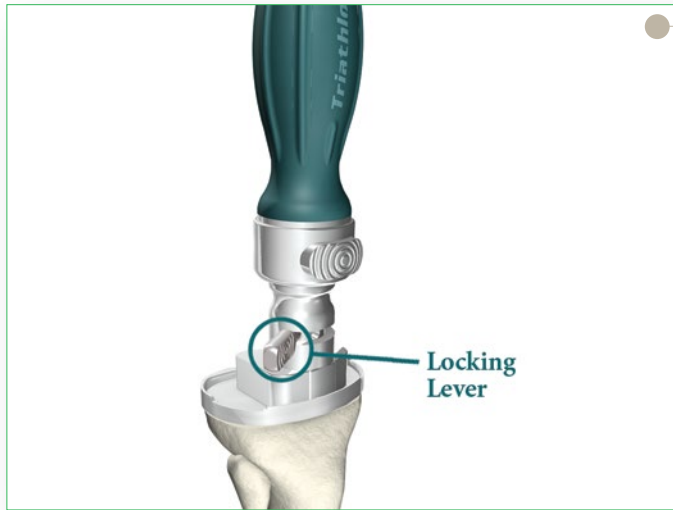


Figure 43

Primary Tibial Baseplate - Cemented/Cementless

- ▶ Connect the Tibial Baseplate Impactor Extractor to the Impaction Handle.
- ▶ Introduce the Primary Tibial Baseplate onto the prepared tibia and impact until the baseplate is seated. Unlock the locking lever and remove the assembly from the Primary Tibial Baseplate.
- ▶ To further seat the baseplate, attach the Tibial Baseplate Impactor to the Impaction Handle.
- ▶ Impact until the Primary Tibial Baseplate is fully seated.

Note: Clear all excess bone cement while maintaining position of the Primary Tibial Baseplate.

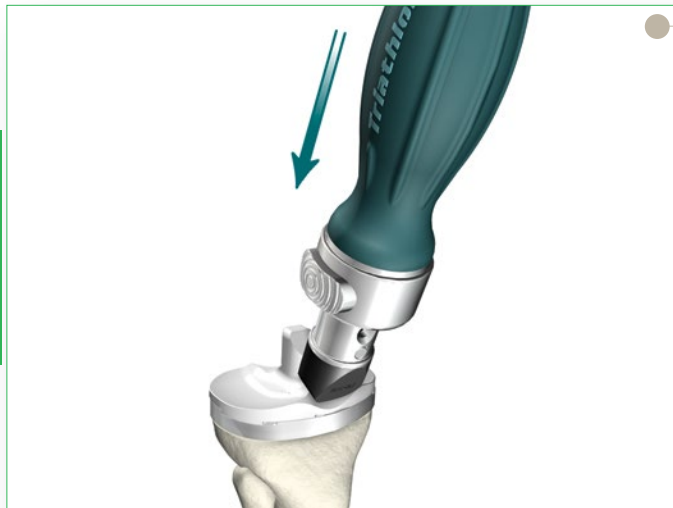


Figure 44

Tibial Insert

- ▶ Prior to assembly of the Tibial Insert, the Tibial Trial Insert may be placed on the Primary Tibial Baseplate to once more assess joint stability and range of motion.
- ▶ To assemble the Tibial Insert, distract the joint and angle the insert posteriorly into the Primary Tibial Baseplate. The posterior lip of the Tibial Insert must fit beneath the lip on the posterior Primary Tibial Baseplate wall.
- ▶ Attach the Tibial Insert Impactor to the Impaction Handle and impact to snap the Insert in place anteriorly. The Tibial Insert is fully seated once the locking wire locks under the barbs on the anterior/interior surface of the Primary Tibial Baseplate wall.

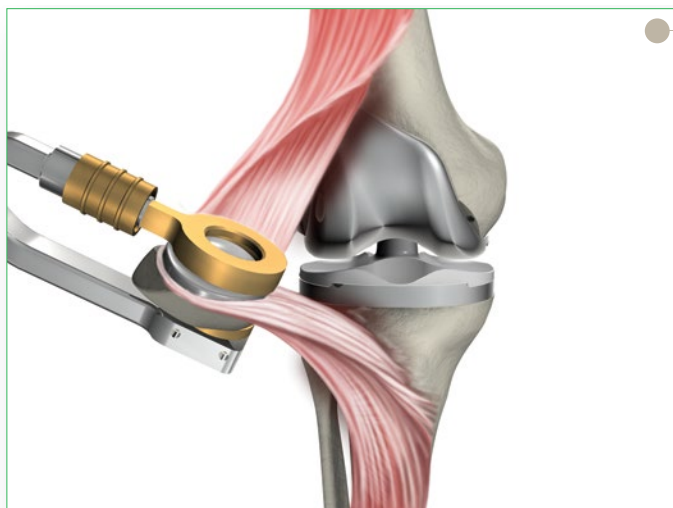


Figure 45

Patellar Component - Cemented/Cementless

- ▶ Place the Patella Component onto the prepared patella, making certain the fixation peg holes are aligned to the corresponding holes.
- ▶ Seat the Patellar Component onto the prepared patella by clamping the Patella Clamp.
- ▶ Leave the assembly clamped to the patella while excess cement is cleared and polymerization is complete (cemented only).
- ▶ Remove the patella clamp.



Figure 46

- Assess the joint in flexion and extension.

Closure

For Cemented Components

- After cement polymerization and removal of all residual cement, thoroughly irrigate the joint. Close soft tissues in the normal layered fashion.

Instrument Bar

6541-4-810

Impaction Handle



See Catalog

PS Femoral Component - Cemented



See Catalog

PS Femoral Component - Cementless



See Catalog

CR Femoral Component - Cemented



See Catalog

CR Femoral Component - Cementless



6541-4-802

1/8" Hex Drive



6541-4-825

Slip Torque Handle



See Catalog

Modular Femoral Distal Fixation Pegs



6541-4-811

Femoral Impactor



6541-4-805

Baseplate Impactor/Extractor



See Catalog

Primary Tibial Baseplate - Cemented



See Catalog

Primary Tibial Baseplate - Cementless



6541-4-813

Tibial Insert Impactor



See Catalog

CR & PS Tibial Inserts



See Catalog

Symmetric & Asymmetric Patellas



6541-3-800E

Express Cement Cap



6633-7-744

Patella Clamp



Triathlon Knee System

Surgical Protocol

Catalog #	Description	Quantity in Kit
Miscellaneous Instruments Kit Contents		
3170-0000	1/8" Drill	2
6541-4-003	Headless Pins - 3"	4
6541-4-300	Headed Nail Impactor Extractor (Optional)	1
6541-4-400	Bladerunner	1
6541-4-515	Headed Nails - 1 1/2" (Optional)	2
6541-4-516	5/16" IM Rod	1
6541-4-518	1/8" Peg Drill	1
6541-4-525	1/4" Peg Drill	1
6541-4-538	3/8" IM Drill	1
6541-4-575	Headed Nails - 3/4" (Optional)	2
6541-4-602	Universal Alignment Rods	1
6541-4-610	Adjustable Spacer Block (Optional)	1
6541-4-700	Bone File (Optional)	1
6541-4-709	Box Chisel	1
6541-4-710	Posterior Osteophyte Removal Tool (Optional)	1
6541-4-800	T-Handle Driver	1
6541-4-801	Universal Driver	1
6541-4-802	1/8" Hex Drive (Optional)	1
6541-4-803	Slap Hammer	1
6541-4-804	Headless Pin Extractor	1
6541-4-805	Tibial Baseplate Impactor Extractor	1
6541-4-806	Universal Alignment Handle	1
6541-4-807	Femoral Impactor Extractor	1
6541-4-809	Headless Pin Driver	1
6541-4-810	Impaction Handle	2
6541-4-811	Femoral Impactor	1
6541-4-812	Tibial Baseplate Impactor	1
6541-4-813	Tibial Insert Impactor	1
6541-4-825	Slip Torque Handle (Optional)	1
6541-8-004	Triathlon Miscellaneous Upper Tray	1
6541-8-104	Triathlon Miscellaneous Lower Tray	1
6541-9-000	Triathlon Case	1
Total Quantity		39

Catalog #	Description	Quantity in Kit
Patella Preparation & Trialing Part Numbers		
6633-7-736	Slotted Patella Resection Guide	1
6633-7-738	Patella Stylus	1
7650-1454	Patella Caliper	1
6541-3-524	All-PolyPatella Drill w/Stop	1
6541-3-617E	Express Asymmetric Patella Drill Template - 29mm	1
6541-3-618E	Express Asymmetric Patella Drill Template - 33mm	1
6541-3-619E	Express Asymmetric Patella Drill Template - 35mm	1
6541-3-620E	Express Asymmetric Patella Drill Template - 38mm	1
6541-3-621E	Express Asymmetric Patella Drill Template - 40mm	1
6541-3-627E	Express Symmetric Patella Drill Template - 27mm	1
6541-3-629E	Express Symmetric Patella Drill Template - 29mm	1
6541-3-631E	Express Symmetric Patella Drill Template - 31mm	1
6541-3-633E	Express Symmetric Patella Drill Template - 33mm	1
6541-3-636E	Express Symmetric Patella Drill Template - 36mm	1
6541-3-639E	Express Symmetric Patella Drill Template - 39mm	1
6541-3-800E	Express Cement Cap	1
6633-7-744	Patella Clamp	1
5550-T-278	Symmetric Patella 27mm x 8mm	1
5550-T-298	Symmetric Patella 29mm x 8mm	1
5550-T-319	Symmetric Patella 31mm x 9mm	1
5550-T-339	Symmetric Patella 33mm x 9mm	1
5550-T-360	Symmetric Patella 36mm x 10mm	1
5550-T-391	Symmetric Patella 39mm x 11mm	1
5551-T-299	Asymmetric Patella 29mm (S/I) x 33mm (M/L) x 9mm	1
5551-T-320	Asymmetric Patella 32mm (S/I) x 36mm (M/L) x 10mm	1
5551-T-350	Asymmetric Patella 35mm (S/I) x 39mm (M/L) x 10mm	1
5551-T-381	Asymmetric Patella 38mm (S/I) x 42mm (M/L) x 11mm	1
5551-T-401	Asymmetric Patella 40mm (S/I) x 44mm (M/L) x 11mm	1
6541-3-522	Metal-Backed Patella Drill w/Stop	1
6541-8-005E	Patellar Preparation - Upper Tray	1
6541-8-105E	Patellar Preparation - Lower Tray	1
6541-7-806	MIS 4:1 Impactor/Extractor	1
6541-1-701E	#1 Express 4:1 Cutting Block (Optional)	1
6541-1-708E	#8 Express 4:1 Cutting Block (Optional)	1
6541-9-000	Triathlon Case	1
Total Quantity		35

Triathlon Knee System

Surgical Protocol

Catalog #	Description	Quantity in Kit
Size 3-6 Femoral & Tibial Preparation Kit Contents		
6541-1-600	Adjustment Block	1
6541-1-603	Femoral Sizer	1
6541-1-605	Femoral Stylus	1
6541-1-657	Femoral Alignment Guide	1
6541-1-703E	#3 Express 4:1 Cutting Block	1
6541-1-704E	#4 Express 4:1 Cutting Block	1
6541-1-705E	#5 Express 4:1 Cutting Block	1
6541-1-706E	#6 Express 4:1 Cutting Block	1
6541-1-721	Universal Resection Guide	1
6541-1-723	Modular Capture - Distal Resection	1
6541-2-013	Size 1-3 Keel Punch	1
6541-2-046	Size 4-6 Keel Punch	1
6541-2-429	Tibial Stylus	1
6541-2-600	Tibial Alignment Jig IM (Optional)	1
6541-2-603	#3 Universal Tibial Template	1
6541-2-604	#4 Universal Tibial Template	1
6541-2-605	#5 Universal Tibial Template	1
6541-2-606	#6 Universal Tibial Template	1
6541-2-609	Tibial Alignment Ankle Clamp EM	1
6541-2-610	Tibial Alignment Distal Assembly EM	1
6541-2-611E	Tibial Alignment Proximal Rod EM	1
6541-2-620	Tibial Template Converter	1
6541-2-700	Tibial Resection Guide Right	1
6541-2-701	Tibial Resection Guide Left	1
6541-2-702	Tibial Resection Guide Modular Capture Right	1
6541-2-703	Tibial Resection Guide Modular Capture Left	1
6541-2-704	Tibial Adjustment Housing - 0° slope (Optional)	1
6541-2-705	Tibial Adjustment Housing - 3° slope	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
6541-8-002	Triathlon Size 3-6 Upper Tray	1
6541-8-102	Triathlon Size 3-6 Lower Tray	1
6541-9-000	Triathlon Case	1
		Total Quantity 34

Catalog #	Description	Quantity in Kit
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Size 3-6 PS Femoral & Tibial Trialing Kit Contents

5511-T-301	PS Femoral Trial #3 Left	1
5511-T-302	PS Femoral Trial #3 Right	1
5511-T-401	PS Femoral Trial #4 Left	1
5511-T-402	PS Femoral Trial #4 Right	1
5511-T-501	PS Femoral Trial #5 Left	1
5511-T-502	PS Femoral Trial #5 Right	1
5511-T-601	PS Femoral Trial #6 Left	1
5511-T-602	PS Femoral Trial #6 Right	1
5532-T-309A	PS Tibial Insert Trial #3 - 9mm	1
5532-T-311A	PS Tibial Insert Trial #3 - 11mm	1
5532-T-313A	PS Tibial Insert Trial #3 - 13mm	1
5532-T-316A	PS Tibial Insert Trial #3 - 16mm	1
5532-T-319A	PS Tibial Insert Trial #3 - 19mm	1
5532-T-409A	PS Tibial Insert Trial #4 - 9mm	1
5532-T-411A	PS Tibial Insert Trial #4 - 11mm	1
5532-T-413A	PS Tibial Insert Trial #4 - 13mm	1
5532-T-416A	PS Tibial Insert Trial #4 - 16mm	1
5532-T-419A	PS Tibial Insert Trial #4 - 19mm	1
5532-T-509A	PS Tibial Insert Trial #5 - 9mm	1
5532-T-511A	PS Tibial Insert Trial #5 - 11mm	1
5532-T-513A	PS Tibial Insert Trial #5 - 13mm	1
5532-T-516A	PS Tibial Insert Trial #5 - 16mm	1
5532-T-519A	PS Tibial Insert Trial #5 - 19mm	1
5532-T-609A	PS Tibial Insert Trial #6 - 9mm	1
5532-T-611A	PS Tibial Insert Trial #6 - 11mm	1
5532-T-613A	PS Tibial Insert Trial #6 - 13mm	1
5532-T-616A	PS Tibial Insert Trial #6 - 16mm	1
5532-T-619A	PS Tibial Insert Trial #6 - 19mm	1
6541-5-713	#3 MIS PS Box Cutting Guide	1
6541-5-714	#4 MIS PS Box Cutting Guide	1
6541-5-715	#5 MIS PS Box Cutting Guide	1
6541-5-716	#6 MIS PS Box Cutting Guide	1
6541-8-009	Triathlon 3-6 PS Upper Tray	1
6541-8-109	Triathlon 3-6 PS Lower Tray	1
6541-9-000	Triathlon Case	1

Total Quantity 35

Triathlon Knee System

Surgical Protocol

Catalog #	Description	Quantity in Kit
Size 3-6 CR Femoral & Tibial Trialing Kit Contents		
5510-T-301	CR Femoral Trial #3 Left	1
5510-T-302	CR Femoral Trial #3 Right	1
5510-T-401	CR Femoral Trial #4 Left	1
5510-T-402	CR Femoral Trial #4 Right	1
5510-T-501	CR Femoral Trial #5 Left	1
5510-T-502	CR Femoral Trial #5 Right	1
5510-T-601	CR Femoral Trial #6 Left	1
5510-T-602	CR Femoral Trial #6 Right	1
5530-T-309A	CR Tibial Insert Trial #3 - 9mm	1
5530-T-311A	CR Tibial Insert Trial #3 - 11mm	1
5530-T-313A	CR Tibial Insert Trial #3 - 13mm	1
5530-T-316A	CR Tibial Insert Trial #3 - 16mm	1
5530-T-319A	CR Tibial Insert Trial #3 - 19mm	1
5530-T-409A	CR Tibial Insert Trial #4 - 9mm	1
5530-T-411A	CR Tibial Insert Trial #4 - 11mm	1
5530-T-413A	CR Tibial Insert Trial #4 - 13mm	1
5530-T-416A	CR Tibial Insert Trial #4 - 16mm	1
5530-T-419A	CR Tibial Insert Trial #4 - 19mm	1
5530-T-509A	CR Tibial Insert Trial #5 - 9mm	1
5530-T-511A	CR Tibial Insert Trial #5 - 11mm	1
5530-T-513A	CR Tibial Insert Trial #5 - 13mm	1
5530-T-516A	CR Tibial Insert Trial #5 - 16mm	1
5530-T-519A	CR Tibial Insert Trial #5 - 19mm	1
5530-T-609A	CR Tibial Insert Trial #6 - 9mm	1
5530-T-611A	CR Tibial Insert Trial #6 - 11mm	1
5530-T-613A	CR Tibial Insert Trial #6 - 13mm	1
5530-T-616A	CR Tibial Insert Trial #6 - 16mm	1
5530-T-619A	CR Tibial Insert Trial #6 - 19mm	1
6541-8-008	Triathlon 3-6 CR Upper Tray	1
6541-8-108	Triathlon 3-6 CR Lower Tray	1
6541-9-000	Triathlon Case	1
		Total Quantity 31

Catalog #	Description	Quantity in Kit
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Size 1, 8 PS Preparation & Trialing Kit Contents

5511-T-101	PS Femoral Trial #1 Left	1
5511-T-102	PS Femoral Trial #1 Right	1
5511-T-801	PS Femoral Trial #8 Left	1
5511-T-802	PS Femoral Trial #8 Right	1
5532-T-109A	PS Tibial Insert Trial #1 - 9mm	1
5532-T-111A	PS Tibial Insert Trial #1 - 11mm	1
5532-T-113A	PS Tibial Insert Trial #1 - 13mm	1
5532-T-116A	PS Tibial Insert Trial #1 - 16mm	1
5532-T-119A	PS Tibial Insert Trial #1 - 19mm	1
5532-T-809A	PS Tibial Insert Trial #8 - 9mm	1
5532-T-811A	PS Tibial Insert Trial #8 - 11mm	1
5532-T-813A	PS Tibial Insert Trial #8 - 13mm	1
5532-T-816A	PS Tibial Insert Trial #8 - 16mm	1
5532-T-819A	PS Tibial Insert Trial #8 - 19mm	1
6541-5-711	#1 MIS PS Box Cutting Guide	1
6541-5-718	#8 MIS PS Box Cutting Guide	1
6541-2-078	Size 7-8 Keel Punch (Optional)	1
6541-2-601	#1 Universal Tibial Template (Optional)	1
6541-2-608	#8 Universal Tibial Template (Optional)	1
6541-8-113	Triathlon 1 & 8 PS Lower Tray	1
6541-9-000	Triathlon Case	1
Total Quantity		21

Triathlon Knee System

Surgical Protocol

Catalog #	Description	Quantity in Kit
Size 1, 8 CR Preparation & Trialing Kit Contents		
5510-T-101	CR Femoral Trial #1 Left	1
5510-T-102	CR Femoral Trial #1 Right	1
5510-T-801	CR Femoral Trial #8 Left	1
5510-T-802	CR Femoral Trial #8 Right	1
5530-T-109A	CR Tibial Insert Trial #1 - 9mm	1
5530-T-111A	CR Tibial Insert Trial #1 - 11mm	1
5530-T-113A	CR Tibial Insert Trial #1 - 13mm	1
5530-T-116A	CR Tibial Insert Trial #1 - 16mm	1
5530-T-119A	CR Tibial Insert Trial #1 - 19mm	1
5530-T-809A	CR Tibial Insert Trial #8 - 9mm	1
5530-T-811A	CR Tibial Insert Trial #8 - 11mm	1
5530-T-813A	CR Tibial Insert Trial #8 - 13mm	1
5530-T-816A	CR Tibial Insert Trial #8 - 16mm	1
5530-T-819A	CR Tibial Insert Trial #8 - 19mm	1
6541-2-078	Size 7-8 Keel Punch	1
6541-2-601	#1 Universal Tibial Template	1
6541-2-608	#8 Universal Tibial Template	1
6541-8-112	Triathlon 1 & 8 CR Lower Tray	1
6541-9-000	Triathlon Case	1
		Total Quantity 19

Size 2, 7 PS Preparation & Trialing Kit Contents

5511-T-201	PS Femoral Trial #2 Left	1
5511-T-202	PS Femoral Trial #2 Right	1
5511-T-701	PS Femoral Trial #7 Left	1
5511-T-702	PS Femoral Trial #7 Right	1
5532-T-209A	PS Tibial Insert Trial #2 - 9mm	1
5532-T-211A	PS Tibial Insert Trial #2 - 11mm	1
5532-T-213A	PS Tibial Insert Trial #2 - 13mm	1
5532-T-216A	PS Tibial Insert Trial #2 - 16mm	1
5532-T-219A	PS Tibial Insert Trial #2 - 19mm	1
5532-T-709A	PS Tibial Insert Trial #7 - 9mm	1
5532-T-711A	PS Tibial Insert Trial #7 - 11mm	1
5532-T-713A	PS Tibial Insert Trial #7 - 13mm	1
5532-T-716A	PS Tibial Insert Trial #7 - 16mm	1
5532-T-719A	PS Tibial Insert Trial #7 - 19mm	1
6541-1-702E	#2 Express 4:1 Cutting Block (Optional)	1
6541-1-707E	#7 Express 4:1 Cutting Block (Optional)	1
6541-5-712	#2 MIS PS Box Cutting Guide	1
6541-5-717	#7 MIS PS Box Cutting Guide	1
6541-2-078	Size 7-8 Keel Punch (Optional)	1
6541-2-602	#2 Universal Tibial Template (Optional)	1
6541-2-607	#7 Universal Tibial Template (Optional)	1
6541-8-022	Triathlon 2 & 7 PS Upper Tray	1
6541-9-000	Triathlon Case	1
		Total Quantity 23

Catalog #	Description	Quantity in Kit
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Size 2, 7 CR Preparation & Trialing Kit Contents

5510-T-201	CR Femoral Trial #2 Left	1
5510-T-202	CR Femoral Trial #2 Right	1
5510-T-701	CR Femoral Trial #7 Left	1
5510-T-702	CR Femoral Trial #7 Right	1
5530-T-209A	CR Tibial Insert Trial #2 - 9mm	1
5530-T-211A	CR Tibial Insert Trial #2 - 11mm	1
5530-T-213A	CR Tibial Insert Trial #2 - 13mm	1
5530-T-216A	CR Tibial Insert Trial #2 - 16mm	1
5530-T-219A	CR Tibial Insert Trial #2 - 19mm	1
5530-T-709A	CR Tibial Insert Trial #7 - 9mm	1
5530-T-711A	CR Tibial Insert Trial #7 - 11mm	1
5530-T-713A	CR Tibial Insert Trial #7 - 13mm	1
5530-T-716A	CR Tibial Insert Trial #7 - 16mm	1
5530-T-719A	CR Tibial Insert Trial #7 - 19mm	1
6541-1-702E	#2 Express 4:1 Cutting Block	1
6541-1-707E	#7 Express 4:1 Cutting Block	1
6541-2-078	Size 7-8 Keel Punch	1
6541-2-602	#2 Universal Tibial Template	1
6541-2-607	#7 Universal Tibial Template	1
6541-8-021	Triathlon 2 & 7 CR Upper Tray	1
6541-9-000	Triathlon Case	1

Total Quantity 21

Size 1-8 Max PS Tibial Trialing Kit Contents

5532-T-122A	PS Tibial Insert Trial #1 - 22mm	1
5532-T-125A	PS Tibial Insert Trial #1 - 25mm	1
5532-T-222A	PS Tibial Insert Trial #2 - 22mm	1
5532-T-225A	PS Tibial Insert Trial #2 - 25mm	1
5532-T-322A	PS Tibial Insert Trial #3 - 22mm	1
5532-T-325A	PS Tibial Insert Trial #3 - 25mm	1
5532-T-422A	PS Tibial Insert Trial #4 - 22mm	1
5532-T-425A	PS Tibial Insert Trial #4 - 25mm	1
5532-T-522A	PS Tibial Insert Trial #5 - 22mm	1
5532-T-525A	PS Tibial Insert Trial #5 - 25mm	1
5532-T-622A	PS Tibial Insert Trial #6 - 22mm	1
5532-T-625A	PS Tibial Insert Trial #6 - 25mm	1
5532-T-722A	PS Tibial Insert Trial #7 - 22mm	1
5532-T-725A	PS Tibial Insert Trial #7 - 25mm	1
5532-T-822A	PS Tibial Insert Trial #8 - 22mm	1
5532-T-825A	PS Tibial Insert Trial #8 - 25mm	1
6541-8-120	Triathlon 1-8 Max PS - Upper Tray	1
6541-9-000	Triathlon Case	1

Total Quantity 18

Triathlon Knee System

Surgical Protocol

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

Catalog #	Description	Sizes	Additional Instruments Required
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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
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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 Knee System

Surgical Protocol

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 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

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 Knee System

Surgical Protocol

Catalog #	Description
Modular Femoral Distal Fixation Peg Part Number	
5575-X-000	Modular Femoral Distal Fixation Peg (2 per pack)

Triathlon PS Box Preparation (Optional) Part Numbers

6541-5-212	Sizes 1-2 Triathlon PS Femoral Finishing Punch
6541-5-234	Sizes 3-4 Triathlon PS Femoral Finishing Punch
6541-5-256	Sizes 5-6 Triathlon PS Femoral Finishing Punch
6541-5-278	Sizes 7-8 Triathlon PS Femoral Finishing Punch
6541-5-814	Sizes 1-4 Triathlon PS Femoral Box Trial/Protector
6541-5-858	Sizes 5-8 Triathlon PS Femoral Box Trial/Protector
6541-8-122	Triathlon PS Box Preparation Sizes 1-8 Tray

Notes

Triathlon Knee System

Surgical Protocol

Notes

Femoral Component/ Insert Compatibility

Size Matching: One up, one down, e.g., size 5 femur with size 4 or 6 insert/ baseplate.

Note: Cementless implants are not to be used with cement.

	Femoral Components	Insert Type			
		CR	CS	PS	TS
Cementless	CR Cemented	✓	✓	No	No
	PS Cemented	No	✓	✓	✓
	TS Cemented	No	No	✓	✓
	CR Beaded	✓	✓	No	No
	PS Beaded	No	No	✓	No
	CR Beaded with PA	✓	✓	No	No
	PS Beaded with PA	No	No	✓	No

Femoral Component/ Patella Compatibility

Size Matching: Every patella articulates with every femur due to a common radius across all sizes.

	Femoral Components	Patella Type			
		Asymmetric	Asymmetric Metal Backed	Symmetric Metal Backed	Symmetric
Cementless	CR Cemented	✓	✓	✓	✓
	PS Cemented	✓	✓	✓	✓
	TS Cemented	✓	✓	✓	✓
	CR Beaded	✓	✓	✓	✓
	PS Beaded	✓	✓	✓	✓
	CR Beaded with PA	✓	✓	✓	✓
	PS Beaded with PA	✓	✓	✓	✓

Tibial Insert/Baseplate Compatibility

Size Matching: Size Specific, e.g., size 4 insert to be used only with size 4 baseplate.

Note: TS insert can only be used with the cemented universal baseplate.

	Tibial Baseplates	Insert Type			
		CR	CS	PS	TS
Cementless	Cemented Cruciform	✓	✓	✓	No
	Cemented Universal	✓	✓	✓	✓
	Beaded Cruciform	✓	✓	✓	No
	Beaded Screw Fix	✓	✓	✓	No
	Beaded with PA Cruciform	✓	✓	✓	No
	Beaded with PA Screw Fix	✓	✓	✓	No
	Tritanium	✓	✓	✓	No

Triathlon TS Augments

Distal Augments are for use with both the medial and lateral portions of the side indicated, e.g. #4 right is used for medial and lateral compartments on a right femur.

Posterior Augments are universal size specific, e.g. size 4 posterior augments are for the size 4 femur.

Tibial Augments are size specific and come in left medial/right lateral or right medial/left lateral configurations.



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