Smith-Nephew



JOURNEY® II TKA with SYNC Performance Instruments

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Nota Bene

The following technique is for informational and educational purposes only. It is not intended to serve as medical advice. It is the responsibility of treating physicians to determine and utilize the appropriate products and techniques according to their own clinical judgment for each of their patients. For more information on the products, including indications for use, contraindications, and product safety information, please refer to the product's label and the Instructions for Use packaged with the product.

Introduction

JOURNEY II TKA is designed to restore normal shapes, position and motion¹⁻⁵ to help patients rediscover their normal through a smoother recovery**^{6,7}, improved function*⁷⁻¹¹ and higher patient satisfaction.*^{7-9,12}

Constraint Options

JOURNEY II TKA offers multiple levels of constraint based on surgeon preference and patient requirements.

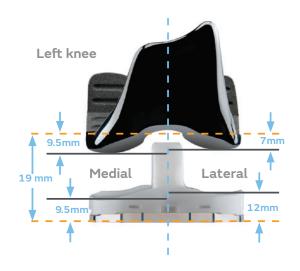
JOURNEY II CR Femoral Component

When the PCL is intact, the JOURNEY II CR femoral component can be used with the CR, Medial Dished or Deep Dished insert.

When the PCL is resected, the JOURNEY II CR femoral component can be used with the Medial Dished or Deep Dished insert.

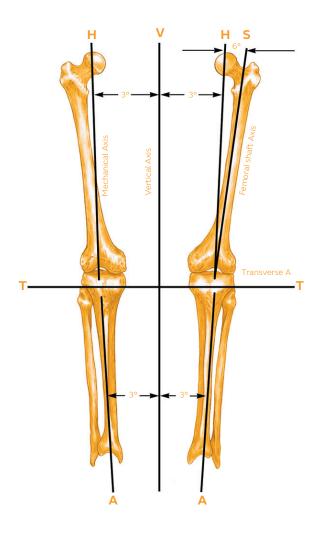
JOURNEY II BCS Femoral Component

When the PCL is resected, the JOURNEY II BCS femoral component can be used with the BCS, Articular Stabilized (AS) or Constrained inserts. The Constrained insert can be used to provide additional varus/valgus stability for patient's requiring additional constraint to best balance the soft tissue.









Preoperative planning

Determine the angle between the anatomical and the mechanical axis. This measurement will be used intraoperatively to select the appropriate valgus angle so that correct limb alignment is restored. Beware of misleading angles in knees with a flexion contracture or rotated lower extremities.

Note: It is recommended to use preoperative templating to determine femoral size because sizes 1-8 and 9-10 have different resection depths.

For patients that present with significant varus or valgus deformities (> 15°), morbid obesity or deficient collateral ligaments consider whether additional implant constraint is more appropriate. If patients with the above-mentioned conditions are scheduled for a JOURNEY° II TKA then assess the flexion space under full ligament tension (e.g., laminar spreaders) with the patella reduced and consider having a constrained implant option on hand.

Pin Offerings

Cat. Item	Description	Quantity per package
74013480	Non-headed 65mm SPEED Pin	3
74013472	Headed 65mm SPEED Pin	3
74016466	MIS Headed 65mm Pin	3
74013471	Headed 45mm SPEED Pin	3
74016465	MIS Headed 45mm Pin	3
71512449	Short Bone Spike	6



Figure 1

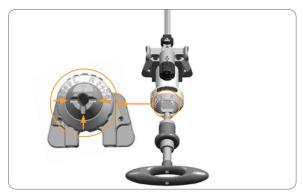


Figure 2

Figure 3

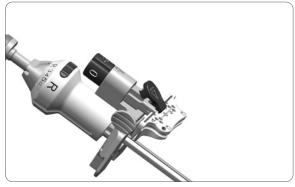


Figure 4

Instrument Assembly: Adjustable Femoral Alignment

1. Attach the Adjustable Valgus Bridge to the Adjustable Valgus Guide. Dial on the bridge should point towards the button on the Valgus Guide (Figure 1).

Note: The Adjustable Valgus Bridge was designed to move anterior and posterior within the Adjustable Valgus Guide to accommodate various patient morphology.

2. Attach the IM rod to the T-handle and insert through the alignment assembly (Figure 3). IM rod will lock into the alignment assembly in one of three places (see Figure 2).

Note: There are two locking positions on the IM Rod. If the alignment assembly can make a full rotation around the IM Rod, the second lock has not engaged. Remove the IM Rod and reengage.

3. Attach the Distal Femoral Cutting block onto the Bridge. Positioning the block and the dial on the adjustable bridge at the primary ("0") resection level will ensure the cut will equal the distal thickness of the femoral prosthesis (Figure 4).

Note: The Distal Femoral Cutting block is designed to pivot medial and lateral to accommodate various patient morphology.

Tip: If surgeon preference is to pin the -2mm pin holes initially, it is recommended to add the Wide Distal Cut Block to the set.



74016210

Adjustable Valgus Bridge

74016203







Long 74016211 **Short** 74016212

Distal Cutting Block 74016205



Figure 5

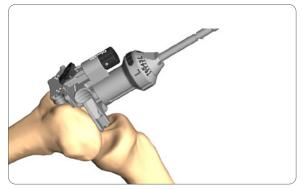


Figure 6



Figure 7

Intramedullary alignment

1. Open the femoral canal with the 9.5mm Intramedullary Drill. The drill has a 12mm step to open the entry point further (**Figure 5**).

2. Slide the Intramedullary Rod of the alignment assembly into the femoral canal until the Valgus Guide contacts the distal femur (**Figure 6**).

Note: There may be times when only one side of the guide will touch bone.

Tip: To avoid a shallow distal resection, it is recommended to not push the Bridge all the way into the Valgus Guide until it has been seated on the distal surface.

Tip: Alternately, the Bridge can be assembled after seating the Valgus Guide onto the distal femur.

3. Push the button on the Valgus Guide and rotate ("L" for a left knee, "R" for a right knee) to set the valgus angle.

Tip: This angle may be set before inserting the IM rod into the canal.

4. Orient rotation of the assembly neutral to the posterior condyles (**Figure 7**) insert a headed or non-headed 65mm pin into one or both of the oblique pin holes.

Note: Distal Cutting Guide will pivot to conform to the anterior bone geometry.



74016210

Adjustable Valg

Adjustable Valgus Bridge 74016203



T-Handle 71674576



IM Rod Long 74016211 Short 74016212



Distal Cutting Block 74016205



Intramedullary drill, 9.5mm 7401211**1**

SPEED PIN Non-Headed 65mm 74013480

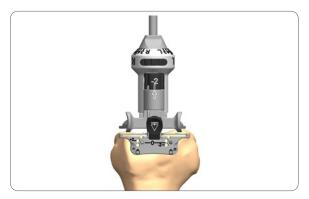


Figure 8

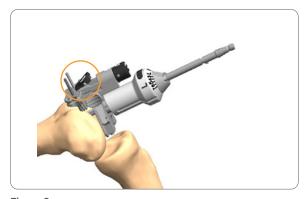


Figure 9

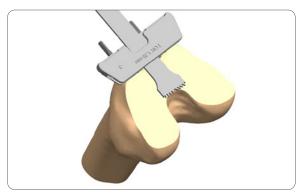


Figure 10

Distal Femur Resection

1. With the Adjustable Valgus Bridge dial set to 0mm, using non-headed 65mm pins, pin the distal femoral cutting block to the anterior femur using the holes marked '0'. Once adequate distal femoral resection is noted, a headed or non-headed 65mm pin should be placed in one or both oblique pin holes for additional stability (**Figure 8**).

Tip: The resection level can be adjusted before pinning the distal block by using the dial on the Valgus Bridge. +2mm or -2mm can be dialed in prior to resection.

Note: Resection level can also be adjusted using the alternate pin holes on the cutting block, -2mm or +2mm of bone.

Tip: The chamfer on the -2mm pin holes of the Standard Distal Cutting Block may cause pins to become stuck in the block. Place pin into pinhole before starting power.

Tip: The oblique pin holes on the Distal Cut Block may come in contact with the IM rod. If any resistance is present, stop and assess.

- 2. Push the button on the Valgus Bridge (**Figure 9**) to remove the alignment assembly from the incision site. Only the distal cutting block should remain on the femur.
- 3. Resect the distal femur (**Figure 10**) then remove the distal femoral cutting block.

Tip: If the distal femoral resection is not adequate, remove the oblique pin, and reposition the block through the pin holes marked +2mm and re-insert the oblique pin.

JOURNEY° II CR Tip: To avoid raising the joint line, it is recommended to resect a maximum of implant thickness. Additional distal femoral resection will raise the joint line and potentially compromise the PCL and create a flexion/extension imbalance.



Adjustable Valgus Guide 74016210



Adjustable Valgus Bridge 74016203



T-Handle 71674576

IM Rod

Long 74016211

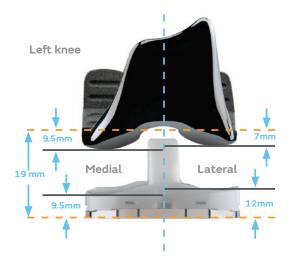
Short 74016212



Distal Cutting Block 74016205



	Size	Distal Resection
Standard	1-8	9.5mm
Large	3 10	11.5mm



Sizing note

The JOURNEY^o II Total Knee System femoral component features a proportional distal resection for the Standard and Large sizes (see table).

Use preoperative templating to estimate the femur size to determine the appropriate distal resection.

If the approximate size is between a size 8 and size 9, it is recommended to make the distal resection for the larger of the two sizes and proceed as normal.

The Distal Cutting Block is designed to remove 9.5mm off of the most distal femoral condyle.



Figure 11



Figure 12



Figure 13

Proximal Tibia

Instrument Assembly: Macro Tibial Alignment

1. Attach the EM Posterior Slope Guide to the Ankle Clamp (**Figure 11**) by depressing the button on the Slope Guide and slide to the desired position.

Tip: The neck on the Slope Guide should orient toward the arms and dials of the Ankle Clamp.

Note: Each tooth is 1mm apart.

2. Attach the Macro EM Tibial Alignment Tube to the EM Posterior Slope Guide by depressing the inferior button on the Alignment Tube (**Figure 12**) and sliding to the desired position. Once the button is released, the height will be locked in position.

Tip: The inferior button on Alignment Tube should face away from the arms of Ankle Clamp.

Note: Each tooth is 1mm apart.

3. Attach the appropriate hand cutting block to the Alignment Tube by depressing the superior button on the Alignment Tube (**Figure 13**).

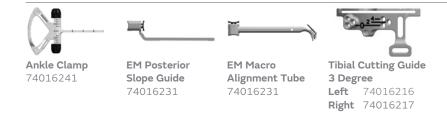




Figure 14



Figure 15



Figure 16

Proximal Tibia

Extramedullary Alignment

1. Open the arms of the ankle clamp and attach alignment jig to the tibia. Adjust height and distance from tibia by depressing the buttons on the Macro Alignment Tube and EM Posterior Slope guide, respectively (**Figure 14**).

Recommended posterior slope

Construct	Slope
JOURNEY II CR	>=5°
JOURNEY II MD (with PCL)	>=5°
JOURNEY II MD (no PCL)	3°
JOURNEY II BCS	3°

Note: 3° and 5° tibial cutting guides are available

- 2. Once approximate resection level is set, use a headed 45mm pin to pin through the provisional slot in the Tibia Cutting Block (**Figure 15**).
- 3. Insert Adjustable Footed Tibia Stylus into the saw slot of the Cutting Guide (**Figure 16**).
- 4. Adjust the stylus to desired resection level by rotating the dial.

Note: The dial on the stylus adjusts from 2mm – 13mm in 1mm increments.

Note: The 9mm tibial implant is 9.5mm thick on the medial side and 12mm thick on the lateral side

Tip: Depending on provisional position, it may be necessary to depress the inferior button of the Alignment Tube while setting resection depth via the stylus. Alternately, this resection level may be set prior to attaching the jig to the patient.





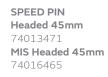
EM Macro Alignment Tube 74016231



Adjustable Tibial C Footed Stylus 3 Degr 74016229 Left



Tibial Cutting Guide
3 Degree
Left 74016216
Right 74016217



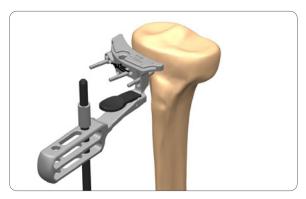


Figure 17

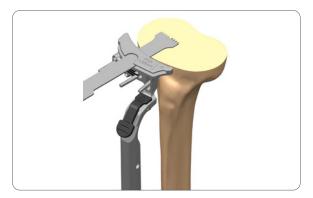


Figure 18

Proximal Tibia

Proximal Tibia Resection

1. With the Adjustable Tibia Stylus set to the desired resection level, using non-headed 65mm pins, pin the cutting guide in position through the holes marked '0.' For additional fixation, a headed or non-headed 65mm pin can be inserted through the oblique pin hole.

Note: To do an extramedullary alignment check, remove alignment tube and replace with the EM alignment guide handle. Place the extramedullary alignment rod through the EM alignment guide handle (**Figure 17**).

2. Remove the Tibia Stylus. Resect the proximal tibia (**Figure 18**) and remove the cutting guide.

Note: If an uncaptured saw cut is desired, the resection can be performed by cutting on top of the block. An additional 3mm will be needed to account for this offset.

Tip: If additional resection is needed, the cutting guide can be shifted to the holes marked '2' or '4' for an additional +2mm or +4mm of resection, respectively.

3. To remove assembly, depress the superior button on the Alignment tube to disengage from the cutting block.



EM Macro Alignment Tube 74016231



Adjustable Footed Stylus 74016229



Tibial Cutting Guide 3 Degree Left 74016216 Right 74016217







EM Alignment Guide Handle 74016213

VNR Extramedullary Alignment Rod 71440302

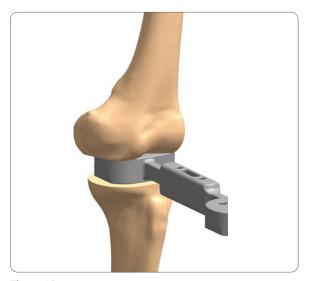


Figure 19

Initial Gap Assessment

Extension Gap

Note: If performing a BCS surgery and the PCL has not already been removed, excise completely the entire PCL attachment from the femoral intercondylar notch with either a cautery or scalpel to prevent it from affecting the assessment. The femoral box prep will not completely detach all fibers of the PCL.

Tip: Assess the extension gap prior to making the posterior cut as removing the posterior condyles can relax the posterior tissue and create a false sense of increased extension laxity.

Ensure that all posterior osteophytes are removed prior to assessing the extension gap. Posterior osteophytes at this stage may result in inaccurate balance once all resections are performed.

1. Insert the Extension Spacer Block into the extension space. The 10mm end of the Extension Spacer Block should easily insert into the extension gap. (Figure 19).

Tip: Use the 10mm side as a gauge to ensure a minimum of 1mm of extension laxity.

Note: The 10mm side of the Extension Spacer Block has a 20mm thickness, which accommodates a standard size implant and 9mm insert (19mm) plus 1mm of laxity. Attach the 12mm Spacer Plate to the 9mm end for large Femoral Component sizes (9 or 10), as they have additional distal resections and 21mm of total thickness.

2. To adjust thickness of Extension Spacer Block, shims (11mm, 12mm, 13mm, etc.) can be added as needed to the 9mm end to determine the extension space.

Tip: The Extramedullary Alignment Rod can be inserted through the Extension Spacer Block to check limb alignment.







Spacer Plate Shim 11mm 74016257 Alignment Rod **12mm** 74016258 13mm 74013721 **15mm** 74013722

18mm 74013723

VNR Extramedullary 71440302



Figure 20



Figure 21

Initial Gap Assessment

Flexion Gap

Note: If performing a BCS surgery and the PCL has not already been removed, excise the entire PCL attachment from the femoral intercondylar notch with either a cautery or scalpel as the PCL has been shown to alter the flexion assessment.

- 1. Assemble the EM Alignment Guide Handle to the Flexion Spacer Block.
- 2. With the knee flexed to 90°, place the Flexion Spacer Block into the joint space, allowing the flat surface to reference the resected tibial surface and the stepped, articular side to reference the native posterior femoral condyles (**Figure 20**).
- 3. Apply a varus/valgus force and assess the medial and lateral compartment laxity levels of the flexion space. Adjust thickness of shim (11mm, 12mm, etc.) as needed to determine the flexion space (**Figure 21**).

Note: No 10mm Spacer Plate Shim available.

4. When the flexion space is determined, compare the thickness selected relative to the extension space on the previous page.

Note: Remember any difference between the extension and flexion space assessments as this will affect how the femoral implant is positioned in the steps ahead (e.g., 10mm Ext – 11mm Flex = -1mm Flex Imbalance).

Scenario	Extension Gap	Flexion Gap	Next Step
1	Good	Good	Move on to Femoral Positioning and Sizing
2	Good	Tight	Set the JOURNEY® II Sizing Guide to resect more posterior Femur
3	Good	Loose	Set the JOURNEY II Sizing Guide to resect less posterior Femur (Example: 10mm extension space minus a 12mm flexion space = -2mm imbalance. Set the Sizing Guide to the -2mm position)
4	Tight	Good	Resect 2mm more Distal Femur
5	Tight	Tight	Resect 2mm more Proximal Tibia
6	Tight	Loose	Resect 2mm more Distal Femur and determine if larger tibial insert can be used. If not, set the JOURNEY II Sizing Guide to resect less posterior Femur
7	Loose	Good	Set the JOURNEY II Sizing Guide to resect more posterior Femur and use a thicker tibial insert (Example: 11mm extension space minus an 10mm flexion space = +1mm imbalance. Set the Sizing Guide to the +1mm position)
8	Loose	Tight	Set the JOURNEY II Sizing Guide to resect more posterior Femur and consider downsizing the Femur
9	Loose	Loose	Implant thicker Tibial Insert







Flexion Spacer Block 74016255



Spacer Plate Shim 11mm 74016257 **12mm** 74016258

13mm 74013721 **15mm** 74013722

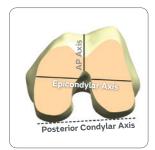




Figure 22

Figure 23

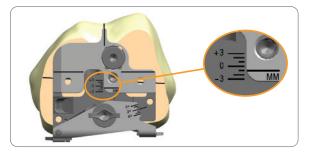


Figure 24

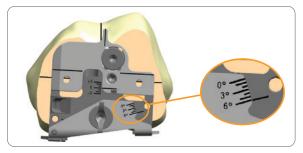


Figure 25

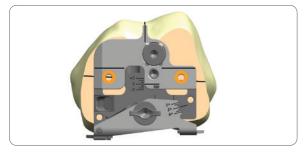


Figure 26

Femoral Positioning and Sizing

- 1. Optional: Mark the A/P and epicondylar axis on the femur (**Figure 22**).
- 2. Place the (left or right) JOURNEY II DCF Sizing Guide on the resected distal femur. With the medial paddle contacting the posterior medial condyle and the sizing guide flush to the distal resection, place a 45mm headed pin through the hole just above the medial paddle (**Figure 23**). This will secure the sizing guide for the remainder of its use.
- 3. If there exists a known flexion/extension imbalance, unlock, translate and relock the drill guide appropriately (**Figure 24**).

Note: For example, a 10mm extension space minus an 11mm flexion space = -1mm imbalance. Therefore, the drill guide should be translated to the -1mm position.

Note: Do not translate the drill guide for anterior referencing. Anterior referencing, if desirable, is accomplished with the A/P Cutting Block.

4. Ensure that the lateral paddle contacts the posterior lateral condyle. Begin with the paddle set to 3°. Rotate away from 3° if it is desirable to match the A/P or epicondylar axis or if it is desirable to balance the medial and lateral flexion gaps (Figure 25).

Note: Each degree of rotation away from 3° is approximately 1mm deviation away from the lateral condyle (eg at 6°, 3mm of implant material is added to the lateral flexion gap).

 Once both the A/P and rotational measures are desirable relative to the anatomic landmarks, drill about a 1 inch (25mm) deep hole through each of the two holes in the drill guide (Figure 26).



JOURNEY II TKA Femoral Sizing Guide Left 74012455



JOURNEY II TKA Femoral Sizing Guide Right 74012456

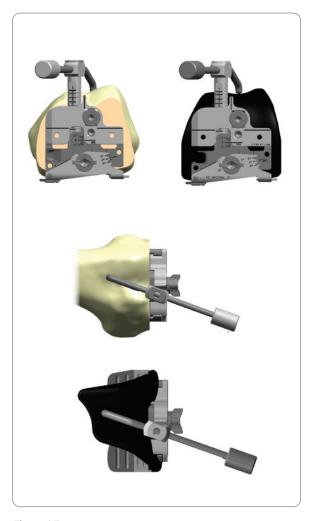


Figure 27

Femoral Positioning and Sizing

6. Finally, assemble the JOURNEY° Sizing Stylus to the guide and estimate the A/P femoral size.

Position the stylus tip just lateral of the anterior trochlear sulcus (**Figure 27**). If desired, use the indicated size Femoral Trial to compare the ML width before selecting which size A/P Cutting Block to use.

Design note: The JOURNEY II DCF Sizing Guide is designed to reference the posterior condyles. At 3° the guide will make A/P resections at 3° externally rotated from the posterior condylar axis. The guide also allows for rotation between 0° and 6° relative to the posterior condylar axis.





Figure 28



Figure 29

Femoral A/P and Chamfer Resections

1. Position the spikes on the DCF A/P Femoral Block into the pre-drilled holes (Figure 28). Use the Mallet to impact the A/P Block assembly until the block is flush with the resected distal femur. Remove the A/P Block Impactor.

Note: The posterior resection will match the implant thickness when the highlighted indicator in the A/P Block knob is aligned with "Post. Ref".

Note: The A/P Femoral Cutting Block allows adjustment of up to 2mm either anteriorly or posteriorly.

2. Use the Resection Check to check the location of the anterior cutting slot. Make any necessary anterior/posterior adjustments to avoid over stuffing the patella femoral joint, over stuffing the flexion space or femoral notching (Figure 29).

Note: If 2mm upshift is not enough to avoid notching, select the next largest A/P cutting block size and adjust until notching is avoided.

Design note: The difference between JOURNEY® II TKA femoral implant sizes is 3mm on average.



JOURNEY DCF AP JOURNEY DCF femoral cutting block Size 5 74012415



AP femoral block impactor 74012421



Hex driver 115035



Resection Check 74016271



Figure 30

Femoral A/P and Chamfer Resections

3. Use two headed 45mm pins through the medial and lateral fixation holes on the cutting block (**Figure 30**).

Note: Any bone spikes placed in either the medial or lateral anterior spike holes should be removed before making the anterior chamfer resection.

- 4. Complete the cuts in the order indicated on the block:
 - 1. Anterior
 - 2. Anterior Chord
 - 3. Posterior
 - 4. Posterior Chamfer
 - 5. Anterior Chamfer

Note: While performing the posterior and posterior chamfer resections use careful placement of retractors to protect the Popliteus Tendon attachments to the femur. Releasing the Popliteus Tendon can destabilize the knee laterally in flexion.

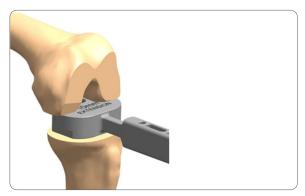


Figure 31

Resected Flexion Gap Assessment

1. The 10mm end of the Extension Spacer Block should easily insert into the flexion gap in 105° of flexion (due to 15° posterior cut) (**Figure 31**).

Tip: Use the 10mm side as a gauge to ensure a minimum of 1mm of flexion laxity.

Note: The 10mm Extension Spacer Block has a 20mm thickness, which accommodates a standard size implant and 9mm insert (19mm) plus 1mm of laxity. Attach the 12mm Spacer Plate to the 9mm end for large Femoral Component sizes (9 or 10), as they have additional distal resections and 21mm of total thickness.

 If the 10mm end of the Extension Spacer Block goes in tight in flexion and loose in extension, consider downsizing the femur.
 If the 10mm end goes in tight in flexion and extension, consider taking 2mm more tibia.





Extension Spacer Block 74016254 Spacer Plate Shim, 12mm 74016258

Downsizing Femoral Component

- Place the smaller DCF A/P Block into the pre-drilled holes. Turn the center knob of the A/P Block until either the anterior resection cutting slot is aligned with the anterior resection or positioned as desired. This can be verified using the Resection Check.
- 2. Secure the A/P Block to the distal femur and remake the cuts as indicated on the block: anterior, anterior chord, posterior, posterior chamfer and anterior chamfer.

Additional Distal Resection

- 1. If the pre-drilled holes in the anterior cortex can be located, place two non-headed 65mm pins into the anterior femur. Place the Distal Cutting Block over the non-headed pins through the spike holes at the desired resection level.
- 2. If the pre-drilled holes cannot be found, place the Resection Check through the Distal Block resection slot and position the plane onto the distal resection. Pin the Distal Block through the "0" holes. Remove the Resection Check and then shift the block to the desired resection level, pin obliquely and remake the distal resection.
- 3. Place the A/P Cutting Block into the pre-drilled holes on the distal resection. Turn the center knob of the A/P Block until the anterior resection cutting slot is aligned with the anterior resection. This can be verified using the Resection Check.
 - **Tip:** Due to the flexed posterior resections taking more distal resection will create a small gap posteriorly (i.e. 0.5mm gap for 2mm additional distal resection). Some surgeons will look to move the A/P Cutting Block 1mm anteriorly to move the gap to the anterior cortex.
- 4. Secure the A/P Cutting Block to the distal femur and remake the cuts as indicated on the block: anterior, anterior chord, posterior, posterior chamfer and anterior chamfer.





Resection Check 74016271

Distal Cutting Block Standard 74016205

SPEED PIN Non-Headed 65mm 74013480



Figure 32



Figure 33

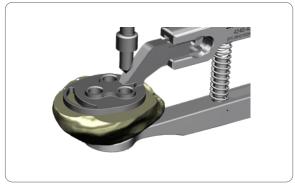


Figure 34

Patella Preparation: Resection Technique

The recommended time to prepare the patella is after all tibial and femoral cuts are made, but prior to trial placement. In some cases, the patella is cut just after the arthrotomy to facilitate exposure.

Evert the patella, or at least partially evert the patella to 90°, measure its thickness and determine the appropriate diameter implant.

1. Measure the overall thickness of the patella with the Caliper and assess how much bone to remove based on selected patella implant thickness (**Figure 32**).

Note: Round patella options come in 9mm and/or 7.5mm. See chart below for Oval patella options.

2. Determining the depth of cut (usually based on patella implant thickness) and dial in the stylus on the patella saw guide to have the corresponding resection level. Clamp the patella between the jaws of the guide (**Figure 33**).

Note: It is recommended to leave at least 12mm of residual patella to minimize the risk of fracture.

- 3. Resect the patella through slots of the dedicated saw guides (**Figure 33**).
- 4. Assess size (diameter) of the patella with the sizing guides.
- 5. Select the appropriate diameter Patella Drill Guide and slide it onto the Resection Patella Clamp. Attach the Assembly to the resected patella and tighten to the patella.
- 6. Use the Patella Peg Drill to drill for the three peg holes through the Patella Drill Guide until the drill bottoms out in the guide (**Figure 34**).
- 7. Remove the Patella Resection Clamp and Drill Guide from the patella.
- 8. Place the Round Patella Trial onto the resected patella. Use the Caliper to reassess the patella thickness.

Oval Patella sizing options



Classic Patella Saw Guide 42404211



Sizing Guides 74015461



Resection Clamp 42404321





Peg Drill 74014748



Figure 35



Figure 36

Patella Preparation: Reaming Technique

- 1. Measure the overall thickness of the patella with the caliper. Assess how much bone to remove based on selected patella implant thickness (**Figure 35**).
 - Note It is recommended to leave at least 12mm of residual patella. Depth gages allows 10mm and 12mm depth of ream (**Figure 36**).
- 2. Attach the Reaming Patella Clamp with appropriate collet, based on patella diameter, to the patella and tighten the reamer guide on the patella.
- 3. Attach the Patella Reamer Shaft with depth stop to the drill and lower the reamer through the Patella Clamp until the reamer dome contacts the patella.
- 4. Place the Depth Gage on the top of the patella collet around the reamer shaft. Use Biconvex side of depth gage if using biconvex patella implant. Use Resurfacing side if using Round patella implant (**Figure 36**).
- 5. Lower the Patella Depth Stop until it contacts the Patella Depth Gage.
- 6. Remove the Depth Gage.
- 7. Ream the patella until the depth stop engages the patella clamp (**Figure 36**).

Note: Outcome data reported in some registries suggest that resurfacing the patella during primary TKA should be considered since it may decrease the rate of revision, provided the patient's anatomy. ^{13,14‡}



Calipers 114943



Reaming Clamp 42404322



Reaming Collet











Depth Stop 71440427

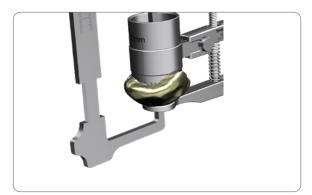


Figure 37

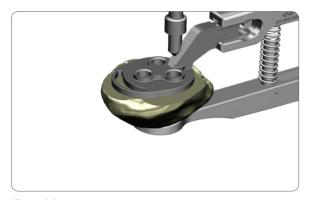


Figure 38

Patella Preparation: Reaming Technique

Biconvex patella (inset)

8. If the Biconvex design is selected, use a towel clip to insert the appropriate diameter Biconvex Patella Trial into the recess in the patella. Use the Patella Caliper to reassess the patella thickness.

Round patella (onset)

- 9. If the Round Patella design is selected, use the Caliper to reassess the patella thickness (**Figure 37**).
- 10. Remove the Patella Reamer Collet from the Patella Reamer Guide.
- 11. Select the appropriate diameter Patella Drill Guide and slide it onto the Patella Reamer Guide. Attach the Patella Reamer Guide Assembly to the reamed patella and tighten the reamer guide on the patella (**Figure 38**).
- 12. Use the Patella Peg Drill to drill the three pegs through the Patella Drill Guide until the drill bottoms out in the guide (**Figure 38**).
- 13. Remove the Patella Reamer Guide and drill guide from the patella.
- 14. Place the Round Patella Trial onto the resected patella. Use the Patella Caliper to reassess the patella thickness.

Note: All GENESIS° II patellae are designed for use with JOURNEY° II Total Knee System.

Note: To decrease the patella thickness further, depress the button on the depth stop to raise it on the Patella Reamer Shaft. Each tooth adjustment will ream an additional 1mm. Engage the Patella Reamer back into the Patella Reamer Collet and ream the patella until the Patella Depth Stop engages the Patella Reamer Collet.



74014748





Figure 39



Figure 40

Tibial and Femoral Trialing

1. Select the baseplate trial based upon best fit and coverage on the resected tibia. Set position of the tibial baseplate based upon the anatomic landmarks of the tibia (best fit coverage and medial third of the tubercle). Pin the baseplate using two short bone spikes (**Figure 39**).

Tip: If desired, for additional fixation, a headed 45mm pin can be used in the anterior medial pin hole.

- 2. Place the Femoral Trial onto the femur by positioning the proximal edge of the posterior condyles at the proximal end of the posterior resection.
- 3. Impact on the angled surface of the Femoral Trial Impactor to rotate the Femoral Trial from posterior to anterior until the distal surface is completely flush with the distal resection (**Figure 40**).
- 4. Place a short bone spike in the anterior flange to secure the Femoral Trial to the femur. Loosen the lock knob of the Femoral Trial Impactor and remove anteriorly, leaving the trial in place.





Femoral Trial Impactor 74012514





Figure 41

JOURNEY® II CR Notch Preparation

- 1. Using the angled face on the femoral trial as the guide, remove the anterior intercondylar femoral bone using a narrow sawblade (**Figure 41**).
- 2. Select the appropriate size JOURNEY II CR notch trial and engage the anterior portion of the notch trial first. Then use the femoral implant impactor to impact the posterior portion of the notch trial until it sits flush with the femoral trial (**Figure 41**).

Note: The intercondylar notch preparation removes the bone allowing for a deepened trochlear groove.

Note: Impaction of the notch trial self-preps for the posterior gussets on the femoral implant.

3. Use the Lug Drill to prepare for the femoral lugs by drilling to the bottom of both distal holes in the femoral trial (**Figure 41**).



Modular Impact Handle 74016242



Notch Trial

74031364

2



JOURNEY II CR Femoral Lug Drill 74013480



JOURNEY II CR Femoral Implant Impactor 74016252

JOURNEY® II BCS Box Preparation

1. Insert the appropriate size JOURNEY II BCS Box Prep Guide into the T-slot of the Femoral Trial from the anterior side until the pegs on the Box Prep Guide engage in the Femoral Trial

Tip: If the pegs on the Box Prep Guide do not automatically engage, apply hand pressure down to manually engage pegs.

Tip: If the power equipment has "Drill" and "Reamer" settings, ensure "Drill" setting is selected and allow the PS Box Reamer

Handle. Insert the Chisel into the posterior portion of the BCS Box Prep Guide and impact until flush. Repeat punching on anterior portion (**Figure 44**). Use underside of strike plate to

4. Remove the BCS Box Prep Guide by lifting up on the outside

6. Position the anterior tabs of the JOURNEY II BCS Cam Trial into the Femoral Trial's anterior recess and rotate the Cam Trial posteriorly until the Femoral Trial detents have secured

casing to disengage the pegs and sliding anteriorly.

5. Remove any remaining bone debris within the box

2. Insert the PS Box Reamer into the BCS Box Prep Guide and ream posteriorly first and then anteriorly (**Figure 43**).

to reach maximum speed before engaging the bone.

3. Connect the Modular Box Chisel to the Modular Impact

(Figure 42).

remove.

preparation area.

the Cam Trial (Figure 45).



Figure 42

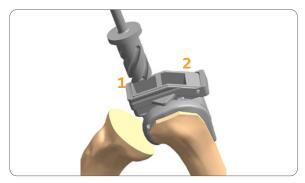


Figure 43



Figure 44

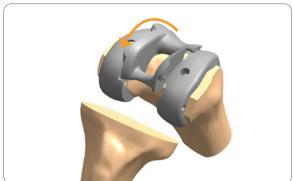


Figure 45



PS Box Reamer 74016269

Modular Impact Handle 74016242



Modular Box Chisel 74036248



JOURNEY II BCS Cam Trial 74032145



 BCS Box Prep Guides

 SZ 1-2
 74012574

 SZ 3-5
 74012575

 SZ 6-8
 74012576

SZ 9-10 74012577



Figure 46



Figure 47



Figure 48

Tibial Insert Trialing

1. Place the appropriate size and desired thickness Articular Insert Trial onto the Tibia Baseplate Trial.

The insert trial pitchfork can aid in placement of the insert trial (**Figure 46**).

Tip: Placing the insert trial into the trial baseplate can be difficult because of the high medial posterior lip of the insert. The best technique is to flex the knee to 120°, push in the insert as far as possible and bring the leg out into full extension.

Note: To trial thicknesses 11mm and higher, assemble the appropriate thickness Universal Insert Spacer with the 9mm Articular Insert Trial.

2. Perform trial range of motion and assess laxity and balance (Figure 47). The knee should drop passively under full extension. Under varus/valgus stresses, there should be approximately 1-2mm of gapping both medially and laterally throughout the range of motion. There should be no increase in resistance as the knee flexes from 0° to 90°. If the knee is too tight, try a thinner insert or resect more tibia.

Tip: A cautery tip is ~2mm wide.

3. Once the trial assessment is completed and the correct insert thickness has been determined, take the leg into full extension (**Figure 48**). Use a cautery to mark the location of the laser etch lines on the anterior cortex of the tibia to reference the baseplate rotation.

Tip: In most cases, rotational alignment of the tibial baseplate based upon 1) best fit and coverage, 2) the medial third of the tubercle, and 3) the cautery mark will all match.



Articular insert trial 74035241



Universal Tibia Baseplate Trial 74033804



Insert Trial Pitchfork 74034196



Universal Insert Spacer 74016263



Universal pin driver 71513331



Figure 49

Tibial Keel Preparation

- 4. Once the trial assessment is complete, and final implant sites determined, remove the Insert Trial and Femoral Trial.
- 5. Optional Step: Use the Tibial Drill to prepare the canal.

Note: An alternative method to setting tibial rotation is to use the tibia trial bullet. This can be used once the central canal has been prepared but before the keel preparation. With the tibial trial not pinned to the tibial surface, insert the bullet into the prepared canal, insert desired articular insert trial and appropriate femoral trial. Assess baseplate rotation and use a cautery to mark correct position. Then pin, remove bullet and prepare keel.

- 6. Connect the appropriate size Modular Fin Punch to the Modular Impact Handle. Impact through the baseplate trial (**Figure 49**). Use the underside of the strike plate to remove.
- 7. Remove the two short bone spikes and anterior pin, if used, with the JOURNEY® II TKA Removal Tool, and remove the baseplate trial.

Note: If a constrained insert has been selected, the patient should have good femoral bone quality and a tibial stem is recommended.

JOURNEY II Removal Tool 74012825

Modular Impact Handle 74016242



Modular NP Fin Punch SZ 1-2 74016244 SZ 3-4 74016245

SZ 5-6 74016246 SZ 7-8 74016247



11mm Tibial Drill 71440040



Tibia Bullet 71442196



Figure 50



Figure 51

Option 1: Outer-Grip Impactor (JOURNEY° II CR and BCS)

- 1. Assemble the JOURNEY II Bumper onto the Outer Grip Locking Femoral Impactor.
- 2. Unthread the lock knob completely.
- 3. Press both outer levers to open both arms (Figure 50).
- 4. Position the Femoral Component to the Lateral and Medial distal condyles as shown on the bumper. Release the outer levers. Arms should mate with the notches on the medial and lateral edges of the Femoral Component.
- 5. Lock the knob until hand tight. Do not over tighten.

Option 2: JOURNEY II BCS Locking Femoral Impactor (JOURNEY II BCS only)

- 1. Assemble the Femoral Implant Impactor Bumper (available in Left and Right) onto the Femoral Implant Impactor.
- 2. Unthread the lock knob completely.
- 3. Press the thumb lever on the posterior side to push the dual arm mechanism upwards.
- 4. Position the taller arm inside the posterior cam of the femoral component and rotate the shorter arm onto the anterior cam. Release the thumb lever (**Figure 51**).
- 5. Thread the lock knob until hand tight.

Cement Preparation

1. Mix and prepare cement for final implants and prepared bone surfaces.



JOURNEY II Outer Grip Bumper 74018903



Outer Grip Locking Femoral Impactor 74018902



JOURNEY Femoral Impactor Bumper 74012821



JOURNEY II BCS Locking Femoral Impactor 74012812



Figure 52

Tibial Component

- 1. Maximally flex the knee and place a thin bent Hohmann laterally and medially and an Aufranc Retractor posteriorly to sublux the tibia forward.
- 2. Suction the keel prep hole and avoid contaminating the implant cement interface surface with fat or other fluids prior to cement application.
- 3. Apply generous amounts of cement to the dry underside of the baseplate, keel and into the keel prep hole.
- 4. Connect the Modular Tibia Impactor to the Modular Handle. Use a mallet to fully seat the Tibial Baseplate Component onto the proximal tibia (**Figure 52**).

Optional Instrument: Use the Locking Tibia Impactor and a mallet to introduce the Tibial Baseplate Component onto the prepared proximal tibia. Release the locking tabs from the center island of the Baseplate Component. Finish with Modular Handle and Modular Tibia Impactor.

5. Remove excess cement.



Modular Impact Handle 74016242



Modular Universal Tibial Impactor 74016249



JOURNEY® II Locking Tibia Impactor 74016268

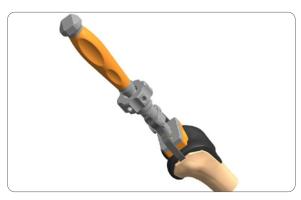


Figure 53



Figure 54



Femoral Component

- 1. Flex the knee to 90°, keeping the thin bent Hohmann laterally and removing the Aufranc retractor.
- 2. Apply generous amounts of cement to the dry inside surfaces of the femoral component and onto the prepared surfaces of the bone.

Tip: Care should be taken to avoid excess cement on the posterior aspect of the femur and femoral component. Excess cement that extrudes posteriorly is difficult to remove.

3. Place the Femoral Component onto the femur by positioning the proximal edge of the posterior condyles at the proximal end of the posterior resection (**Figure 53**).

Tip: Care should be taken when reverse impacting if implant removal is necessary.

- 4. Impact on the angled surface of the Femoral Implant Impactor to rotate the Femoral Component from posterior to anterior until the distal surface is completely flush with the distal resection.
- 5. Unthread the lock knob completely. Rotate the Femoral Implant Impactor posteriorly to disengage it from the Femoral Component.
- 6. Connect the Modular JOURNEY® Femoral Impactor to the Modular Impact Handle for final impactions (**Figure 54**).
- 7. Remove excess cement giving particular care to remove cement along the proximal portion of the femoral cam.
- 8. Extend the knee to remove cement anteriorly without retracting the proximal soft tissue.

Radiographic note: The JOURNEY II Total Knee System features an anatomical joint line in the A/P view. The distal condyles of the Femoral Component will present a 3° varus angle relative to the Tibial Component when correctly aligned.



JOURNEY II BCS Locking Femoral Impactor 74012812



Modular Impact Handle 74016242





Figure 55

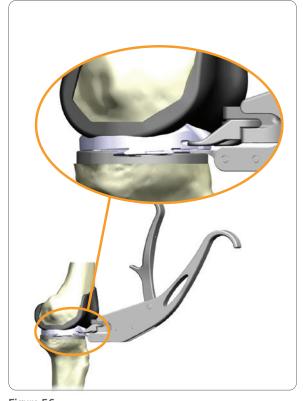


Figure 56

Patellar Component

- 1. Assemble the Patella Cement Clamp to the Clamp.
- 2. Apply bone cement to the patella.
- 3. Place the patellar implant onto the prepared patella.
- 4. Clamp the patellar implant into the bone and remove the extruded cement (Figure 55).

JOURNEY® II TKA articular insert

- 1. Clear any debris from the locking mechanism.
- 2. Manually slide the insert into the tibial baseplate engaging the locking mechanism until the insert periphery is within 1-2mm of the Tibial Component periphery.

Note: The articular insert can be difficult to insert because of the high medial posterior lip. The best technique is to flex the knee to 110°, push in the insert as far as possible and bring the leg out into full extension. Externally rotating the tibial in flexion can also help with getting in the insert.

3. Insert the tip of the Articular Insert Assembly Tool into the center notch of the anterior lock detail (handle up) and engage the two tabs of the Tool into the two recesses on the anterior periphery of the insert (Figure 56).

Note: Make sure the tool is level with the plane of the baseplate.

4. Squeeze the tool handle until the insert is fully seated within the Tibial Component. The insert should not move under any pressure in flexion or extension.





Articular insert assembly tool 74018911

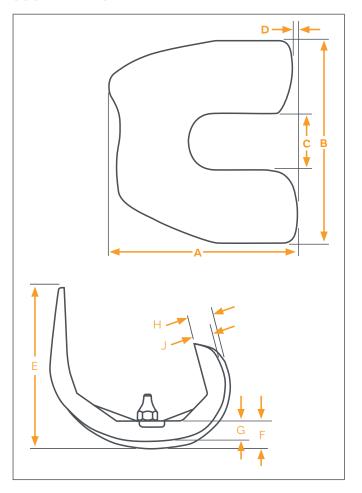
Closure

- 1. Close the arthrotomy by placing three O-VicrylTM sutures at the superior border of the patella just distal to the VMO. A stitch is placed to close the VMO fascia. The remainder of the arthrotomy is closed in the standard fashion.
- 2. Perform routine subcutaneous and skin closure.

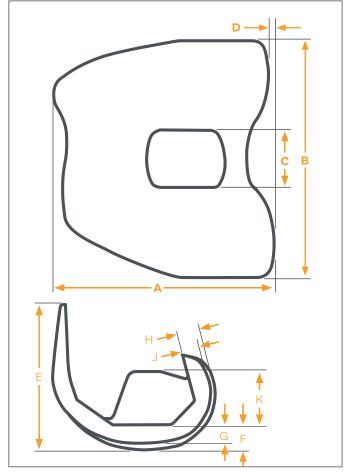
Tip: Closing the knee in flexion may benefit early rehab.

Femoral Component Dimensions (mm)

JOURNEY[®] II CR



JOURNEY II BCS

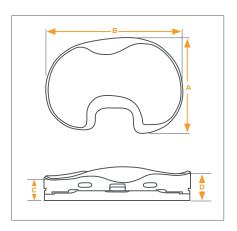


	Sterior	etal	width.	T COUGAIG	.d ^{XX}	a a	8 ,2	edial
Anterior	Medial	ate Noted	60kg	Flange He	Ojstal Mec	ojstallates Ojstalknes	Posteriores	Poste
						G	Н	
51.7	59.0	19	1.7	49.5	9.5	7	9	7.4
53.7	60.0	19	1.7	50.7	9.5	7	9	7.4
56.7	61.5	19	1.7	52.5	9.5	7	9	7.4
59.7	64.5	19	1.7	54.3	9.5	7	9	7.4
62.7	67.5	19	1.7	56.0	9.5	7	9	7.4
65.7	70.5	19	1.8	57.7	9.5	7	9	7.4
68.8	73.5	19	1.8	59.5	9.5	7	9	7.4
71.8	76.0	19	1.8	61.2	9.5	7	9	7.4
75.8	80.0	19	1.8	63.5	11.5	9	11	9.4
79.8	82.0	19	1.8	65.7	11.5	9	11	9.4
	51.7 53.7 56.7 59.7 62.7 65.7 68.8 71.8	A B 51.7 59.0 53.7 60.0 56.7 61.5 59.7 64.5 62.7 67.5 65.7 70.5 68.8 73.5 71.8 76.0 75.8 80.0	A B C 51.7 59.0 19 53.7 60.0 19 56.7 61.5 19 59.7 64.5 19 62.7 67.5 19 65.7 70.5 19 68.8 73.5 19 71.8 76.0 19 75.8 80.0 19	A B C D 51.7 59.0 19 1.7 53.7 60.0 19 1.7 56.7 61.5 19 1.7 59.7 64.5 19 1.7 62.7 67.5 19 1.7 65.7 70.5 19 1.8 68.8 73.5 19 1.8 71.8 76.0 19 1.8 75.8 80.0 19 1.8	A B C D E 51.7 59.0 19 1.7 49.5 53.7 60.0 19 1.7 50.7 56.7 61.5 19 1.7 52.5 59.7 64.5 19 1.7 54.3 62.7 67.5 19 1.7 56.0 65.7 70.5 19 1.8 57.7 68.8 73.5 19 1.8 59.5 71.8 76.0 19 1.8 61.2 75.8 80.0 19 1.8 63.5	A B C D E F 51.7 59.0 19 1.7 49.5 9.5 53.7 60.0 19 1.7 50.7 9.5 56.7 61.5 19 1.7 52.5 9.5 59.7 64.5 19 1.7 54.3 9.5 62.7 67.5 19 1.8 57.7 9.5 68.8 73.5 19 1.8 59.5 9.5 71.8 76.0 19 1.8 61.2 9.5 75.8 80.0 19 1.8 63.5 11.5	A B C D E F G 51.7 59.0 19 1.7 49.5 9.5 7 53.7 60.0 19 1.7 50.7 9.5 7 56.7 61.5 19 1.7 52.5 9.5 7 59.7 64.5 19 1.7 54.3 9.5 7 62.7 67.5 19 1.7 56.0 9.5 7 65.7 70.5 19 1.8 57.7 9.5 7 68.8 73.5 19 1.8 59.5 9.5 7 71.8 76.0 19 1.8 61.2 9.5 7	A B C D E F G H 51.7 59.0 19 1.7 49.5 9.5 7 9 53.7 60.0 19 1.7 50.7 9.5 7 9 56.7 61.5 19 1.7 52.5 9.5 7 9 59.7 64.5 19 1.7 54.3 9.5 7 9 62.7 67.5 19 1.7 56.0 9.5 7 9 65.7 70.5 19 1.8 57.7 9.5 7 9 68.8 73.5 19 1.8 59.5 9.5 7 9 71.8 76.0 19 1.8 61.2 9.5 7 9 75.8 80.0 19 1.8 63.5 11.5 9 11

	Ariterior	Post	aterat wid	ith Posterior	, trauge H	Distal Me	olic Stallar	ess eight Posteidkre	55 sterior C	s Botheight
Size	Α				E			Н	J	K
1	51.7	59.0	16.5	1.7	49.5	9.5	7	9	7.4	16.0
2	53.7	60.0	16.5	1.7	50.7	9.5	7	9	7.4	17.0
3	56.7	61.5	16.5	1.7	52.5	9.5	7	9	7.4	17.0
4	59.7	64.5	16.5	1.7	54.3	9.5	7	9	7.4	20.5
5	62.7	67.5	16.5	1.7	56.0	9.5	7	9	7.4	20.5
6	65.7	70.5	16.5	1.8	57.7	9.5	7	9	7.4	22.0
7	68.8	73.5	16.5	1.8	59.5	9.5	7	9	7.4	22.0
8	71.8	76.0	16.5	1.8	61.2	9.5	7	9	7.4	22.0
9	75.8	80.0	16.5	1.8	63.5	11.5	9	11	9.4	22.8
10	79.8	82.0	16.5	1.8	65.7	11.5	9	11	9.4	22.8

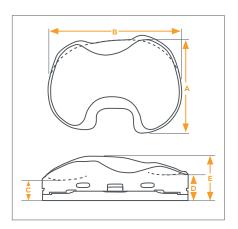
Tibial Insert Dimensions (mm)

JOURNEY® II CR



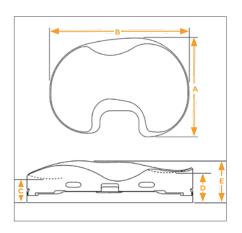
	Anterrejion	rediated a	Medianes	Lateroknes	
9mm CR Insert	Α	В	С	D	
Sz 1-2	42	60	9.6	12.0	
Sz 3-4	48	68	9.6	12.0	
Sz 5-6	52	74	9.6	11.9	
Sz 7-8	56	81	9.6	11.9	

JOURNEY II Deep Dished



	Anterior Posterior	redial ateral	Medial	S Lateral Les	Anteriol ess
9mm Deep-Dished Insert	Α	В	С	D	E
Sz 1-2	42	60	9.6	12.1	16.9
Sz 3-4	48	68	9.6	12.1	18.1
Sz 5-6	52	74	9.6	12.1	19.3
Sz 7-8	56	81	9.6	12.1	19.9

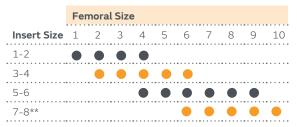
JOURNEY II Medial Dished



	Anterior Posterior	Medial	Redial Ress	Lateral Less	Arterioness
9mm Medial-Dished Insert	Α	В	С	D	Е
Sz 1-2	42	60	9.6	12.1	16.2
Sz 3-4	48	68	9.6	12.1	16.9
Sz 5-6	52	74	9.6	12.1	18.8
Sz 7-8	56	81	9.6	12.1	19.5

Insert offering/compatibility (Medial Dished and Deep Dished)

JOURNEY II CR tibial insert is completely interchangeable with all size femoral components.



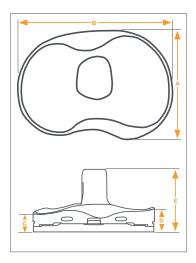
**Size 7-8 tibia inserts can also be used with size 9 tibia baseplates $% \left(1\right) =\left(1\right) \left(1\right) \left($

Minimum polyethylene thickness for a 9mm metal-backed component is 6.7mm on the medial side.

^{*} Baseplate thickness included.

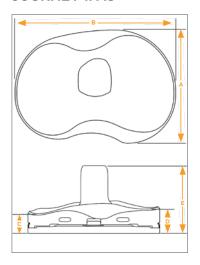
Tibial Insert Dimensions (mm)

JOURNEY® II BCS



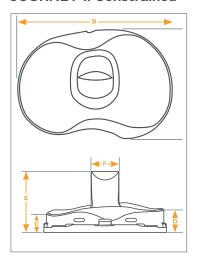
	Anterio ser	"se segial atera	* Wedigi Cki	'stersicks	POST Height
9mm Insert	Α	В	С	D	Е
Size 1-2	42	60	9.6	11.9	34.1
Size 3-4	48	68	9.6	11.9	35.1
Size 5-6	52	74	9.6	11.9	38.6
Size 7-8	56	81	9.6	11.9	40.1

JOURNEY II AS



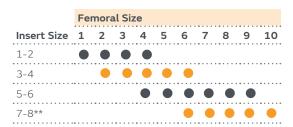
	Anterior Post	redial ater	al redial	kues latetal thick	post Height
9mm Insert	Α	В	С	D	E
Size 1-2	42	60	9.6	12.1	34.1
Size 3-4	48	68	9.6	12.1	35.1
Size 5-6	52	74	9.6	12.1	38.6
Size 7-8	56	81	9.6	12.1	40.1

JOURNEY II Constrained



	Arterio,	erio Medial	stal Wediat	ckue latelaj	Kile, 602, He	ingrit, 602 Mig
9mm Insert	Α	В	С	D	E	F
Size 1-2	42	60	9.6	12.1	34.1	16.1
Size 3-4	48	68	9.6		35.3	16.1
Size 5-6	52	74	9.6	12.1	38.6	16.1
Size 7-8	56	81	9.6	12.1	40.1	16.1

Insert offering/compatibility (All)



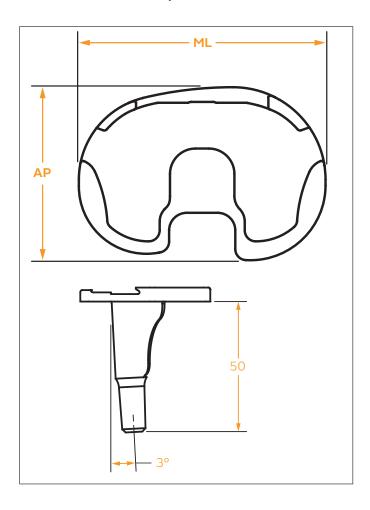
^{**}Size 7-8 tibia inserts can also be used with size 9 tibia baseplates.

 $^{\\ \}text{Minimum polyethylene thickness for a 9mm metal-backed component is 6.7mm on the medial side.}$

^{*} Baseplate thickness included.

Tibial Baseplate Dimensions (mm)

JOURNEY® Tibial baseplate

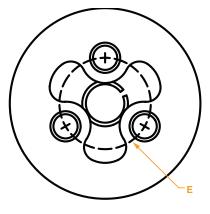


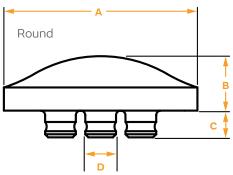
Arte tene	Mediteral
oriot iot	iial 1

	80	13-
Size	A/P	M/L
1	42	60
2	45	64
3	48	68
4	50	71
5	52	74
6	54	77
7	56	81
8	59	85
9	61	89

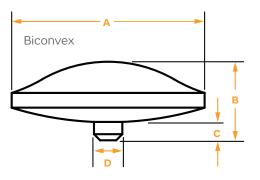
Note Stem sloped 3° posteriorly. Stem length is 50mm on all nonporous sizes.

JOURNEY® Patella Dimensions (mm)

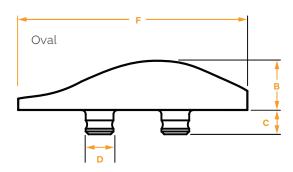




Round	Diameter	Thickness	PetHeiti	Pegliame	Sep Citcle
Size	Α	В	С	D	E
26mm Std	26	9	4.4	5.1	15.3
29mm Std	29	9	4.4	5.1	15.3
32mm Std	32	9	4.4	5.1	15.3
35mm Std	35	9	4.4	5.1	17.9
38mm Std	38	9	4.4	5.1	17.9
41mm Std	41	9	4.4	5.1	17.9



Diame	Thicks.	Petr	Sep.
Α	В	С	D
			4.7
			4.7
		0.1	4.7
			4.7
	A 23 26 29	A B 23 13 26 13 29 13	A B C 23 13 4.1 26 13 4.1 29 13 3.1



Oval	Diarnette	Thickness	SepHerr	PegDia	Pedonette	
Size	Α	В	С	D	Е	F
29mm Std	29	8.5	4.4	5.1	15.3	35
32mm Std	32	9.0	4.4	5.1	15.3	38
35mm Std	35	9.0	4.4	5.1	17.9	41
38mm Std	38	9.5	4.4	5.1	17.9	44
41mm Std	41	10.0	4.4	5.1	17.9	47



Figure 57



Figure 58



Figure 60

Fixed Femoral Alignment Technique

Instrument Assembly: Fixed Femoral Guide

1. Attach the appropriate Fixed Valgus Bushing (4-7 Degrees) to the Fixed Valgus Guide Base.

Tip: Position the bushing such that the appropriate hand ("LT" or "RT") orients toward "ANTERIOR" on the Valgus Guide.

2. Attach the desired Valgus Bridge to the Valgus Guide Base (**Figure 57**).

Note: The Valgus Bridge was designed to move anterior and posterior within the Valgus Guide to accommodate various patient morphology

3. Attach the IM rod to the T-handle and insert through the alignment assembly (**Figure 58**). IM rod will lock into the alignment assembly in one of four places (see **Figure 59**).

Note: There are two locking positions on the IM Rod. If the alignment assembly can make a full rotation around the IM Rod, the second lock has not engaged. Remove the IM Rod and reengage.

4. Attach the Distal Femoral Cutting block onto the Bridge. Positioning the block and the dial on the adjustable bridge at the primary ("0") resection level will ensure the cut will equal the distal thickness of the femoral prosthesis (**Figure 60**).

Note: The Distal Femoral Cutting block is designed to pivot medial and lateral to accommodate various patient morphology.

Tip: If surgeon preference is to pin the -2mm pin holes initially, it is recommended to add the Wide Distal Cut Block to the set.



Fixed Valgus Bushing 4 Degrees 74016206

5 Degrees 74016207 **6 Degrees** 74016208 **7 Degrees** 74016209



Fixed Valgus Guide Base 74016200



Fixed Valgus Bridge 74016202



T-Handle 71674576



Long 74016211 Short 74016212



Distal Cutting Block 74016205



Figure 61



Figure 62



Figure 63

Fixed Femoral Alignment Technique

Intramedullary Alignment

- 1. Open the femoral canal with the 9.5mm Intramedullary Drill. The drill has a 12mm step to open the entry point further (**Figure 61**).
- 2. Slide the Intramedullary Rod of the alignment assembly into the femoral canal until the Valgus Guide contacts the distal femur (**Figure 62**).

Note: There may be times when only one side of the guide will touch bone.

Note: To avoid a shallow resection, it is recommended to not push the Bridge all the way into the Valgus Guide until it has been seated on the distal surface.

Tip: Alternately, the Bridge can be assembled after seating the Valgus Guide onto the distal femur.

3. Orient rotation of the assembly neutral to the posterior condyles (**Figure 63**) insert a headed or non-headed 65mm pin into one or both of the oblique pin holes.

Note: Distal Cutting Guide will pivot to conform to the anterior bone geometry.



Fixed Valgus Bushing 4 Degrees 74016206

5 Degrees 74016207 **6 Degrees** 74016208 **7 Degrees** 74016209



Fixed Valgus Guide Base 74016200



Fixed Valgus Bridge 74016202



T-Handle 71674576



IM Rod Long 74016211 Short 74016212



Distal Cutting Block 74016205



Intramedullary drill, 9.5mm 74012111

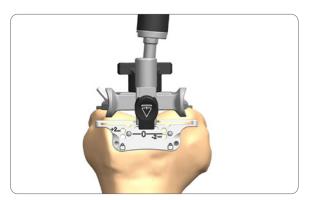


Figure 64

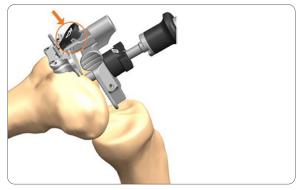


Figure 65

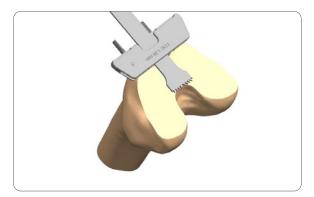


Figure 66

Fixed Femoral Alignment Technique

Distal Resection

 Using non-headed 65mm pins, pin the distal femoral cutting block to the anterior femur using the holes marked '0'.
 Once adequate distal femoral resection is noted, a headed or non-headed 65mm pin should be placed in one or both oblique pin holes for additional stability (Figure 64).

Note: Resection level can be adjusted using the alternate pin holes on the cutting block, -2mm or +2mm of bone.

Tip: The chamfer on the -2mm pin holes of the Standard Distal Cutting Block may cause pins to become stuck in the block. Place pin into pinhole before starting power.

Tip: The oblique pin holes on the Distal Cut Block may come in contact with the IM rod. If any resistance is present, stop and assess.

- 2. Push the button on the Valgus Bridge (**Figure 65**) to remove the alignment assembly from the incision site. Only the distal cutting block should remain on the femur.
- 3. Resect the distal femur (**Figure 66**) then remove the distal femoral cutting block.

Tip: If the distal femoral resection is not adequate, remove the oblique pin, and reposition the block through the pin holes marked +2mm and re-insert the oblique pin.



Fixed Valgus Bushing 4 Degrees 74016206

5 Degrees 74016207 **6 Degrees** 74016208 **7 Degrees** 74016209



Fixed Valgus Guide Base 74016200



Fixed Valgus Bridge 74016202



Distal Cutting Block 74016205



SPEED PIN Non-Headed 65mm 74013480

Introduction to Kinematic Alignment

Kinematic Alignment aims to restore the patient's pre-arthritic anatomy by:

- 1. Restoring the native femoral and tibial articular surfaces
- 2. Restore the native knee and limb alignments
- 3. Restore the native soft-tissue laxities of the knee.

The femoral and tibial instruments described in this section will allow for restoration of the patient's knee anatomy by aligning the resections in a way to remove the implant thickness on each condyle accounting for cartilage wear if present.

In this Kinematic Alignment technique, it is assumed that healthy cartilage is approximately 2mm. Therefore, the target resection depth for a worn condyle would be (Implant Thickness – 2mm).

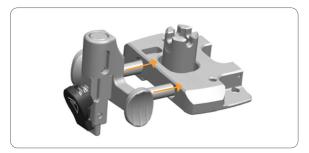


Figure 67

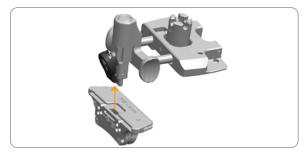


Figure 68



Figure 69



Figure 70

Distal Femoral Alignment Guide Assembly

1. Insert the Fixed Valgus Bridge into the appropriate, handed JOURNEY Kinematic Alignment Valgus Guide (Figure 67).

Note: The Valgus Bridge was designed to move anterior and posterior within the Valgus Guide to accommodate various patient morphology.

2. Attach the Distal Femoral Cutting block onto the Fixed Valgus Bridge (Figure 68).

Note: The Distal Femoral Cutting block is designed to pivot medial and lateral to accommodate various patient morphology.

3. Attach the Short IM rod to the T-handle and insert through the alignment assembly (Figure 69). IM rod will lock into the alignment assembly in one of four places.

Note: There are two locking positions on the IM Rod. If the alignment assembly can make a full rotation around the IM Rod, the second lock has not engaged. Remove the IM Rod and reengage.

4. Assess the distal femoral condyles for cartilage wear (medial, lateral or both), and place a 2mm shim on the worn side/s of the Kinematic Alignment Valgus Guide to accommodate for the cartilage wear (Figure 70).

Note: If a distal condyle is partially worn, use a ring curette to remove the remaining cartilage.



Fixed Valgus Bridge 74016202



JOURNEY KA Distal Short IM Rod Valgus Guide Left 42407565 **Right** 42407566



74016212

Distal Cutting Block 74016205



2mm Distal Cartilage Shim 42407562



Figure 71



Figure 72



Figure 73



Figure 74

Placing Femoral Alignment Guide

- 1. Open the femoral canal with the 9.5mm Intramedullary Drill. The drill has a 12mm step to open the entry point further (Figure 71).
- 2. Slide the Intramedullary Rod of the Kinematic Alignment assembly and pivot the Distal Valgus Guide until both sides contact the distal femur (Figure 72). Contacting both sides of the femur ensures that the resection will match the implant thickness accounting for cartilage wear

Note: To avoid a shallow resection, it is recommended to not push the Bridge all the way into the Valgus Guide until it has been seated on the distal surface.

3. Orient rotation of the assembly neutral to the posterior condyles and insert a non-headed 65mm pin into one of the distal holes to maintain rotation (Figure 73).

Note: Distal Cutting Guide will pivot to conform to the anterior bone geometry.

4. Using non-headed 65mm pins, pin the distal femoral cutting block to the anterior femur using the holes marked '0'. Once adequate distal femoral resection is noted, a headed or non-headed 65mm pin should be placed in one or both oblique pin holes for additional stability (Figure 74).

Tip: The oblique pin holes on the Distal Cut Block may come in contact with the IM rod. If any resistance is present, stop and assess.



Intramedullary drill,9.5mm 74012111



Fixed Valgus **Bridge** 74016202



JOURNEY KA Distal Short IM Rod Valgus Guide **Left** 42407565 **Right** 42407566



74016212



Distal Cutting Block 74016205



2mm Distal Cartilage Shim 42407562

Speed Pin 74013480



Figure 75

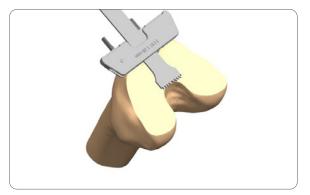
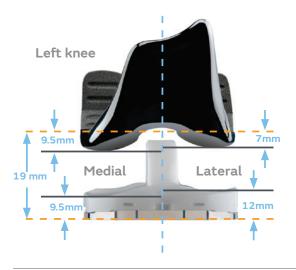


Figure 76

	Size	Distal Resection
Standard	1-8	9.5mm
Large	9-10	11.5mm



5. Push the button on the Valgus Bridge to remove the alignment assembly from the incision site (**Figure 75**). Only the distal cutting block should remain on the femur.

Distal Resection

- 1. Resect the distal femur (**Figure 76**) then remove the distal femoral cutting block.
- 2. Measure the distal cuts with the caliper to ensure that implant thickness was taken on both sides while accounting for 2mm of wear on the worn sides.

Note: JOURNEY II Femoral Thicknesses (Sizes 1-8)

Medial: 9.5mm Lateral: 7.0mm

Sizing note

The JOURNEY® II Total Knee System femoral component features a proportional distal resection for the Standard and Large sizes (see table).

Use preoperative templating to estimate the femur size to determine the appropriate distal resection.

If the approximate size is between a size 8 and size 9, it is recommended to make the distal resection for the larger of the two sizes and proceed as normal.







Kinematic Alignment Caliper 42407354



Figure 77



Figure 78



Figure 79

Proximal Tibia Assembly: Macro Extramedullary tibial alignment guide

1. Attach the EM Posterior Slope Guide to the Ankle Clamp by depressing the button on the Slope Guide and slide to the desired position (**Figure 77**).

Tip: The neck on the Slope Guide should orient toward the arms and dials of the Ankle Clamp.

Note: Each tooth is 1mm apart.

2. Attach the Macro EM Tibial Alignment Tube to the EM Posterior Slope Guide by depressing the inferior button on the Alignment Tube and sliding to the desired position (**Figure 78**). Once the button is released, the height will be locked in position.

Tip: The inferior button on Alignment Tube should face away from the arms of Ankle Clamp.

Note: Each tooth is 1mm apart.

3. Attach the appropriate hand tibial cutting block to the Alignment Tube by depressing the superior button on the Alignment Tube (**Figure 79**).

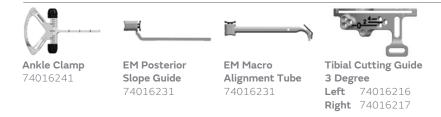




Figure 80



Figure 81



Figure 82

Placing Extramedullary Tibial Alignment Guide

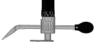
 Open the arms of the ankle clamp and attach alignment jig to the tibia. Adjust height and slope by depressing the buttons on the Macro Alignment Tube and EM Posterior Slope guide, respectively (Figure 80).

Note: Varus/valgus adjustments can be made by rotating the dial on the ankle clamp.

- 2. Once approximate resection level is set, use a headed 45mm pin to pin through the provisional slot in the Tibia Cutting Block (**Figure 81**).
- 3. Insert Adjustable Footed Tibia Stylus into the saw slot of the Cutting Guide (**Figure 82**).
- 4. Adjust the stylus to desired resection level by rotating the dial and reference the lateral tibial plateau with its respective implant thickness accounting for (and subtracting) cartilage wear if present.

Note: JOURNEY II Tibial Thicknesses

Medial: 9.5mm Lateral: 12.0mm



Adjustable Footed Stylus 74016229

SPEED PIN Non-Headed 65mm 74013480

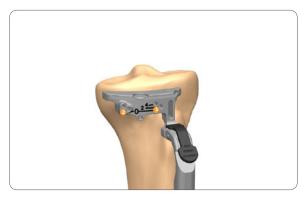


Figure 83



Figure 84



Figure 85

- 5. With the Adjustable Tibia Stylus set to the desired resection level on the lateral side, pin the cutting block on the lateral side by using a non-headed 65mm pin through the hole marked '0.' (Figure 83)
- 6. Repeat the same resection depth measurement on the medial side by adjusting the stylus to account for implant thickness and cartilage wear if present. Place a non-headed 65mm pin through the hole marked '0'. For additional fixation, a headed or non-headed 65mm pin can be inserted through the oblique pin hole.

Proximal Tibia Resection

- 1. Remove the Tibia Stylus. Resect the proximal tibia and remove the cutting guide (**Figure 84**).
- 2. Measure the proximal tibia cuts with the caliper to ensure that implant thickness was taken on both sides while accounting for 2mm of wear on the worn side/s

Note: JOURNEY® II Tibial Thicknesses

Medial: 9.5mm Lateral: 12.0mm

Tip: If additional resection depth is needed, the cutting guide can be shifted to the holes marked '2' or '4' for an additional +2mm or +4mm of resection, respectively.

- 3. To remove assembly, depress the superior button on the Alignment tube to disengage from the cutting block.
- If additional varus or valgus resection is needed, place the flat surface of Varus/Valgus Recut Block on the cut tibial surface to add an additional 2° in either direction (Figure 85).



42407354



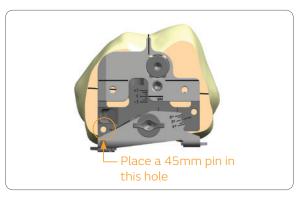


Figure 86



Figure 87

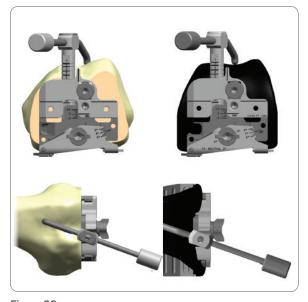


Figure 88

Femoral Rotation and Sizing

 Place the appropriate (left or right) JOURNEY[®] II DCF Sizing Guide on the resected distal femur with the rotation set to 3[®] to resect implant thickness from the posterior condyles. Place a 45mm headed pin through the hole just above the medial paddle to secure the sizing guide for the remainder of its use (Figure 86).

Note: Rotation is set to 3° for the JOURNEY II Femur due to the asymmetric posterior condyles.

- 2. Ensure that both medial and lateral paddles are contacting the posterior condyles with the guide set to 3°.
- 3. Once both the A/P and rotational measures are desirable relative to the anatomic landmarks, drill about a 1 inch (25mm) deep hole through each of the two holes in the drill guide (**Figure 87**).
- 4. Insert the JOURNEY Sizing Stylus to the guide and estimate the A/P femoral size. Position the stylus tip just lateral of the anterior trochlear sulcus (**Figure 88**). If desired, use the indicated size Femoral Trial to compare the ML width before selecting which size A/P Cutting Block to use.

Design note: The JOURNEY II DCF Sizing Guide is designed to reference the posterior condyles.

Continue to Femoral Cuts on page 14 of this surgical technique



JOURNEY II TKA Femoral Sizing Guide Left 74012455



JOURNEY II TKA Femoral Sizing Guide Right 74012456



Figure 89



Figure 90



Figure 91

Micro EM Tibial Alignment Technique

Micro Alignment Assembly

1. Attach the EM Posterior Slope Guide to the Ankle Clamp (**Figure 89**) by depressing the button on the Slope Guide and slide to the appropriate position.

Tip: The neck of the Slope Guide should orient toward the arms and dials of the Ankle Clamp.

Note: Each tooth is 1mm apart.

Attach the Micro EM Tibial Alignment Tube to the EM
 Posterior Slope Guide by depressing the inferior button on
 the Alignment Tube (Figure 90) and sliding to the desired
 position. Once the button is released, the height will be
 locked in position.

Tip: The inferior button on Alignment Tube should face away from the arms of Ankle Clamp.

Note: Each tooth is 1mm apart.

- 3. Attach the EM Tibial Alignment Guide Micro Head Dial to the Alignment Tube by depressing the button on the Micro Head Dial sliding it onto the Alignment Tube (**Figure 91**).
- 4. Attach the appropriate hand Cutting Guide Head to the Micro Adjustment Tibial Alignment Dial by engaging the threads and rotating the black dial (**Figure 91**).

Tip: Adjust the Tibial Cutting Guide Head so that the "0" mark is aligned with the Micro Adjustment Tibial Alignment Dial.



74016241



74016231



EM Tibial Alignement Tub Micro 74016233



Tibial Cutting Guide Head 3 Degree Left 74016237 Right 74016238



EM Tib Align Guide Micro Head 74016236



Figure 92

Micro EM Tibial Alignment Technique

Extramedullary Alignment

- 1. Open the arms of ankle clamp and attach alignment jig to tibia. Adjust height and distance from the tibia (slope) by depressing the buttons on the Micro Alignment Tube and EM Posterior Slope Guide, respectively.
- 2. Once approximate resection level is set, use a headed 45mm to pin through the provisional pin hole in the EM Micro Tibial Alignment Tube Micro.
- 3. Insert the 2 and 10mm Pegged Tibial Stylus into the hole of the Cutting Guide (**Figure 92**).
- 4. Reference the desired condyle with the desired stylus level. Stylus arms rotate to reference desired location.
- 5. Adjust the cutting guide to the desired amount of resection by rotating the dial.

Note: The Dial allows for 13mm of total proximal-distal adjustment.



EM Tibial Alignement Tub Micro 74016233



Tibial Cutting Guide Head 3 Degree Left 74016237 Right 74016238



EM Tib Align Guide Micro Head 74016236



Tibial Stylus 2 and 10mm Pegged74016229



SPEED PIN Headed 45mm74013471 **MIS Headed 45mm**74016465



Figure 93

Micro EM Tibial Alignment Technique

Proximal Resection

- 1. With the 2 and 10mm Pegged Tibia Stylus set to the desired resection level, using non-headed pins, pin the cutting guide through the holes.
- 2. Remove the Tibia Stylus. Resect the proximal tibia (**Figure 93**) and remove the cutting guide.

Tip: If an uncaptured saw cut is desired, the resection can be performed by cutting on top of the block. An additional 3mm will be needed to account for this offset.

Tip: If additional resection is needed, the cutting guide can be adjusted by rotating the black dial.



EM Tibial Alignement Tub Micro 74016233



Tibial Cutting Guide Head 3 Degree Left 74016237 Right 74016238



EM Tib Align Guide Micro Head 74016236





Figure 94



Figure 95



Figure 96



Figure 97

Spiked Extramedullary Tibia Technique

Spiked EM Tibial Alignment Guide Assembly

1. Attach the Spiked EM Posterior Slope Guide to the Ankle Clamp by depressing the button on the Slope Guide and slide to the desired position (**Figure 94**).

Tip: The neck on the Slope Guide should orient toward the arms and dials of the Ankle Clamp.

Note: Each tooth is 1mm apart.

- 2. Slide the Spiked EM Alignment Jig into the Spiked EM/IM Down Rod (**Figure 95**).
- 3. Slide the appropriate hand tibial cutting block up the Spiked EM/IM Down rod until it reaches the section of hash marks and lock into place by rotating the knob on the cutting block (**Figure 96**).
- 4. Complete the whole assembly by placing onto the EM Posterior Slope Guide (**Figure 97**).



Spiked EM Slope Guide 42407455



Ankle Clamp 74016241



Spiked EM Alignment Jig 42407453



Spiked EM/IM Down Rod 42407454



Spiked EM/IM Tibia 3° Cutting Block Left 42407611 Right 42407612 Symmetric 42407616



Figure 98

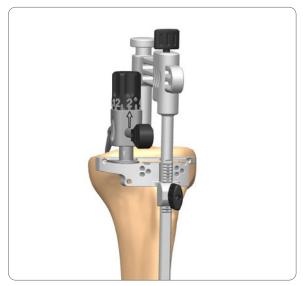


Figure 99

Spiked Extramedullary Tibia Technique

Placing Spiked EM Tibial Alignment Guide

1. Open the arms of the ankle clamp and attach alignment jig to the tibia. Adjust height and impact first spike to set initial position (Figure 98).

Note: The Spiked EM Alignment Jig can slide to optimize positioning on the proximal tibia

2. Assess rotation of the alignment guide and slope of the cutting plane. The slope can be adjusted with the button on the Spiked EM Posterior Slope Guide (Figure 98). Impact the second spike fully to secure the assembly.

Recommended Posterior Slope

- JOURNEY II CR: >= 5°
- JOURNEY II MD (w/PCL): >= 5°
- JOURNEY II MD (No PCL): 3°
- JOURNEY II BCS: 3°
- 3. Insert Adjustable Footed Tibia Stylus into the saw slot of the Cutting Guide (Figure 99).
- 4. Adjust the stylus to desired resection level by rotating the dial on the stylus and adjusting the height of the cutting block by using rotating the knob.

Note: The dial on the stylus adjusts from 2mm – 13mm in 1mm increments.

Note: The 9mm tibial implant is 9.5mm thick on the medial side and 12mm thick on the lateral side

Note: All knobs on this assembly can be locked with the hex driver



Spiked EM **Ankle Clamp** Slope Guide 74016241 42407455



Spiked EM Alignment Jig 42407453



42407454



Spiked EM/IM Tibia 3° **Cutting Block** Left 42407611 Right 42407612

Symmetric 42407616



Tibial Stylus Adjustable Footed 74016229



Figure 100

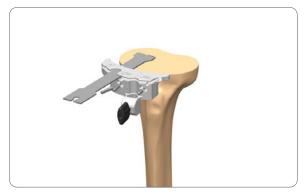


Figure 101

Spiked Extramedullary Tibia Technique

Proximal Tibia Resection

- 1. With the Adjustable Tibia Stylus set to the desired resection level, using non-headed 65mm pins, pin the cutting guide in position through the holes marked '0.' For additional fixation, a headed or non-headed 65mm pin can be inserted through the oblique pin hole (**Figure 100**).
- 2. Remove the Tibia Stylus and assembly leaving the cutting block in place. Resect the proximal tibia (**Figure 101**).

Note: If an uncaptured saw cut is desired, the resection can be performed by cutting on top of the block. An additional 3mm will be needed to account for this offset.

Tip: If additional resection is needed, the cutting guide can be shifted to the holes marked '2' or '4' for an additional +2mm or +4mm of resection, respectively.

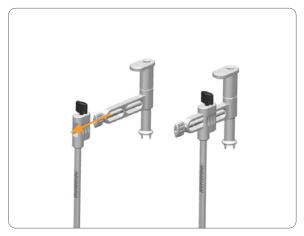


Figure 102



Figure 103



42407457

Figure 103

Intramedullary Tibia Technique

Intramedullary Tibial Alignment Guide Assembly

- 1. Slide the IM Alignment Jig into the Spiked EM/IM Down Rod (**Figure 102**).
- 2. Slide the appropriate hand tibial cutting block up the Spiked EM/IM Down rod until it reaches the section of hash marks and lock into place by rotating the knob on the cutting block (**Figure 103**).
- 3. Attach T-Handle onto the Long IM Rod and run the IM Rod through the IM Alignment Jig (**Figure 104**).



42407454





T-Handle 71674576

- <u>- , (p.</u>



Figure 105

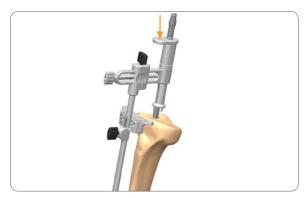


Figure 106



Figure 107

Intramedullary Tibia Technique

Placing Intramedullary Tibial Alignment Guide

- Open the tibial canal with the 9.5mm Intramedullary Drill.
 The drill has a 12mm step to open the entry point further (Figure 105). A preliminary resection of the tibial spine may facilitate seating of the tibial drill guide onto the proximal tibia.
- 2. Slowly insert the Intramedullary Rod of the IM assembly into the tibial Canal (**Figure 106**).
- 3. Assess rotation of the intramedullary tibial alignment guide.
- 4. Impact the top of the IM Alignment Jig to secure assembly to the proximal tibia (**Figure 106**).
- 5. Insert Adjustable Footed Tibia Stylus into the saw slot of the Cutting Guide (**Figure 107**).
- 6. Adjust the stylus to desired resection level by rotating the dial on the stylus and adjusting the height of the cutting block by using rotating the knob.

Note: The dial on the stylus adjusts from 2mm – 13mm in 1mm increments.

Note: The 9mm tibial implant is 9.5mm thick on the medial side and 12mm thick on the lateral side

Note: All knobs on this assembly can be locked with the hex driver







Tibial Stylus Adjustable Footed 74016229



Figure 108



Figure 109

Intramedullary Tibia Technique

Tibial Resection

- 1. With the Adjustable Tibia Stylus set to the desired resection level, using non-headed 65mm pins, pin the cutting guide in position through the holes marked '0.' For additional fixation, a headed or non-headed 65mm pin can be inserted through the oblique pin hole (**Figure 108**).
- 2. Remove the Tibia Stylus and assembly leaving the cutting block in place. Resect the proximal tibia (**Figure 109**).

Note: If an uncaptured saw cut is desired, the resection can be performed by cutting on top of the block. An additional 3mm will be needed to account for this offset.

Tip: If additional resection is needed, the cutting guide can be shifted to the holes marked '2' or '4' for an additional +2mm or +4mm of resection, respectively.



Figure 110



Figure 111

Fixed Femoral A/P and Chamfer Resections

A/P and Chamfer resections

- 1. Position the spikes on the Fixed A/P Femoral Block into the pre-drilled holes. Use the Mallet to impact the Fixed A/P Block until it is flush with the resected distal femur (Figure 110).
- 2. Use two headed 45mm pins through the medial and lateral fixation holes on the cutting block.
- 3. Complete the cuts in the order indicated on the block:
 - 1. Anterior
 - 2. Anterior Chord
 - 3. Posterior
 - 4. Posterior Chamfer
 - 5. Anterior Chamfer

Downsizing the Femoral Component

- 1. Attach the downsizing drill guide to the cut femur, placing the spikes on the back of the plate into the same location holes used for the A/P cutting block (Figure 111).
- 2. Drill new location holes through the downsizing drill guide (shifted 2mm anterior).
- 3. Place the smaller A/P cutting block into the new location holes. Redo the posterior, anterior, anterior chord and chamfer cuts.



JOURNEY® DCF FIXED AP femoral Headed 45mm cutting block Size 5 74012665



74013471 MIS Headed 45mm 74016465



Downsizing Drill Guide 74016274

JOURNEY® II TKA Femoral Compatiblity Chart

		Femoral component		
		JOURNEY II CR (OXINIUM°/CoCr)	JOURNEY II BCS (OXINIUM/CoCr)	
	JOURNEY II CR Insert			
	JOURNEY II Medial Dished Insert			
Inserts	JOURNEY II Deep Dished Insert		*	
	JOURNEY II BCS Insert			
	JOURNEY II Constrained Insert			
Patella	JOURNEY Round Patella			
	JOURNEY Biconvex Patella			
	GENESISº II Round Patella			
	GENESIS II Oval Patella			
	GENESIS II Biconvex Patella			

^{*}This combination is not available in EU countries.

JOURNEY II TKA Tibial Compatiblity Chart

		Tibial baseplate		
		JOURNEY Tibial Baseplate	LEGION° Revision Baseplate with JRNY Lock	
Inserts	JOURNEY II CR Insert			
	JOURNEY II Medial Dished Insert			
	JOURNEY II Deep Dished Insert			
	JOURNEY II BCS Insert			
	JOURNEY II Constrained Insert			

LEGION Revision Baseplate with JRNY Lock is not available in the EU.

Stems

- The JOURNEY Baseplate can be used with GENESIS II Stems.
- The LEGION Revision Baseplate with JRNY Lock can be used with LEGION Cemented and press fit stems

- *Compared to non-JOURNEY II knees
- +Based on BCS evidence

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