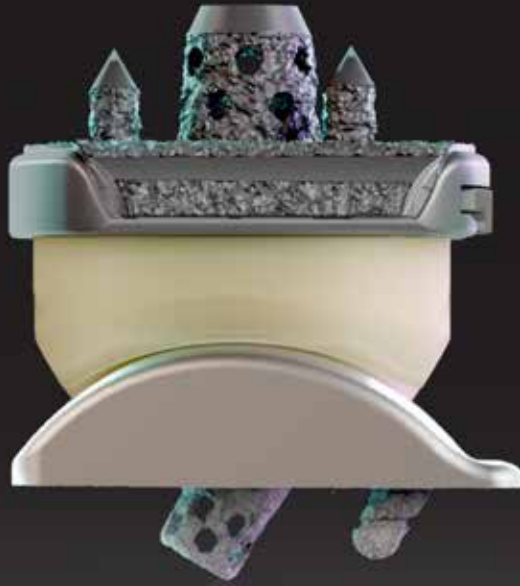


EXACTECH | EXTREMITIES

Operative Technique



VANTAGE[®]
TOTAL ANKLE

**Vantage[®] Total Ankle Fixed Bearing
Operative Technique with the Vantage
Ankle 3D Tibia and Flat Cut Talus**



TABLE OF CONTENTS

DETAILED OPERATIVE TECHNIQUE	1
Surgical Approach	1
Surgical Site Preparation	1
Cut Alignment and Positioning.....	5
Tibial Size Assessment	13
Tibial Resection.....	16
Talar Resection.....	20
Tibial Fixation Feature Preparation	23
Talar Fixation Preparation	29
Prepare and Implant the Tibial Plate.....	32
Implant Talar Component and Liner	35
APPENDIX A: TALUS-DRIVEN ROTATION	36
Talar Fixation Preparation	36
Tibial Fixation Preparation	38
INSTRUMENT LISTING	41
IMPLANT LISTING	48



Figure 1
Position Patient

SURGICAL SITE PREPARATION

The patient is placed in the supine position. A bump is placed under the ipsilateral hip, so that the leg will not externally rotate; the patella should be facing directly anterior. Surgery is typically done under regional or general anesthesia. A thigh high tourniquet may be used. To begin the surgery, the patient is prepped, sterilized, and draped (*Figure 1*).

DETAILED OPERATIVE TECHNIQUE

SURGICAL SITE PREPARATION



Figure 2

Place Skin Incision 6-7cm Proximal to Tibiotalar Joint



Figure 3

Retract for Initial Exposure

The anterior incision is made approximately 1cm lateral to the crest of the tibia. This incision should extend about 6-7cm proximal to the ankle joint and extend distally to the talonavicular joint (*Figure 2*).

Expose the extensor retinaculum. Open the extensor hallucis longus sheath; this is preferred over the anterior tibial tendon sheath to prevent "bowstringing" of the anterior tibial tendon. Once the sheath is open, identify, gently dissect and protect the deep peroneal nerve and artery throughout the entire procedure (*Figure 3*).

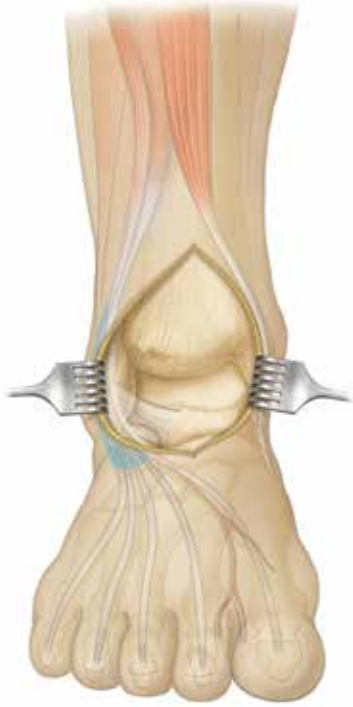


Figure 4
Expose Bony Anatomy

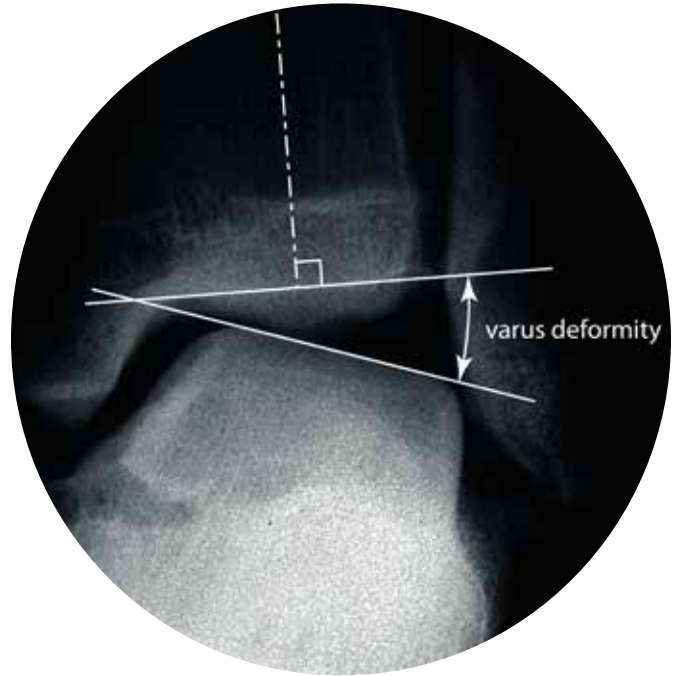


Figure 5
Address Varus/Valgus Ankle

Continue exposure down to the bony anatomy. Be sure to expose from the medial malleolus to the syndesmosis in the coronal plane and all the way to the TN joint in the sagittal plane. If standard instrumentation is being used, be sure to remove any osteophytes from the anterior tibia or neck of the talus (*Figure 4*).

When using standard instrumentation, it is important to balance the ankle prior to establishing alignment and making any bony cuts. Soft tissue releases are often required to achieve this (*Figure 5*).

DETAILED OPERATIVE TECHNIQUE

CUT ALIGNMENT AND POSITIONING

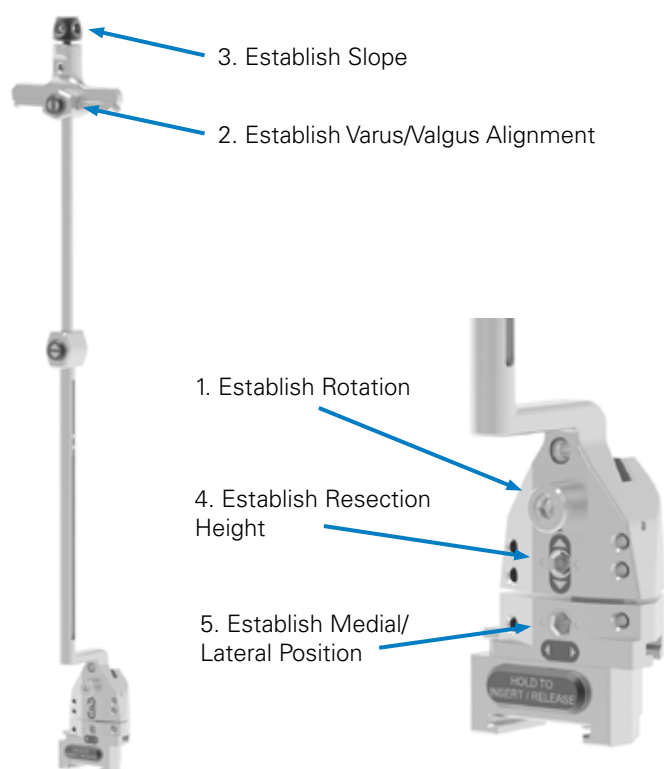


Figure 6
Alignment Guide Functions

The **Tibial Alignment Guide** is used to position the cutting blocks in the following steps. To establish position (*Figure 6*):

- 1) Establish rotation (clinically assessed with the Medial Shim)
- 2) Establish varus/valgus alignment (assessed with an anterior X-ray)
- 3) Establish slope (assessed with a lateral X-ray and the Angel Wing)
- 4) Establish resection height (assessed with a lateral X-ray and the Angel Wing)
- 5) Establish medial/lateral position of the resection (clinically assessed or with an anterior X-ray).

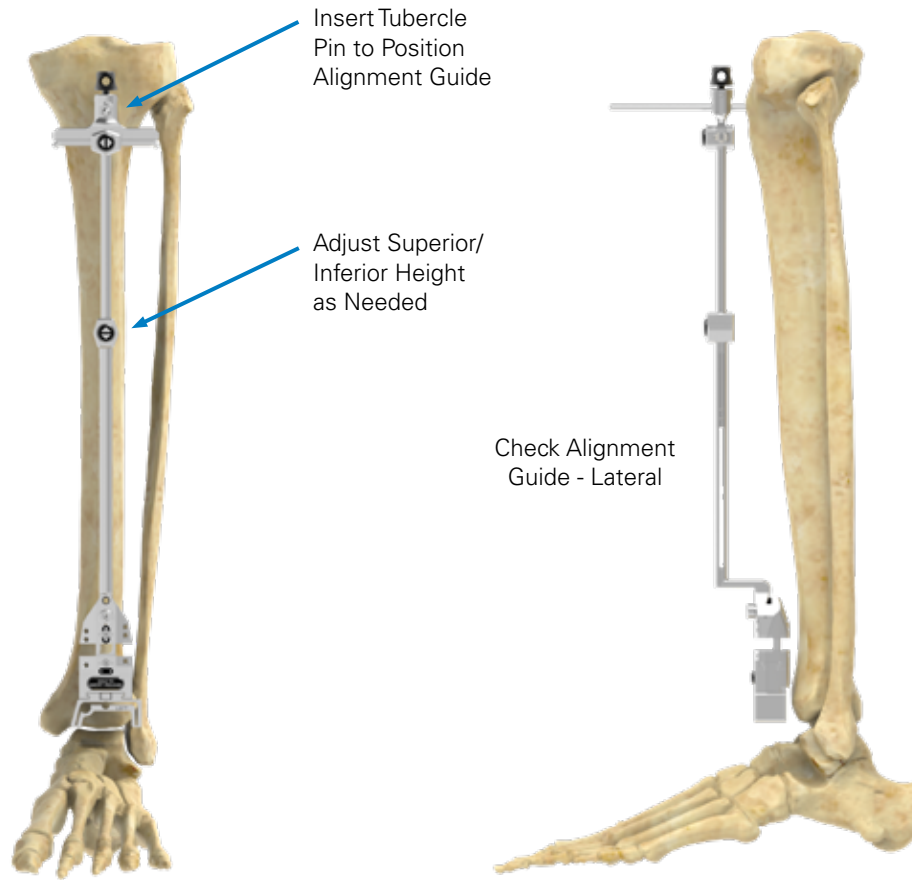


Figure 7
Place Alignment Guide

CUT ALIGNMENT AND POSITIONING

Once the ankle joint is exposed, insert the **Medial Shim** between the talus and medial malleolus. Make a small 5mm incision over the tibial tubercle.

Use the rotation of the Medial Shim to align the **Tubercle Pin** prior to insertion. The pin should be perpendicular to the anterior cortex of the tibia.

Note: Care should be taken to avoid tilting the tubercle pin superior as this can prevent the distal block from contacting the anterior cortex.

Once the pin is inserted, place the Tibial Alignment Guide over the tubercle pin.

Provisionally select the appropriately sized **Tibial Cutting Block** and attach it to the Alignment Guide (final size selection will be performed in later steps). Press and hold the button in the middle of the shaft to adjust the length of the guide. Align the guide such that the distal end of the Tibial Cutting Block is roughly aligned to the anterior tibial cortical rim (*Figure 7*).

► SURGICAL PEARL

The distal portion of the Tibial Alignment Guide should be half-opened prior to placement to allow for later superior or inferior adjustments.

DETAILED OPERATIVE TECHNIQUE

CUT ALIGNMENT AND POSITIONING



Figure 8
Provisionally Fix Alignment Guide

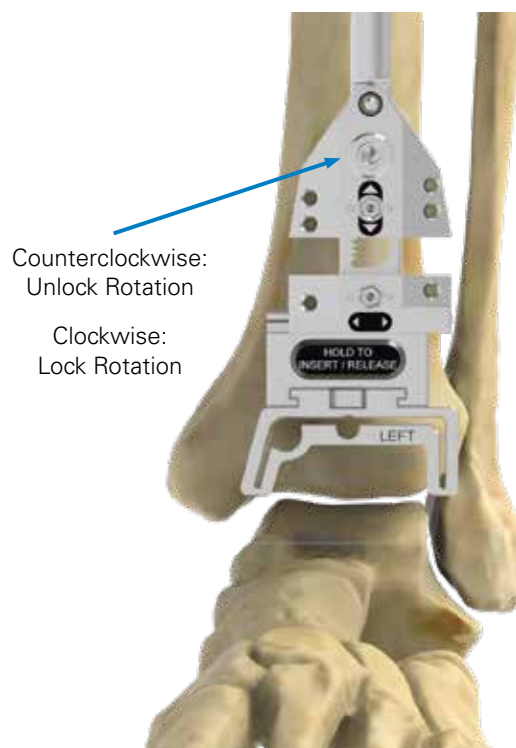


Figure 9
Unlock/Lock Rotation

Once the length of the guide is adjusted, center the distal alignment guide over the distal tibia. Place a provisional pin in the most proximal hole of the Alignment Guide. This will hold the position of the distal block and allow minor adjustments proximally (*Figure 8*).

► SURGICAL PEARL

Small adjustments may be made to the superior/inferior height and slope once the pin is placed, however larger adjustments may require repositioning of the distal pin.

To adjust the rotation, first build the screwdriver by mating the **Impactor Handle** to the **1/8" Standard Hex Driver**. Next, insert the driver into the center locking hex mechanism and turn counterclockwise to enable rotation of the distal block. Turn clockwise again to lock rotation (*Figure 9*).



Figure 10

Adjust Tibial Block Rotation with Alignment Rod




Figure 11

Confirm Rotation

Place the **Rotation Alignment Rod** into the Tibial Cutting Block.

Adjust rotation of the distal block until the Alignment Rod is parallel to either the Medial Shim, or the second or third ray of the foot, based on user preference. This orientation will guide the rotation of the tibial implant and prevent inadvertent resection of the posteromedial portion of the medial malleolus (*Figure 10*).

Note: In loose ankles or those with valgus deformity, the medial shim may not stay in place. In these cases, the alignment rod may be oriented with the second or third ray.

 An A/P image can be taken to confirm appropriate alignment. The hole in the center of the block must appear as a perfect circle and the cut slots must be visible to ensure that a true anterior view is achieved. In this orientation, verify that the mortise view is visible (*Figure 11*).

 Signifies fluoroscopic image

DETAILED OPERATIVE TECHNIQUE

CUT ALIGNMENT AND POSITIONING

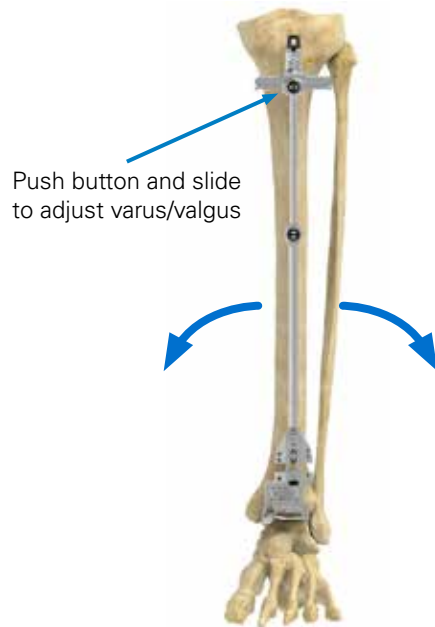


Figure 12
Adjust Varus/Valgus Alignment

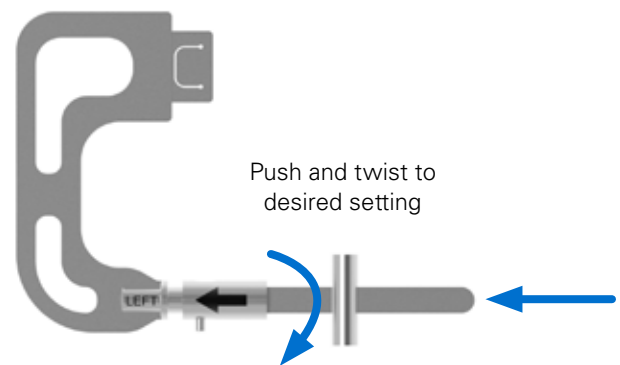



Figure 13
Adjust Angel Wing

Varus/valgus alignment of the guide should be confirmed using the c-arm. Adjustments can be made by pushing the proximal button and sliding the proximal shaft medial or lateral (*Figure 12*).

 Take an anterior-posterior X-ray to confirm varus/valgus alignment. When assessing varus/valgus, anterior-posterior X-rays at both the joint and midshaft of the tibia may help to greater identify the axis of the tibia.

► SURGICAL PEARL

In most cases, appropriate alignment can be achieved by ensuring that the alignment guide is parallel to the lateral border of tibia.

Remove the Rotation Alignment Rod. Adjust the **Reversible Angel Wing** to the appropriate operative side by pushing in and twisting 180° (*Figure 13*).

 Signifies fluoroscopic image



Figure 14
Insert Angel Wing

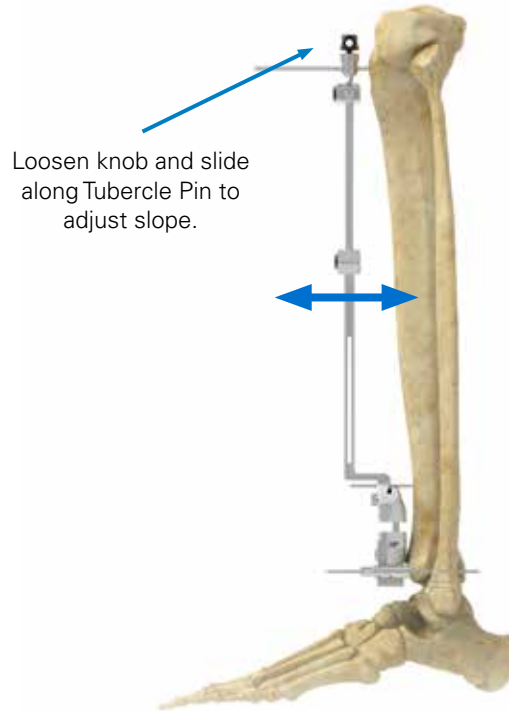


Figure 15
Adjust Slope

Insert the Angel Wing into the Tibial Cutting Block. The radiographic markers should be distal to the cutting guide (Figure 14). The Angel Wing allows the user to visually assess the slope and tibia resection height.

To adjust the slope, loosen the proximal knob and shift the Alignment Guide anterior/posterior along the Tubercle Pin, then tighten the proximal knob (Figure 15).

►► **SURGICAL PEARL**

The Hex Driver may be inserted into the holes of the proximal knob to provide additional torque when tightening.

►► **SURGICAL PEARL**

Some users may wish to bias toward a slightly open resection (i.e. 1-2° of dorsiflexion) based on their surgical experience and preferences.

Note: It may be necessary to extend/contract the alignment guide in the superior/inferior direction using the center button to allow travel along the proximal pin.

DETAILED OPERATIVE TECHNIQUE

CUT ALIGNMENT AND POSITIONING

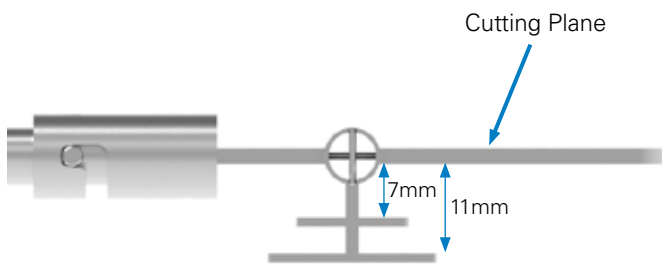


Figure 16
Angel Wing Height Indicators

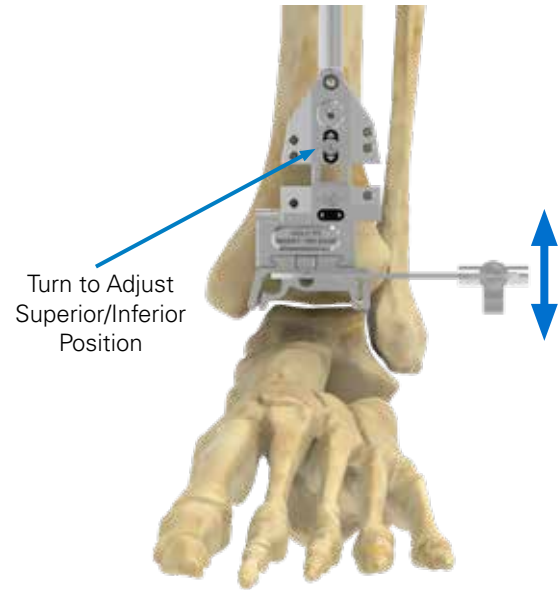


Figure 17
Adjust Superior-Inferior Position

Note: The Reversible Angel Wing provides the user with 7mm and 11mm height indications on a lateral radiographic view.

A 7mm resection height is recommended. However, alternate resections may be used at the discretion of the user based on joint laxity/tightness present and surgical preference (Figure 16).

The level of the cut may be moved by inserting the Hex Driver into the imaged superior-inferior adjustment feature on the Alignment Guide. Press firmly into the hex until it is fully depressed and begin rotating the driver to adjust height (Figure 17).


Note: When removing the hex driver, confirm that the female hex feature returns to its original un-depressed position. In the event that the feature is still depressed, reinsert the driver and rotate slightly clockwise or counterclockwise until the hex returns to its original position.



Figure 18
Misaligned Lateral View Plane



Figure 19
Correctly Aligned Lateral View Plane

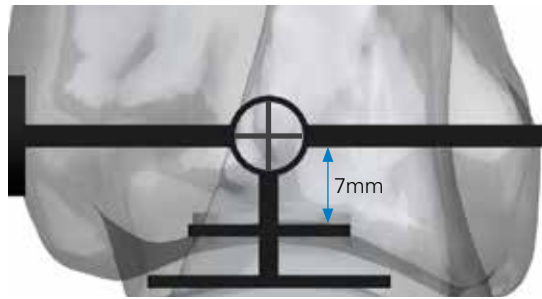
 A lateral fluoroscopic image should be taken at this point to assess the slope of the tibial cut and the position of the cut relative to the plafond. The center alignment feature must present as a perfect circle to verify that a true lateral view is achieved (*Figures 18 and 19*).

At this point, the user should perform any final adjustments to slope and reconfirm adjustments with additional lateral fluoroscopic images as necessary.

 Signifies fluoroscopic image

DETAILED OPERATIVE TECHNIQUE

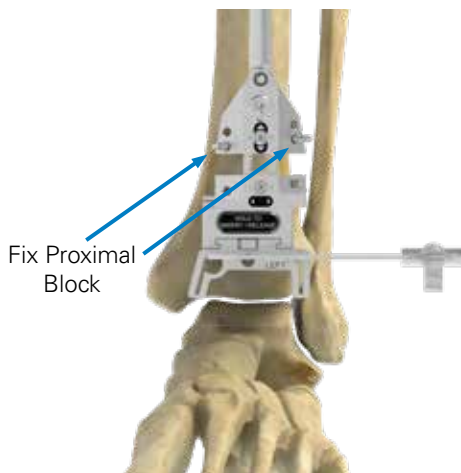
CUT ALIGNMENT AND POSITIONING



Recommended for
3D Tibia Resection

Figure 21

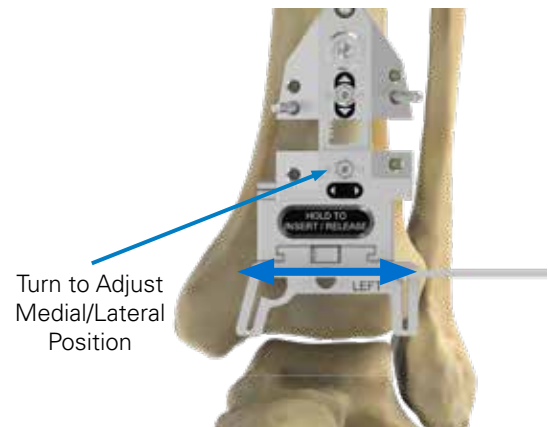
Adjust Slope and Resection Height Under Lateral X-ray



Fix Proximal
Block

Figure 20

Pin the Proximal Block for Stability



Turn to Adjust
Medial/Lateral
Position

Figure 22

Trial Preliminary Medial-Lateral Position
& Cutting Block Size

When the proper rotation, varus/valgus, and slope are achieved, pin the upper portion of the Alignment Guide in any of the holes depending on the best bony purchase (*Figure 20*). Note that modifications to cut height and medial/lateral position may still be made after this step.

► SURGICAL PEARL

Proximal holes are symmetric, however the tibial bone tends to bow lateral, so care should be taken to ensure the pin holes being used proximally are overlying bone.



Under a lateral X-ray, assess the resection height. If using the recommended resection height (7mm), the shorter line should be tangent with the top of the tibial plateau. Alternate resection heights may be used at the user's discretion, such as when operating on an ankle with laxity (*Figure 21*).

Use the Hex Driver to adjust the medial-lateral position of the Tibial Cutting Block (*Figure 22*). For the size assessment in the following steps, it is recommended that the Tibial Cutting Block be initially positioned over the midline of the distal tibia. Further adjustments in medial-lateral offset may be performed in later steps.



Signifies fluoroscopic image

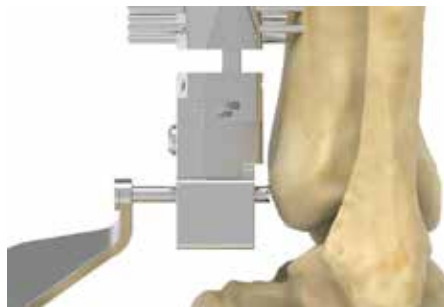


Figure 23
Insert Drill Guide




Figure 24
Create Bicortical Drill Hole

TIBIAL SIZE ASSESSMENT

Tibial size selection is performed by assessing anterior-posterior tibial length and available medial-lateral space at the desired resection height. It is recommended that the anterior-posterior length be used as a primary sizing variable, while the medial-lateral assessment be used as a secondary sizing variable to confirm that the desired size is appropriate for the patient anatomy. However, the user may optionally prioritize medial-lateral space as their primary indicator based on their surgical preferences.

Insert the **AP Sizer Drill Guide** through the center hole of the Tibial Cutting Block. The drill guide should make firm contact with the anterior tibial cortex (*Figure 23*).

Drive the **AP Sizer Drill** under power through the Drill Guide, until the posterior cortex is breached (*Figure 24*). At this point, examine the visible drill bands above the drill guide to identify the tibial plate size corresponding to the depth of the prepared hole. To ensure an accurate reading, the drill tip should be flush with the back of the posterior cortex.

 A lateral fluoroscopic image may optionally be taken at this point to confirm that the drill is flush with the posterior tibial cortex and is not protruding into the posterior soft tissues.

 Signifies fluoroscopic image

DETAILED OPERATIVE TECHNIQUE

TIBIAL SIZE ASSESSMENT



Figure 26
Measure A/P Depth Using AP Size Indicator



Figure 25
Identify Size from A/P Depth

Recommended
10mm Minimum
Medial Shoulder



Figure 27
Confirm Size Selection and Medial-Lateral Offset


In the indicated image, a size 4 plate would be recommended based on the anterior-posterior length (*Figure 25*).

► SURGICAL PEARL

If the size reading is between two sizes, it is recommended that the user selects the larger tibial size to ensure complete anterior and posterior cortical coverage of the implant.

If preferred, the user may choose to instead measure the depth of the hole using the **AP Size Indicator**. Insert the probe into the prepared sizing hole and hook the posterior tibial cortex. Allow the slide of the size indicator to contact the anterior cortex, then note the indicated tibial plate size (*Figure 26*).

Attach the final Tibial Cut Block based on the previous sizing steps. Adjust the medial/lateral position as necessary and confirm that the determined size is appropriate for the distal tibial anatomy. It is recommended that the medial shoulder be in line with plane of the medial malleolus. If the medial/lateral anatomy of the tibia is too small for the chosen size, the user may downsize to better match the medial/lateral constraints of the bone.

 An anterior fluoroscopic image may optionally be taken at this point to assess the medial-lateral footprint of the chosen size cut block (*Figure 27*).

 Signifies fluoroscopic image

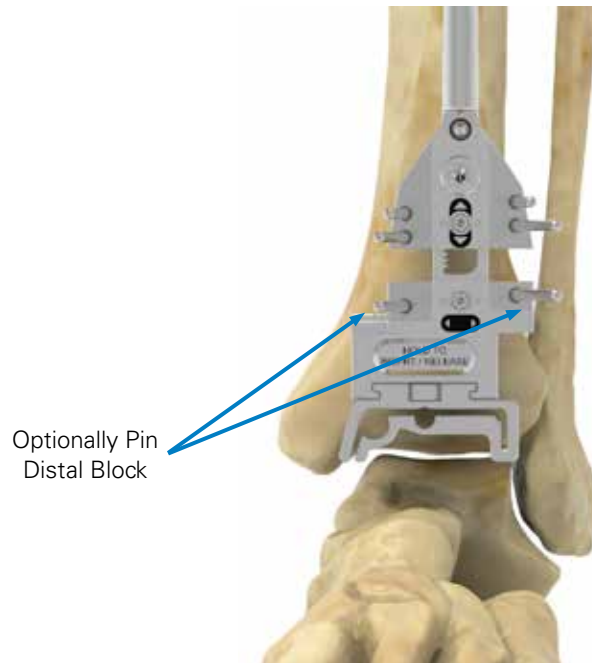


Figure 28
Optionally Pin Distal Block

When the final superior-inferior height, medial-lateral offset, and component size has been determined, the distal holes of the Alignment Guide may be optionally pinned for additional cut block security (*Figure 28*).

DETAILED OPERATIVE TECHNIQUE

TIBIAL RESECTION



Figure 29
Drive Lateral Protector Pin



Figure 31
Insert Corner Plug



Figure 30
Drill Medial Corner



Figure 32
Complete Tibial Resection

TIBIAL RESECTION

Drive a pin through the lateral corner of the cut block (Figure 29).

Use the **Corner Drill** to prepare the rounded corner of the tibial resection (Figure 30).

Note: Care should be taken to avoid the posterior soft tissues during tibial preparation.

Use the **Scissor Handle** to insert the **Corner Plug** into the prepared medial hole to guard against off-axis sawing (Figure 31).

Cut the distal tibia using an oscillating saw, taking care not to penetrate through the posterior capsule where the neurovascular bundle is located. A small reciprocating saw is used to cut the bone along the medial slot (Figure 32).

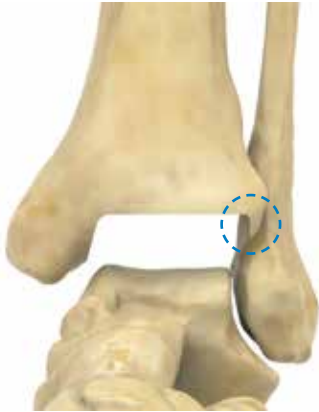


Figure 33

Optionally Preserve Anterolateral Tibial Bone



Figure 34

Optionally Remove Anterolateral Tibial Bone



Figure 35

Remove Corner Plug with Scissors

Note: The Vantage Ankle 3D Tibia implant allows the user to optionally preserve anterolateral tibial bone and soft tissues by creating a vertical lateral cut. If the user wishes to do so, the tibial fixation features should be prepared before continuing with talar preparation. As such, tibial rotation (as established during tibial resection) will drive the final construct rotation (Figure 33).

Alternatively, the user may choose to complete the cut laterally, either by hand or by shifting the cut block laterally after the initial medial shoulder and proximal cuts are made. In this scenario, the user may choose whether to prepare the tibial fixation features (i.e. construct rotation established based on tibial resection) or talar fixation features first (i.e. construct rotation established based on talar lollipop positioning) (Figure 34).

Remove the lateral pin and corner plug (Figure 35).

DETAILED OPERATIVE TECHNIQUE

TIBIAL RESECTION

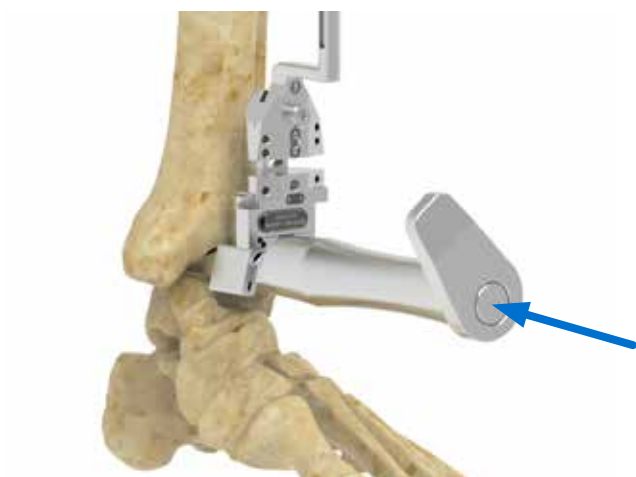


Figure 36

Optionally Complete Medial Corner with Corner Chisel

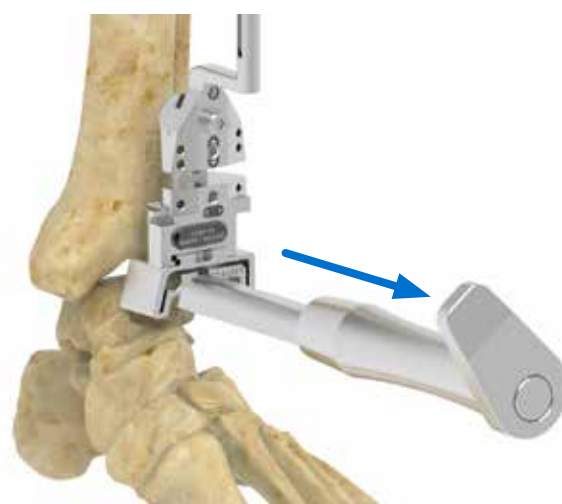


Figure 37

Optionally Apply Retrograde Impaction to Free Chisel

The surgeon may optionally impact the **Corner Chisel** in the posterior direction into the medial corner of the cut block to clear any remaining attached bone (Figure 36).

Note: Ensure that the distal tibia has been fully cut through the posterior tibial cortex before proceeding. Attempting to use the Corner Chisel to punch through an incomplete posterior cortical cut may require excessive force that could lead to damage of the posterior soft tissues. Additionally, a higher strike force may also increase the risk of fracturing the medial malleolus. Do not toggle the Corner Chisel in a medial/lateral direction, as doing so may fracture the medial malleolus.

Note: The Corner Chisel is not intended for use in the lateral portion of the tibial cut.

The size markings indicate an appropriate chisel depth based on overall anterior/posterior length of the designated size. However, posterior tibial curvature may result in a shorter depth along the corner of the cut. Users must employ their surgical judgment to evaluate when the posterior bone has been fully cleared.

If the chisel is wedged in the resection, the user may lightly apply retrograde impaction to the strike plate to free the chisel (Figure 37).

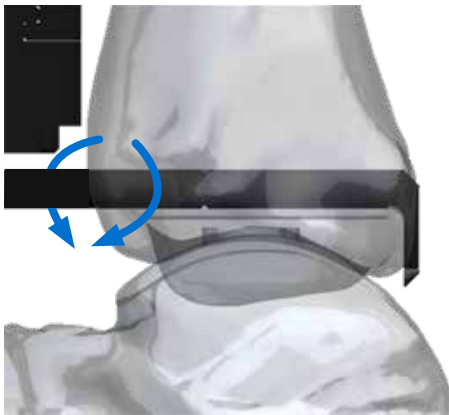


Figure 38

Release Posterior Soft Tissues

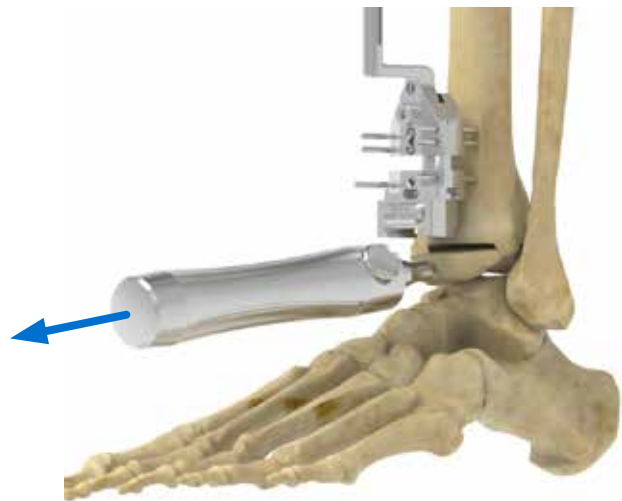


Figure 39

Drive In Tibial Bone Removal Screw and Apply Tension

Remove the tibial cut block and the resected tibial bone. To aid in removal, the user may do one or more of the following based on their surgical preferences:

- Cut the bone into small pieces with the reciprocating saw, then use a rongeur to remove the bone until all bone is cleared from the joint.
- Attach the **Posterior Capsule Release Tool** to the Impactor Handle, and insert the tip of the device through the joint space and/or the proximal tibial cut line. With the tip posterior to the resected bone, begin rotating/sweeping the device to release the posterior joint capsule from the resected bone (*Figure 38*).

- Drive the **Tibial Bone Removal Screw** into the distal tibial resection bone block, taking care to not damage the posterior soft tissues. Attach the Impactor Handle to the Tibial Bone Removal Screw. Apply tension in the anterior direction to remove the resected bone, using a scalpel or Posterior Capsule Release Tool to release the exposed posterior soft tissues where necessary (*Figure 39*).

DETAILED OPERATIVE TECHNIQUE

TALAR RESECTION

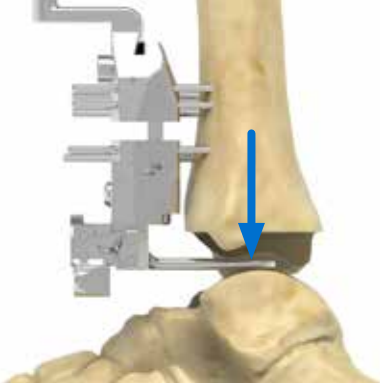


Figure 40

Insert Adjustable Talar Cutting Block

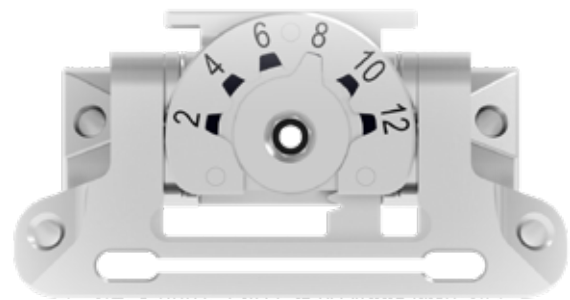


Figure 41

Set Talar Resection Height

TALAR RESECTION

After clearing the resected tibial bone, the **Adjustable Talar Cutting Block** is placed onto the Alignment Guide. Remove any pins from the distal block of the Alignment Guide. Pins in the proximal block should be kept in place to maintain alignment. The adjustable talar cutting block should be extended as far as possible distally, using the superior-inferior adjustment on the alignment guide (unpin the distal block of the alignment guide as necessary). This will allow for proper tensioning of the soft tissues.

Note: Care should be taken to ensure the paddle is both contacting the talar bone and centered on it (Figure 40).

Use the hex driver to adjust to the desired resection height. An 8-10mm cut is standard for a flat cut talus approach. However, in cases of severe talar dome collapse a shallower resection may be necessary (Figure 41).



Figure 43

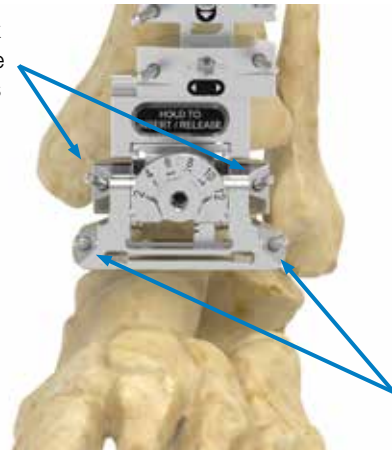
Evaluate Talar Resection Plane Orientation and Height



Figure 42

Insert Angel Wing Into Talar Cut Block

Optionally Pin Proximal Block After Cut Slope & Varus/Valgus Orientation is Confirmed



Pin Distal Block When Cut Height is Confirmed

Figure 44

Pin Block and Resect Talus

Insert the Angel Wing into the cutting slot of the block (*Figure 42*).

Hold the foot in neutral dorsiflexion and the heel in slight valgus. A lateral fluoroscopic image should be taken at this point to assess the plane of talar cut. Ensure that the Angel Wing is at its thinnest and that the barrel appears as a thin circle. At this point, also confirm that the tongue of the cut block is contacting the talar dome. The slope may be adjusted by plantar flexing/dorsiflexing the foot or by sliding the proximal guide along the tubercle pin shaft (*Figure 43*).

If the cut plane orientation and the cut height have been finalized, the user may pin the distal two pin holes of the talar cutting block. Alternatively, if the user intends to make further adjustments to the resection height, the two proximal pin holes may be used to lock the cut plane orientation while the height is finalized. At the point where resection height is confirmed, the distal pins should be used to lock the distal block, and the proximal pins should be removed (*Figure 44*).

Remove the Angel Wing and resect the talar dome with the oscillating saw.

DETAILED OPERATIVE TECHNIQUE

TALAR RESECTION

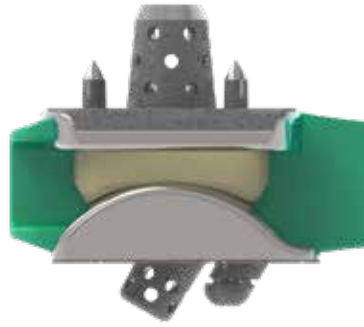


Figure 46
Construct Height Representation



Figure 45
Insert Gap Check Tool



Figure 47
Remove Alignment Guide

Remove the Cut Block and clear the resected bone. Insert the **Flat Cut Talus Gap Check Tool** (Figure 45).

The thickness of the Gap Check Tool corresponds to the minimum construct thickness for a given range of flat cut talus sizes (Figure 46). Note that all sizes of the tibial component have an identical thickness.

If the Gap Check Tool cannot be inserted into the joint space, additional tibial/talar bone must be resected to ensure sufficient space is made for the implant construct.

► SURGICAL PEARL

Do not remove the Alignment Guide until sufficient joint space is verified with the gap check tool. This will make the process easier if a recut is necessary.

Once sufficient construct height is confirmed, unpin and remove the Alignment Guide (Figure 47).

► SURGICAL PEARL

The user may optionally keep the Proximal Tubercle Pin in place in the event that additional resections are deemed necessary later in the case.

The body of this technique describes a tibial-driven rotation approach with preserved anterolateral tibial bone. See Appendix A for a talus-driven rotation approach.



Figure 48
Insert Punch Guide

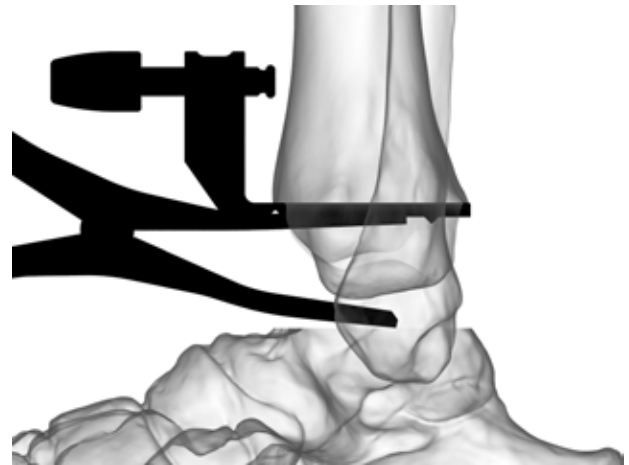



Figure 49
Confirm Punch Guide is Seated

TIBIAL FIXATION FEATURE PREPARATION

Insert the **Punch Guide** that corresponds to the chosen Tibial Cut Block size. Use the **Lamina Distractor** to apply joint tension and ensure the punch guide is flush with the tibial resection (*Figure 48*).

 A lateral fluoroscopic image should be taken at this point to confirm that the Punch Guide is fully seated and no posterior liftoff is present. Note that markers for the fixation feature locations will likely be occluded by the distractor in this view (*Figure 49*).

 Signifies fluoroscopic image

DETAILED OPERATIVE TECHNIQUE

TIBIAL FIXATION PREPARATION



Figure 50
Provisionally Secure Tibial Punch Guide

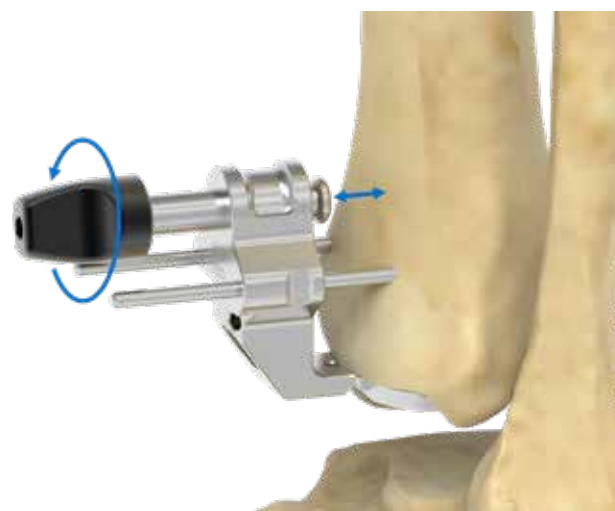


Figure 51
Adjust Anterior-Posterior Position

When the desired tibial component slope is achieved, the user may optionally pin both parallel pin holes. This will allow the user to remove the distractor while retaining orientation of the Tibial Punch Guide and allow for visualization of the fixation feature locations in a lateral X-ray. Adjustments to anterior/posterior position of the punch guide may be made after this step (*Figure 50*).

If the parallel pin holes are not used, the distractor should remain in place until the punch guide is secured with oblique pins. Once again, adjustments to anterior/posterior position of the punch guide may be made up until the oblique pins are inserted.

Shift the anterior-posterior offset of the Tibial Punch Guide by adjusting the knob either by hand or with the hex driver (*Figure 51*).



Figure 52

Optionally Insert Pin for Anterior Hard Stop

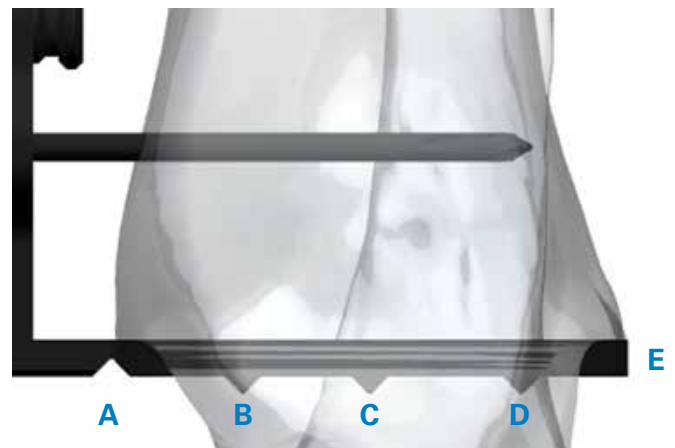



Figure 53

Confirm Anterior-Posterior Offset in Lateral View

Note: The Tibial Punch Guide features a pin hole which has a trajectory that aligns to the anterior border of the implant. If desired, the user may back the knob fully out, then insert a temporary 2.5" pin through this hole to act as a hard stop for adjustment of the Punch Guide, such that the final implant positioning will be flush with the anterior tibial cortex. The pin may be secured in place by gently tightening the screw to apply pressure to the pin. The punch guide position is then secured using the oblique pins, and the temporary hard stop pin is removed (Figure 52).

 A lateral fluoroscopic image should be taken at this point to confirm that the desired anterior-posterior offset is achieved. A true lateral view is confirmed when the Punch Guide appears as a thin line with visible "V"-shaped features (Figure 53). These features correspond to the:

- A. Anterior border of the implant
- B. Position of the anterior pegs
- C. Position of the center cage
- D. Position of the posterior peg
- E. Posterior border of the implant

 Signifies fluoroscopic image

DETAILED OPERATIVE TECHNIQUE

TIBIAL FIXATION PREPARATION

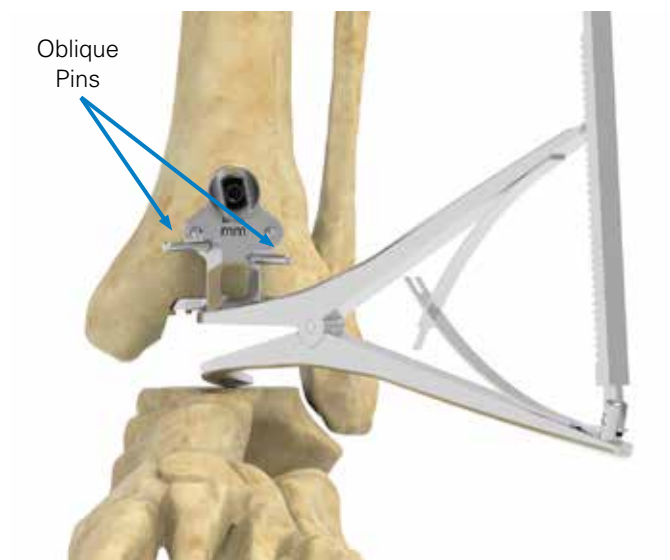


Figure 54
Insert Oblique Pins



Figure 55
Punch Peripheral Holes

Secure the Tibial Punch Guide by pinning at least one of the two oblique pin holes (*Figure 54*).

Attach the **Peripheral Peg Punch** to the **Modular Impactor Arm**. Align the punch to the three peripheral peg holes of the Punch Guide. Impact in the proximal direction until the punch is fully seated. Repeat for all peripheral peg holes (*Figure 55*).

DETAILED OPERATIVE TECHNIQUE

TIBIAL FIXATION PREPARATION

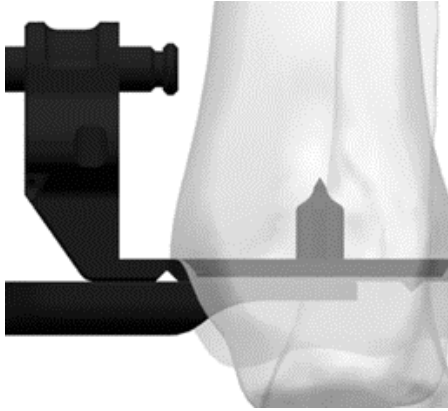


Figure 56

Optionally Pre-Punch Center Hole with Cruciform Punch



3D Tibial Plate Size	Base Cage Diameter	Reamer Diameter
Size 1	10mm	8mm
Size 2	10mm	8mm
Size 3	11mm	9mm
Size 4	12mm	10mm
Size 5	13mm	11mm
Size 6	14mm	12mm



Figure 57

Select Appropriately-Sized 10mm Reamer

The subsequent steps describe center hole preparation through reaming. In cases of sclerotic bone, the user may optionally initiate the hole preparation by attaching the **Cruciform Punch** to the Modular Impactor Arm and impacting through the center hole of the punch guide. Applying a light torque and/or repunching may aid with clearing bone (*Figure 56*).

Select the appropriately sized 10mm tall **Reamer** based on the marking located on the anterior face of the punch guide. Insert the tip into the joint and align to the center hole of the punch guide (*Figure 57*).

DETAILED OPERATIVE TECHNIQUE

TIBIAL FIXATION PREPARATION



Figure 58

Prepare Center Hole

Insert the Lamina Distractor inferior to the reamer, such that the male nub of the reamer mates to the hole of the distractor paddle. Begin slowly distracting the joint while applying a ratchet-style rotation motion to the reamer. Use a full arc of motion but avoid contacting the bony shoulders with the reamer handle. Continue spreading and rotating the reamer until it sits flush with the punch guide (Figure 58).

If the joint space is sufficient, a 15mm tall reamer of the same diameter may be used through the punch guide as previously described in order to reach the final depth.

Note: If the joint space is insufficient, reaming with a 10mm tall reamer to the final depth will be performed later in the procedure after the punch guide is removed.



Figure 59
Insert Talar Trial Component



Figure 60
Insert Punch Liner

TALAR FIXATION PREPARATION

▶ **SURGICAL PEARL**

Based on surgical preference, the user may choose at this stage to immediately implant the tibial component (ref. Figures 65-70) so that the subsequent talar component positioning can be assessed as a construct. In this case, the user should perform the implantation steps described in Figures 65-70, then return to this step to position the trial. Note that instead of using the punch liner, the appropriate sized liner trial may be used to tension the joint.

Note: If upsizing the talar component by two or more sizes relative to the tibial component, additional preparation of the bony shoulder(s) of the tibia may be necessary. Clearance will be confirmed later in the procedure when the liner trial is inserted.

Insert the desired thickness **Punch Liner** corresponding to the Talar Trial size using the Scissor Style Inserter. Assess range of motion for the construct and adjust the talar trial position as necessary for optimal coverage and joint motion (Figure 60).

Insert the desired size **Flat Cut Talar Trial** using the **Scissor Style Inserter**. Check to ensure the trial covers the bone medial to lateral without overhang into the gutters in order to avoid impingement. The flange/scissor handle is meant to align rotationally with the second or third ray with the ankle in neutral flexion (Figure 59).

DETAILED OPERATIVE TECHNIQUE

TALAR FIXATION PREPARATION

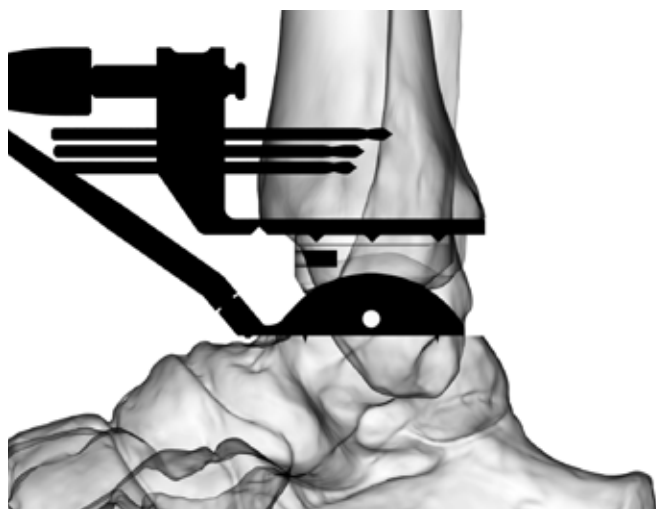



Figure 61

Confirm Talar Trial Position on Lateral X-ray



Figure 62

Pin Talar Component and Complete Talar Prep

 A lateral fluoroscopic image should be taken to confirm that the circular fluoroscopic hole appears directly over the lateral talar process. Anterior/posterior coverage of the talus should also be assessed at this stage (Figure 61).

Pin the talar trial (Figure 62). Remove the Punch Liner, Punch Guide Oblique pin(s), and the Punch Guide.

 Signifies fluoroscopic image



Figure 63
Prepare Two Anterior Holes



Figure 64
Drill Center Hole for Cage

Use the **Talus Drill** under power to prepare the two anterior holes in the trial (*Figure 63*).

Use the **Coring Drill** under power to prepare the center hole for the cage (*Figure 64*).

» **SURGICAL PEARL**

The Coring Drill is cannulated. A pin or K-wire up to 3.2mm in diameter can be used to clear the bone from the drill. This bone could be used in the cage of the talar implant.

Remove the oblique pins and Talar Trial.

DETAILED OPERATIVE TECHNIQUE

PREPARE AND IMPLANT THE TIBIAL PLATE



Figure 65

Apply Cement to the Tibial Component

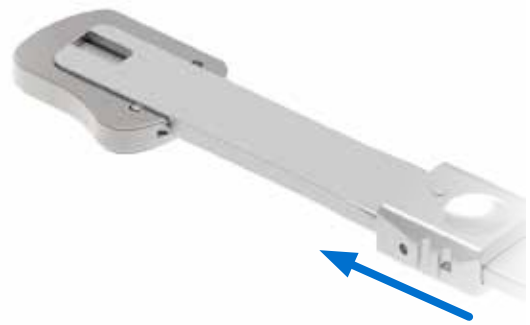


Figure 66

Lock the Tibial Implant on the Tibial Insert

If the joint space was previously insufficient to allow for use of a 15mm tall reamer (ref. page 28), the user should now chase the center cage hole with a 10mm tall reamer to achieve the final depth.

Note: The final reamer diameter identified in the table on page 27 will provide a 2mm diametric press-fit at the base of the cage. The user may at this stage employ their surgical discretion to chase the center cage hole with an upsized reamer to reduce the resultant implant press-fit as needed based on the patient bone quality.

PREPARE AND IMPLANT THE TIBIAL PLATE

Prepare cement and apply to the desired regions of the tibial component (Figure 65).

► SURGICAL PEARL

The user may optionally pack the tibial cage with autograft harvested throughout the procedure.

Gently insert the **Tibial Inserter** into the tibial implant T-slot. Slide the button forward toward the tibial component to lock it. The Tibial Inserter is fully engaged when it is fully mated to the locking mechanism on the tibial implant (Figure 66). Ensure that the Tibial Inserter is locked into the tibial implant to avoid dropping the implant.



Figure 67
Insert the Tibial Component



Figure 68
Disengage the Tibial Inserter From the Implant

Insert the tibial component into the joint and line up the fixation features on the tibial component with the prepped holes in the distal tibia (*Figure 67*).

Note: Do not impact the Tibial Inserter as this action may result in damage to the tibial component, the Tibial Inserter and/or the bone.

Once the tibial component is in place, slide the button back to disengage the Tibial Inserter and remove it (*Figure 68*).

DETAILED OPERATIVE TECHNIQUE

PREPARE AND IMPLANT THE TIBIAL PLATE




Figure 69
Impact the Tibial Implant



Figure 70
Remove the Tibial Instrumentation

Insert the **Tibial Plate Protector** into the implant T-slot.

Attach the **Tibial Impactor Tip** to the Modular Punch Arm. Align to the center of the tibial implant and begin impacting in the axial plane until the device sits flush with the distal tibial cortex (*Figure 69*).

 Lateral fluoroscopy may optionally be used during impaction to ensure the tibial plate is entering the distal tibia orthogonal to the cut surface.

Remove the impaction assembly. The Tibial Protector should remain in place during the subsequent talus implantation steps (*Figure 70*).

 Signifies fluoroscopic image



Figure 71
Impact Talus

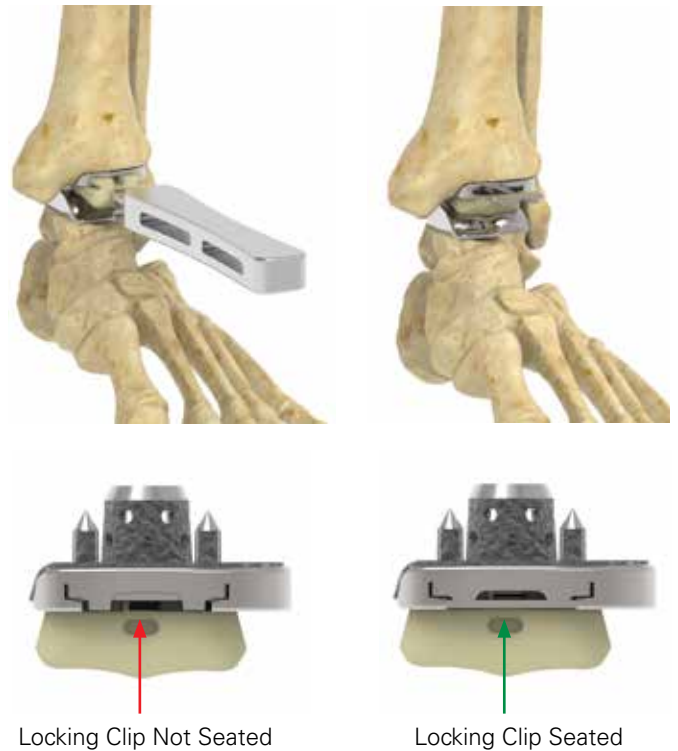


Figure 72
Insert Liner and Locking Clip

IMPLANT TALAR COMPONENT AND LINER

Attach the **Talar Impactor Cover** to the **Talar Impactor Frame** and then to the Modular Impactor Handle. Insert the talar implant and begin impacting the proximal surface. Plantarflexing the foot may assist with insertion/impaction. Ensure the component is fully seated onto the bone (Figure 71).

Remove the tibial protector and insert the **Tibial Liner Trial** to verify the proper liner thickness for proper ligament tensioning. Take care not to scratch the polished talar surface when the tibial protector is removed. Insert the corresponding Activit-E Tibial Insert of the same size and thickness as the verified liner trial into the T-slot of the tibial component by hand until resistance is met. Either manually push the liner posteriorly, or align the tip of the **Activit-E Liner Inserter Handle** with the recess on the anterior face of the insert (Figure 72), and grasp the handle to carefully apply force posteriorly until the hump of the talus is overcome.

Note: Do not impact the Activit-E Tibial Liner Inserter Handle as this action may result in damage to the tibial liner, the liner inserter handle, and/or the bone.

Insert the tibial locking clip (Figure 72).

Note: The locking clip is based on the tibial size, and the polyethylene size is determined by the talar component.

The entire wound is irrigated with antibiotic solution and a closed suction drainage system is placed. The deep tissue and extensor retinaculum are closed in an interrupted fashion. The subcutaneous tissue is closed. Skin edges are approximated with an interrupted skin closure. A sterile compression dressing and short-leg cast are applied with the ankle in neutral position.

Note: The AP Sizer Drill, Corner Drill, Peripheral Peg Punch, saw blades, pins/ screws, and all Vantage implants are single-use only. After use/explantation, they should be considered as biohazardous materials and disposed of following applicable local regulations and surgical center controls for disposal of biohazardous waste.

APPENDIX A: TALUS-DRIVEN ROTATION

TALAR FIXATION PREPARATION



Figure 73
Insert Talar Trial Component

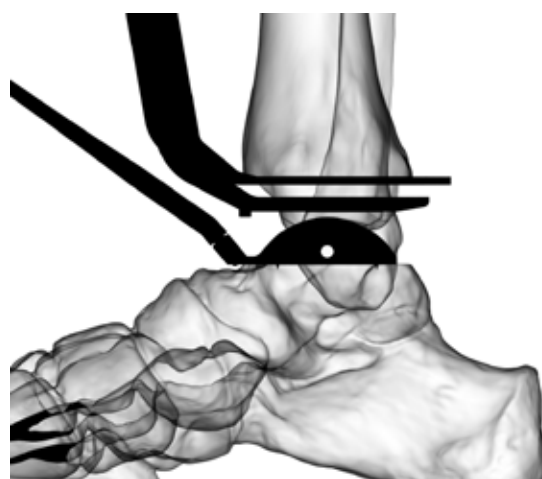



Figure 74
Confirm Talar Trial Position on Lateral X-ray

Insert the desired size Flat Cut Talar Trial using the Scissor Style Inserter. The Distraction Tool may be used to tension the soft tissue and hold the trial in place. Check to ensure the trial covers the bone medial to lateral without overhang into the gutters in order to avoid impingement. Assess range of motion to confirm that the lollipop positioning recreates the anatomic joint motion (*Figure 73*). The flange/scissor handle is meant to align rotationally with the second or third ray with the ankle in neutral flexion.

Note: If upsizing the talar component by two or more sizes relative to the tibial component, additional preparation of the bony shoulder(s) of the tibia may be necessary. Clearance will be confirmed later in the procedure when the liner trial is inserted.

 A lateral fluoroscopic image should be taken to confirm that the circular fluoroscopic hole appears directly over the lateral talar process. Anterior/posterior coverage of the talus should also be assessed at this stage (*Figure 74*).

 Signifies fluoroscopic image



Figure 76
Prepare Two Anterior Holes



Figure 75
Pin Talar Component and Complete
Talar Prep



Figure 77
Drill Center Hole for Cage

Once the desired position is achieved, pin the talar trial (*Figure 75*). Remove the Distractor Tool.

Use the Talus Drill under power to prepare the two anterior holes in the trial (*Figure 76*).

Use the Coring Drill under power to prepare the center hole for the cage (*Figure 77*).

» **SURGICAL PEARL**

The Coring Drill is cannulated. A pin or K-wire up to 3.2mm in diameter can be used to clear the bone from the drill. This bone could be used in the cage of the talar implant.

APPENDIX A: TALUS-DRIVEN ROTATION

TIBIAL FIXATION PREPARATION

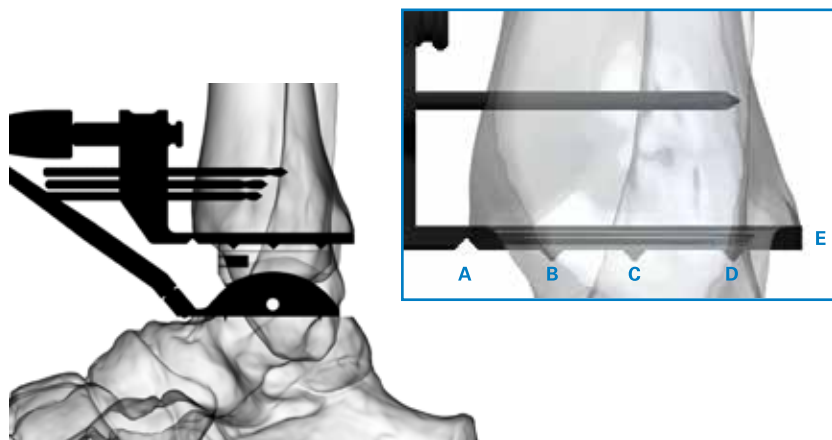


Figure 79

Optionally Confirm Punch Guide is Seated



Figure 78

Insert Punch Guide




Figure 80

Secure Tibial Punch Guide

TIBIAL FIXATION PREPARATION

Insert the appropriately sized Punch Guide (based on tibial cut block size). Using the Scissor Inserter, assemble the appropriately sized Punch Liner (based on talar component size) to the punch guide. Articulate the joint and ensure the rotation of the tibial component is correct. Check the range of motion and look for evidence of lift-off during articulation. This confirms proper alignment between the tibia and talus. (*Figure 78*).

 A lateral fluoroscopic image should be taken at this point to confirm that the Punch Guide is fully seated, and that the desired anterior-posterior position is achieved. A true lateral view is confirmed when the Punch Guide appears as a thin line with visible "V"-shaped features (*Figure 79*).

 Signifies fluoroscopic image

These features correspond to the:

- A. Anterior border of the implant
- B. Position of the anterior pegs
- C. Position of the center cage
- D. Position of the posterior peg
- E. Posterior border of the implant.

When the desired tibial component position/rotation/slope is achieved, the punch guide should be secured in place using the oblique pins. The parallel pins may be used for additional stability if desired (*Figure 80*).

Remove the Punch Liner. Unpin and remove the Flat Cut Talar Trial.

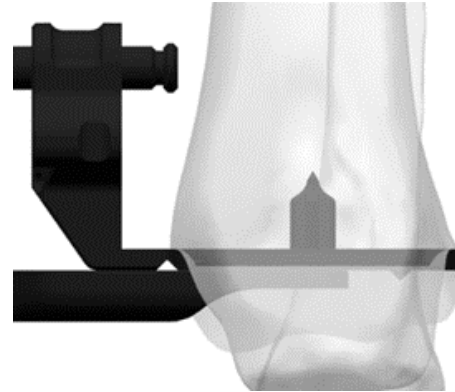


Figure 81
Punch Peripheral Holes



Figure 82
Optionally Pre-Punch Center Hole with Cruciform Punch

Attach the Peripheral Peg Punch to the Modular Impactor Arm. Align the punch to the three peripheral peg holes of the Punch Guide. Impact in the proximal direction until the punch is fully seated. Repeat for all peripheral peg holes (*Figure 81*).

The subsequent steps describe center hole preparation via reaming. In cases of sclerotic bone, the user may optionally initiate the hole preparation by attaching the Cruciform Punch to the Modular Impactor Arm and impacting through the center hole of the punch guide. Applying a light torque and/or repunching may aid with clearing bone (*Figure 82*).

APPENDIX A: TALUS-DRIVEN ROTATION

TIBIAL FIXATION PREPARATION

3D Tibial Plate Size	Base Cage Diameter	Reamer Diameter
Size 1	10mm	8mm
Size 2	10mm	8mm
Size 3	11mm	9mm
Size 4	12mm	10mm
Size 5	13mm	11mm
Size 6	14mm	12mm



Figure 83

Select Appropriately-Sized 10mm Reamer



Figure 84

Prepare Center Hole

Select the appropriately sized 10mm tall reamer based on the marking located on the anterior face of the punch guide. Insert the tip into the joint and align to the center hole of the punch guide (*Figure 83*).

Insert the Lamina Distractor inferior to the reamer, such that the male nub of the Reamer mates to the hole of the distractor paddle. Begin slowly distracting the joint while applying a ratchet-style rotation motion to the reamer. Use a full arc of motion but avoid contacting the bony shoulders with the reamer handle. Continue spreading and rotating the reamer until it sits flush with the punch guide (*Figure 84*).

If the joint space is sufficient, a 15mm tall reamer of the same diameter may be used through the punch guide as previously described in order to reach the final depth. The punch guide and pins may then be removed.

If the joint space is insufficient, first remove the punch guide and pins, then chase the center cage hole with a 10mm tall reamer to achieve the final depth.

Note: The final reamer diameter identified in the table above will provide a 2mm diametric press-fit at the base of the cage. The user may at this stage employ their surgical discretion to chase the center cage hole with an upsized reamer diameter to reduce the resultant implant press-fit as needed based on the patient bone quality.

Continue with preparing the tibial plate for implantation as normal on page 32, beginning with *Figure 65*.

INSTRUMENT LISTING

CATALOG NUMBER DESCRIPTION

03-CNB-AP-0000 Vantage Ankle 3D/3D+ A/P Size Indicator



03-CNB-AR-0000 Vantage Ankle 3D/3D+ Alignment Rod



03-CNB-AW-0000 Vantage Ankle 3D/3D+ Reversible Angel Wing



03-CNB-CC-0000 Vantage Ankle 3D/3D+ Corner Chisel



03-CNB-CD-0001 Vantage Ankle 3D/3D+ Corner Drill



03-CNB-CP-0000 Vantage Ankle 3D/3D+ Corner Plug



03-CNB-DG-0000 Vantage Ankle 3D/3D+ A/P Sizing Drill Guide



03-CNB-DR-0001 Vantage Ankle 3D/3D+ A/P Sizing Drill, ZH Connection



03-CNB-FG-0000 Vantage Ankle 3D/3D+ Flat Cut Gap Check Tool



03-CNB-5G-0000* Vantage Ankle 3D/3D+ Gap Check Tool, Size 5



PI-3695 Lamina Distractor



03-CNB-LN-0000 Activit-E Tibial Liner Inserter Handle



INSTRUMENT LISTING

CATALOG NUMBER DESCRIPTION

03-CNB-MA-0000 Vantage Ankle 3D/3D+ Bent Modular Impactor Arm With Strikeplate

03-CNB-MP-0000 Vantage Ankle 3D/3D+ Tibial Plate Impactor

03-CNB-PL-1206 Vantage Ankle 3D/3D+ Punch Liner, Size 1-2, 6mm
 03-CNB-PL-1208 Vantage Ankle 3D/3D+ Punch Liner, Size 1-2, 8mm
 03-CNB-PL-1210 Vantage Ankle 3D/3D+ Punch Liner, Size 1-2, 10mm
 03-CNB-PL-1212 Vantage Ankle 3D/3D+ Punch Liner, Size 1-2, 12mm
 03-CNB-PL-1214* Vantage Ankle 3D/3D+ Punch Liner, Size 1-2, 14mm
 03-CNB-PL-1216* Vantage Ankle 3D/3D+ Punch Liner, Size 1-2, 16mm
 03-CNB-PL-1218* Vantage Ankle 3D/3D+ Punch Liner, Size 1-2, 18mm
 03-CNB-PL-3506 Vantage Ankle 3D/3D+ Punch Liner, Size 3-5, 6mm
 03-CNB-PL-3508 Vantage Ankle 3D/3D+ Punch Liner, Size 3-5, 8mm
 03-CNB-PL-3510 Vantage Ankle 3D/3D+ Punch Liner, Size 3-5, 10mm
 03-CNB-PL-3512 Vantage Ankle 3D/3D+ Punch Liner, Size 3-5, 12mm
 03-CNB-PL-3514* Vantage Ankle 3D/3D+ Punch Liner, Size 3-5, 14mm
 03-CNB-PL-3516* Vantage Ankle 3D/3D+ Punch Liner, Size 3-5, 16mm
 03-CNB-PL-3518* Vantage Ankle 3D/3D+ Punch Liner, Size 3-5, 18mm

03-CNB-PP-0000 Vantage Ankle 3D/3D+ Peripheral Peg Punch

03-CNB-RM-1008 Vantage Ankle 3D/3D+ Reamer - 10mm x 8mm
 03-CNB-RM-1009 Vantage Ankle 3D/3D+ Reamer - 10mm x 9mm
 03-CNB-RM-1010 Vantage Ankle 3D/3D+ Reamer - 10mm x 10mm
 03-CNB-RM-1011 Vantage Ankle 3D/3D+ Reamer - 10mm x 11mm
 03-CNB-RM-1012 Vantage Ankle 3D/3D+ Reamer - 10mm x 12mm
 03-CNB-RM-1013 Vantage Ankle 3D/3D+ Reamer - 10mm x 13mm
 03-CNB-RM-1014 Vantage Ankle 3D/3D+ Reamer - 10mm x 14mm
 03-CNB-RM-1015 Vantage Ankle 3D/3D+ Reamer - 10mm x 15mm
 03-CNB-RM-1508 Vantage Ankle 3D/3D+ Reamer - 15mm x 8mm
 03-CNB-RM-1509 Vantage Ankle 3D/3D+ Reamer - 15mm x 9mm
 03-CNB-RM-1510 Vantage Ankle 3D/3D+ Reamer - 15mm x 10mm
 03-CNB-RM-1511 Vantage Ankle 3D/3D+ Reamer - 15mm x 11mm
 03-CNB-RM-1512 Vantage Ankle 3D/3D+ Reamer - 15mm x 12mm
 03-CNB-RM-1513 Vantage Ankle 3D/3D+ Reamer - 15mm x 13mm
 03-CNB-RM-1514 Vantage Ankle 3D/3D+ Reamer - 15mm x 14mm
 03-CNB-RM-1515 Vantage Ankle 3D/3D+ Reamer - 15mm x 15mm

03-CNB-PP-0000 Vantage Ankle 3D /3D+ Cruciform Punch



CATALOG NUMBER	DESCRIPTION
03-LNB-CB-0001	Vantage Ankle 3D/3D+ Tibial Cut Block - Size 1
03-LNB-CB-0002	Vantage Ankle 3D/3D+ Tibial Cut Block - Size 2
03-LNB-CB-0003	Vantage Ankle 3D/3D+ Tibial Cut Block - Size 3
03-LNB-CB-0004	Vantage Ankle 3D/3D+ Tibial Cut Block - Size 4
03-LNB-CB-0005	Vantage Ankle 3D/3D+ Tibial Cut Block - Size 5
03-LNB-CB-0006	Vantage Ankle 3D/3D+ Tibial Cut Block - Size 6
03-LNL-PG-0001	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 1, Left
03-LNL-PG-0002	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 2, Left
03-LNL-PG-0003	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 3, Left
03-LNL-PG-0004	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 4, Left
03-LNL-PG-0005	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 5, Left
03-LNL-PG-0006	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 6, Left
03-LNR-PG-0001	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 1, Right
03-LNR-PG-0002	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 2, Right
03-LNR-PG-0003	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 3, Right
03-LNR-PG-0004	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 4, Right
03-LNR-PG-0005	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 5, Right
03-LNR-PG-0006	Vantage Ankle 3D/3D+ Tibial Punch Guide - Size 6, Right



351-00-06 Adjustable Talar Cut Block, Size 2-12mm



351-01-10 Scissor Style Inserter Handle



351-03-11	Flat Cut Trial - Size 1 - Left
351-03-12	Flat Cut Trial - Size 2 - Left
351-03-13	Flat Cut Trial - Size 3 - Left
351-03-14	Flat Cut Trial - Size 4 - Left
351-03-15*	Flat Cut Trial - Size 5 - Left
351-04-11	Flat Cut Trial - Size 1 - Right
351-04-12	Flat Cut Trial - Size 2 - Right
351-04-13	Flat Cut Trial - Size 3 - Right
351-04-14	Flat Cut Trial - Size 4 - Right
351-04-15*	Flat Cut Trial - Size 5 - Right

351-05-00 Talus Drill



351-06-00 Flat Cut Coring Drill

351-07-03 Talar Impactor Frame



INSTRUMENT LISTING

CATALOG NUMBER DESCRIPTION

351-07-04 Talar Impactor Insert



351-10-00 Tibial Alignment Guide



351-10-12 Medial Shim



351-10-16 Ankle Tensor Assembly



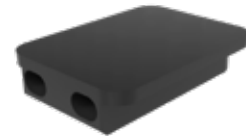
351-10-32 Posterior Capsule Removal Tool



351-10-34 Tibial Bone Removal Screw



351-17-01 Tibial Plate Protector



351-17-03 Ankle Tibial Inserter

351-23-01 Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 6mm
 351-23-02 Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 6mm
 351-23-03 Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 6mm
 351-23-04 Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 6mm
 351-23-05* Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 6mm
 351-23-11 Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 7mm
 351-23-12 Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 7mm
 351-23-13 Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 7mm
 351-23-14 Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 7mm
 351-23-15* Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 7mm



CATALOG NUMBER	DESCRIPTION
351-23-21	Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 8mm
351-23-22	Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 8mm
351-23-23	Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 8mm
351-23-24	Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 8mm
351-23-25*	Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 8mm
351-23-31*	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 9mm
351-23-32*	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 9mm
351-23-33*	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 9mm
351-23-34*	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 9mm
351-23-35*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 9mm
351-23-41	Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 10mm
351-23-42	Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 10mm
351-23-43	Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 10mm
351-23-44	Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 10mm
351-23-45*	Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 10mm
351-23-51*	Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 11mm
351-23-52*	Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 11mm
351-23-53*	Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 11mm
351-23-54*	Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 11mm
351-23-55*	Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 11mm
351-23-61	Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 12mm
351-23-62	Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 12mm
351-23-63	Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 12mm
351-23-64	Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 12mm
351-23-65*	Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 12mm
351-23-71*	Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 14mm
351-23-72*	Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 14mm
351-23-73*	Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 14mm
351-23-74*	Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 14mm
351-23-75*	Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 14mm
351-23-81*	Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 16mm
351-23-82*	Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 16mm
351-23-83*	Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 16mm
351-23-84*	Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 16mm
351-23-85*	Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 16mm
351-23-91*	Activit-E Fixed Bearing Liner Trial - Size 1 - Left - 18mm
351-23-92*	Activit-E Fixed Bearing Liner Trial - Size 2 - Left - 18mm
351-23-93*	Activit-E Fixed Bearing Liner Trial - Size 3 - Left - 18mm
351-23-94*	Activit-E Fixed Bearing Liner Trial - Size 4 - Left - 18mm
351-23-95*	Activit-E Fixed Bearing Liner Trial - Size 5 - Left - 18mm
351-24-01	Activit-E Fixed Bearing Liner Trial – Size 1 - Right - 6mm
351-24-02	Activit-E Fixed Bearing Liner Trial – Size 2 - Right - 6mm
351-24-03	Activit-E Fixed Bearing Liner Trial – Size 3 - Right - 6mm
351-24-04	Activit-E Fixed Bearing Liner Trial – Size 4 - Right - 6mm
351-24-05*	Activit-E Fixed Bearing Liner Trial – Size 5 - Right - 6mm

INSTRUMENT LISTING

CATALOG NUMBER DESCRIPTION

351-24-11	Activit-E Fixed Bearing Liner Trial – Size 1 - Right - 7mm
351-24-12	Activit-E Fixed Bearing Liner Trial – Size 2 - Right - 7mm
351-24-13	Activit-E Fixed Bearing Liner Trial – Size 3 - Right - 7mm
351-24-14	Activit-E Fixed Bearing Liner Trial – Size 4 - Right - 7mm
351-24-15*	Activit-E Fixed Bearing Liner Trial – Size 5 - Right - 7mm
351-24-21	Activit-E Fixed Bearing Liner Trial – Size 1 - Right - 8mm
351-24-22	Activit-E Fixed Bearing Liner Trial – Size 2 - Right - 8mm
351-24-23	Activit-E Fixed Bearing Liner Trial – Size 3 - Right - 8mm
351-24-24	Activit-E Fixed Bearing Liner Trial – Size 4 - Right - 8mm
351-24-25*	Activit-E Fixed Bearing Liner Trial – Size 5 - Right - 8mm
351-24-31*	Activit-E Fixed Bearing Liner Trial – Size 1 - Right - 9mm
351-24-32*	Activit-E Fixed Bearing Liner Trial – Size 2 - Right - 9mm
351-24-33*	Activit-E Fixed Bearing Liner Trial – Size 3 - Right - 9mm
351-24-34*	Activit-E Fixed Bearing Liner Trial – Size 4 - Right - 9mm
351-24-35*	Activit-E Fixed Bearing Liner Trial – Size 5 - Right - 9mm
351-24-41	Activit-E Fixed Bearing Liner Trial – Size 1 - Right - 10mm
351-24-42	Activit-E Fixed Bearing Liner Trial – Size 2 - Right - 10mm
351-24-43	Activit-E Fixed Bearing Liner Trial – Size 3 - Right - 10mm
351-24-44	Activit-E Fixed Bearing Liner Trial – Size 4 - Right - 10mm
351-24-45*	Activit-E Fixed Bearing Liner Trial – Size 5 - Right - 10mm
351-24-51*	Activit-E Fixed Bearing Liner Trial – Size 1 - Right - 11mm
351-24-52*	Activit-E Fixed Bearing Liner Trial – Size 2 - Right - 11mm
351-24-53*	Activit-E Fixed Bearing Liner Trial – Size 3 - Right - 11mm
351-24-54*	Activit-E Fixed Bearing Liner Trial – Size 4 - Right - 11mm
351-24-55*	Activit-E Fixed Bearing Liner Trial – Size 5 - Right - 11mm
351-24-61	Activit-E Fixed Bearing Liner Trial – Size 1 - Right - 12mm
351-24-62	Activit-E Fixed Bearing Liner Trial – Size 2 - Right - 12mm
351-24-63	Activit-E Fixed Bearing Liner Trial – Size 3 - Right - 12mm
351-24-64	Activit-E Fixed Bearing Liner Trial – Size 4 - Right - 12mm
351-24-65*	Activit-E Fixed Bearing Liner Trial – Size 5 - Right - 12mm
351-24-71*	Activit-E Fixed Bearing Liner Trial - Size 1 - Right - 14mm
351-24-72*	Activit-E Fixed Bearing Liner Trial - Size 2 - Right - 14mm
351-24-73*	Activit-E Fixed Bearing Liner Trial - Size 3 - Right - 14mm
351-24-74*	Activit-E Fixed Bearing Liner Trial - Size 4 - Right - 14mm
351-24-75*	Activit-E Fixed Bearing Liner Trial - Size 5 - Right - 14mm
351-24-81*	Activit-E Fixed Bearing Liner Trial - Size 1 - Right - 16mm
351-24-82*	Activit-E Fixed Bearing Liner Trial - Size 2 - Right - 16mm
351-24-83*	Activit-E Fixed Bearing Liner Trial - Size 3 - Right - 16mm
351-24-84*	Activit-E Fixed Bearing Liner Trial - Size 4 - Right - 16mm
351-24-85*	Activit-E Fixed Bearing Liner Trial - Size 5 - Right - 16mm
351-24-91*	Activit-E Fixed Bearing Liner Trial - Size 1 - Right - 18mm
351-24-92*	Activit-E Fixed Bearing Liner Trial - Size 2 - Right - 18mm
351-24-93*	Activit-E Fixed Bearing Liner Trial - Size 3 - Right - 18mm
351-24-94*	Activit-E Fixed Bearing Liner Trial - Size 4 - Right - 18mm
351-24-95*	Activit-E Fixed Bearing Liner Trial - Size 5 - Right - 18mm

INSTRUMENT LISTING

CATALOG NUMBER	DESCRIPTION
----------------	-------------

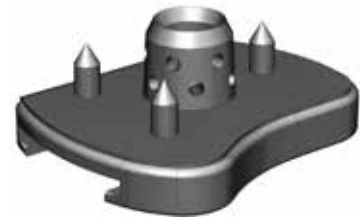
351-90-00	Tibial Tubercle Pin
351-90-01	2.4mm x 3.5" Fluted Drill Bit
351-90-02	2.4mm x 2.5" Fluted Drill Bit
351-90-03	2.4mm x 3.5" Olive Pin
351-90-04	Talar Trial Screw
351-90-05	2.4mm x 3.5" Threaded Pin
351-90-06	2.4mm x 3.5" Threaded Olive Pin
351-90-07	Long Talar Trial Screw
351-90-20	Tubercle Pin Pouch
351-90-21	3.5" Pin Pouch
351-90-22	2.5" Pin Pouch
351-90-24	Talar Trial Screw Pouch
351-91-03	Reciprocating Sawblade 8 x 50 x 1mm
351-91-04	Saw 10 x 75 x 1.19mm Stryker
351-91-05	Saw 10 x 75 x 1.19mm Hall
351-91-06	Ankle Reciprocating Saw - Hall
351-93-01	Ankle Impactor Handle
351-93-02	1/8" Hex Drive



IMPLANT LISTING

CATALOG NUMBER DESCRIPTION

350-03-01	Flat Cut Talus - Size 1, Left
350-03-02	Flat Cut Talus - Size 2, Left
350-03-03	Flat Cut Talus - Size 3, Left
350-03-04	Flat Cut Talus - Size 4, Left
350-03-05*	Flat Cut Talus - Size 5, Left
350-04-01	Flat Cut Talus - Size 1, Right
350-04-02	Flat Cut Talus - Size 2, Right
350-04-03	Flat Cut Talus - Size 3, Right
350-04-04	Flat Cut Talus - Size 4, Right
350-04-05*	Flat Cut Talus - Size 5, Right
03-CMB-LC-0102	Vantage 3D/3D+ Tibial Locking Clip - Sizes 1 & 2
03-CMB-LC-0003	Vantage 3D/3D+ Tibial Locking Clip - Size 3
03-CMB-LC-0004	Vantage 3D/3D+ Tibial Locking Clip - Size 4
03-CMB-LC-0005	Vantage 3D/3D+ Tibial Locking Clip - Size 5
03-CMB-LC-0006	Vantage 3D/3D+ Tibial Locking Clip - Size 6
03-LML-10-0001	Vantage FB 3D Tibial Plate, Left, 10mm Tall, Size 1
03-LML-10-0002	Vantage FB 3D Tibial Plate, Left, 10mm Tall, Size 2
03-LML-10-0003	Vantage FB 3D Tibial Plate, Left, 10mm Tall, Size 3
03-LML-10-0004	Vantage FB 3D Tibial Plate, Left, 10mm Tall, Size 4
03-LML-10-0005	Vantage FB 3D Tibial Plate, Left, 10mm Tall, Size 5
03-LML-10-0006	Vantage FB 3D Tibial Plate, Left, 10mm Tall, Size 6
03-LMR-10-0001	Vantage FB 3D Tibial Plate, Right, 10mm Tall, Size 1
03-LMR-10-0002	Vantage FB 3D Tibial Plate, Right, 10mm Tall, Size 2
03-LMR-10-0003	Vantage FB 3D Tibial Plate, Right, 10mm Tall, Size 3
03-LMR-10-0004	Vantage FB 3D Tibial Plate, Right, 10mm Tall, Size 4
03-LMR-10-0005	Vantage FB 3D Tibial Plate, Right, 10mm Tall, Size 5
03-LMR-10-0006	Vantage FB 3D Tibial Plate, Right, 10mm Tall, Size 6
350-23-01	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 6mm
350-23-02	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 6mm
350-23-03	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 6mm
350-23-04	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 6mm
350-23-05*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 6mm
350-23-11	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 7mm
350-23-12	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 7mm
350-23-13	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 7mm
350-23-14	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 7mm
350-23-15*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 7mm
350-23-21	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 8mm
350-23-22	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 8mm
350-23-23	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 8mm
350-23-24	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 8mm
350-23-25*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 8mm
350-23-31*	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 9mm
350-23-32*	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 9mm
350-23-33*	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 9mm
350-23-34*	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 9mm
350-23-35*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 9mm



CATALOG NUMBER	DESCRIPTION
350-23-41	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 10mm
350-23-42	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 10mm
350-23-43	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 10mm
350-23-44	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 10mm
350-23-45*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 10mm
350-23-51*	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 11mm
350-23-52*	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 11mm
350-23-53*	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 11mm
350-23-54*	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 11mm
350-23-55*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 11mm
350-23-61	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 12mm
350-23-62	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 12mm
350-23-63	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 12mm
350-23-64	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 12mm
350-23-65*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 12mm
350-23-71*	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 14mm
350-23-72*	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 14mm
350-23-73*	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 14mm
350-23-74*	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 14mm
350-23-75*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 14mm
350-23-81*	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 16mm
350-23-82*	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 16mm
350-23-83*	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 16mm
350-23-84*	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 16mm
350-23-85*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 16mm
350-23-91*	Activit-E Fixed Bearing Tibial Insert - Left - Size 1 - 18mm
350-23-92*	Activit-E Fixed Bearing Tibial Insert - Left - Size 2 - 18mm
350-23-93*	Activit-E Fixed Bearing Tibial Insert - Left - Size 3 - 18mm
350-23-94*	Activit-E Fixed Bearing Tibial Insert - Left - Size 4 - 18mm
350-23-95*	Activit-E Fixed Bearing Tibial Insert - Left - Size 5 - 18mm
350-24-01	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 6mm
350-24-02	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 6mm
350-24-03	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 6mm
350-24-04	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 6mm
350-24-05*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 6mm
350-24-11	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 7mm
350-24-12	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 7mm
350-24-13	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 7mm
350-24-14	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 7mm
350-24-15*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 7mm
350-24-21	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 8mm
350-24-22	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 8mm
350-24-23	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 8mm
350-24-24	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 8mm
350-24-25*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 8mm

IMPLANT LISTING

CATALOG NUMBER DESCRIPTION

350-24-31*	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 9mm
350-24-32*	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 9mm
350-24-33*	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 9mm
350-24-34*	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 9mm
350-24-35*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 9mm
350-24-41	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 10mm
350-24-42	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 10mm
350-24-43	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 10mm
350-24-44	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 10mm
350-24-45*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 10mm
350-24-51*	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 11mm
350-24-52*	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 11mm
350-24-53*	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 11mm
350-24-54*	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 11mm
350-24-55*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 11mm
350-24-61	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 12mm
350-24-62	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 12mm
350-24-63	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 12mm
350-24-64	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 12mm
350-24-65*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 12mm
350-24-71*	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 14mm
350-24-72*	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 14mm
350-24-73*	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 14mm
350-24-74*	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 14mm
350-24-75*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 14mm
350-24-81*	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 16mm
350-24-82*	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 16mm
350-24-83*	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 16mm
350-24-84*	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 16mm
350-24-85*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 16mm
350-24-91*	Activit-E Fixed Bearing Tibial Insert - Right - Size 1 - 18mm
350-24-92*	Activit-E Fixed Bearing Tibial Insert - Right - Size 2 - 18mm
350-24-93*	Activit-E Fixed Bearing Tibial Insert - Right - Size 3 - 18mm
350-24-94*	Activit-E Fixed Bearing Tibial Insert - Right - Size 4 - 18mm
350-24-95*	Activit-E Fixed Bearing Tibial Insert - Right - Size 5 - 18mm

Exactech is proud to have offices and distributors around the globe. For more information about Exactech products available in your country, please visit www.exac.com.

For additional device information, refer to the Exactech Vantage® Total Ankle System—Instructions for Use for a device description, indications, contraindications, precautions, and warnings. For further product information, please contact Customer Service, Exactech, Inc., 2320 NW 66th Court, Gainesville, Florida 32653-1630, USA. (352) 377-1140, (800) 392-2832 or FAX (352) 378-2617.

Exactech, as the manufacturer of this device, does not practice medicine, and is not responsible for recommending the appropriate surgical technique for use on a particular patient. These guidelines are intended to be solely informational and each surgeon must evaluate the appropriateness of these guidelines based on his or her personal medical training and experience. Prior to use of this system, the surgeon should refer to the product package insert for comprehensive warnings, precautions, indications for use, contraindications, and adverse effects.

The products discussed herein may be available under different trademarks in different countries. All copyrights, and pending and registered trademarks, are property of Exactech, Inc. This material is intended for the sole use and benefit of the Exactech sales force and physicians. It should not be redistributed, duplicated or disclosed without the express written consent of Exactech, Inc. ©2024 Exactech, Inc. OPTECH-000013 Rev/B 0924

Exactech is proud to have offices and distributors around the globe.
For more information about Exactech products available in your country, please visit www.exac.com



GLOBAL HEADQUARTERS
2320 NW 66TH COURT
GAINESVILLE, FL 32653 USA

+1 352.377.1140
+1 800.EXACTECH
+1 352.378.2617
www.exac.com