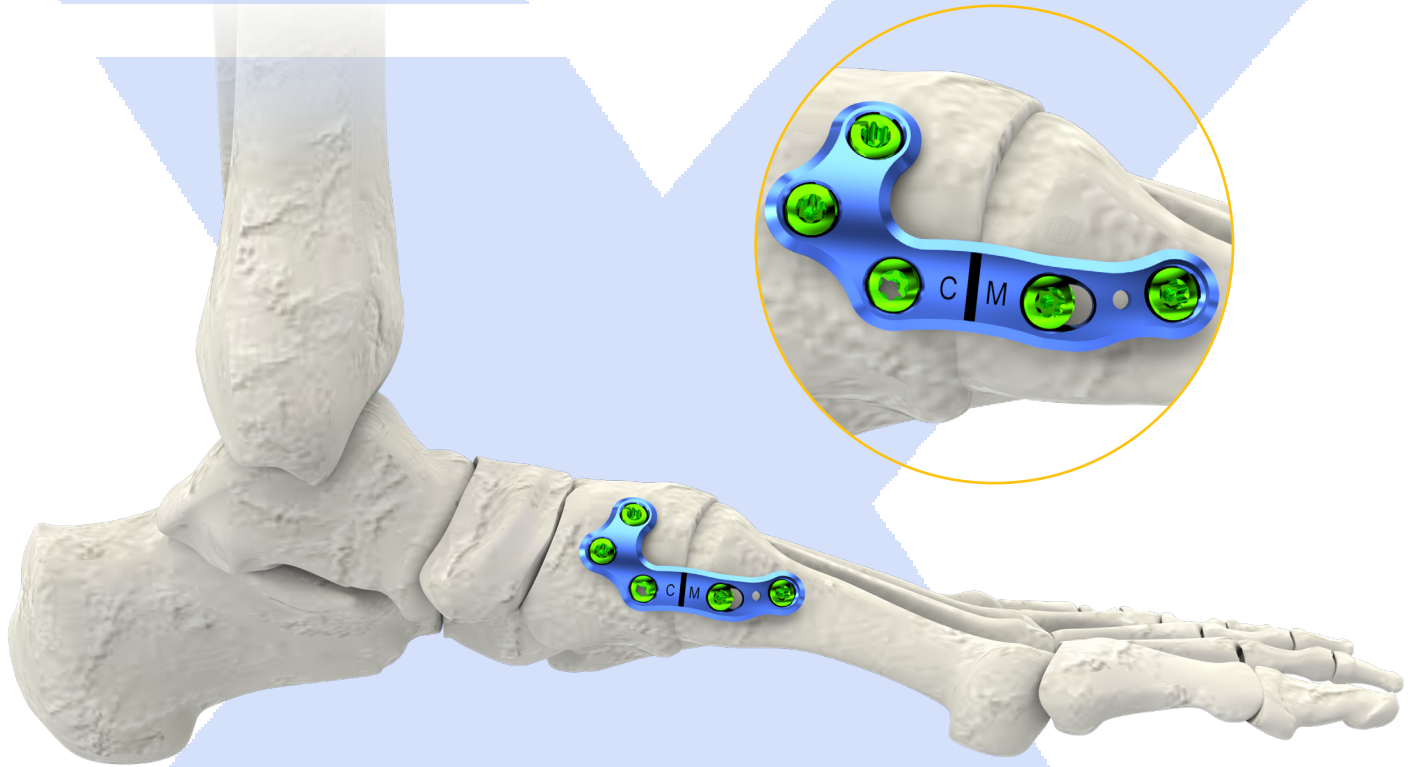


Freedom | Lapidus

Joint Preparation and Alignment System



OMNI Lapidus Plating Surgical Technique

Featuring

SlotLock[®]

EXTREMITY[®]
MEDICAL

Freedom | Lapidus

Joint Preparation and Alignment System

Instrument Overview

THE[®] CARTILAGINATOR

A revolutionary joint preparation technology designed to efficiently prepare the 1st TMT joint while minimizing shortening.

Single Sided



Double Sided



Cartilaginator

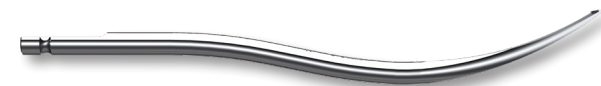
Customized for Stryker Power Unit



1.6mm Olive Wire Tack, Smooth



Joint Prep Cup Curette



Joint Preparation Rasp



1.6mm Guidewire and Guidewire Holder



2.0mm Guidewire (150mm) and Guidewire Holder (180mm)

Customer Service: 973.588.8980

www.extremitymedical.com

Instrument Overview



Slim Fenestrating Drill



Fenestrating Drill Guide

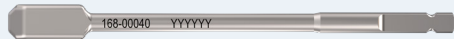


Distraction Guide

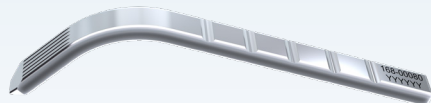
Joint Seeker Tab



Joint Seeker



Paddle Distractor



Metatarsal Base Spacer

Medial Arm Left



Lateral Arm Left

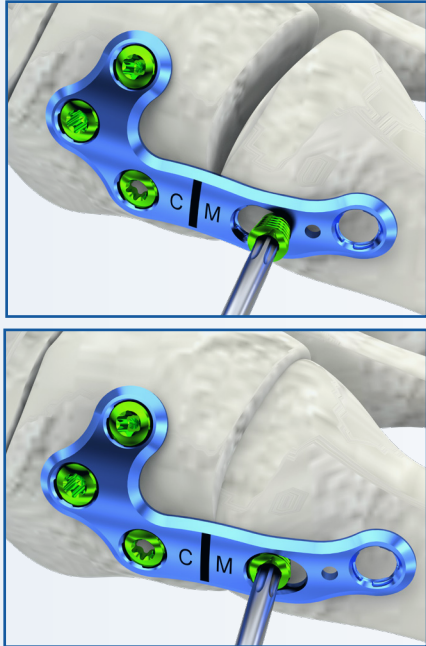
Medial Arm Right



Lateral Arm Right

OMNI™ Lapidus

Plating System



SlotLock®

A novel locking compression slot that affords the surgeon greater versatility with reliable fixed angle compression capability.

*compatible with locking and non-locking screws

Implants



Lapidus SlotLock Plate
Slim, 4 Hole



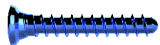
Lapidus SlotLock Plate
5-Hole (L/R)



Lapidus SlotLock Plate
6-Hole (L/R)



Lapidus SlotLock Plate
Straight, 4-Hole



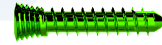
2.8mm Non-locking Screw



2.8mm Locking Screw



3.5mm Non-locking Screw



3.5mm Locking Screw



3.5mm Screw Washer



3.5mm Cannulated
Compression Screw

General Instruments



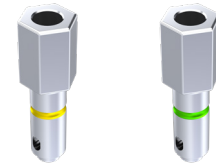
SlotLock Compression Drill Guide



Compression Drill Guide for 2.8 and 3.5 screws



Quick Drill Guide



Locking Drill Sleeves



Drill Bit for 2.8 Screw



2.5mm Cannulated Drill



Drill Bit for 3.5 Screw



Depth Gauge for Cannulated Screws



Depth Gauge for 2.8 and 3.5 Screws



Headed Screw Countersink



T10 Solid Hex Driver



T15 Cannulated Hex Driver

Real change *starts* here™

Threaded Tip, Long



Olive Wires, 1.6mm

Smooth Tip, Short



Smooth Tip, Long



1.4mm Guidewire and
Guidewire Holder



Fenestrating Drill



Joint Preparation Rasp



Small AO Handle



Hinterman
Compressor/Distractor



Grasping Forceps

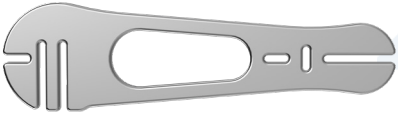


Plate Bender

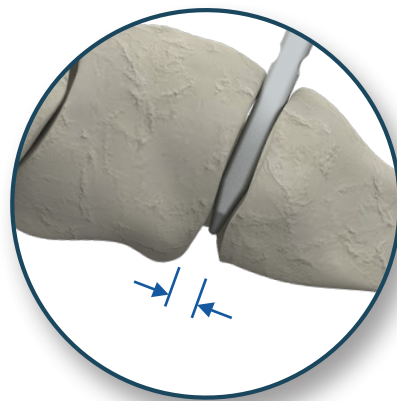
Scope:

This surgical technique guide is intended to illustrate the joint preparation and alignment steps of a Lapidus procedure utilizing a small incision (~1-2cm), either dorsally, medially or dorsomedially with the implantation of an OMNI Lapidus Plate. If an open procedure is preferred, the surgeon can distract the joint using his/her own means and skip to “Step 5 — Joint Preparation with the Cartilaginator”.

Joint Preparation and Alignment

STEP 1. Joint Seeker

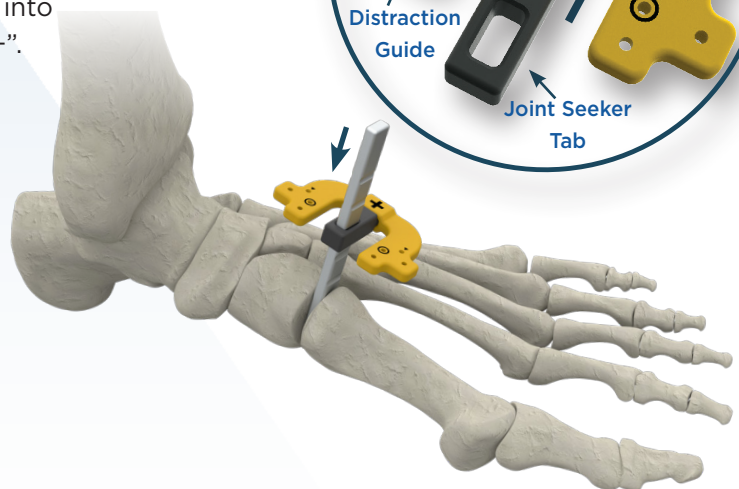
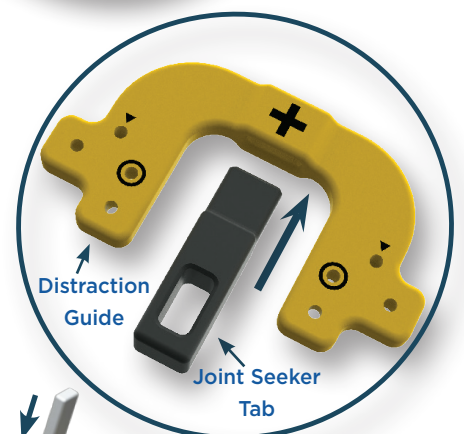
- A. Use an osteotome to fully mobilize the 1st TMT joint and detach from any surrounding soft tissue, especially on the plantar edge. Take precaution to preserve the 1st webspace neurovascular structures.
- B. Insert the Joint Seeker into the joint with the beveled end entered first. The Joint Seeker will distract the joint 4mm when the instrument is fully inserted.
If step 1A was completed properly, the instrument should experience minimal resistance during insertion.



Step 2. Slide the Distraction Guide over the Joint Seeker

- A. Attach the Joint Seeker Tab to the Distraction Guide by inserting the tab into the opening on the guide under the “+”.
- B. Once assembled, slide the Distraction Guide over the Joint Seeker until it is touching the bone. Ensure the “+” is facing up, and laterally towards the 5th ray.

The tab can be inserted into the opening of the distraction guide like shown.

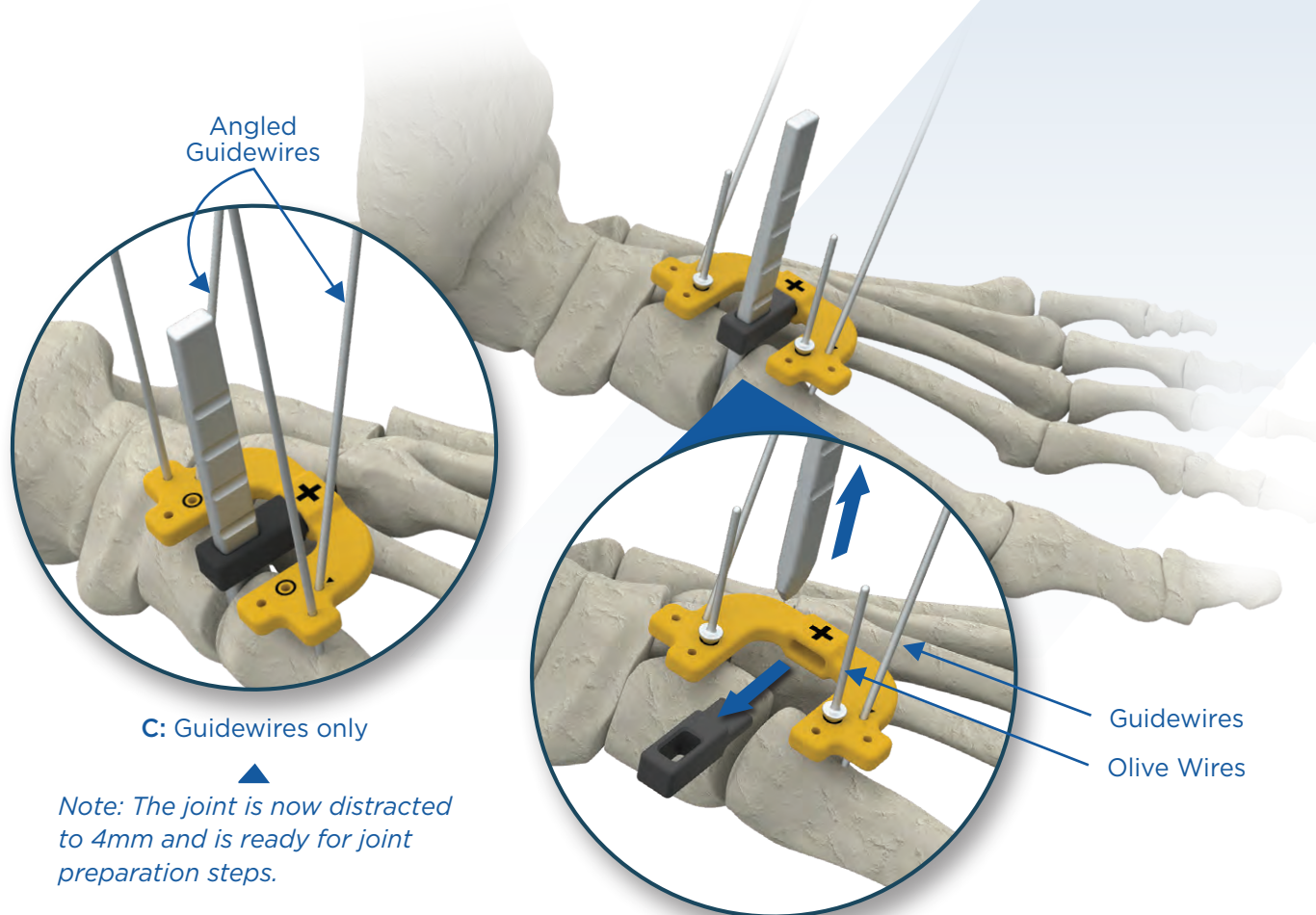


Step 3. Pin the Distraction Guide to retain joint distraction

- A.** Using the provided 1.6mm Guidewires or Olive Wires, pin the Distraction Guide in place.
- i. For maximum stability, use two points of fixation in the metatarsal and the cuneiform (four total).
 - ii. If only Guidewires are used, follow the orientation shown below on the left. Start with the two Guidewires furthest away from the joint, then place the angled Guidewires through the holes designated with an arrow.
 - iii. If the use of Olive Wires is preferred, the orientation shown below on the right is recommended.
- B.** Once the Distraction Guide has been fixated, remove the Joint Seeker and the seeker tab.

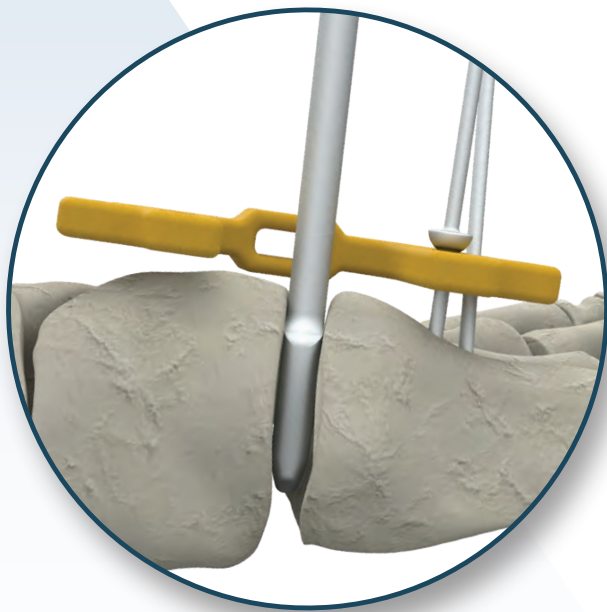
Note: The angled holes on the Distraction Guide are labeled with an arrow.

Note: The circled holes are intended for Olive Wire use.

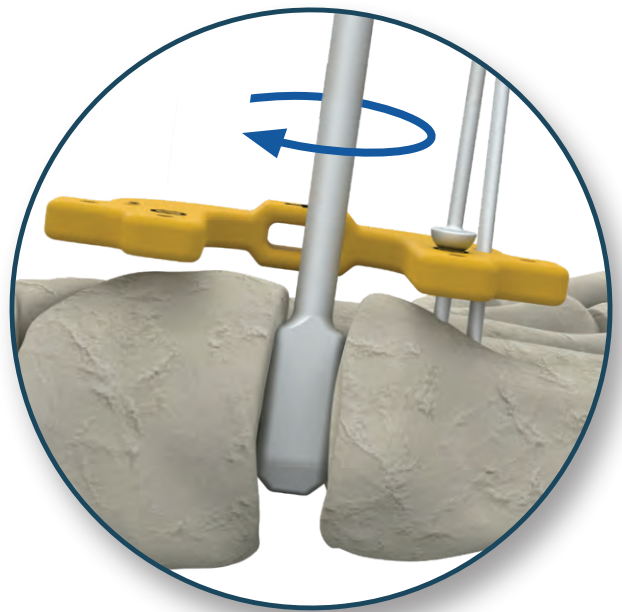


STEP 4. Paddle Distractor (Optional) – Utilize to open the joint from 4mm to 8mm.

- A. Remove all Guidewires inserted in the cuneiform from the Distraction Guide. Insert the Paddle Distractor in the joint with the flattened side inserted first (as shown in the left image below).
- B. Rotate the Paddle Distractor 90°, which will distract the space to an 8mm width.
- C. While keeping the Paddle Distractor engaged, replace the Guidewires into the cuneiform to hold the Distraction Guide in its new position. At this point, the joint will be distracted 8mm.
- D. This tool and technique can be used to increase the distraction space of the 1st TMT at anytime in the surgical technique.



Initial Insertion - 4mm Distraction



After 90° Rotation - 8mm Distraction

Step 5. Joint Preparation with the Cartilaginator

- A. Attach the Cartilaginator to a sagittal saw power unit.

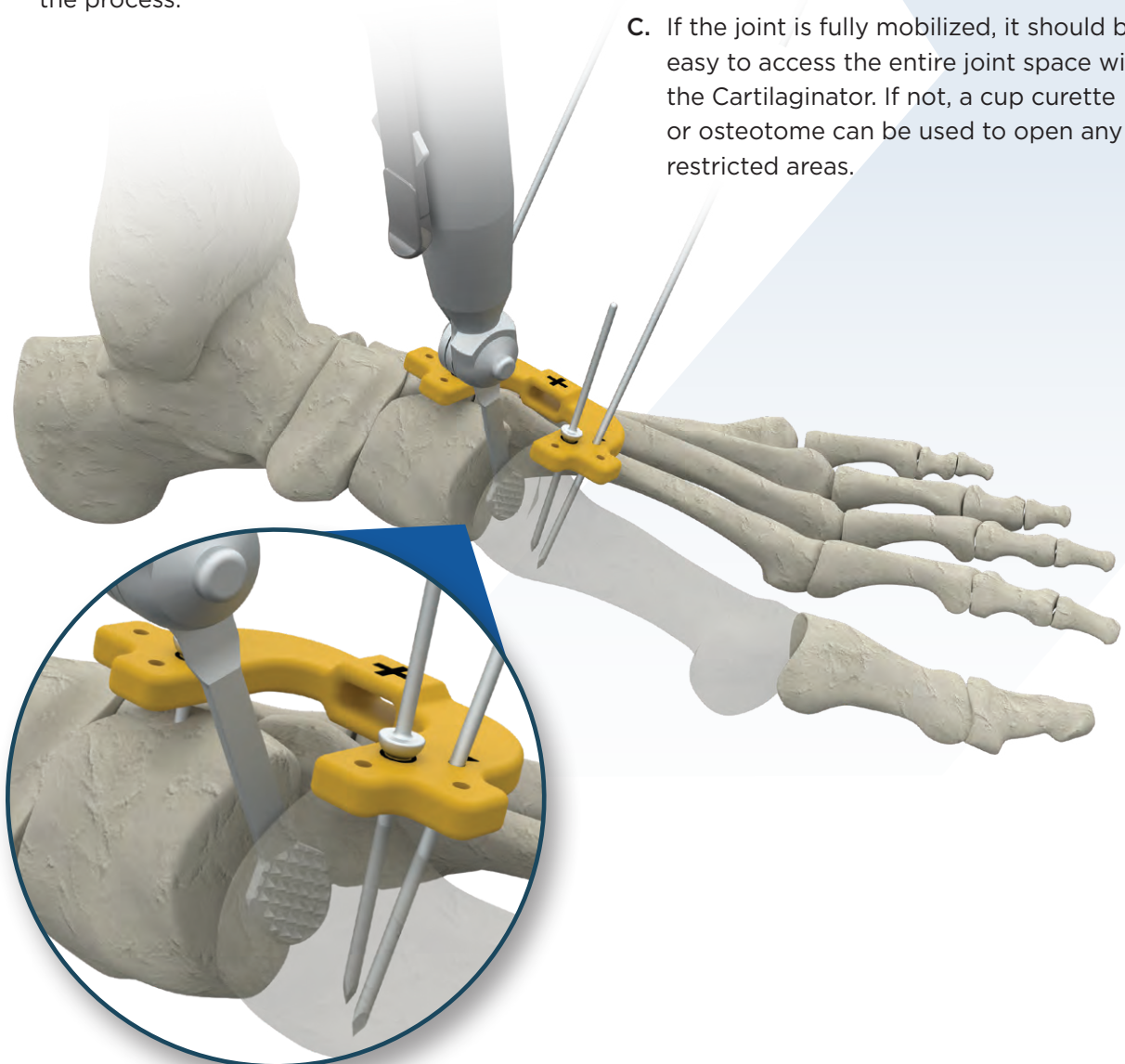
Note: A single and double sided Cartilaginator option is available.

- B. Use the Cartilaginator like a saw rasp to remove cartilage down to the subchondral bone. Minimal pressure should be applied to ensure control is maintained throughout the process.

Note: During use, cartilage and bone material may build up in the Cartilaginator. This can be cleared out using gauze or the sharp end of a guidewire.

WARNING. To avoid excessive heat, the **Cartilaginator should only be run at lower speeds (50% power or less)** in standard saw modes. Lower speed settings like “Oscillate” or “Ream” are equally effective and recommended.

- C. If the joint is fully mobilized, it should be easy to access the entire joint space with the Cartilaginator. If not, a cup curette or osteotome can be used to open any restricted areas.

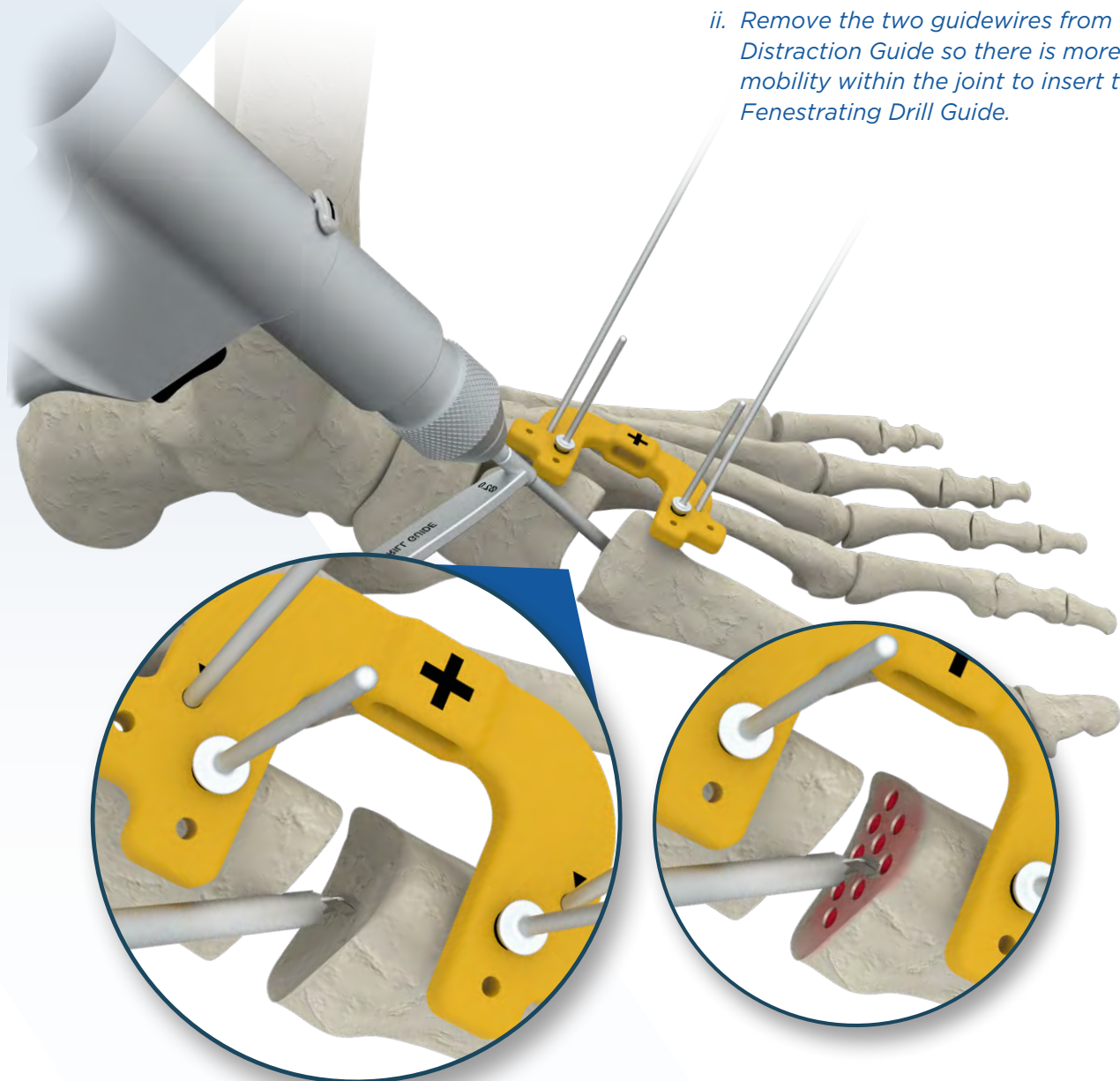


Step 6. Joint Fenestration

A. If fenestration is desired to create an enhanced bleeding surface, a 2.0mm Fenestrating Drill and Fenestrating Drill Guide is provided. The drill guide enhances the placement of holes in a small incision technique, and provides protection of the soft tissue.

B. If the joint space is too small for adequate fenestration, the surgeon has two options to create more distraction space:

- i. Utilize the Paddle Distractor as described in Step 4 to achieve 8mm of distraction.
- ii. Remove the two guidewires from the Distraction Guide so there is more mobility within the joint to insert the Fenestrating Drill Guide.



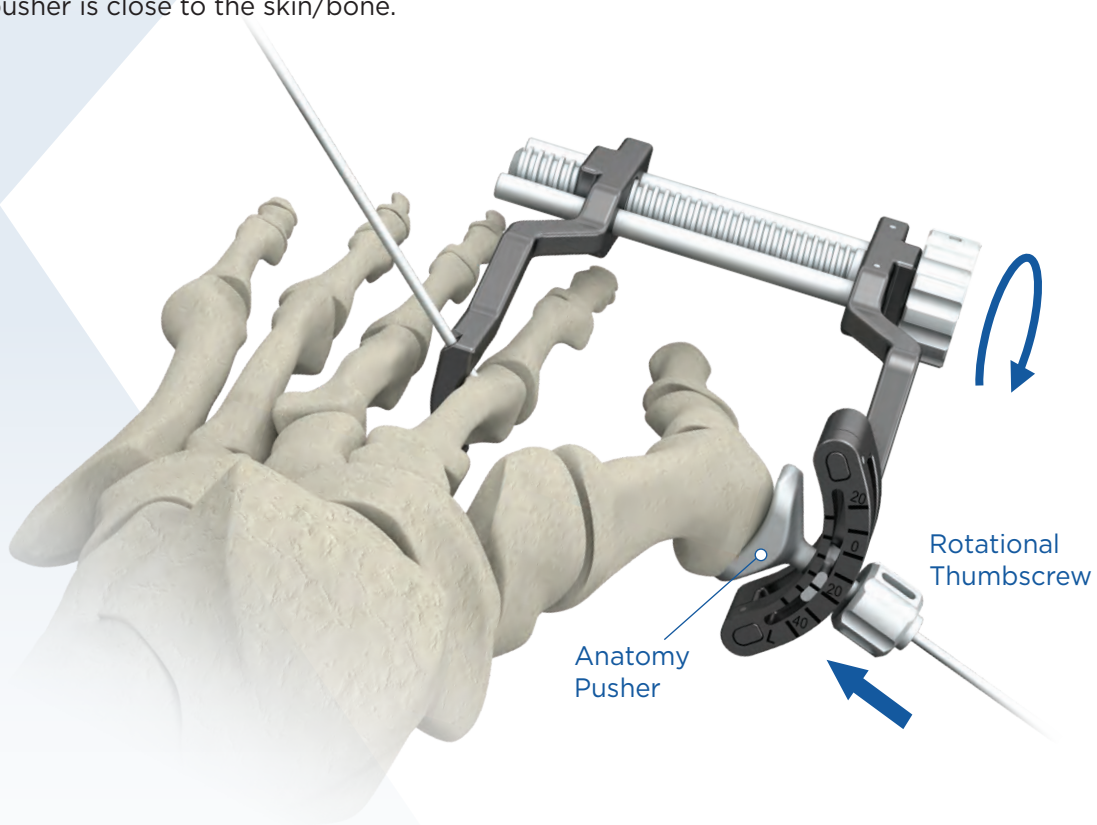
Step 7. Initial Clamp Preparation

- A.** Assemble the Reduction Clamp construct:
- Ensure both the medial and lateral arms say R or L.
 - Align the threaded rod and beams on the Medial Arm with the corresponding holes on the Lateral Arm, as shown.
 - While applying pressure, twist the large thumbscrew clockwise until the threads engage with the Lateral Arm.
- B.** Pre-Operative planning can be used to determine the rough rotational correction required for the procedure.
- C.** The clamp rotation arc has reference tick marks which can assist with the rotational correction needed for the patient.
- For example, if the surgeon has pre-determined that $\sim 20^\circ$ of rotational correction is needed, the rotation arc should be rotated to the lower 20° tick mark, shown below, prior to initial placement.
 - If rotational correction has not been predetermined, it is recommended to begin with the clamp at the lower 20° position, shown below.



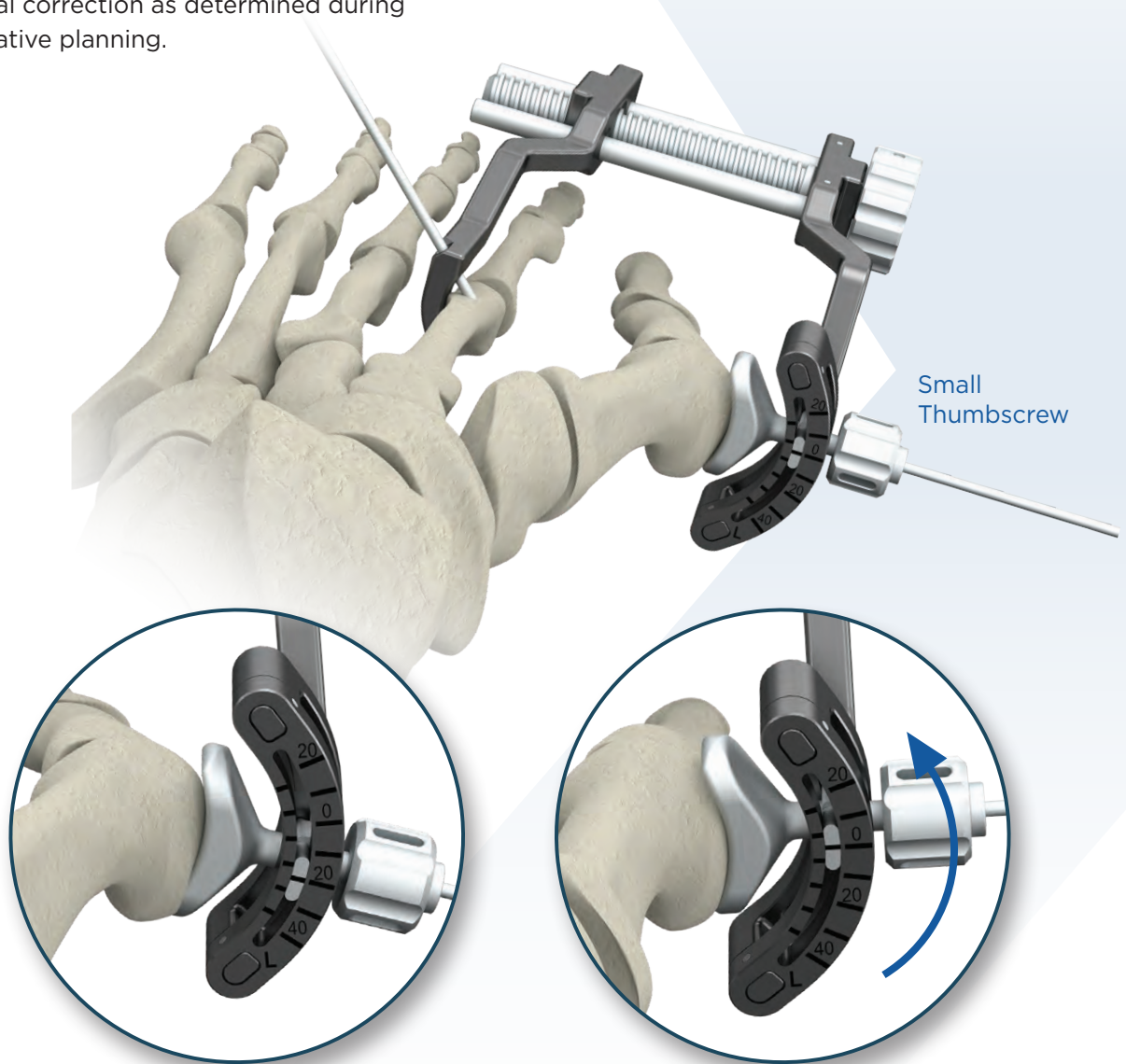
Step 8. Place the Reduction Clamp

- A. An incision over the 2nd metatarsal head is required for placement of the lateral clamp arm. This can be done with a lateral release incision or via a separate stab incision.
- B. Rotate the large thumbscrew clockwise to compress the clamp until the anatomy pusher is close to the skin/bone.
- C. Place the 2.0mm Guidewires through the lateral and medial clamp arms prior to applying compression to reduce the IM angle.



Step 9. Apply rotational correction if needed

Using the small thumbscrew as a joystick, rotate the wire along the arcs to apply the desired rotational correction as determined during preoperative planning.



Small
Thumbscrew

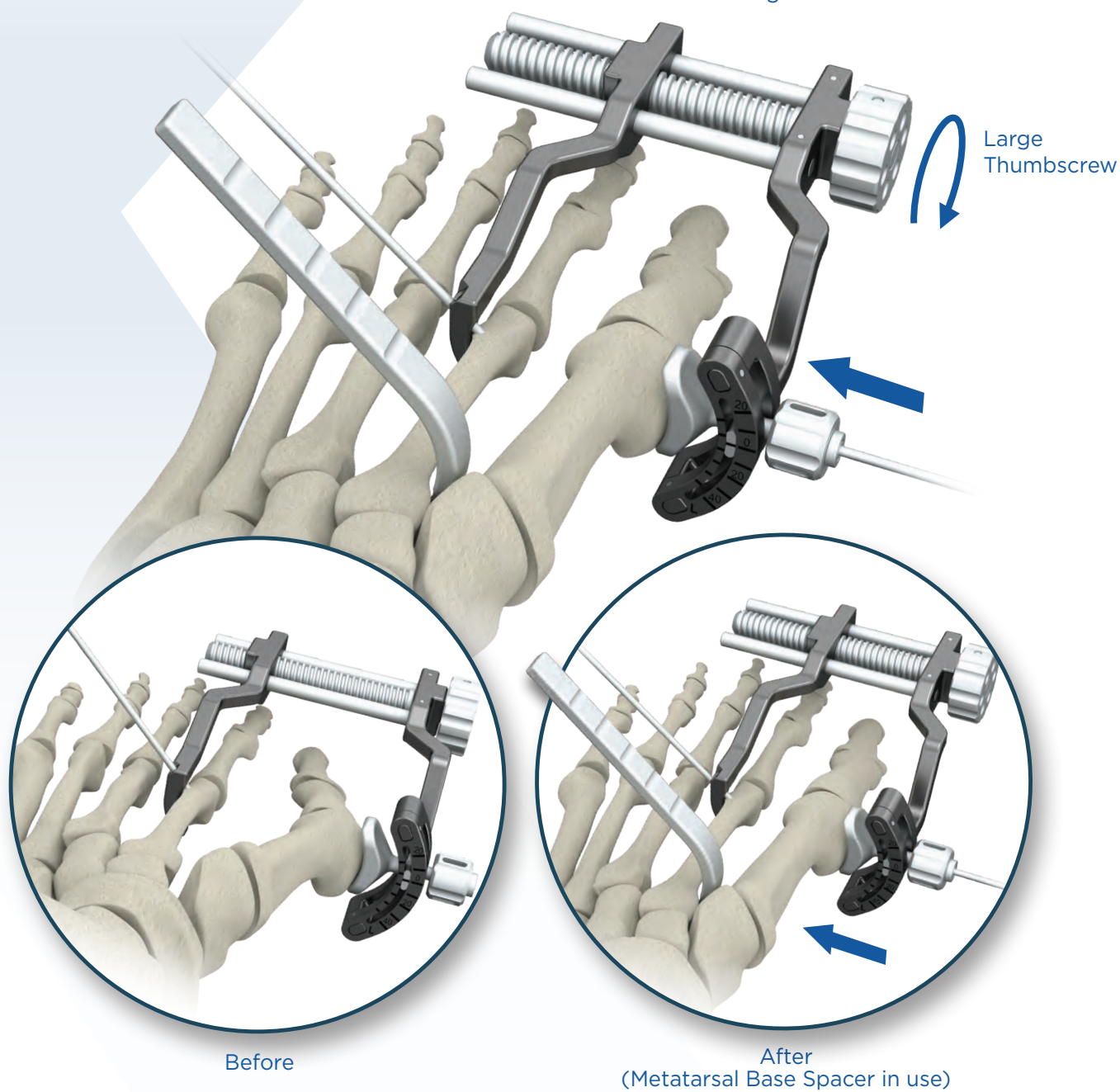
-20° Before rotational correction

0° After rotational correction

Step 10. Translate the distal metatarsal to reduce the IM angle

- A. The large thumbscrew will compress the two clamp arms and can be used to close the IM angle between the 1st and 2nd metatarsals.

Note: The Metatarsal Base Spacer instrument can be placed between the 1st and 2nd metatarsal base during this step. This will keep the metatarsal base in the preferred location while translating the distal metatarsal.



Step 11. Confirm desired position under fluoroscopy

- A. After reducing the IM angle, confirm the desired position under fluoroscopy.

Note: The clamp mainly corrects the frontal and transverse planes — NOT the sagittal plane. Ensure the 1st ray is not excessively plantar or dorsiflexed prior to placing hardware.

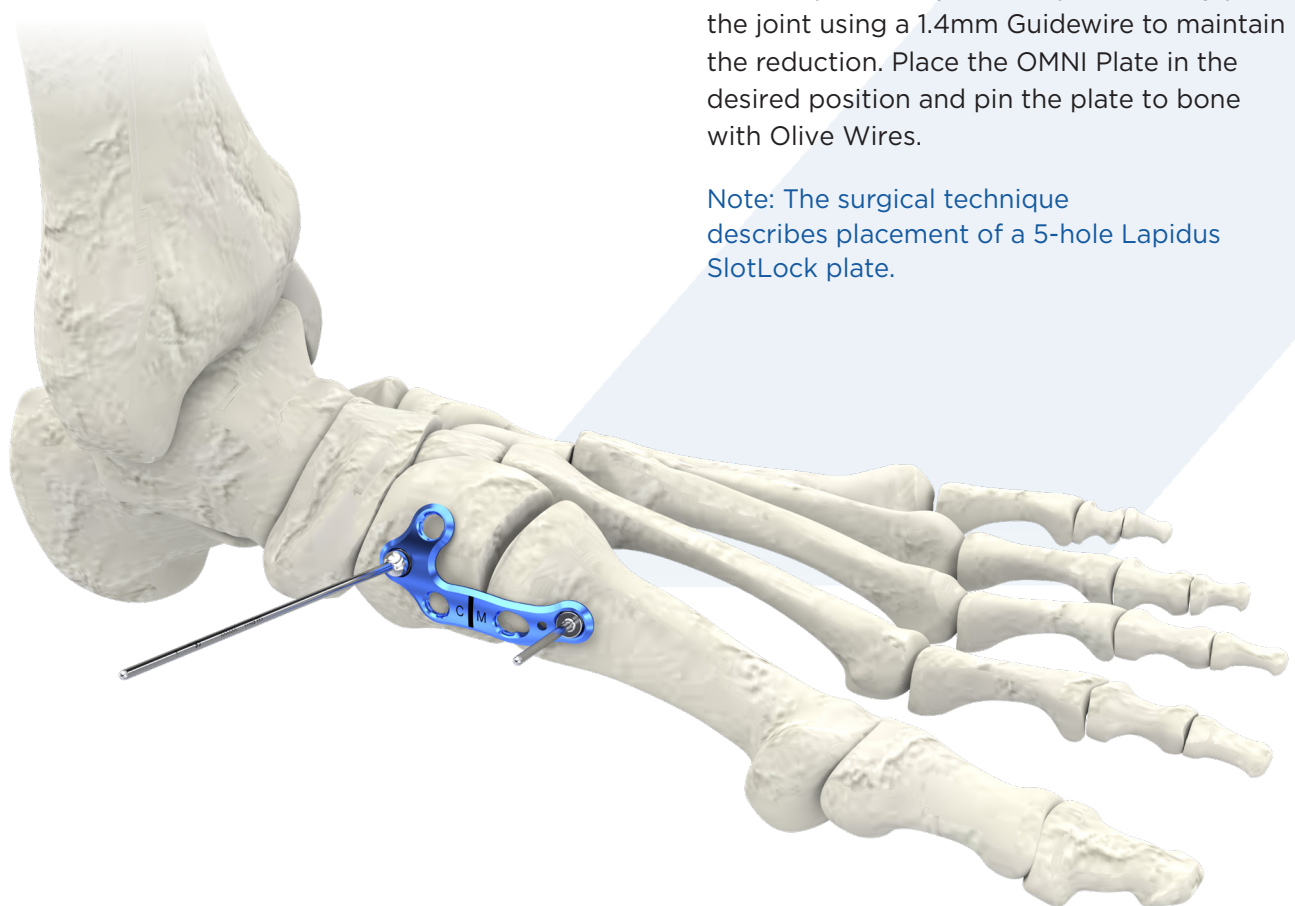
Note: The joint has now been prepared and is ready for OMNI Lapidus plate insertion. The following steps demonstrate the technique with the clamp removed, as illustrated by the figures, although it can be kept in place if preferred.

Lapidus Plate Implantation

STEP 12. Provisionally pin the plate

Pre-compress the joint and provisionally pin the joint using a 1.4mm Guidewire to maintain the reduction. Place the OMNI Plate in the desired position and pin the plate to bone with Olive Wires.

Note: The surgical technique describes placement of a 5-hole Lapidus SlotLock plate.



STEP 13. Quick Drill Guide

To generate compression with SlotLock, first decide in which locking hole the screw will be placed (If there are more than one SlotLock holes). The first screws are to be placed on the opposite side of the joint from the SlotLock hole.

Use the Quick Drill Guide to drill for the solid screw to be placed in the non-SlotLock holes.

Screw Size	Drills	Drill Guide Color	Driver Size
2.8mm (locking/non-locking)	2.0mm (solid)	Yellow	T10
3.5mm (locking/non-locking)	2.7mm (solid)	Green	T10
3.5mm Compression Screw	2.5mm (cannulated)	Magenta	T15



STEP 14. Drill for First Solid Screw

Use the appropriate drill (indicated in Step 13) to drill down to the desired depth for screw insertion.

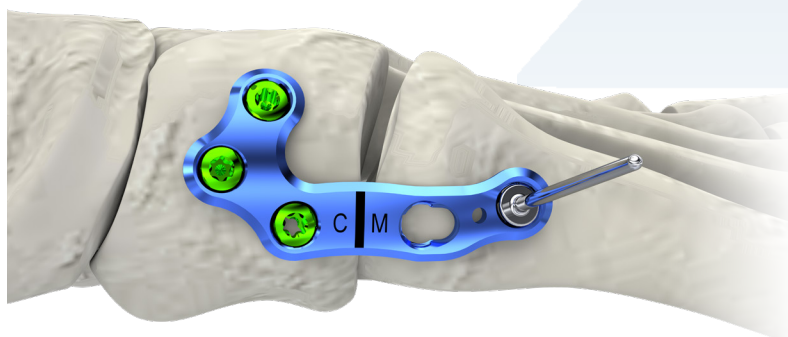
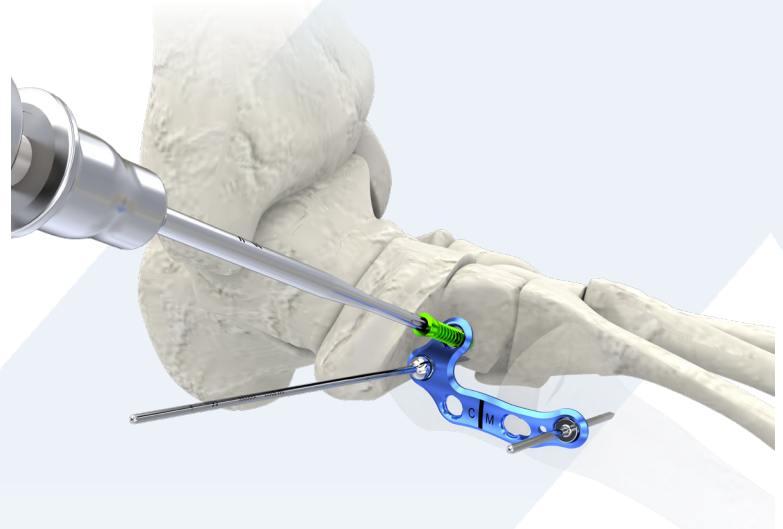


Use the Depth Gauge to measure the length of the screw.



STEP 15. Insert First Solid Screw

Use the appropriate driver (indicated in Step 13) to insert and lock the screw into the plate.



STEP 16. Insert Remaining Screws

Follow steps 13 to 15 to insert the remaining plate screws. As you can see in the image to the left, all plate holes on the distal side of the SlotLock hole are filled, while leaving the Olive Wire intact on the proximal side of the SlotLock to keep the joint reduced.

The same technique will apply for all Lapidus SlotLock Plates.

STEP 17. SlotLock Compression Drill Guide for Locking Screws

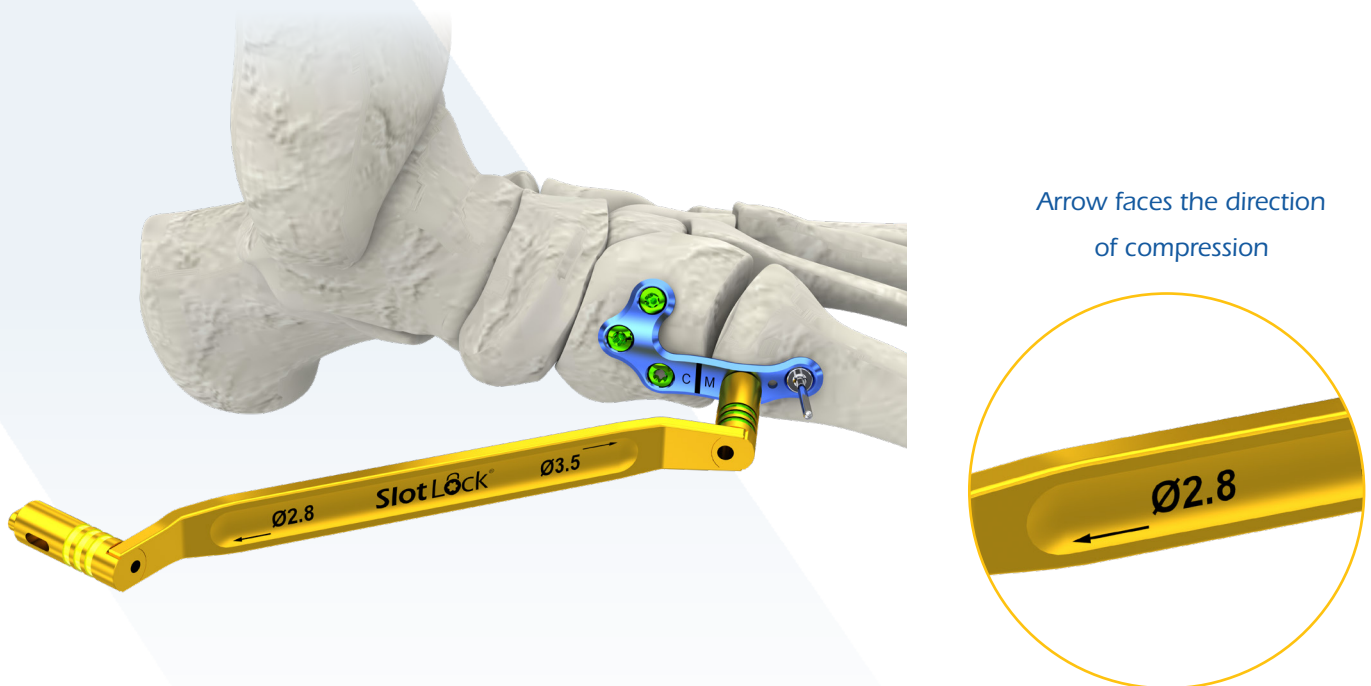
Use the **SlotLock Compression Drill Guide** when placing a screw into the SlotLock hole. The orientation of the Drill Guide will differ based on the type of screw you are inserting.

For locking screws, place the SlotLock Compression Drill Guide into the compression slot of the plate with the handle away from the plate, as shown below. This will create an eccentric hole allowing for compression with a **locking** screw. Drill with the respective Drill Bit.



STEP 18. SlotLock Compression Drill Guide for Non-Compressive Application of SlotLock

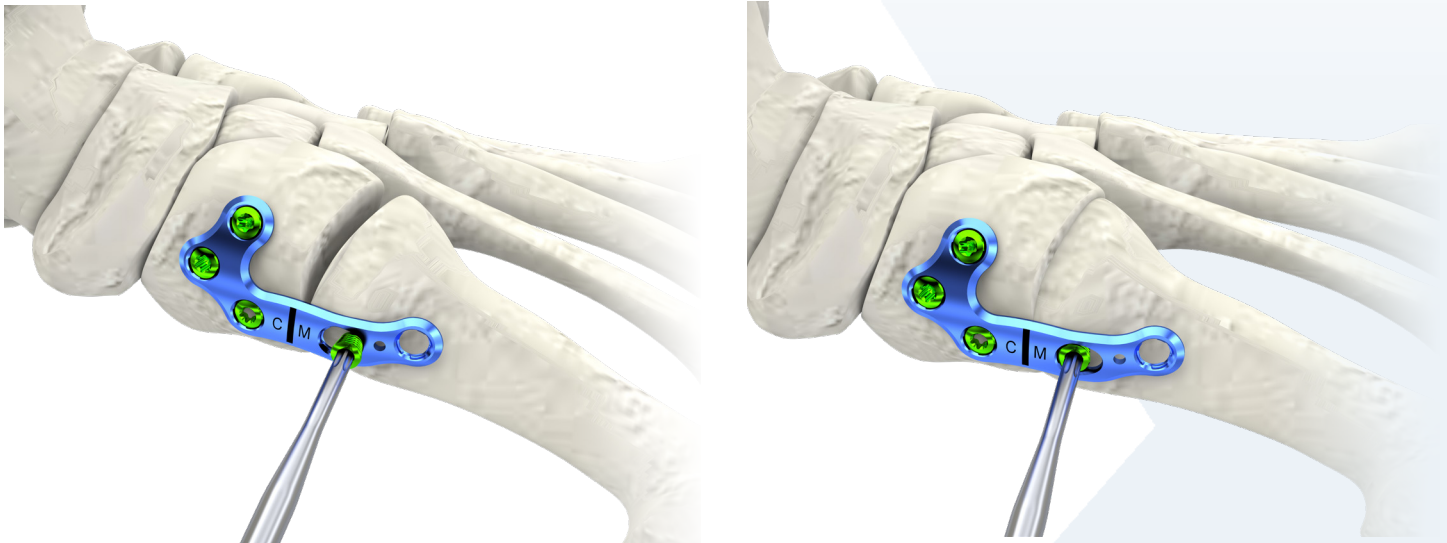
For non-locking screws, place the SlotLock Compression Drill Guide into the compression slot of the plate with the handle oriented over the plate, as shown below.



STEP 19. Lock Compression Screw in Place

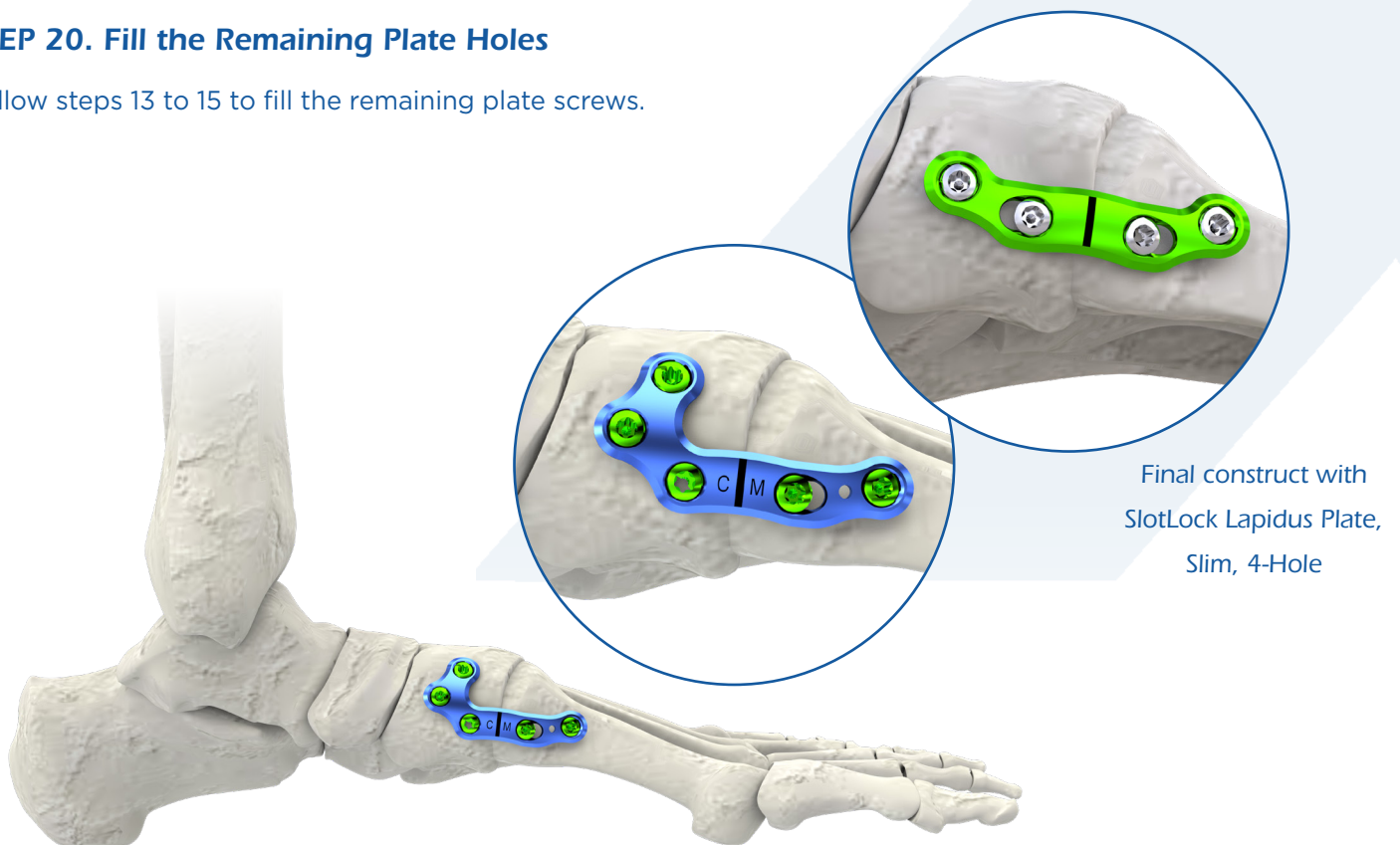
Using the T10 driver, advance the screw into the SlotLock hole, and you will see it progress down the ramp.

Note: Final tightening of the SlotLock Compression Screw should be applied with two finger pressure and care should be taken not to over tighten the construct.



STEP 20. Fill the Remaining Plate Holes

Follow steps 13 to 15 to fill the remaining plate screws.



Indications for use:

- The Omni Foot and Ankle Plating System is intended for use in internal fixation of arthrodeses, osteotomies, fractures, and nonunions of the small bones of the foot & ankle including fore-, mid-, and hind foot and ankle applications.
- Lapidus Instruments are designed to facilitate joint preparation and deformity correction of the 1st metatarsal prior to fusion of the first TMT joint.

Lapidus Joint Preparation and Alignment Components

Reusable Instruments

Part #	Description
168-00000	Lapidus System – Joint Prep and Alignment Tray
168-01001	Hallux Valgus Reduction Clamp, Medial Arm Assembly, Right
168-01002	Hallux Valgus Reduction Clamp, Medial Arm Assembly, Left
168-02001	Hallux Valgus Reduction Clamp, Lateral Arm, Right
168-02002	Hallux Valgus Reduction Clamp, Lateral Arm, Left
168-00030	Joint Seeker, 4mm x 8mm
168-00040	Paddle Distractor, 4mm x 8mm
168-00060	2.0mm Guidewire Holder, 180mm
168-00080	Metatarsal Base Spacer
147-00010	Fenestrating Drill Guide
101-00009	1.6mm Guidewire Holder

Disposable Instruments

Part #	Description
168-05010	Cartilaginator (Saw Rasp), Single-Sided, Stryker
168-05020	Cartilaginator (Saw Rasp), Double-Sided, Stryker
168-00010	Distraction Guide
168-00020	Seeker Tab
168-00050	Joint Prep Cup Curette, 7mm x 5mm
168-00070	2.0mm Guidewire, 150mm
147-00020	Slim Fenestrating Drill
101-00006	1.6mm Guidewire
144-00030	Joint Prep Rasp
168-00100	1.6mm Olive Wire Tack, Smooth, 30mm

OMNI Lapidus Plates Components

Plates

Part #	Description
164-21401	SlotLock Lapidus Plate, 5-Hole, Left
164-21402	SlotLock Lapidus Plate, 5-Hole, Right
164-11401	SlotLock Lapidus Plate, Slim, 4-Hole
164-31701	SlotLock Lapidus Plate, 6-Hole, Left
164-31702	SlotLock Lapidus Plate, 6-Hole, Right
164-41600	SlotLock Lapidus Plate, Straight, 4-Hole

Washers

Part #	Description
147-35600	3.5mm Screw Washer

Reusable Instruments

Part #	Description
144-00002	Grasping Forceps
144-00006	Depth Gauge for 2.8 and 3.5 screws
144-00307	Compression Drill Guide for 2.8 and 3.5 screws
144-00308	Drill Sleeve for 2.8 Screw
144-00009	Drill Sleeve for 3.5 Screw
144-00010	T10 Driver, Solid
144-00013	Depth Gauge for Cannulated Screw
144-00015	T15 Driver, Cannulated
144-00026	Guidewire Holder (Dispenser)
144-00027	Plate Bender
144-00031	Hintermann Compressor Distractor
127-00006	Small AO Handle
144-00041	Quick Drill Guide
144-00407	SlotLock Compression Drill Guide

Disposable Instruments

Part #	Description
144-00303	Drill Bit for 2.8 Screw (2.0 mm)
144-00004	Drill Bit for 3.5 Screw (2.7 mm)
144-00011	Olive Wire 1.6 mm, Threaded
144-00012	Headed Screw Countersink
144-00014	1.4 mm Guidewire
144-00025	2.5 mm Cannulated Drill
144-00030	Joint Preparation Rasp
144-00032	Fenestrating Drill
144-50111	Olive Wire 1.6 mm, Smooth
144-61111	Olive Wire 1.6 mm, Smooth, Short

3.5mm Cannulated Lag Screws

Part #	Description
144-35224	Cannulated Screw - 3.5 x 24mm
144-35226	Cannulated Screw - 3.5 x 26mm
144-35228	Cannulated Screw - 3.5 x 28mm
144-35230	Cannulated Screw - 3.5 x 30mm
144-35232	Cannulated Screw - 3.5 x 32mm
144-35234	Cannulated Screw - 3.5 x 34mm
144-35236	Cannulated Screw - 3.5 x 36mm
144-35238	Cannulated Screw - 3.5 x 38mm
144-35240	Cannulated Screw - 3.5 x 40mm
144-35245	Cannulated Screw - 3.5 x 45mm
144-35250	Cannulated Screw - 3.5 x 50mm

2.8mm Solid Locking Screws

Part #	Description
144-28110	Locking Screw - 2.8 x 10mm
144-28112	Locking Screw - 2.8 x 12mm
144-28114	Locking Screw - 2.8 x 14mm
144-28116	Locking Screw - 2.8 x 16mm
144-28118	Locking Screw - 2.8 x 18mm
144-28120	Locking Screw - 2.8 x 20mm
144-28122	Locking Screw - 2.8 x 22mm
144-28124	Locking Screw - 2.8 x 24mm
144-28126	Locking Screw - 2.8 x 26mm
144-28128	Locking Screw - 2.8 x 28mm
144-28130	Locking Screw - 2.8 x 30mm

2.8mm Solid Non-Locking Screws

Part #	Description
144-28010	Non-Locking Screw - 2.8 x 10mm
144-28012	Non-Locking Screw - 2.8 x 12mm
144-28014	Non-Locking Screw - 2.8 x 14mm
144-28016	Non-Locking Screw - 2.8 x 16mm
144-28018	Non-Locking Screw - 2.8 x 18mm
144-28020	Non-Locking Screw - 2.8 x 20mm
144-28022	Non-Locking Screw - 2.8 x 22mm
144-28024	Non-Locking Screw - 2.8 x 24mm
144-28026	Non-Locking Screw - 2.8 x 26mm
144-28028	Non-Locking Screw - 2.8 x 28mm
144-28030	Non-Locking Screw - 2.8 x 30mm

3.5mm Solid Locking Screws

Part #	Description
144-35110	Locking Screw - 3.5 x 10mm
144-35112	Locking Screw - 3.5 x 12mm
144-35114	Locking Screw - 3.5 x 14mm
144-35116	Locking Screw - 3.5 x 16mm
144-35118	Locking Screw - 3.5 x 18mm
144-35120	Locking Screw - 3.5 x 20mm
144-35122	Locking Screw - 3.5 x 22mm
144-35124	Locking Screw - 3.5 x 24mm
144-35126	Locking Screw - 3.5 x 26mm
144-35128	Locking Screw - 3.5 x 28mm
144-35130	Locking Screw - 3.5 x 30mm
144-35132	Locking Screw - 3.5 x 32mm
144-35134	Locking Screw - 3.5 x 34mm
144-35135	Locking Screw - 3.5 x 35mm
144-35136	Locking Screw - 3.5 x 36mm
144-35138	Locking Screw - 3.5 x 38mm
144-35140	Locking Screw - 3.5 x 40mm

3.5mm Solid Non-Locking Screws

Part #	Description
144-35010	Non-Locking Screw - 3.5 x 10mm
144-35012	Non-Locking Screw - 3.5 x 12mm
144-35014	Non-Locking Screw - 3.5 x 14mm
144-35016	Non-Locking Screw - 3.5 x 16mm
144-35018	Non-Locking Screw - 3.5 x 18mm
144-35020	Non-Locking Screw - 3.5 x 20mm
144-35022	Non-Locking Screw - 3.5 x 22mm
144-35024	Non-Locking Screw - 3.5 x 24mm
144-35026	Non-Locking Screw - 3.5 x 26mm
144-35028	Non-Locking Screw - 3.5 x 28mm
144-35030	Non-Locking Screw - 3.5 x 30mm
144-35032	Non-Locking Screw - 3.5 x 32mm
144-35034	Non-Locking Screw - 3.5 x 34mm
144-35036	Non-Locking Screw - 3.5 x 36mm
144-35038	Non-Locking Screw - 3.5 x 38mm
144-35040	Non-Locking Screw - 3.5 x 40mm

Additional OMNI Components

OMNI Plates

Part #	Description
144-10211	MTP Fusion Plate (Narrow), Left
144-10212	MTP Fusion Plate (Narrow), Right
144-10241	MTP Fusion Plate (Narrow), Long, Left
144-10242	MTP Fusion Plate (Narrow), Long, Right
144-10251	MTP Fusion Plate (Narrow), Dorsiflexed, Left
144-10252	MTP Fusion Plate (Narrow), Dorsiflexed, Right
144-20020	Straight Plate, 2 Hole
144-20040	Straight Plate, 4 Hole
144-20050	Straight Plate, 5 Hole
144-20060	Straight Plate, 6 Hole
144-20070	Straight Plate, 7 Hole
144-20080	Straight Plate, 8 Hole
144-30011	X-Plate, Short, Left
144-30012	X-Plate, Short, Right
144-40011	Dog Bone Plate, Narrow, Short
144-40012	Dog Bone Plate, Narrow, Long
144-50050	Universal T-Plate, 5 Hole
144-50060	Universal T-Plate, 6 Hole
144-60041	T-Plate, 4 Hole, Left
144-60042	T-Plate, 4 Hole, Right
144-60051	T-Plate, 5 Hole, Left
144-60052	T-Plate, 5 Hole, Right
144-70051	Lapidus Plate, 5 Hole, Left
144-70052	Lapidus Plate, 5 Hole, Right
144-80011	Lisfranc Plate, Extra Small, Left
144-80012	Lisfranc Plate, Extra Small, Right
144-80021	Lisfranc Plate, Small, Left
144-80022	Lisfranc Plate, Small, Right
144-80031	Lisfranc Plate, Medium, Left
144-80032	Lisfranc Plate, Medium, Right
144-80041	Lisfranc Plate, Large, Left
144-80042	Lisfranc Plate, Large, Right

PlantarFix Compression Post

Part #	Description
144-42112	PlantarFix Compression Post - 12 mm
144-42116	PlantarFix Compression Post - 16 mm

Disposable Instruments

Part #	Description
144-00016	Barrel Reamer
144-00017	2.5 mm Solid Drill with Stop
144-00018	Post Drill
113-00114	14 mm Cone Rasp
113-00116	16 mm Cone Rasp
113-00118	18 mm Cone Rasp
113-00120	20 mm Cone Rasp
113-00214	14 mm Cup Rasp
113-00216	16 mm Cup Rasp
113-00218	18 mm Cup Rasp
113-00220	20 mm Cup Rasp

Reusable Instruments

Part #	Description
144-00020	Targeting Guide
144-00021	Post Adjuster
144-00023	Post Drill Guide
144-00119	Wire Guide
144-00122	2.5 mm Drill Sleeve, Long
144-00222	2.5 mm Drill Sleeve

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