Lapidus Plate

Designed to provide excellent fixation for a lapidus procedure, the Lapidus Plate offers the foot & ankle surgeon an anatomically contoured and configured option for procedures in the midfoot. The slot in this low profile plate allows the surgeon the choice of placing a lag screw across the TMT joint, as an outrigger screw to the 2nd metatarsal, or simply in offset compression mode. The surgeon may also choose to place locking or nonlocking screws in the other three plate holes.

**Locking Option** – The two proximal and most distal holes allow the surgeon to choose a fixed-angle locking or variable-angle nonlocking option, depending on the needs of the patient

**Compression Option** – The inner slot can accommodate an interfragmentary screw or generate compression when drilled eccentrically

**Minimized Profile** – Low Profile Plates and screw heads reduce soft tissue irritation and the need for removal

**Anatomic Contour** – Optimizes construct strength, simplifies surgical technique and reduces soft tissue irritation

**Anodized Finish** – Dramatically improves smoothness

**Screw Options** – 3.5 mm cortical, locking and 4 mm cancellous

![Graph](image)

Midfoot Fusion with Lapidus Plate
H-Plates

Designed to provide excellent fixation for fusions and osteotomies, these plates offer the foot & ankle surgeon a comprehensive option for procedures in the midfoot. These additions to the Low Profile Plating System come with and without wedge blocks, and in a variety of lengths to fixate lateral column lengthenings, calcaneocuboid arthrodesis, talonavicular arthrodesis and other common procedures in the midfoot.

**Left or Right Slants** – Fits a variety of indications

**Wedge Option** – Wedges save OR time and eliminate the need to harvest a tri-cortical wedge from the iliac crest

**Locking Option** – The outermost holes allow the surgeon to chose a fixed-angle locking or variable-angle nonlocking option, depending on the needs of the patient

**Compression Option** – The inner slots generate compression when drilled eccentrically in arthrodesis applications

**Minimized Profile** – Low profile plates and screw heads reduce soft tissue irritation and the need for removal

**Anatomic Contour** – Optimizes construct strength, simplifies surgical technique and reduces soft tissue irritation

**Anodized Finish** – Dramatically improves smoothness

**Screw Options** – 3.5 mm cortical, 3.5 mm cortical locking and 4 mm cancellous

Consider These Surgical Procedures:

- Lateral Column Lengthening
- Midfoot Fusions
- Calcaneocuboid Fusion
- Talonavicular Fusion
Lisfranc Plates

The new Lisfranc Plates were designed to provide fixation for acute Lisfranc injuries and fusions of the tarsal-metatarsal joints. The unique design allows for compression along the Lisfranc ligament and allows the surgeon to visualize the healing process during recovery. These plates come in three different sizes with both left and right plates to fit any patient and are contoured to fit the Lisfranc anatomy at only 1.4 mm thick.

Allows visualization – of the Lisfranc joint during healing process

Compresses along the Lisfranc ligament – along the line of injury

Eliminates the joint damage – that may occur with the use of screws and Guidewires

Bridge-plating preserves the joint surfaces – and results in larger surface area for bony fusion

1.4 mm maximum thickness – providing minimal prominence and low profile contouring

Contoured to fit the 1st/2nd metatarsal – cuneiform joints

Allows room – for normal interfrag screw placement

On the adjacent page some of the surgical steps from our Lisfranc Reduction for Injuries and Fusions Surgical Technique Guide are depicted, utilizing the Lisfranc Plate. Please reference LT1-0434-EN for a complete list of all steps.
The 2.5 mm drill guide is used to eccentrically drill the oblong hole over the 2nd metatarsal for the 3.5 mm cortical screw.

Placement of 3.5 mm cortical screw eccentrically in the oblong slot over the 2nd metatarsal for added compression along the Lisfranc ligament.

Upon exposure, the Lisfranc fracture/dislocation is reduced using a bone reduction clamp. Additional K-wires can be used to supplement the fixation.

The appropriate sized plate is placed dorsally over the Lisfranc joint. The 1st metatarsal and intermediate cuneiform can be temporarily secured with BB-Taks. Additionally, there are other holes in the plate where the BB-Taks can be used for added fixation. Note: See full surgical technique for all steps.

The same steps are used to place the other proximal 3.5 mm locking screw.
Provisionally fix the MTC joint with K-wires to the side of the eventual plate placement.

Insert locking Drill Guides into the proximal holes. (Drill Guides may also be preassembled on a back table). Drill both holes, noting depth from laser line on the 2.5 mm drill. A conventional Depth Device may also be used after the locking Drill Guides are removed.

Provisionally hold the Lapidus Plate in place with a BB-Tak at the slot. Make sure the plate is reduced to the bone and fully secure. If needed, plate may be contoured at this point.

Insert a 3.5 mm Locking Screw, if the plate is reduced to bone. If greater reduction is desired, insert a standard screw first and then a Locking Screw. Standard screw may be replaced later, if two proximal Locking Screws are desired.
Insert the locking Drill Guide into the distal hole. Drill bicortically, noting depth from laser line on the 2.5 mm drill. A conventional Depth Device may also be used once the locking Drill Guide is removed.

Drill for the lag screw at as steep an angle as possible aiming between two proximal screws with a 2.5 mm drill. Overdrill the metatarsal base with a 3.5 mm drill.

**Optional:** Drill from 1st metatarsal to 2nd if outrigger screw is desired to help reduce IM angle.

Remove K-wires. Insert a 3.5 mm screw until it contacts the plate. Tighten the screw and compress across the MTC joint. The head of the screw will be slightly angled.

Optional for outrigger screw

Insert a 3.5 mm Locking Screw distally.
H-Plate Evans Technique

1. Make a single transverse cut at least 1.2 cm to 1.5 cm posterior to the calcaneal-cuboid joint and just anterior to the subtalar joint.

2. With the Osteotomy Distractor or lamina spreader, open osteotomy and assess correction. Select either a plate with a wedge or a tri-cortical bone graft wedge and flat plate.

3. Provisionally hold the plate to the anterolateral side of the calcaneus with BB-Tak through either wire hole or locking screw hole.

4. For static placement: Drill both nonlocking slots centrally with the 2.5 mm drill.
   For compression: Drill both nonlocking slots away from the osteotomy with a 2.5 mm drill. Aim the drill so it does not interfere with the eventual path of the Locking Screws.
Insert 3.5 mm or 4 mm nonlocking screws and remove the BB-Taks. Tighten the screws alternately to reduce plate-to-bone.

Thread the locking Drill Guides into the locking holes. Locking Drill Guides may be threaded into the plate on the back table prior to surgery. Drill both holes, noting depth from laser line on the drill.

*Note:* If one hits the nonlocking screw, try to ease by. If impossible, remove guide and drill freehand for nonlocking screw.

Remove the Drill Guides and insert 3.5 mm Locking Screws.

Wedge plate shown here with bone graft packed into the void.

Flat plate shown here with the tri-cortical bone graft wedge option.

Designed in conjunction with J. Chris Coetzee, MD, Minneapolis, MN; and Paul Shurnas, MD, Columbia, MO
H-Plate CC Arthrodesis Technique*

1. Completely denude cartilage from the calcaneocuboid joint for fusion.

2. Pin the joint with K-wires. Provisionally, hold the plate to anterolateral side of the calcaneus with a BB-Tak through wire or locking screw holes.

3. Drill nonlocking hole eccentrically with a 2.5 mm drill—away from joint. Insert a 3.5 mm or 4 mm screw 90%. Drill other nonlocking hole eccentrically with a 2.5 mm drill.

4. Insert second 3.5 mm or 4 mm screw 90%. Remove K-wires and the BB-Tak. Tighten both nonlocking screws alternately to reduce the plate-to-bone and achieve compression. Each slot should achieve 1 mm of compression.
Thread locking Drill Guides into locking holes. Locking Drill Guides may be threaded into the plate prior to its introduction to the surgical site. Drill bicortically with a 2.5 mm drill, noting the depth from the scale on the Drill Guide.

Remove Drill Guides and insert Locking Screws.

*A similar technique may be used for talonavicular or other midfoot fusion procedures.
**Plate/Screw Mechanics**

**Nonlocking Screws and Plate**
- Reduction, and possibly compression with standard screws
- Axial load may cause standard screws to toggle and loosen
- Bending load requires only screw pull-out to fail

**Locking Screws and Plate**
- No reduction, limited bone contact, and total construct load-sharing with locking screws
- Axial load distributed evenly through the bone
- Bending load requires large scale screw, cut-through to fail

**Hybrid Plate**
- Nonlocking screws drilled and inserted eccentrically away from the bone gap
- Reduction of the plate-to-bone and compression, as the screws are inserted and tightened
- Locking screws are inserted to hold everything in place – improving construct strength against bending and axial loading
Low Profile System Midfoot Plating Module for H-Plates, Lisfranc and Lapidus Plates

The modules of the Low Profile Plating System house the Lapidus, Lisfranc and H-Plates, along with the 3.5 mm cortical, 3.5 mm cortical locking and 4 mm cancellous screws. The instrumentation for these implants is straightforward and easy to use, assisting the surgeon with distraction, provisional fixation and other elements of the procedure. This module is stackable with the Forefoot Osteotomy, Forefoot Fusion and other future modules. Additionally, all plates and instrumentation are also available in the Comprehensive Foot System (CFS) AR-8950S-02 (3.5/4.0 CFS Module).

Ordering Information

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<tr>
<th>Item Description</th>
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<tbody>
<tr>
<td>Driver Handle w/AO connection, cannulated</td>
<td>AR-13221AOC</td>
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<tr>
<td>Osteotomy Distractor</td>
<td>AR-13225</td>
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<tr>
<td>Drill Bit, 2.5 mm</td>
<td>AR-4160-25</td>
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<td>Drill Bit, 3.5 mm</td>
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<td>Drill Bit, 4 mm</td>
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<td>Bone Reduction Forceps w/Teeth</td>
<td>AR-4160FT</td>
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<td>Depth Device, small</td>
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<td>Bending Iron</td>
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<td>Bending Pliers</td>
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<td>Hexalobe Driver, T15</td>
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<td>Drill Guide for metal screws, 3.5 mm/4 mm</td>
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<td>Drill/Depth Guide, locking</td>
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<td>Holmohann Retractor, 8 mm x 16 cm</td>
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<td>Countersink, 3.5 mm/4 mm Screws</td>
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<td>Screw Holding Forceps</td>
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<td>Plate Caddy Insert (b)</td>
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<td>AR-8951LL</td>
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Screws:
- Locking Screws, titanium, 3.5 mm x 14 – 44 mm          | AR-8935L-14 – 44 |
- Low Profile Screws, titanium, 3.5 mm x 14 – 44 mm      | AR-8935-14 – 44  |
- Low Profile Screws, titanium, 4 mm x 14 – 44 mm         | AR-8940-14 – 44  |

Disposables (necessary for procedure, order separately):
- BB-Tak                                               | AR-13226       |
- BB-Tak, threaded                                      | AR-13226T      |
- Guidewire w/Trocar Tip, .062” (1.6 mm)                 | AR-8941K       |

Literature:
- Lisfranc Reduction for Injuries and Fusions           | LT1-0434-EN   |
- Comprehensive Foot System Brochure                    | LB1-0437-EN    |

Multimedia:
- Comprehensive Foot System iBook                       | EB1-0437-EN    |
- Comprehensive Foot & Ankle Repair                     | DVD-1103       |
- Surgical Technique by J. Chris Coetzee, MD            |              |

Plates (housed in AR-8941C-PC, order separately):

H-Plate, 36 mm x 16 mm, large, left
H-Plate, 36 mm x 16 mm, large, right
H-Plate, 32 mm x 16 mm, medium, left
H-Plate, 32 mm x 16 mm, medium, right
H-Plate, 28 mm x 16 mm, small, left
H-Plate, 28 mm x 16 mm, small, right

Plates, wedge (housed in AR-8941C-PC, order separately):

H-Plate, 38 mm x 16 mm, 10 mm wedge, left
H-Plate, 38 mm x 16 mm, 10 mm wedge, right
H-Plate, 36 mm x 16 mm, 8 mm wedge, left
H-Plate, 36 mm x 16 mm, 8 mm wedge, right
H-Plate, 34 mm x 16 mm, 6 mm wedge, left
H-Plate, 34 mm x 16 mm, 6 mm wedge, right

Plates (housed in AR-8941C-PC, order separately):

Lapidus Plate

Plates (housed in caddy insert AR-8941C-PCI, order separately):

Lapidus Plate, long
Lapidus Plate, small, right
Lapidus Plate, small, left
Lapidus Plate, medium, right
Lapidus Plate, medium, left
Lapidus Plate, large, right
Lapidus Plate, large, left
This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product’s directions for use.