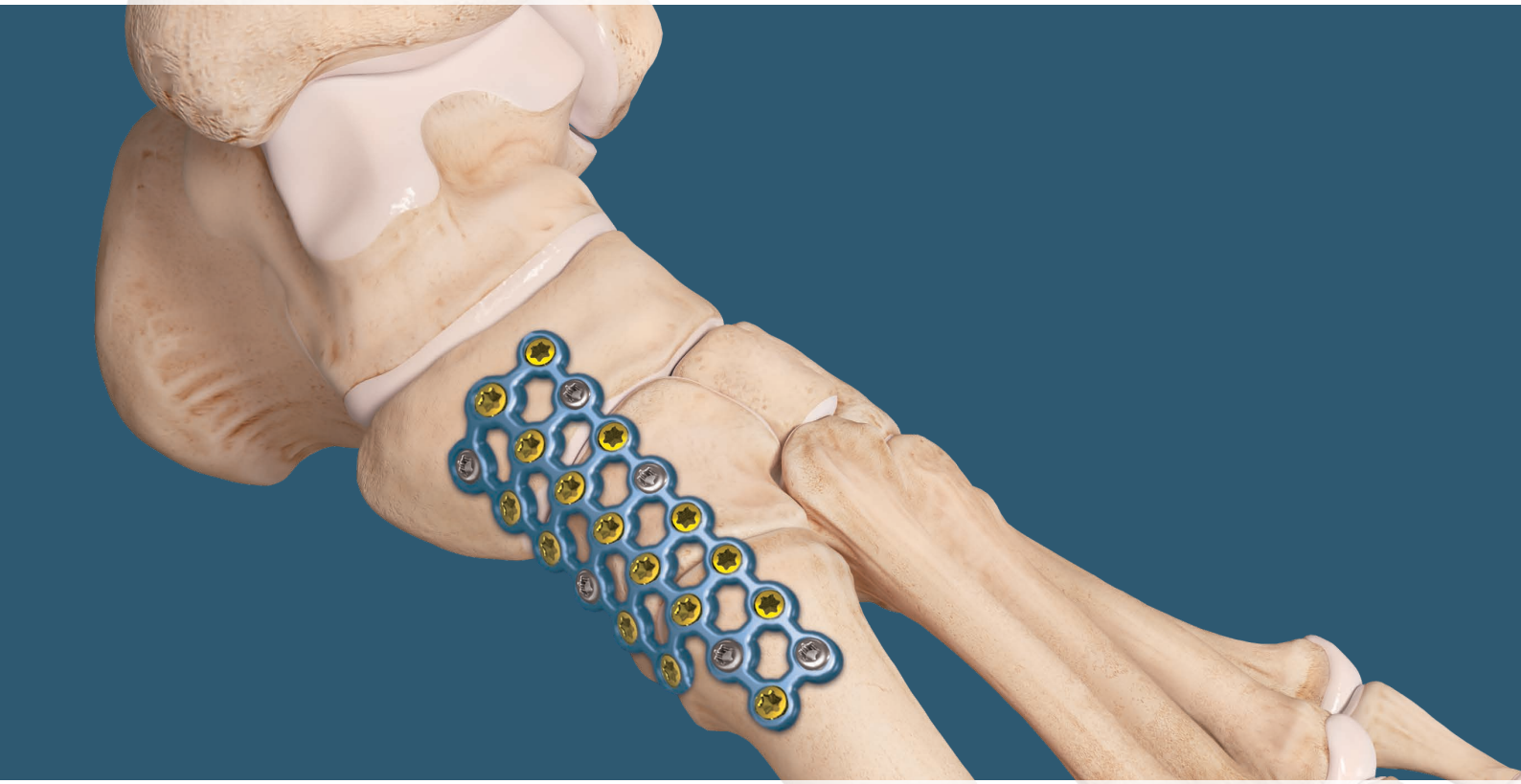
Mesh Plate for Foot Fractures and Medial Column Arthrodesis

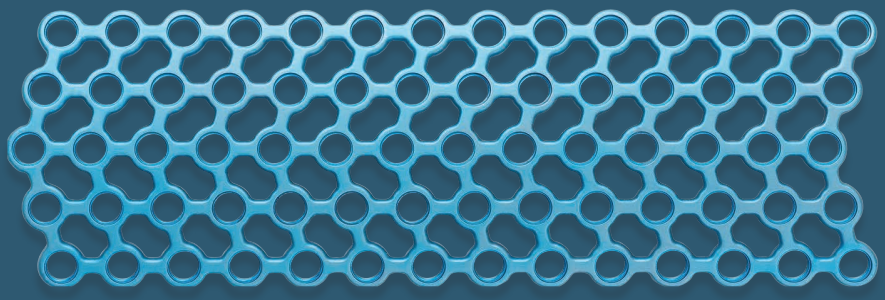
Surgical Technique



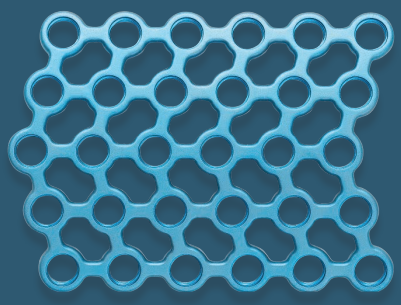
Arthrex®

Mesh Plating Technique

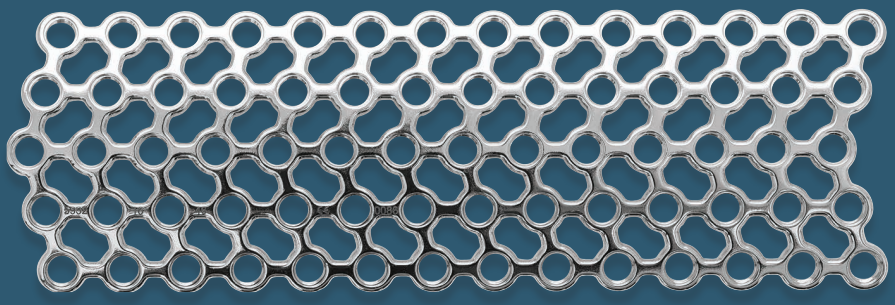
The Arthrex Mesh Plate is available in titanium or stainless steel and standard and short lengths. Surgeons may cut the plate to size. The plates are intended for use in stabilization of fresh fractures, revision procedures, osteotomies, joint fusions, and reconstruction of small bones and bone fragments of the hand/wrist, foot/ankle, and osteopenic bone.



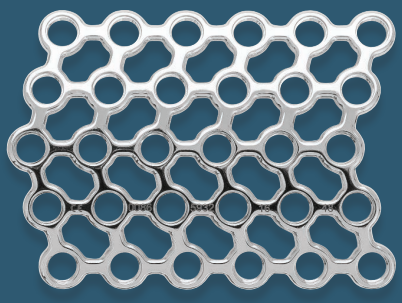
Titanium Mesh Plate, long



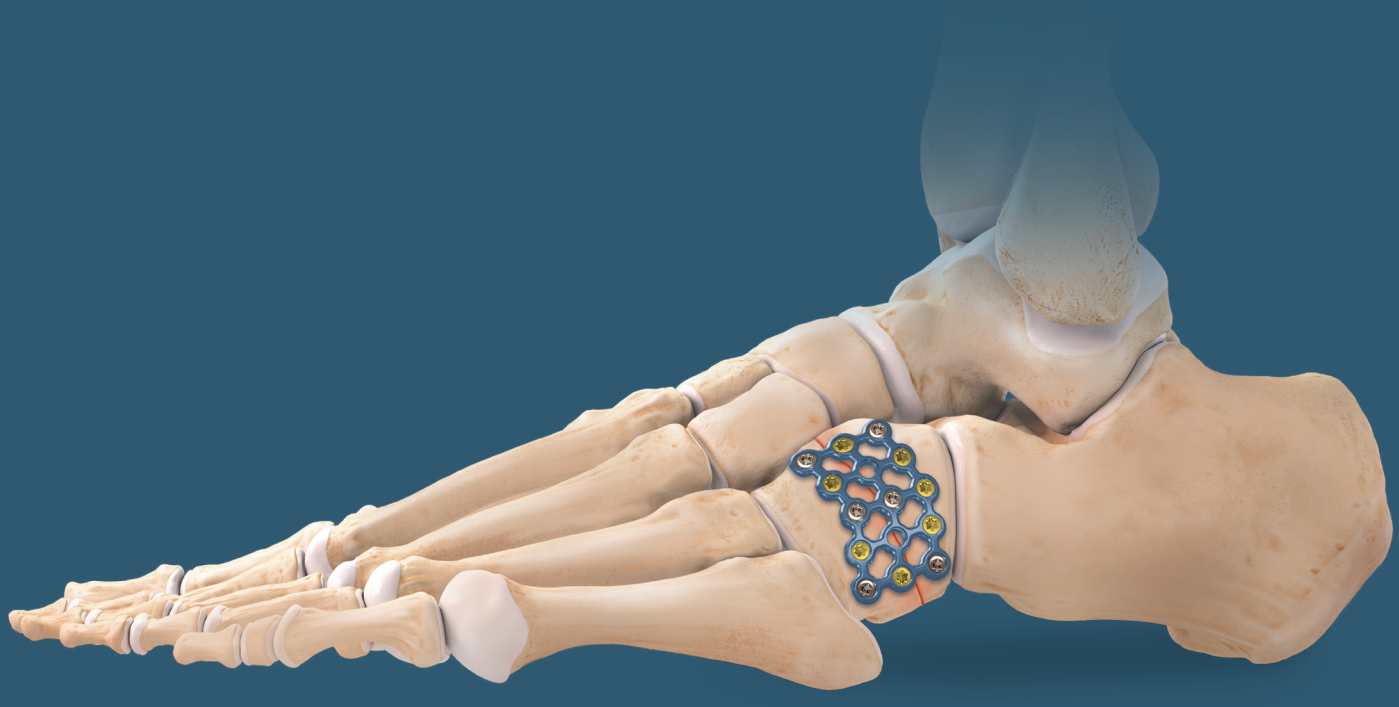
Titanium Mesh Plate, short



Stainless Steel Mesh Plate, long



Stainless Steel Mesh Plate, short



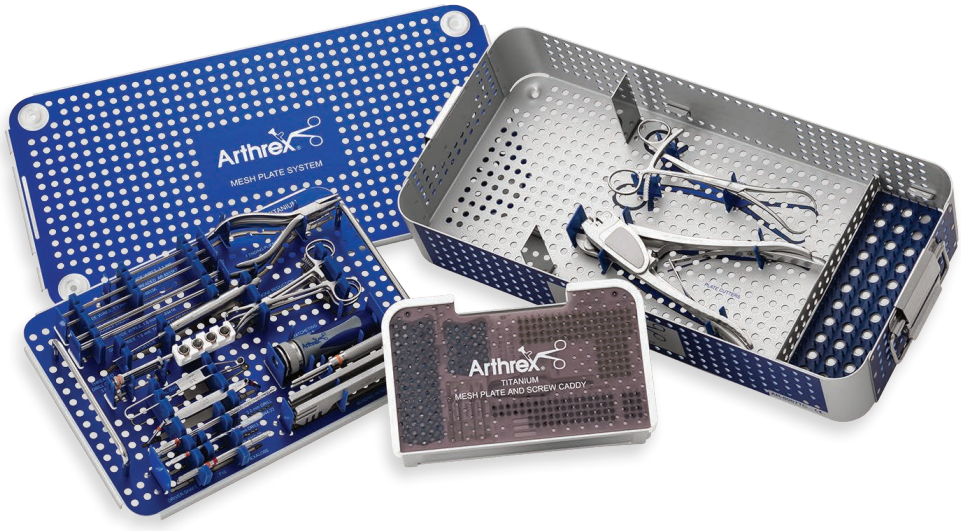
Ordering Information

Mesh Plating System, Stainless Steel

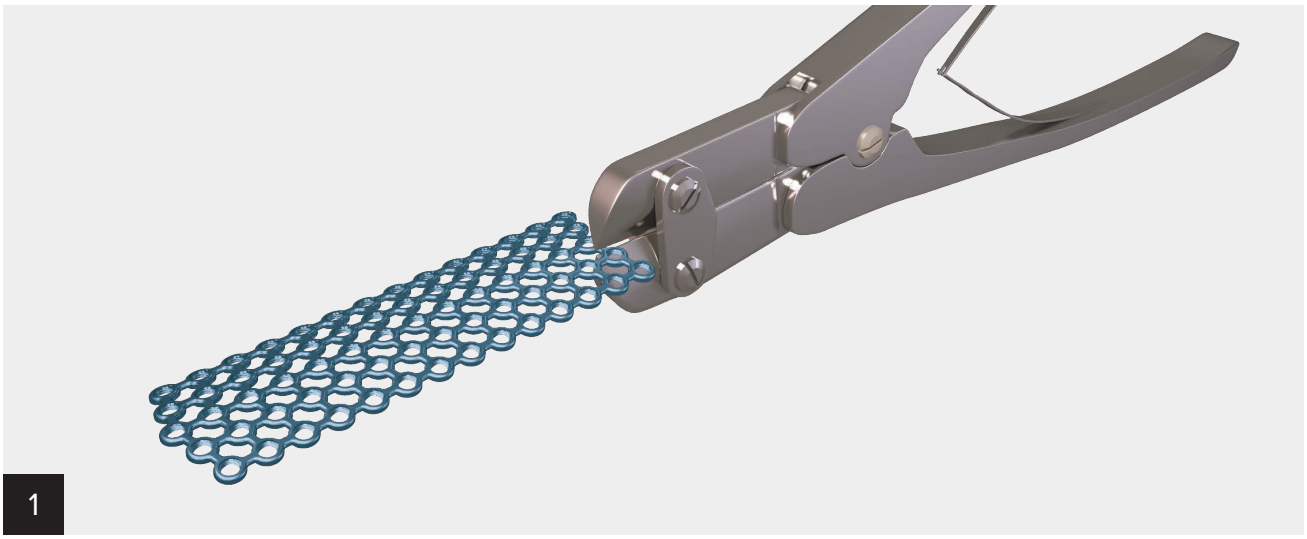
Product Description	Item Number
Mesh Plating System, Stainless Steel	AR-**8957S**
Instruments	
TRIM-IT™ Depth Gauge, small	AR-**4166**
Drill Bit, 2.7 mm	AR-**8827D-01**
Drill Guide, 2.0 mm/2.7 mm	AR-**8827D-02**
Bending Pliers, qty. 2	AR-**8941BP**
Screw Holding Forceps, self-retaining	AR-**8941F**
Bone Reduction Forceps, curved, pointed, qty. 2	AR-**8943-07**
Bending Iron Plate, qty. 2	AR-**8943-18**
Weber Clamp	AR-**8943-24**
Drill Bit, 2 mm, qty. 2	AR-**8944-22**
Driver, T10 hexalobe, qty. 2	AR-**8944DH**
Drill Guide, locking, threaded, 3 mm, qty. 2	AR-**8950-07**
Locking Bending Guide, 3 mm, qty. 2	AR-**8950-09**
Handle QC, ratcheting, cannulated	AR-**8950RH**
Plate Cutter, curved cut	AR-**8957-05**
Plate Cutter, straight cut	AR-**8957-06**
Instrument Case	AR-**8957C**
Plates	
Mesh Plate, short Mesh Plate, long	AR-**8957-04** AR-**8957-02**
Screws, Stainless Steel	
Low Profile Screws, cortical, 2.7 mm × 10 mm-50 mm (2 mm increments)	AR-**8827-10 – 50**
Low Profile Screws, locking, 2.7 mm × 10 mm-50 mm (2 mm increments)	AR-**8827L-10 – 50**

Mesh Plating System, Titanium

Product Description	Item Number
Mesh Plating System, Titanium	AR-**8957TS**
Instruments	
TRIM-IT Depth Gauge, small	AR-**4166**
Drill Guide, VAL, 3 mm	AR-**8933GV**
Drill Guide, VAL, 3 mm, qty. 4	AR-**8933GVN**
Bending Pliers, qty. 2	AR-**8941BP**
Screw Holding Forceps, self-retaining	AR-**8941F**
Bone Reduction Forceps, curved, pointed, qty. 2	AR-**8943-07**
Bending Iron Plate, qty. 2	AR-**8943-18**
Weber Clamp	AR-**8943-24**
Drill Guide, 2.0 mm/3.0 mm	AR-**8943-31**
Drill Bit, 2.0 mm, qty. 2	AR-**8944-22**
Driver, T10 hexalobe, qty. 2	AR-**8944DH**
Drill Bit, 3.0 mm	AR-**8950-05**
Drill Guide, locking, threaded, 3 mm, qty. 2	AR-**8950-07**
Locking Bending Guide, 3 mm, qty. 2	AR-**8950-09**
Handle QC, ratcheting, cannulated	AR-**8950RH**
Plate Cutter, curved cut	AR-**8957-05**
Plate Cutter, straight cut	AR-**8957-06**
Instrument Case	AR-**8957TC**
Plates	
Mesh Plate, short Mesh Plate, long	AR-**8957-03** AR-**8957-01**
Screws, Titanium	
Low Profile Screws, cortical, 3.0 mm × 10 mm-50 mm (2 mm increments)	AR-**8933-10 – 50**
VAL Screws, 3 mm × 10 mm-40 mm (2 mm increments)	AR-**8933V-10 – 40**

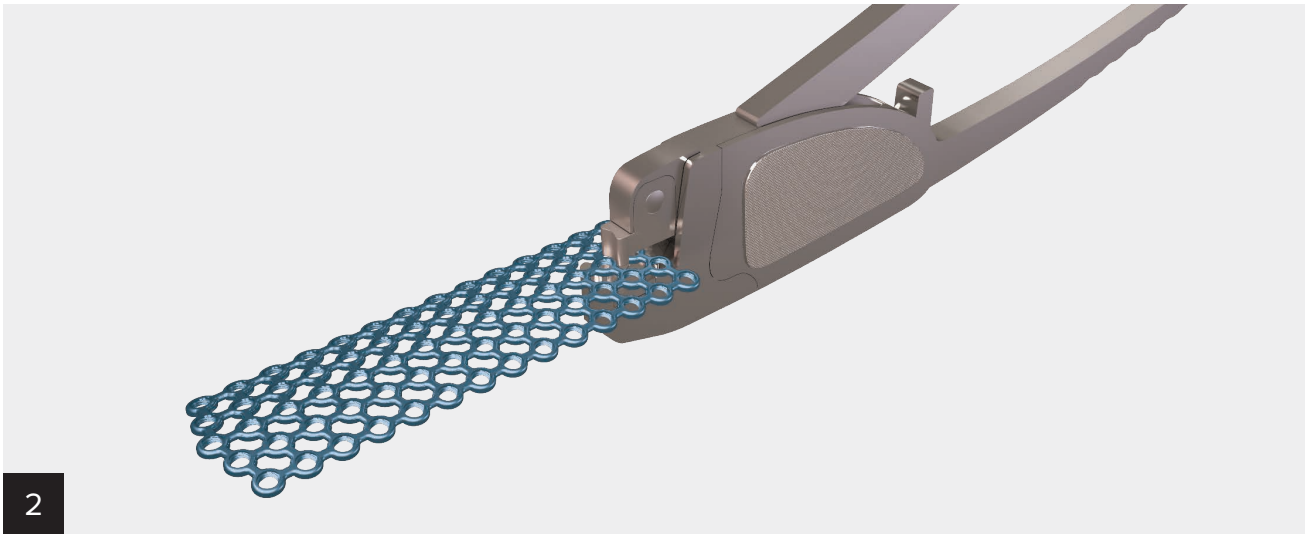


Mesh Plating Technique



1

After preparing and reducing the joint surfaces, fracture, or osteotomy site, use the straight plate cutter to cut multiple rows to fit the area.



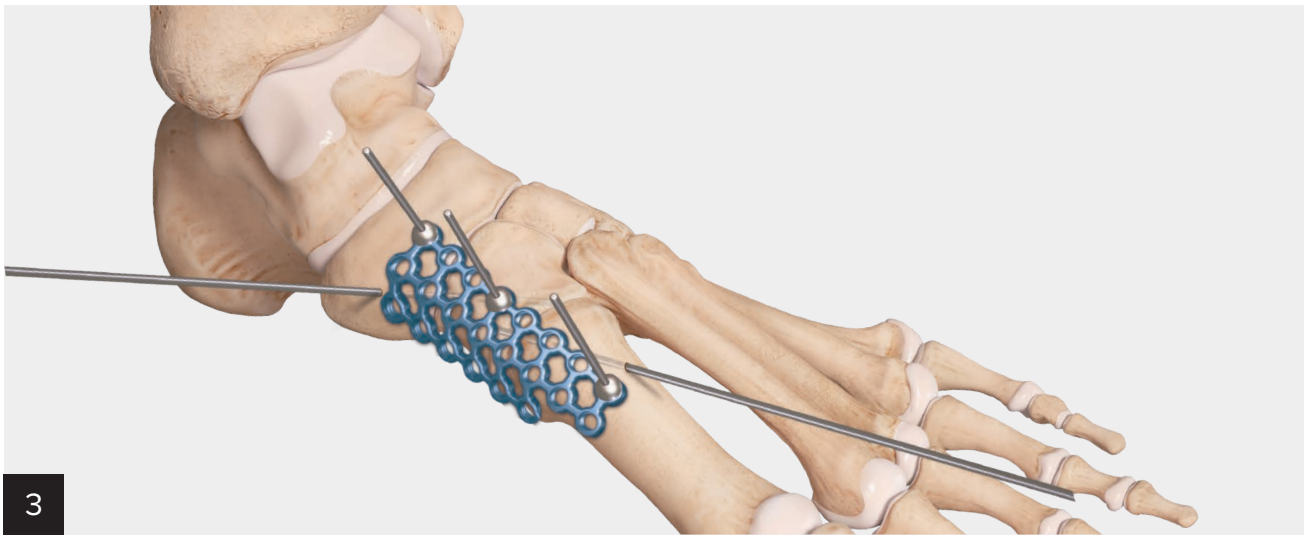
2

Cut plate

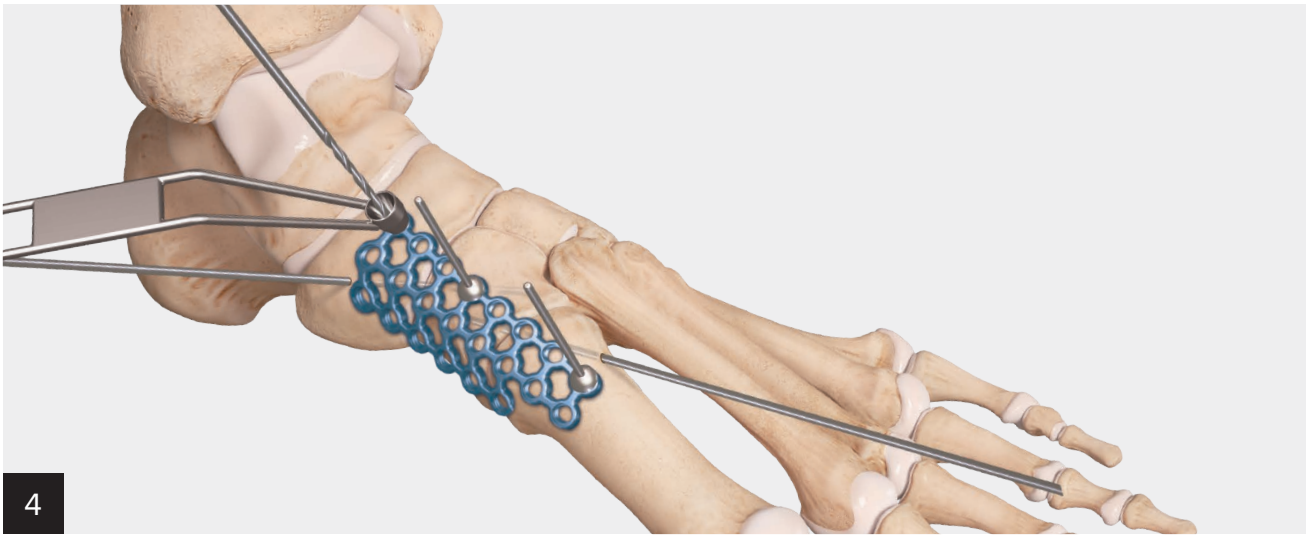
The curved cut plate cutter can be used for finer cuts around the screw holes. To help prevent sharp edges from causing soft-tissue irritation, place the plate into the jaws of the cutter as shown. 1) Position the plate on the seating pin. 2) Position the plate under the notched pin. 3) Cut. **Note: User should maintain a minimum of 2 rows and 2 columns to ensure structural strength.**

Precautions:

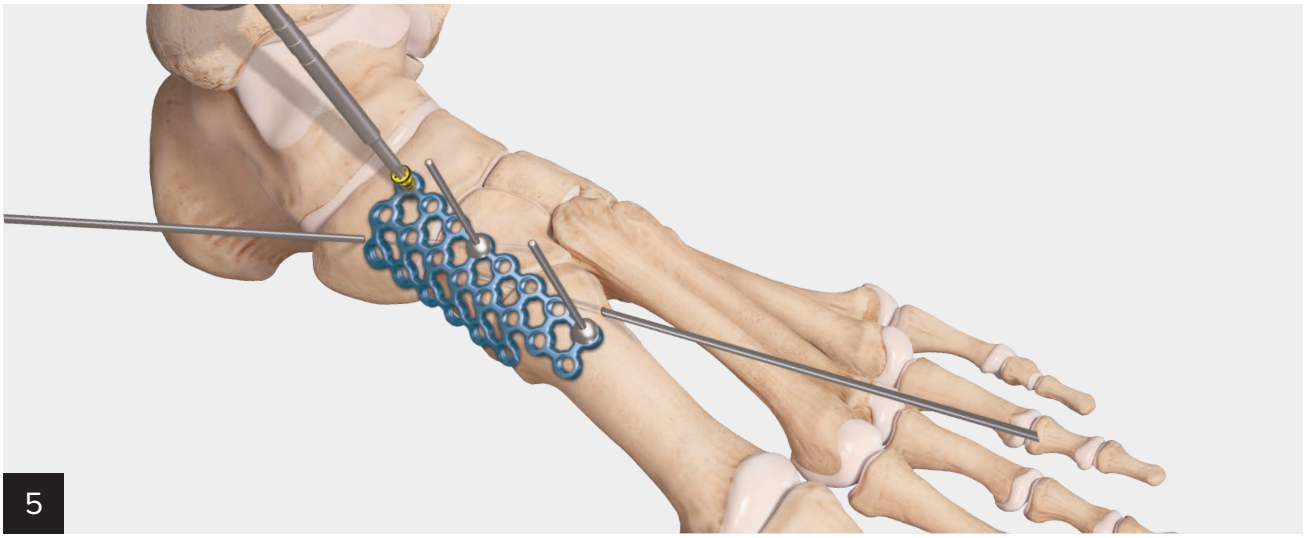
- Do not bend the plate near the locking hole. Bending the plate near the locking hole can distort the holes, which may prohibit the screw from locking.
- Repeated bending of the plate at the same location, or creating excessive acute angles, may lead to premature plate fatigue, failure, and/or breakage in situ.
- Screws should be inserted by hand and not with powered equipment.



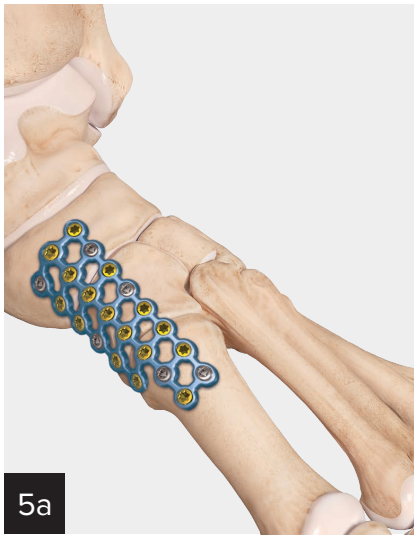
Position plate
Position the plate over the osteotomy, joint, or fracture site. If necessary, fix provisionally with K-wires, BB-Taks, and/or reduction forceps. Place the plate on the bone, ensuring appropriate placement according to the specific procedure.



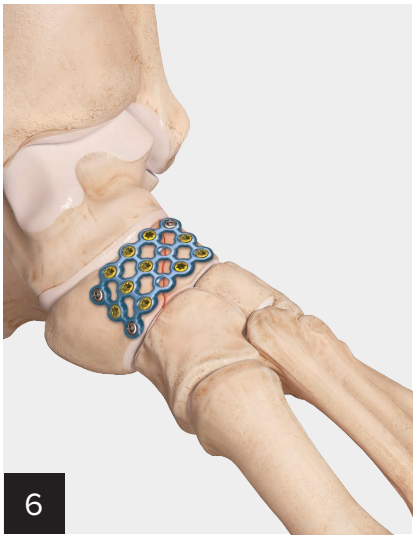
Drill for variable-angle locking screws (titanium plates only)
Variable-angle locking (VAL) screws can be manipulated around the independent lag screw or existing implants. Begin by placing the VAL drill guide in the hole to be drilled. **Precaution: To ensure that the drill sleeve is locked correctly, do not angle the drill bit in excess of ±15° from the nominal trajectory of the hole.** Verify the drill bit angle and depth under image intensifier control. If incorrect, drill at a different angle and verify again. Use the corresponding depth gauge to measure the correct screw length.



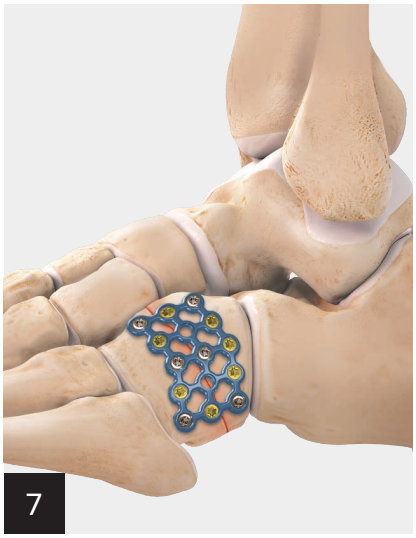
Drill and insert cortical screws
Insert independent cortical screws according to the corresponding indication and situation. Use the lag screw technique to achieve additional compression. For the titanium 3.0 mm cortical screws, use the 3.0 mm drill guide and predrill the screw hole with the 2.0 mm drill bit. For the stainless steel 2.7 mm cortical screws, use the 2.7 drill guide and predrill the screw hole with the 2.0 mm drill bit. Determine the screw length with the depth gauge and insert the cortical screws manually.



Final construct for a medial column fusion.



Final construct for a navicular fracture.



Final construct for a cuboid fracture.

Contraindictions

1. Insufficient quantity or quality of bone.
2. Blood supply limitations and previous infections, which may retard healing.
3. Foreign-body sensitivity. Where material sensitivity is suspected, appropriate tests should be made and sensitivity ruled out prior to implantation.
4. Any active infection or blood supply limitations.
5. Conditions that tend to limit the patient's ability or willingness to restrict activities or follow directions during the healing period.
6. The use of this device may not be suitable for patients with insufficient or immature bone. The physician should carefully assess bone quality before performing orthopedic surgery on patients who are skeletally immature. The use of this medical device and the placement of hardware or implants must not bridge, disturb, or disrupt the growth plate.
7. Do not use for surgeries other than those indicated.

Warnings

1. An internal fixation device must never be reused.
2. All metallic implant devices used for this surgical procedure should have the same metallurgical composition.
3. Postoperatively and until healing is complete, fixation provided by this device should be considered as temporary and may not withstand weight bearing or other unsupported stress. The fixation provided by this device should be protected. The postoperative regimen prescribed by the physician should be strictly followed to avoid adverse stresses applied to the device.
4. Preoperative and operating procedures, including knowledge of surgical techniques and proper selection and placement of the device, are important considerations in the successful utilization of this device. The appropriate Arthrex delivery system is required for proper implantation of the device.
5. Any decision to remove the device should take into consideration the potential risk to the patient of a second surgical procedure. Device removal should be followed by adequate postoperative management.
6. Detailed instructions on the use and limitations of this device should be given to the patient.
7. This is a single-use device. Reuse of this device could result in failure of the device to perform as intended and could cause harm to the patient and/or user.
8. Removal of supplemental fixation after healing. If the supplemental fixation is not removed following the completion of its intended use, any of the following complications may occur: (1) corrosion, with localized tissue reaction or pain; (2) migration of implant position resulting in injury; (3) risk of additional injury from postoperative trauma; (4) bending, loosening, and/or breakage, which could make removal impractical or difficult; (5) pain, discomfort, or abnormal sensations due to the presence of the device; (6) possible increased risk of infection; and (7) bone loss due to stress shielding. The surgeon should carefully weigh the risks versus benefits when deciding whether to remove the implant. Implant removal should be followed by adequate postoperative management to avoid re-fracture.

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. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level or outcomes.

View U.S. patent information at www.arthrex.com/corporate/virtual-patent-marking

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