



# Magna-FX<sup>®</sup> Cannulated Screw Fixation System

Abbreviated  
Surgical Technique



This technique is used in the treatment of late complications of calcaneus fractures including incongruous subtalar joint, loss of calcaneal body height, and decreased lateral talocalcaneal angle. The technique involves distraction of the subtalar joint, insertion of a bone block and rigid screw fixation. Through distraction, the surgeon can correct the talocalcaneal relationship and restore lost hindfoot height.

## 1 Expose Lateral Calcaneal Wall



With the patient in the lateral decubitus position, make a longitudinal posterolateral approach to the subtalar joint. Identify and protect the sural nerve proximally. Expose the lateral calcaneal wall subperiosteally, and excise it to a more normal width.

## 2 Distract Subtalar Joint



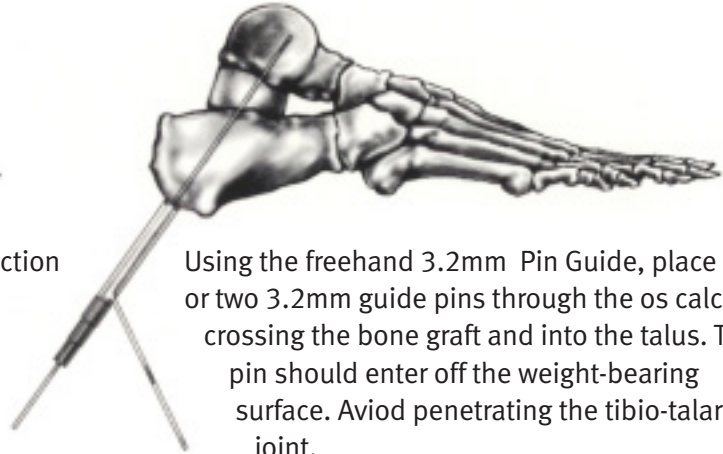
Identify the subtalar joint and denude the subtalar joint to the subchondral bone. Apply distraction to restore a more normal lateral talocalcaneal angle. If necessary, manipulate the heel to achieve appropriate varus/valgus alignment.

## 3 Insert Bone Block



Take intraoperative radiographs to ensure correction of the lateral talocalcaneal angle. Measure the subtalar joint gap. Fill the gap with one or two tricortical blocks harvested from the posterior iliac crest. Then proceed with screw fixation using one or two 7.0mm *Magna-FX* Fully-Threaded Cannulated Screws.

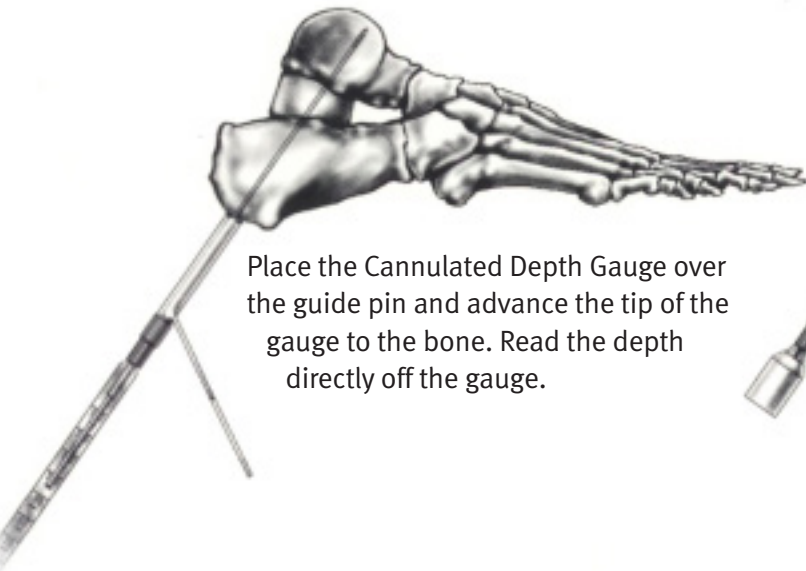
## 4 Place Guide Pin



Using the freehand 3.2mm Pin Guide, place one or two 3.2mm guide pins through the os calcis, crossing the bone graft and into the talus. The pin should enter off the weight-bearing surface. Avoid penetrating the tibio-talar joint.

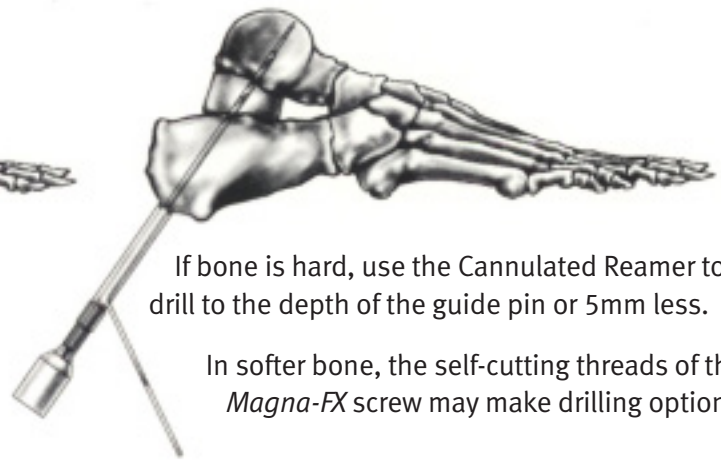
**PRECAUTION:** For the steps 5, 6, 7 and 8, check the guide wire position frequently using fluoroscopy to prevent unintended guide wire advancement and/or penetration into the surrounding tissues.

## 5 Measure Depth



Place the Cannulated Depth Gauge over the guide pin and advance the tip of the gauge to the bone. Read the depth directly off the gauge.

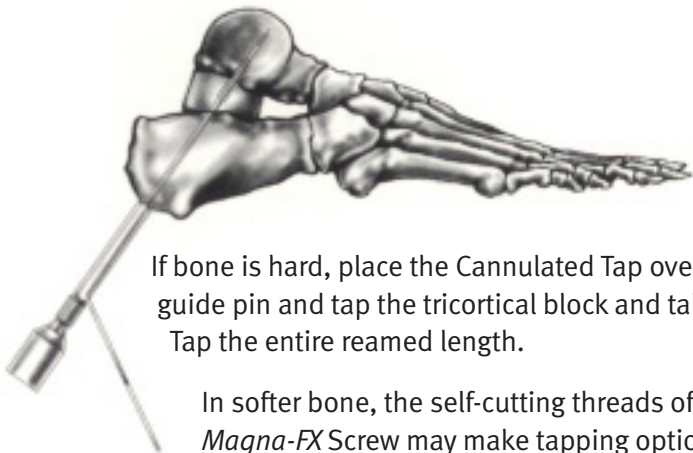
## 6 Drill (Optional)



If bone is hard, use the Cannulated Reamer to drill to the depth of the guide pin or 5mm less.

In softer bone, the self-cutting threads of the *Magna-FX* screw may make drilling optional.

## 7 Tap (Optional)



If bone is hard, place the Cannulated Tap over the guide pin and tap the tricortical block and talus. Tap the entire reamed length.

In softer bone, the self-cutting threads of the *Magna-FX* Screw may make tapping optional.

## 8 Insert Screw



Using the Cannulated Screwdriver to insert the proper length *Magna-FX* Screw over the guide pin. If the os calcis is osteoporotic, use a washer to distribute stress and prevent the screw from pulling into the cortex. Use the manual Cannulated Driver to finish seating the screw. The screw should not penetrate the tibotalar joint. The Fully-Threaded Screw prevents collapse and maintains the height of the reconstruction. Take final lateral and axial radiographs to confirm appropriate positioning.

Warning: This device is not approved for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic, or lumbar spine.

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