

# CHARLOTTE™ CLAW™ Plate

Compression Locking Arthrodesis by Wright

SURGICAL TECHNIQUE



**WRIGHT.**



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Proper surgical procedures and techniques are the responsibility of the medical professional. The following guidelines are furnished for information purposes only. Each surgeon must evaluate the appropriateness of the procedures based on his or her personal medical training and experience. Prior to use of the system, the surgeon should refer to the product package insert for complete warnings, precautions, indications, contraindications and adverse effects. Package inserts are also available by contacting Wright Medical Technology, Inc.

# Preoperative Planning



## Introduction

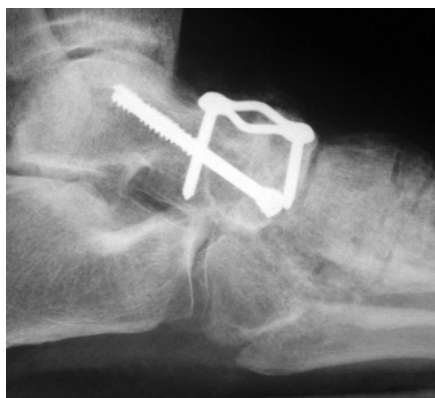
The CHARLOTTE™ CLAW™ Plate is a highly versatile implant for osteotomies and arthrodeses of the foot. It is particularly useful for calcaneal-cuboid talonavicular and midfoot arthrodesis as well as corrective osteotomies of the calcaneus, midfoot and forefoot. The CLAW™ Plate is a unique, low-profile, fixed-angle device that delivers a high level of stability across a joint or osteotomy.

## Surgical Goals

- To provide maximum stability across the fusion site.
- To ensure maximum stiffness of the fusion construct while minimizing device profile.
- To utilize a device highly resistant to pullout and bending.
- To provide surgical flexibility in order to match implant size and geometry to patient anatomy.

## System Basics

- All CLAW™ Plate implant components are manufactured from surgical grade stainless steel for maximum strength and stiffness.
- Plate lengths are measured between the holes, center to center.
- Compression plates are available in 15, 20 and 25mm lengths.
- Locking cancellous bone screws are available in 2.7mm diameter with lengths of 12-30mm in 2mm increments.



CHARLOTTE™ CLAW™ Plate X-ray

## Calcaneal Cuboid Arthrodesis

### Exposure/Preparation

Expose the calcaneal cuboid joint through a lateral (Ollier) incision. Distract the joint with a lamina spreader, and sharply debride the articular cartilage to expose bleeding subchondral bone. A powered drill may be used to create holes in the subchondral bone to promote vascular ingrowth and provide local bone grafting.

### Plate Sizing

Use the measurement guide (P/N 40120010) to determine the appropriate plate size. **Figure 1** Interaxis distance is chosen so that the plate will span the fusion site and leave an adequate bony bridge between the plate screws.



Figure 1

## Surface Preparation

Assess the surface upon which the plate will sit. If the surface is uneven or irregularly contoured, the plate may not sit flush after application. Because of the locked screw construct, the screws will not contour the plate to the bone. The plate may be bent to accommodate surface curvature. Contour the plate using the Plate Benders (P/N 40120014). **Figure 2** However, bend in one direction only and do not exceed 10° of bending. Do not use drill guides to contour the plate. If necessary, bone may be removed with rongeurs or a powered burr prior to plate placement. Leave as much cortical bone intact as possible, particularly in the regions that will support the screws.



Figure 2

## Hole Preparation

Thread both the locking drill guides (P/N 40120002) into plate holes. **Figure 3** The Guide Handle (P/N 40120004) may be affixed to the locking drill guide; thread the drill guide hand nut into the locking drill guide and tighten. **Figure 4** Using the AO Quick Connect (P/N 41112017) and the 2.0mm drill (P/N 40122000), drill the first hole. **Figure 5** Read the screw length from the window in the locking drill guide. **Figure 6** Release the drill leaving it in the hole and insert a second 2.0mm drill into the AO Quick Connect. Drill the second hole and read the screw length from the window in the locking drill guide. Remove the 2nd drill and detach the drill guide. **Figure 7**

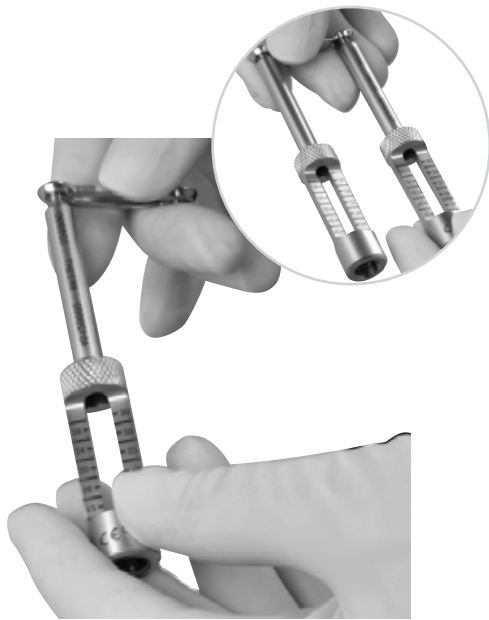


Figure 3



Figure 4

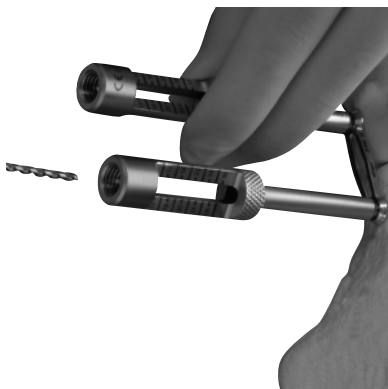


Figure 5

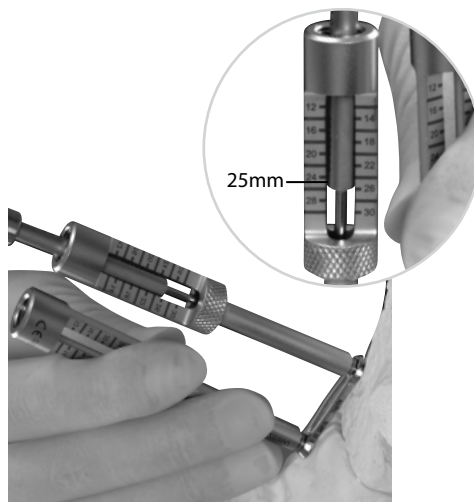


Figure 6

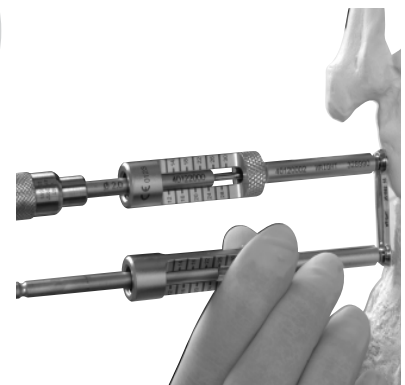


Figure 7

## Screw Placement

The Hex Driver (P/N 40120008) is used to pick up the appropriate screw for the 2nd hole drilled. **Figure 8** Press the driver tip firmly into the head of the correct screw while it is still in the tray; this engages the driver into the screw and provides retention. The driver may then be used to deliver the screw to the surgical site and place it in the hole. Alternatively, the threaded screw gripper (P/N 40120024) can be used to retain the screw. **Figure 9** The screw should be tightened until it locks securely into the plate; “two-finger” tightness on the driver should suffice. Remove the remaining drill bit and locking drill guide, and repeat the process. **Figure 10 and 11**



Figure 8

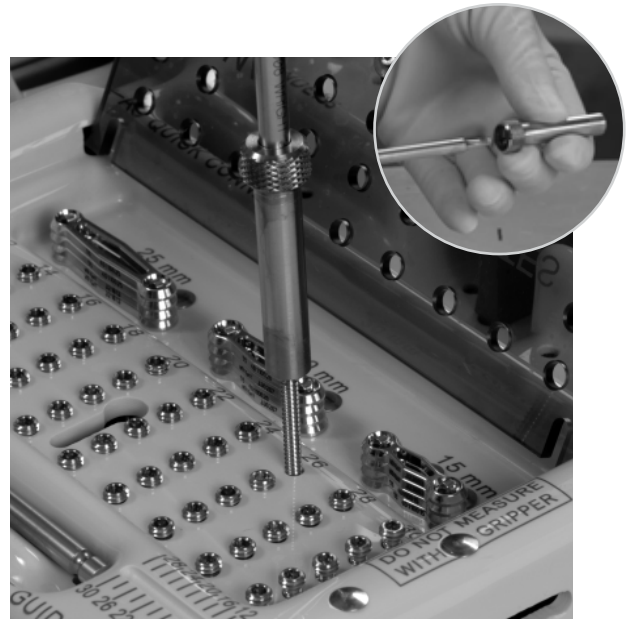


Figure 9

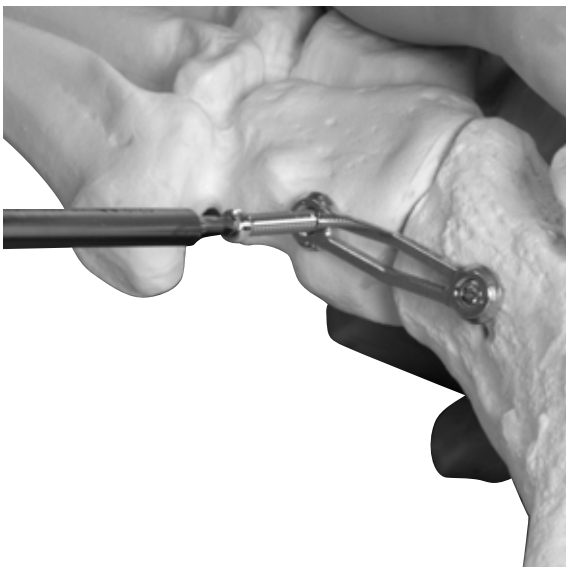


Figure 10

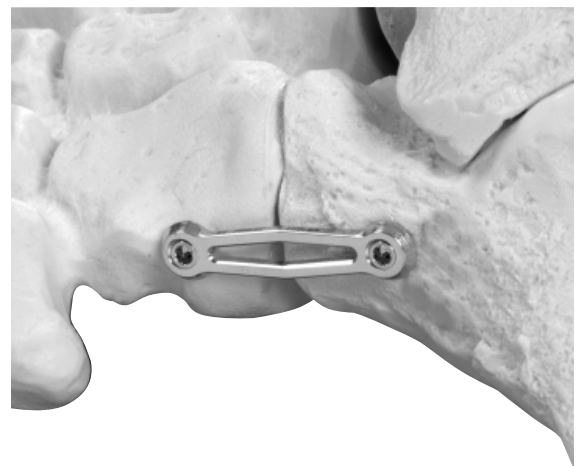


Figure 11



## Plate Compression

To apply compression, use the Spreader (P/N 40120013). Insert the spreader tips into the center “diamond” of the plate. Using firm pressure, squeeze the sides of the expansion mechanism outward, drawing the screws together. Be sure to insert the spreader completely into the center “diamond” of the plate before applying any force. **Figure 12, 13 and 14**

Surgical closure is performed in the routine fashion.



Figure 12

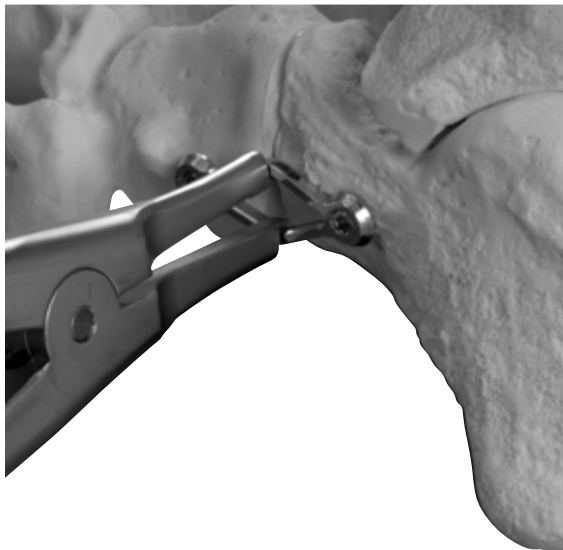


Figure 13



Figure 14

# Ordering Information



## CHARLOTTE™ CLAW™ Plate Impants

Part Number	Description
40120015	CLAW™ Plate 15mm Interaxis
40120020	CLAW™ Plate 20mm Interaxis
40120025	CLAW™ Plate 25mm Interaxis
40122712	CLAW™ Screw 2.7mm x 12mm
40122714	CLAW™ Screw 2.7mm x 14mm
40122716	CLAW™ Screw 2.7mm x 16mm
40122718	CLAW™ Screw 2.7mm x 18mm
40122720	CLAW™ Screw 2.7mm x 20mm
40122722	CLAW™ Screw 2.7mm x 22mm
40122724	CLAW™ Screw 2.7mm x 24mm
40122726	CLAW™ Screw 2.7mm x 26mm
40122728	CLAW™ Screw 2.7mm x 28mm
40122730	CLAW™ Screw 2.7mm x 30mm

## CHARLOTTE™ CLAW™ Plate Instruments

Part Number	Description
41112017	AO Quick Connect Cannulated
44112009	AO Driver Handle
40120002	CLAW™ Drill Guide
40122000	CLAW™ Drill 2.0mm
40120004	CLAW™ Guide Handle
40120008	CLAW™ Hex Screwdriver
40120010	CLAW™ Measurement Guide
40120013	CLAW™ Plate Spreader
40120014	CLAW™ Bender
40120024	CLAW™ Gripper, Threaded

## CHARLOTTE™ Surgical Trays

Part Number	Description
40120016	CLAW™ Surgical Tray





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