L⊕CKING CALCANEAL PLATES



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Since 1988 Acumed has been designing solutions to the demanding situations facing orthopedic surgeons, hospitals and their patients. Our strategy has been to know the indication, design a solution to fit, and deliver quality products and instruments.

Acumed's Locking Calcaneal Plate is designed to offer an anatomic, ultra-low profile plate with added strength throughout the posterior facet region.

Stability is gained via the overall triangular construct – secure screw fixation in the anterior process, superior to the posterior facet, and in the tuberosity.

Our anatomic Locking Calcaneal Plates are available in six different sizes, with the option of locking or non-locking screws.

The plate is thicker under the posterior facet to provide strength and lower profile in the regions with minimal soft tissue coverage.







Designed in conjuction with Douglas N. Beaman, MD, the ultra-low profile Locking Calcaneal Plate addresses the complex challenges of calcaneal fractures. The key is to regain stability by anatomically restoring the posterior facet and aligning the calcaneal tuberosity.

Acumed's Locking Calcaneal Plate is 20% thicker through the posterior facet region to provide added strength where needed. To address multiple size requirements and to make sure multiple screws can go through the plate and into the tuberosity, the plates are available in small, medium and large, left and right specific (color-coded).

2

SURGICAL TECHNIQUE

Douglas N. Beaman, M.D.



Step 1: Exposure

The recommended surgical approach is lateral right-angled extensile approach (meticulous soft tissue handling is critical). Use blunt retractors only and use K-wire retraction once the full thickness lateral flap has been created. Reduction of the fracture typically involves the use of joysticks or Schanz screws placed into the calcaneal tuberosity to provide traction and manipulation of the tubor out of its angulated and translated position. The components of the calcaneus fracture, both extra-articular and intra-articular, are realigned and then held provisionally with multiple K-wires.



Step 3: Plate Positioning

The plate is applied to the lateral wall with the distal end placed just proximal (5-10mm) to the calcaneocuboid joint in the anterior process. This can be adjusted based on fracture patterns. The triangular portion of the plate that supports the posterior facet typically sits just inferior to the interfragmentary screws. The plate should extend posteriorly enough to allow multiple screw engagement into the tuberosity. Typically, we prefer three screws to be placed into the tuberosity segment. The plate should be positioned and then held provisionally with K-wires. Both radiographic imaging and direct clinical inspection can confirm satisfactory position of the plate.

Step 5: Closure and Post-op Protocol



Step 2: Posterior Facet Screw Placement

We recommend the use of subchondral screws placed under the posterior facet to secure the posterior facet intra-articular portion of the calcaneus fracture. Typically, these are 2.7 or 3.5mm cortical screws placed in an interfragmentary lag fashion. It is crucial that the screws remain extra-articular (do not penetrate the posterior facet). Careful evaluation, radiographically and clinically, should be used to confirm that the subchondral screws do not penetrate the posterior facet.



Step 4: Screw Insertion

Screw placement is typically performed from the anterior process and extends posteriorly. 2.7 or 3.5mm screws are used depending on surgeon preference. Initial screws should be place in a non-locking mode to secure the bone to the plate. Screws are then placed through the plate from the distal to proximal direction into the sustentaculum with the most posterior screws directed into the tuberosity. Locking screws are generally placed after the plate has been secured with multiple non-locking screws. Additional screws may be placed as needed to supplement the plate fixation.

Wound closure is meticulously performed over a medium Hemovac drain with interrupted 4/0 nylon suture. For postoperative management, soft, bulky dressing incorporating plaster splints holding the foot in a neutral position are applied. The postoperative dressing is removed at three to seven days, and pending wound condition, subtalar range of motion is initiated in a removable device. Patients are kept non-weight bearing for 10 to 12 weeks.

ORDERING INFORMATION

Locking Calcaneal Plate	Part Number
Locking Calcaneal Plate, Small Left	70-0022
Locking Calcaneal Plate, Small Right	70-0023
Locking Calcaneal Plate, Medium Left	70-0024
Locking Calcaneal Plate, Medium Right	70-0025
Locking Calcaneal Plate, Large Left	70-0026
Locking Calcaneal Plate, Large Right	70-0027

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