AESCULAP®

Innovative Solutions

Fibula Rod System

Fibula Rod System

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

Acumed's Fibula Rod System represents a radical alternative to the use of ORIF for unstable ankle fractures. Open reduction of ankle fractures has been associated with high rates of deep wound sepsis, particularly in the elderly and diabetics, and in patients where the soft tissue envelope is swollen and blistered. Retained hardware under the lateral malleolar incision is also a common source of skin and soft tissue irritation and discomfort.[1]

Acumed's goal is to provide excellent fracture stability through a minimally invasive procedure. Incorporating a straightforward targeting guide, the Fibula Rod and the interlocking screws can be inserted via small incisions, which may dramatically reduce surgical complications.

Lateral Malleolus Fracture Indications:

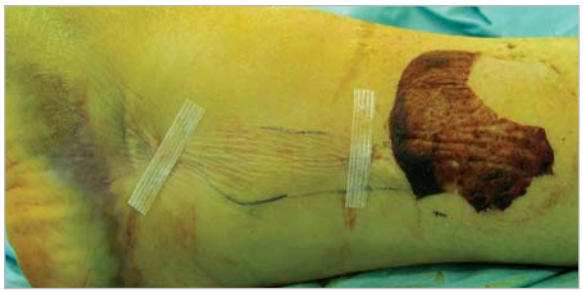
•Unstable ankle fractures with talar subluxation

The Acumed Fibula Rod System provides excellent fixation for unstable ankle fractures (Weber B, C) with associated talar subluxation or joint incongruity (pilon). A minimally invasive surgical technique and straightforward, accurate targeting procedure minimizes OR time – a benefit for both the patient and the surgeon.

The key with the Fibula Rod is the two by two, interlocking screw holes. Using standard 3.5mm cortical screws and the targeting guide assembly, the surgeon has the choice of placing one or two screws from either anterior-to-posterior or lateral-to-medial. More importantly, the surgeon also has a choice of placing one or two screws through the syndesmosis which creates a more stable construct.

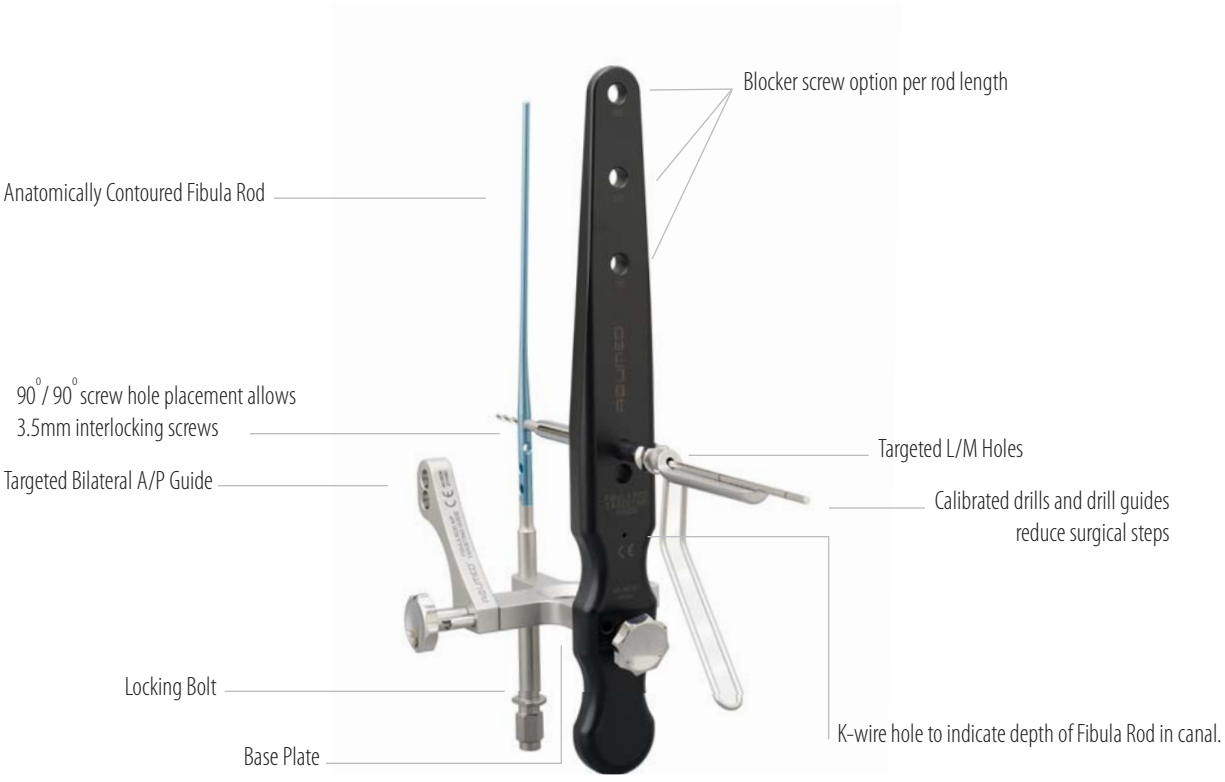
The system is contained in a simple, well-organized tray with all the instruments needed to implant the rod. Calibrated drills ensure proper screw sizing and eliminate extra surgical steps. Straightforward assembly of the targeting guide saves valuable OR time.

Minimally invasive surgical technique dramatically reduces complications due to large incisions required with plating. Fracture fixation with the Fibula Rod System may ease some of the difficulties associated with elderly patients and those with co-morbidities. Smaller incisions can be especially beneficial for diabetic patients and those with wound healing problems.

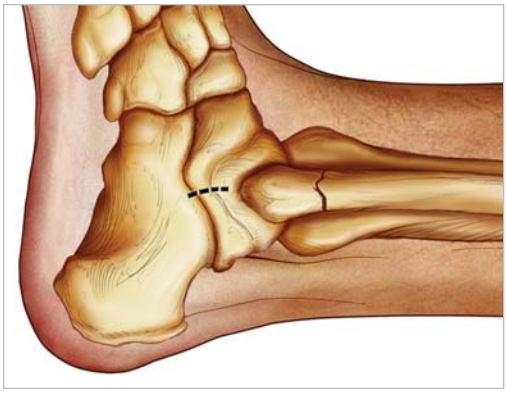


Talar stability is gained via the distal A/P screw(s) and a syndesmosis screw placed through one or both of the L/M holes. The rod will be locked preventing longitudinal or rotational displacement and the lateral buttress of the mortice is stable.

Six size options – 3.0mm and 3.6mm diameter rods with lengths of 110mm, 145mm and 180mm are available to accommodate canal width and fracture location. The Fibula Rods are color-coded to easily distinguish the two diameters in the tray.

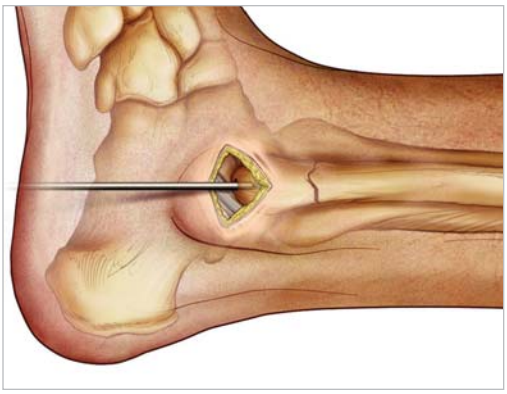


Fibula Rod System



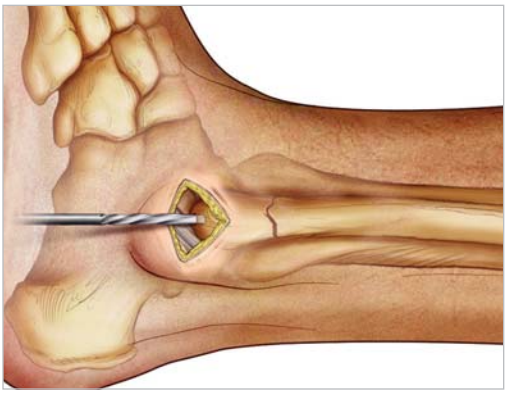
Step 1: Incision

Make a 1.5cm longitudinal incision based 1cm distal to the tip of the fibula.



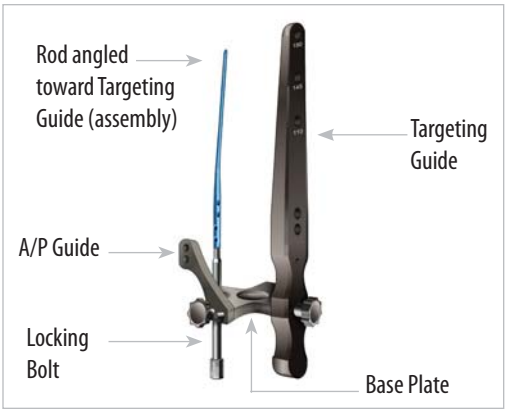
Step 2: Entry Point

The entry point is the tip of the fibula. Establish the entry point with the 1.6mm (0.62") guide wire, using fluoroscopy in both A/P and lateral planes.



Step 3: Canal Preparation

The distal 4cm of the fibula is drilled with the cannulated, 6.1mm drill over the guide wire (full depth of the drill flutes). The diaphyseal canal is then sequentially reamed with the hand reamers while holding the reduction.



Back Table:

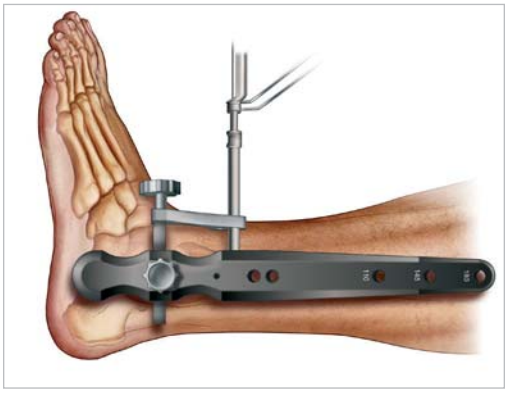
Assemble the targeting guide (assembly), base plate, A/P guide and locking bolt to the selected fibula rod as shown.

Step 4: Rod Insertion

Prior to inserting the A/P screw, the targeting guide (assembly) should be rotated approximately 25º posteriorly to allow for both (a) some internal rotation during fracture reduction, when required, and (b) anatomical placement of the syndesmosis screw from the fibula to the center of the tibia, which requires a slight posterior to anterior orientation.

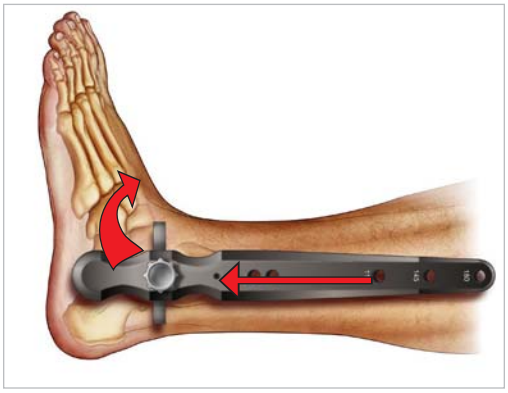
Step 5: A/P Screw(s) Insertion

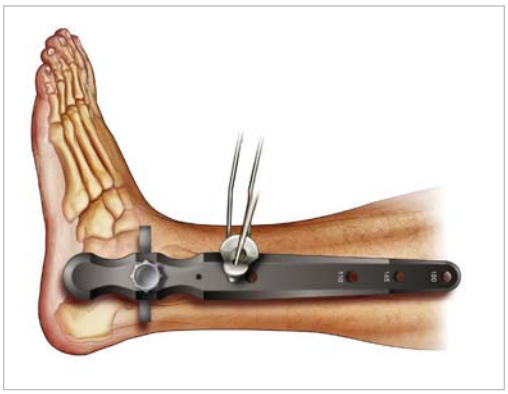
Insert the 3.5mm targeting cannula and the 3.5mm drill guide into one of the A/P holes over the distal fragment and make a separate stab incision to allow this to be advanced to bone. Drill to the second cortex and measure. Insert a screw that reaches to, but does not penetrate, the posterior cortex (to avoid peroneal tendon irritation). One or two screws can be inserted according to preference.



Step 6: Fracture Reduction

The distal fragment is now secured to the Fibula Rod, which in turn is securely attached to the targeting guide (assembly). Use the assembly to reduce the ankle mortice anatomically by gentle controlled movements. For the most common supination–external rotation fracture, for example this will typically involve gentle traction and internal rotation. Careful confirmation of adequate reduction using fluoroscopy is recommended.





Step 7: Syndesmosis Screw(s) Insertion

Maintain the reduction manually and insert the targeting cannula and drill guide into one of the lateral-to-medial targeting holes in the jig, again making a stab incision to allow this to be advanced to bone. Ensure the cannula and guide have a slight posterior-to-anterior orientation. Drill at least three cortices and insert appropriate length screw. The Fibula Rod is now locked, preventing longitudinal or rotational displacement, and the lateral buttress of the mortice is now stable. This step is recommended regardless of whether there is mechanical instability of the syndesmosis.

Step 8: Closure and Post-op

After removal of the assembly from the Fibula Rod, the skin can be closed with steris strips or the surgeon's preferred alternative. The patient can usually be allowed full weight-bearing, but may be restricted according to the surgeon's judgement and preference.

Fibula Rod Implants

3.0mm x 110mm Fibula Rod	40-0026-S
3.0mm x 145mm Fibula Rod	40-0027-S
3.0mm x 180mm Fibula Rod	40-0028-S
3.6mm x 110mm Fibula Rod	40-0029-S
3.6mm x 145mm Fibula Rod	40-0030-S
3.6mm x 180mm Fibula Rod	40-0031-S

3.5mm Cortical Screws

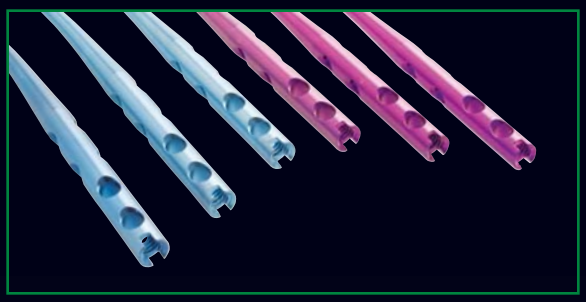
3.5mm x 8mm Cortical Screw	CO-3080
3.5mm x 10mm Cortical Screw	CO-3100
3.5mm x 12mm Cortical Screw	CO-3120
3.5mm x 14mm Cortical Screw	CO-3140
3.5mm x 16mm Cortical Screw	CO-3160
3.5mm x 18mm Cortical Screw	CO-3180
3.5mm x 20mm Cortical Screw	CO-3200
3.5mm x 22mm Cortical Screw	CO-3220
3.5mm x 40mm Cortical Screw	CO-3400
3.5mm x 45mm Cortical Screw	CO-3450
3.5mm x 50mm Cortical Screw	CO-3500
3.5mm x 55mm Cortical Screw	CO-3550
3.5mm x 60mm Cortical Screw	CO-3600
3.5mm x 65mm Cortical Screw	CO-3650

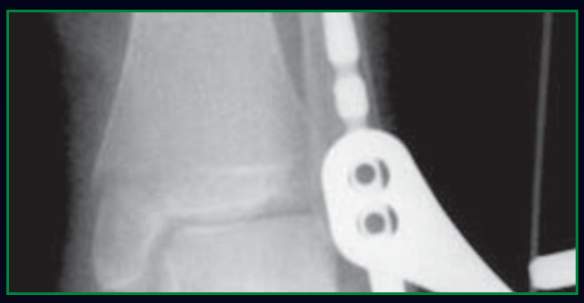
Fibula Rod Implants

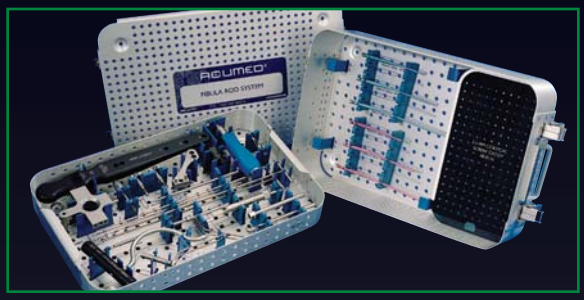
Fibula Rod Targeting Guide	40-0032
Fibula Rod Base Plate	40-0034
Fibula Rod A/P Targeting Guide	40-0036
Fibula Rod Awl	40-0037
3.5mm Drill Guide	40-0038
2.8mm Fibula Rod Drill	80-0642
Fibula Rod Intramedullary Drill	40-0111
Fibula Rod Locking Bolt	40-0113
X-ray Template	90-0011
3.5mm Targeting Cannula	HR-3101
2.5mm QR Driver Tip	HT-2502
Screw Sleeve	MS-SS35
Locking Bolt Finger Wrench	MS-0611
Rosette Knob	MS-0100
Generic Cannula (Soft tissue protector)	MS-2000
QR Handle	MS-3200
Depth Gauge	MS-9022
3.1mm Reamer	RMT3130
3.7mm Reamer	RMT3730
.062" x 6" Guide Wire	WS-1607ST
Fibula Rod System Tray Assembly	80-0114

The Fiblua Rod my also be used in combination with the following Acumed Products:

- Acutrak 2® - 5.5 for Medial Molleolar fractures
- Locking Ankle Plates
- AcuTwist® Compression Screws
- Lag Screws
- Acutrak® 4/5







REFERENCES

1. Appleton, Paul M.D.; McQueen, Margaret M.D.; Court-Brown, Charles M.D. The Fibula Nail for Treatment of Ankle Fractures in Elderly and High Risk Patients, Techniques in Foot & Ankle Surgery. 5(3):204-208, September 2006

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