Advanced Orthopaedic Solutions designs, manufactures, and markets orthopaedic trauma products, specializing in solutions which are less invasive, more cost effective and reduce surgical OR time, without compromise to the patient.

AOS is entirely focused on the orthopaedic trauma industry. We base our success by relying on the expertise of the leading orthopaedic surgeons. By building on strong customer relationships, AOS strives to continue to improve every aspect of the way we do business.
Leonard of Pisa, better known as Fibonacci, made revolutionary contributions to the mathematical world in the 13th century. The patterns that emerged from Fibonacci’s sequence also impacted all of nature and the biophysical world, especially the orthopaedic trauma industry.

Fibonacci did not invent the mathematical problem he solved, but his solution, the Fibonacci sequence will forever provide a solution to the problem. In much the same way, AOS’s Fibonacci Lower Extremity Fracture System provides the solution to distal tibia and fibular fractures.

This same Golden Ratio is evident in the bony anatomy of the human body and is always the same. AOS applied Fibonacci’s equation in the design of the pre-contoured plates of the Fibonacci Ankle Plating System, resulting in greater anatomical accuracy and superior fit.

• **Posterior Malleolar and Posterior Column Pilon Fixation Technique:**
  - Plate anatomically contoured to fit the posterior distal tibia and distal fibula to facilitate posterior surgical approach

• **Syndesmosis fixation:**
  - Syndesmosis slots - anatomically oriented 30° anteriorly for optimal screw placement (lateral fibular plate)
  - Strategically placed cutouts for syndesmotic screw placement (posterior fibular plate)

• **Medial Malleolus Fixation:**
  - Multiple options, one system: fix with cancellous lag screws or headless compression screws, tension band wiring, antiglide plate, hook plate and combination of varying other plates
Design Rationale
Why: “Plates That Fit”

3 axis of correction
The X/Y/Z creates a template for the specific contours of the bone. These contours and ratios allow variation in scaling for more accurate proportions.

Valgus
Metaphyseal curve - Backbend
Medial Contours
Idealized Contour

Diaphyseal Backbend
Varus
Cutouts for Syndesmotic screws

Design Rationale
How: “Plates That Fit”

All AOS articular plates are designed to correct the X/Y/Z axis of the bone

- Torque
- Flexion/Extension
- Valgus/Varus

All angles are cut from one block of titanium, helping to maintain strength, resulting in reduced bending, torque, or weakening of the plates after formation.
The Fibonacci sequence is named after Italian mathematician Leonardo of Pisa, known as Fibonacci.

Specialty Plates

Medial Malleolus Fixation: Multiple options, one system

Posterior Distal Fibula and Distal Tibia Technique

Plates are anatomically contoured to fit posterior distal fibula and posterior distal tibia to facilitate prone posterior technique.

Medial Malleolus

Sizes:
- 5-Hole - 21-Hole (4 hole increments)
- Length: 91mm - 264mm
- *220mm - 264mm

Posterior Tibia Plates

Syndesmosis slots:
Anatomically orientated 30° anteriorly for optimal screw placement.

L-Plates

Sizes:
- 3x2 Hole: 34.5mm
- 3x4 Hole: 52.6mm

Oblique T-Plate

Sizes:
- 3x2 Hole: 48.8mm
- 3x5 Hole: 66.8mm

Distal Posterior Fibula Plates

Sizes:
- 5-Hole: 83mm
- 7-Hole: 118mm

Lateral Distal Fibula Plates

Sizes:
- 4-Hole, 6 Hole - 15 Hole (3 hole increments)
- Lengths: 74mm-198mm
- *164mm - 198mm

Posterior Distal Fibula and Distal Tibia Technique

Strategically placed cutouts for syndesmotic screw placement.

“Any screw, any hole”
Unique Hook Plate Design aids in Fracture Reduction and Compression

Drill guide to facilitate pre drilling for distal spikes allowing for the plate to be slipped into position rather than impacted. Suture holes in the plate allow for an easy and reproducible tension band technique to compress fractures.
Screws

Screw Options to capture every fragment: with an extensive screw selection, the Fibonacci system is setup to help fix the most difficult of fractures.

- 2.4mm, 2.7mm, 3.5mm and 4.0mm non locking options
- 2.7mm and 3.5mm variable angle locking options
- 3.5mm cannulated headless compression
- 4.0mm solid and cannulated screw available in two thread lengths: 50% thread, 25% thread

Variable Angle Locking Technology: Locking holes in each plate accommodate variable angle locking in a 30° cone utilizing 2.7mm and 3.5mm variable angle locking screws.

Variable Angles

Screw heads sit flush with top surface of plate, minimizing prominent hardware and the potential for tissue irritation.

Straight

Angled

Screws

Straight

Angled
Instrument Trays

Specialty Plates
**INDICATIONS**

- Clavicle
- Ulna
- Radius
- Pelvis
- Fibula
- Distal Fibula
- Humerus
- Olecranon
- Scapula
- Pelvis
- Ulna
- Radius
- Fibula
- Distal Tibia