Introduction

The ArthroFX™, large external fixation system was designed to give surgeons a simple, efficient and versatile solution for temporary or definitive fixation. For staged distal tibia fracture repairs, Arthrex® provides surgeons with external fixation (ArthroFX), internal fixation (ankle and distal tibia fracture management systems) as well as biologics [JumpStart™ Antimicrobial Wound Dressing] to streamline operating room efficiency.

The 11 mm Carbon Fiber Rods make ArthroFX suitable for many indications outside the distal tibia as well as the femur, pelvis and humerus.

The simplicity and ease of use make this external fixation system friendly in the operating room for quick applications. For delayed open reconstruction in periarticular fractures, ArthroFX functions as an excellent means of “portable traction”. This allows the patients the benefit of soft tissue healing while having the option of being at home and waiting for their elective procedures. It allows the surgeon the benefits of getting the patient out of the hospital quickly and readmitting for a well-planned surgery or for transfer to the appropriate physician.
Delta Frame Technique

Fig 1 – Insert the first Schanz Pin into the anteromedial tibial shaft. Pins should be placed out of the zone of injury or hardware placement.

Fig 2 – Insert the second Transfixation Pin through the calcaneus, perpendicular to the long axis of the calcaneus, parallel to the ankle joint.
Fig 3 – Attach a small rod between two Schanz pins (Multi-Pin Clamp can also be used) before affixing the rods in the form of a triangle between the first screws and Transfixation Pin.

Fig 5 (optional) – An additional 4 mm Schanz pin can be added into the bar of the first metatarsal at a slight angle to incorporate the foot.

Fig 4 – Reduce the fracture by pulling lengthwise with balanced ligamentotaxis before tightening down the clamps.
Large Combination Clamp and Multi-Pin Clamp

The Large Clamp was designed for ease of use and rapid locking. A single step lock allows for speed of application and secure purchase on rods, 4 mm, 5 mm and 6 mm bone screws and 6 mm Transfixation Pins. The clamp is locked with an 11 mm adapter or 11 mm wrench. The key component and instrument review feature of the Large Clamp is the ability to snap on to both the rod and the shank of the 6 mm Transfixation Pins. The clamp also has the ability to lock to the shank of 4 mm, 5 mm and 6 mm diameter screws.

Schanz Pins

The 4 mm and 5 mm Schanz Pins were designed primarily for temporizing fixation techniques which typically span the joint and zone of the injury. The Schanz Pins are secured to the frame with the Large Clamp. All sizes of Schanz Pins are equipped with a drilling tip.

Transfixation Pins

The Transfixation Pins have a centrally threaded body with trocar tip.
Product Information

Carbon Fiber Rods

The Carbon Fiber Rods are offered in 11 mm diameter and are available in a variety of lengths. Carbon Fiber Rods have the added benefit of being radiolucent and extremely lightweight.

100 mm

150 mm

200 mm

250 mm

300 mm

350 mm

400 mm

450 mm

500 mm*

*Only available by special order. Not included in tray.
Ankle Fracture Management System, AR-8943S

- Complex Fibular Fracture plate
- Locking Third Tibular plate
- Reconstruction plate
- Locking Medial Hook plate
- Lateral Hook plate
Supporting Products

Anterolateral plate
Medial plate
Posterior plate
Anterior plate
Anatomic Distal Fibula plate
Distal Fibula plate
Straight/rim plate
Distal Tibia Plating System, AR-8963S
Supporting Products

Ankle Fracture Distal Tibia Screw Case, AR-8943C-31

- **2.7 mm Low Profile Screw™, Locking**
  - 10 mm - 60 mm

- **2.7 mm Low Profile Screw, Nonlocking, Cortical**
  - 10 mm - 60 mm

- **3 mm Low Profile Screw, Cancellous**
  - 10 mm - 30 mm

- **3.5 mm Low Profile Screw, Nonlocking, Cortical**
  - 10 mm - 80 mm

- **3.5 mm Low Profile Screw, Locking**
  - 10 mm - 50 mm

- **4 mm Low Profile Screw, Nonlocking, Cancellous**
  - 10 mm - 60 mm

- **4 mm Low Profile Screw, Short Thread, Cannulated**
  - 10 mm - 60 mm

- **4 mm Low Profile Screw, Long Thread, Cannulated**
  - 30 mm - 60 mm

- **4 mm Low Profile Screw, Short Thread**
  - 30 mm - 60 mm

- **4 mm Low Profile Screw, Long Thread**
  - 30 mm - 60 mm

ArthroFX External Fixation System, AR-8964S
Both levels pictured below are included in AR-8964S

**LEVEL 1**
Instrument Tray with Transfixation Pins and Schanz Screws

**LEVEL 2**
Instrument Tray with Carbon Fiber Rods and Large Clamps
JumpStart surgical dressings are an easy-to-use and protective wound dressing solution for postoperative management of surgical incisions and puncture sites. Featuring Advanced Microcurrent Technology®, JumpStart provides sustained, broad-spectrum antimicrobial efficacy, including protection against multi-drug resistant and biofilm-forming bacteria*

Embedded in the JumpStart dressing are a matrix of elemental silver and zinc islands, which form microcell batteries. These batteries generate microcurrents designed to mimic physiologic electric currents*, creating an optimal environment for wound healing.

Using JumpStart with ArthroFX

1. Remove dressing from sterile package. For best adhesion, ensure that skin is thoroughly dry before dressing application.

2. Using sterile scissors, create a single cut that reaches the center point of the dressing.

3. Remove liner opposite the cut and moisten with sterile saline, taking care not to wet the adhesive. If a highly exuding wound is expected, saline application may not be necessary.

4. Apply dressing to the pin site, adhering the side opposite of the cut first. Remove final liner and carefully wrap dressing around the pin, one side at a time. It is recommended the top of the dressing overlap the bottom to seal the dressing edges. Gently rub the dressing to ensure full skin contact.

*For activation instructions, warnings, and contraindications, please refer to the Instructions For Use.

Included in this kit:

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Size</th>
<th>Qty/Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS-4054</td>
<td>2.5&quot; Diameter</td>
<td>5</td>
</tr>
</tbody>
</table>

*data on file

Advanced Microcurrent Technology® is owned by Vomaris Innovations, Inc.
**Trim-It Pins™**

The use of Trim-It pins can be extremely useful in providing preliminary or definitive stabilization of small fracture fragments, particularly for periarticular injuries where the pins allow the smaller osteochondral fracture fragments to be realigned anatomically. By using a standard pin driver, the surgeon can drill and place the pin in one step. The bioabsorbable portion of the pin is seated in the pin driver during the drilling phase. In cases of extra hard bone stock, or if using the 1.5 mm Trim-It Drill Pin, a metal “pредрил” pin K-wire is used to create a pilot hole. Once the pin placement is complete, countersink below the bone surface using the manual insertion instruments. Fractures can then be fixed definitively by whichever fixation construct is needed (plates and screws) without blocking hardware placement, while still maintaining the initial reduction.*

**Advantages of Trim-It Pins for fractures***

1. Allow conversion of smaller fragments into one fragment to simplify reduction
2. It obviates the use of metal K-wires during provisional fixation, where reduction may become lost as the K-wires are removed for final screw placement
3. Minimizes problems associated with “screw traffic”
4. Simplified technique using Trim-It Pins as metal implants have to be buried below the surface in perfect position

## Ordering Information

ArthroFX™ External Fixation System Kit (AR-8964S) Includes:

- Drill Bit, 3.5 mm x 195 mm  AR-8964-10
- Drill Guide Handle  AR-8964-17
- Universal Chuck w/T-Handle  AR-8964-20
- Ratchet Wrench, 11 mm  AR-8964-21
- Multi-Driver Adapter  AR-8964-19
- 6-Position Drill Guide Handle  AR-8964-18
- Trocar, long  AR-8964-16
- Trocar, short  AR-8964-15
- Drill Sleeve, long  AR-8964-12
- Drill Sleeve, short  AR-8964-11
- Threaded Sleeve, long  AR-8964-14
- Threaded Sleeve, short  AR-8964-13

Implants (to be ordered separately):

- Large Combination Clamps  AR-8964-07
- Multi-Pin Clamp, Large  AR-8964-08
- Rod Attachment, Large Multi-Pin Clamp  AR-8964-09
- Carbon Fiber Rod, 11 mm x 100 mm  AR-8964R-100
- Carbon Fiber Rod, 11 mm x 150 mm  AR-8964R-150
- Carbon Fiber Rod, 11 mm x 200 mm  AR-8964R-200
- Carbon Fiber Rod, 11 mm x 250 mm  AR-8964R-250
- Carbon Fiber Rod, 11 mm x 300 mm  AR-8964R-300
- Carbon Fiber Rod, 11 mm x 350 mm  AR-8964R-350
- Carbon Fiber Rod, 11 mm x 400 mm  AR-8964R-400
- Carbon Fiber Rod, 11 mm x 450 mm  AR-8964R-450
- Carbon Fiber Rod, 11 mm x 500 mm  AR-8964R-500
- Schanz Screw, 4 mm x 125 mm  AR-8964-01
- Schanz Screw, 4 mm x 150 mm  AR-8964-02
- Schanz Screw, 5 mm x 175 mm  AR-8964-03
- Schanz Screw, 5 mm x 200 mm  AR-8964-04
- Schanz Screw, 5 mm x 250 mm  AR-8964-24
- Transfixation Pin, 6 mm x 225 mm  AR-8964-05
- Transfixation Pin, 6 mm x 300 mm  AR-8964-06
This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience and should conduct a thorough review of pertinent medical literature and the product's Directions For Use.