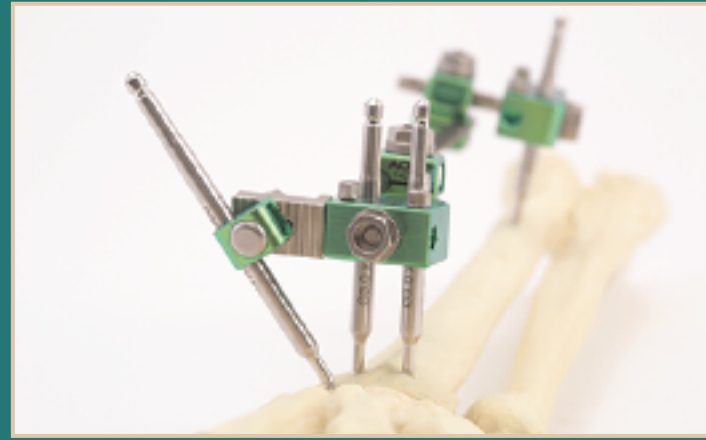


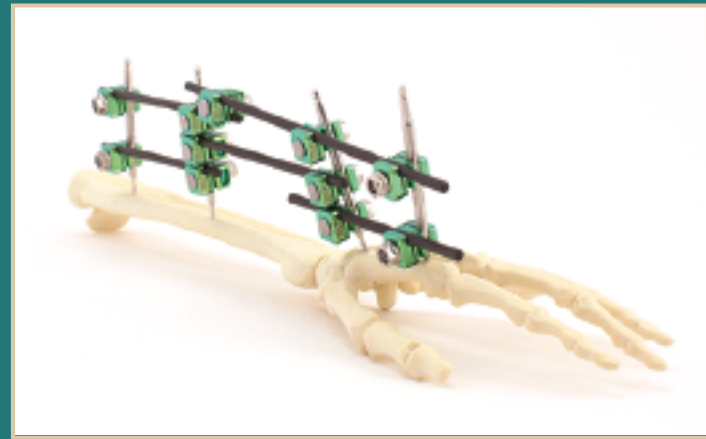
Part  
Number Description

1181-050 Carbon Fiber Rod, 5mm x 50mm  
 1181-075 Carbon Fiber Rod, 5mm x 75mm  
 1181-100 Carbon Fiber Rod, 5mm x 100mm  
 1181-125 Carbon Fiber Rod, 5mm x 125mm  
 1181-150 Carbon Fiber Rod, 5mm x 150mm  
 1181-200 Carbon Fiber Rod, 5mm x 200mm  
 1181-250 Carbon Fiber Rod, 5mm x 250mm  
 1181-300 Carbon Fiber Rod, 5mm x 300mm



1400-000 5.0mm Small External Fixation Clamp  
 1406-000 Two-Pin Small Multi-Pin Clamp  
 1407-000 Multi-Pin Clamp Extension  
 1409-000 Three-Pin Small Multi-Pin Clamp

1410-055 2.0mm x 10mm x 55mm Threaded Half Pin  
 1410-075 2.0mm x 10mm x 75mm Threaded Half Pin  
 1411-055 2.0mm x 15mm x 55mm Threaded Half Pin  
 1411-075 2.0mm x 15mm x 75mm Threaded Half Pin  
 1412-075 2.0mm x 20mm x 75mm Threaded Half Pin



1414-075 3.0mm x 10mm x 75mm Threaded Half Pin  
 1415-075 3.0mm x 15mm x 75mm Threaded Half Pin  
 1415-100 3.0mm x 15mm x 100mm Threaded Half Pin  
 1416-075 3.0mm x 20mm x 75mm Threaded Half Pin  
 1416-100 3.0mm x 20mm x 100mm Threaded Half Pin  
 1416-140 3.0mm x 20mm x 140mm Threaded Half Pin  
 1417-075 3.0mm x 25mm x 75mm Threaded Half Pin  
 1417-100 3.0mm x 25mm x 100mm Threaded Half Pin  
 1417-140 3.0mm x 25mm x 140mm Threaded Half Pin

1421-000 Bent Post, Multi-Pin Clamp  
 1422-000 Straight Post, Multi-Pin Clamp  
 1423-000 Bolt, Multi-Pin Clamp

1425-000 Nut, Small External Fixation System  
 1428-000 Parallel Fixation Nut

0109-150 1.5mm Guide Pin  
 1426-000 Pin Caps (4 pack)

4001-000 Calibrated Drill, AO Style, 1.5mm x 110mm  
 4002-000 Calibrated Drill, AO Style, 2.0mm x 110mm  
 0343-000 1.5mm/2mm Drill Guide

5007-000 Wrench, AO- 3/8" - 3/16"  
 5009-000 3/16" T-Handle Wrench  
 5013-000 3/8" T-Handle Wrench

0357-000 Multi-Pin Clamp Drill Guide  
 0358-000 Thread-In Sleeve Multi-Pin Clamp Drill Guide

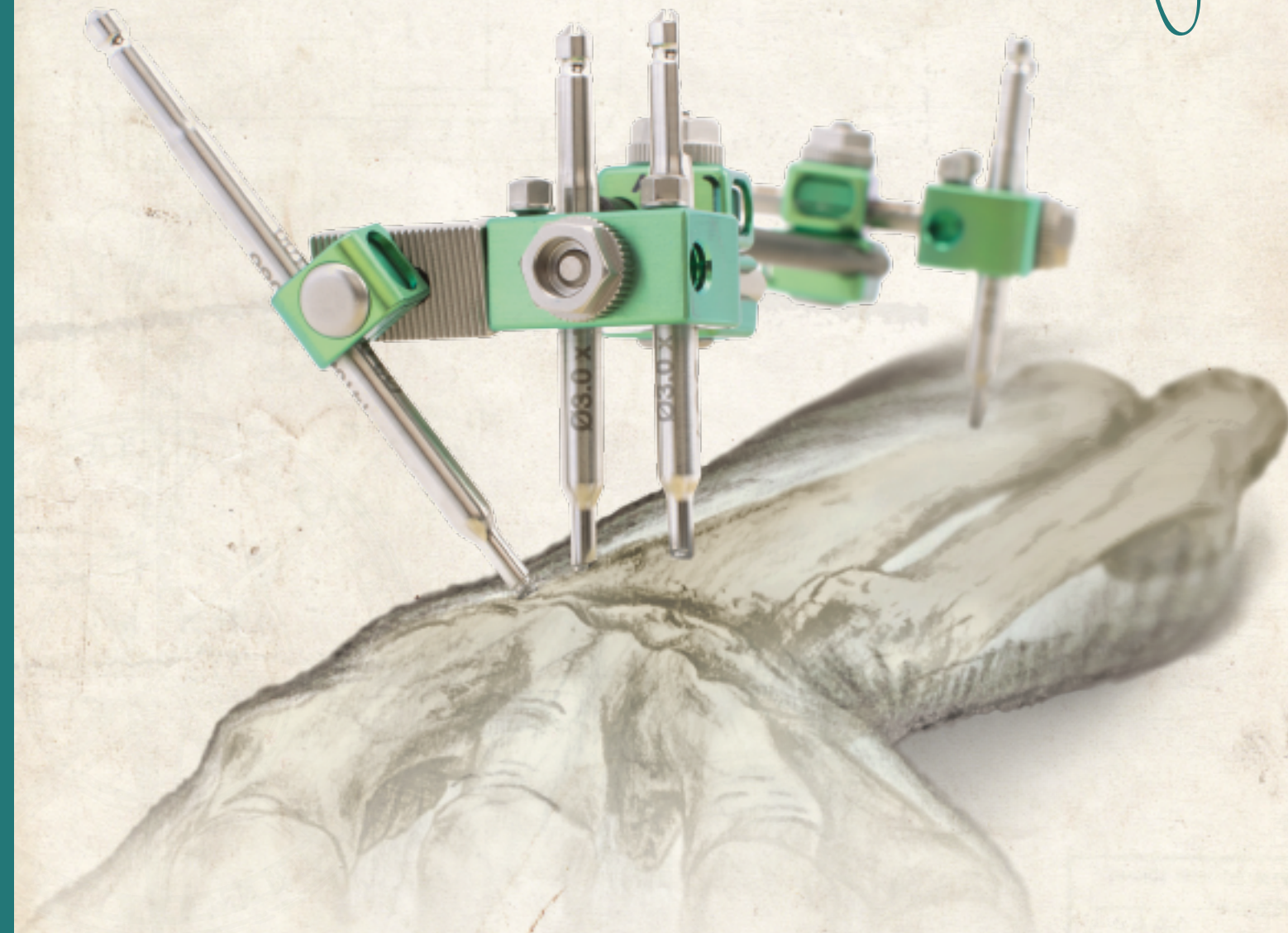


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**AOS**


ADVANCED ORTHOPAEDIC SOLUTIONS



*Small Bone*

EXTERNAL FIXATION

P/N · 9092, Rev A  
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Made in the USA 



# Surgical Guide

The AOS Small Bone External Fixation System is comprised of rods, pin-to-rod clamps, multi-pin clamps, and pins used for the management of bone fracture and reconstructive orthopedic surgery.

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## Pre-Drill

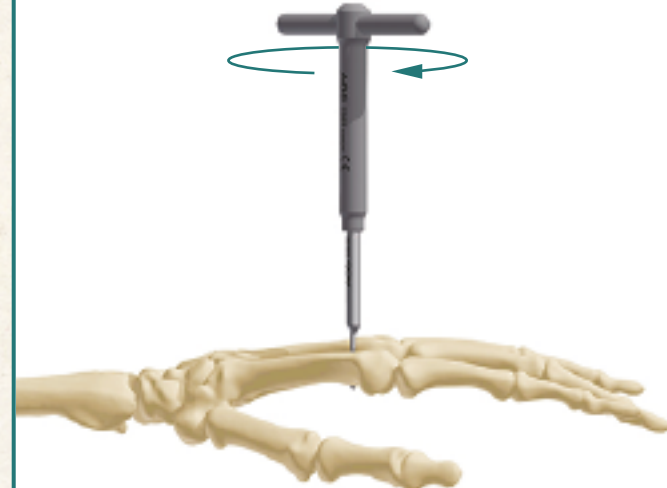
When pre-drilling is desired, insert the drill guide through the incision, perpendicular to the longitudinal axis of the bone. Drill diameter should be no more than 1/3 the diameter of the bone. Drill through the drill guide with the **1.5mm (4001-000) or 2.0mm Calibrated Drill (4002-000)** through the first cortex checking that the drill bit is at the right angles to the bone. Read the calibration of the thread length when the drill tip is at the far cortex of the bone. Select the appropriate pin based on diameter drilled and the thread length read off the calibrations.



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## Pin Insertion

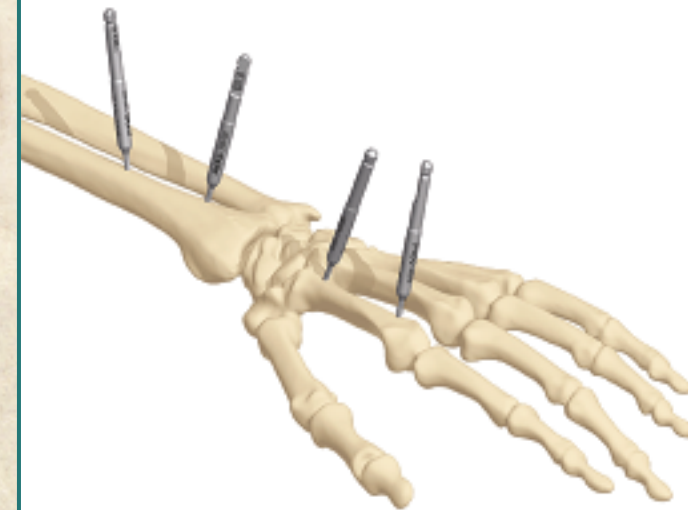
Insert a pin through the incision into the bone using the **T-Handle Wrench (5009-000 or 5013-000)** or a drill. During insertion the alignment of the pin should stay constant and perpendicular to the longitudinal axis of the bone. Once the second cortex has been reached, reduce the insertion speed so that the tip just protrudes through the distal cortex.



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## Remaining Pins

Insert the remaining pins using the same technique.



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## Pin Clamp Assembly

The two pins in each bone segment are joined by rods of suitable length; each one mounted with the pin clamps positioned about 10-20 mm from the skin. They are then locked firmly with the wrench.



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## Rod Assembly

A rod is then used to join the first two rods together by the rod clip clamps, which are not yet tightened. The surgeon now manipulates the fracture, if possible under X-ray control; when the position is satisfactory, the assistant locks the two rod clips clamps firmly with the wrench.



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## Multi-Pin Clamp Assembly

### Use of the Multi-Pin Clamp

When using a multi-pin clamp, start by inserting the first pin per the directions listed above. Place the center clamp over the first pin ensuring the set screws are oriented away from the bone. Next, follow the pin insertion technique to place a second parallel pin through the center clamp if desired.



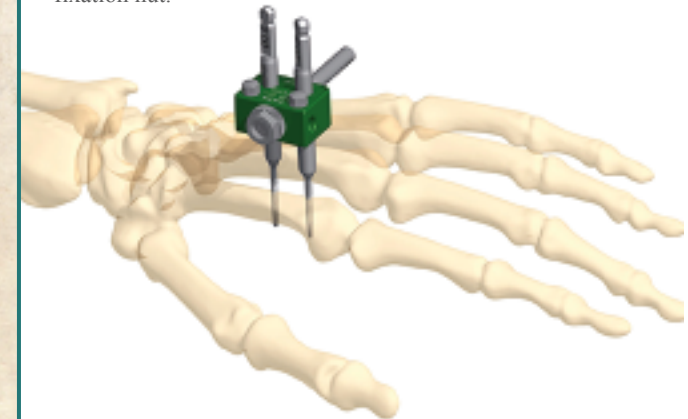
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## Post-Assembly (Optional)

### Select the desired locking method.

The options are:  
· Straight post for attaching the multi-pin clamp to other rods and pins.  
· Bent post for attaching the multi-pin clamp to other rods and pins.  
· Hex bolt for use of the multi-pin clamps without attachment to other rods or pins.

Insert the post or hex bolt through the center clamp and tighten the clamp 10-20mm away from the soft tissue using the nut or parallel fixation nut.

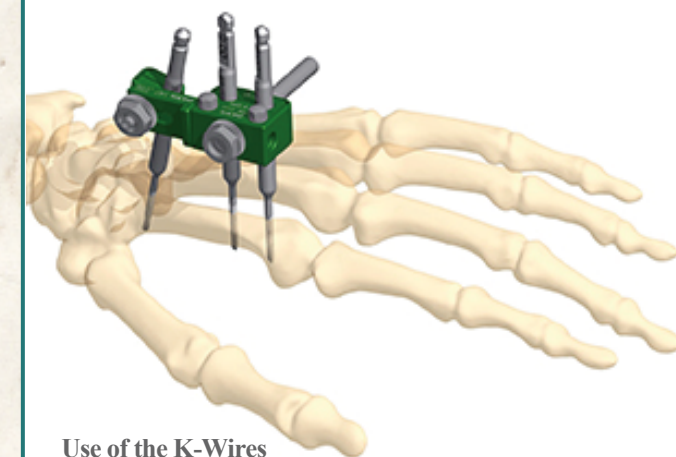


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## Additional Pins & Rod Assembly (Optional)

If additional pins or rods need to be attached to the center clamp, loosen the set screw and insert an extension piece into the side of the center clamp. This extension piece should snap into place.

Follow the pin insertion technique for placing this next pin through the extension piece. With the pin in place, ensure proper reduction and tighten all hex screws and nuts on the multi-pin clamp.



### Use of the K-Wires

K-wires may be used to supplement fracture reduction and improve fixation stiffness.

To insert the K-wires, make an incision and use a power drill to drive the pin across the plane of the fracture.

