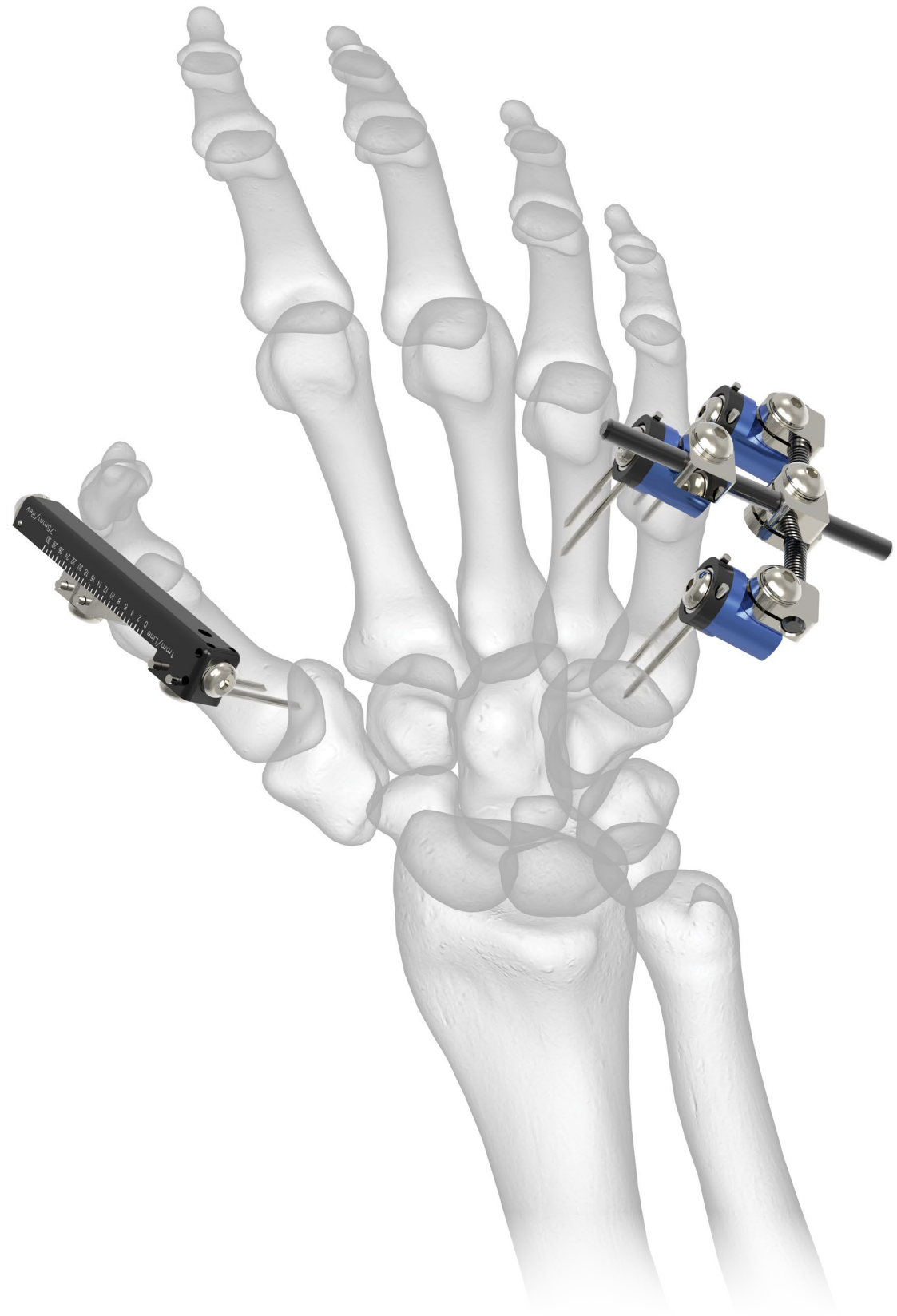


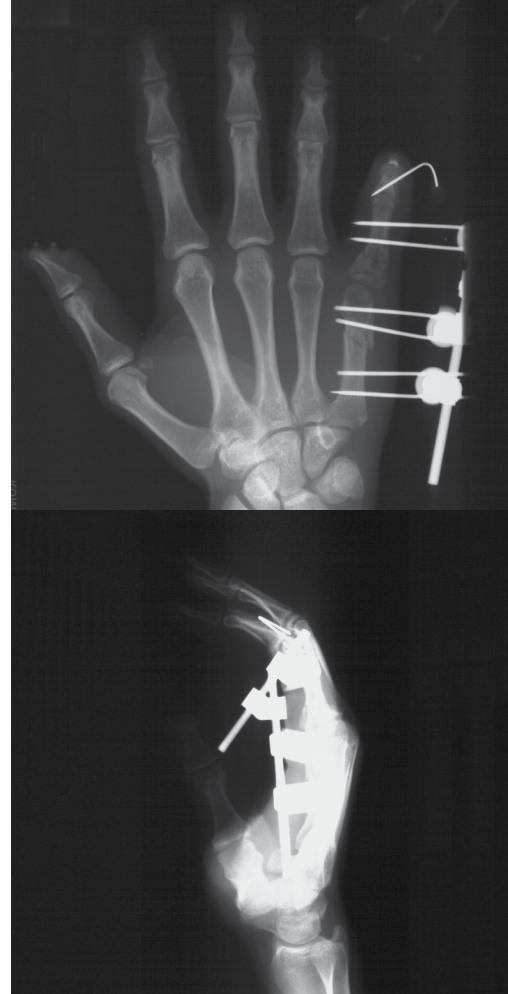
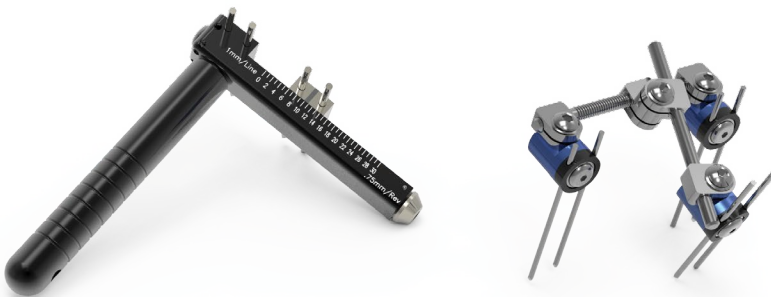
Surgical Technique





Acumed® is a global leader of innovative orthopaedic and medical solutions.

We are dedicated to developing products, service methods, and approaches that improve patient care.



Acumed® Small Bone External Fixation System

The Acumed Small Bone External Fixation System includes the Acumed Small Bone Fixator and Small Bone Distractor. These devices are designed for temporary stabilization of the metacarpals and phalanges. The Small Bone Fixator aids in reduction and compression to help correct fragment alignment for various fractures and osteotomies. The Small Bone Distractor is used in conjunction with guide pins to maintain distraction forces during fracture healing.

By combining the Small Bone Fixator and Small Bone Distractor in one system, Acumed's Small Bone External Fixation System provides multiple solutions for hand trauma, all in one tray.

The Instructions for Use (IFU) for the Small Bone External Fixation System can be found in PKGI-24 and PKGI-52.

Indications for Use:

The Acumed Small Bone External Fixation System is a device used in conjunction with guide pins to achieve optimal fracture reduction and to help correct fragment alignment by maintaining distraction forces during fracture healing in the hand. It is not intended for use in the spine.

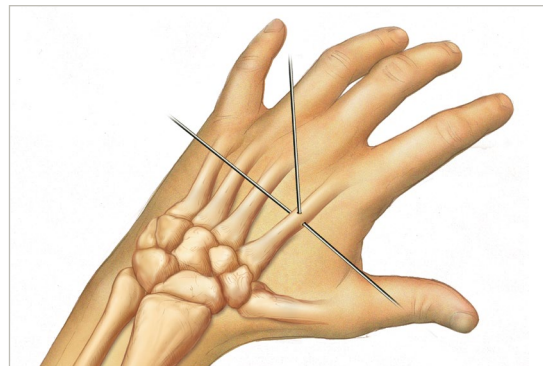
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Small Bone Fixator Surgical Technique

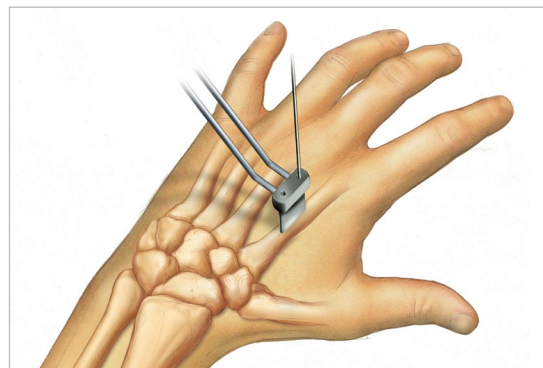
1 PRE-SURGICAL PLANNING

The versatility of the housing assemblies allows for the K-wire pairs to be placed in any plane between medial/dorsal/lateral. Both wire and rod clamps rotate to match wire placement.

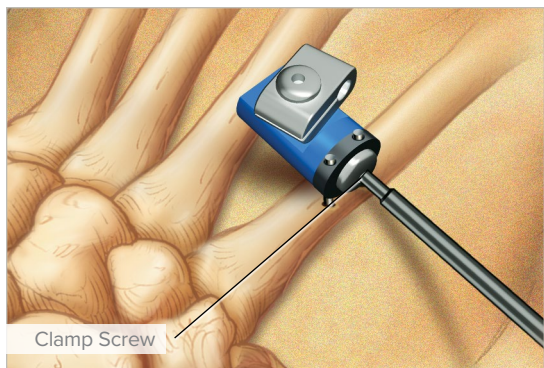


2 K-WIRE POSITIONING

Determine K-wire position by using the Pin Guide Assembly (SM-5080). .035" (.89 mm) to .062" (1.57 mm) K-wires may be used for the Small Bone External Fixation System.

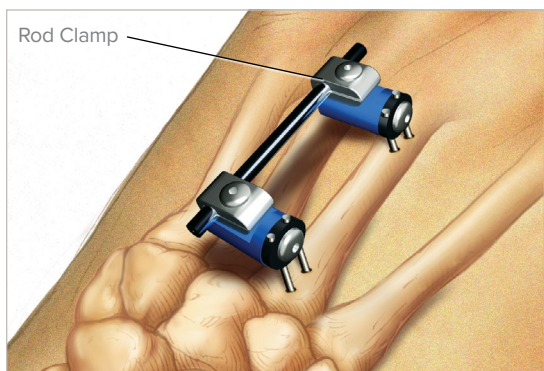


Part Number	Part Description
WS-0906ST	.035" x 5.75" Single Trocar Guide Wire
WS-1106ST	.045" x 6" Single Trocar Guide Wire
WS-1607ST	.062" x 6" Single Trocar Guide Wire
Not Included in Set	
WS-1504STT	1.5 mm x 4" Threaded Single Trocar Guide Wire



3 PREPARATION

The Small Bone Housing Assembly (SM-5100) is secured onto the K-wires by inserting the holes of the Wire Clamp over the K-wires. Lightly tighten the Wire Clamp Screw to allow rotation of the blue assembly body. Repeat these steps as needed to add more housing assemblies.



4 CREATE THE FIXATION SCAFFOLD

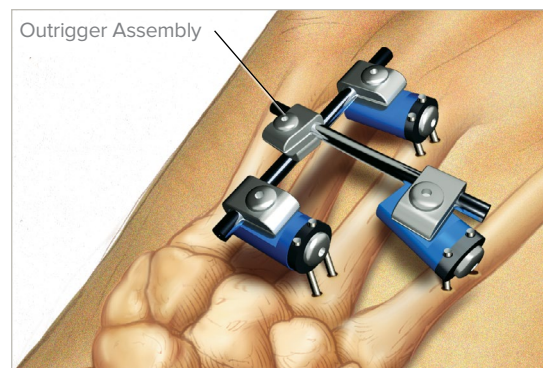
Housing assemblies are connected with either the provided carbon rods or the threaded rods (60 mm or 90 mm Small Bone Fixator Shafts). Slide the selected rod through the loosened rod clamp.

Note: For distraction or compression of the fracture, the Small Bone Fixator Knob (SM-5015) can be utilized but only with the threaded rods.

Part Number	Part Description
SMC-5060	60 mm Small Bone Fixator Shaft (Carbon Fiber Rod)
SMT-5060	60 mm Small Bone Fixator Shaft (Threaded Rod)
SMC-5090	90 mm Small Bone Fixator Shaft (Carbon Fiber Rod)
SMT-5090	90 mm Small Bone Fixator Shaft (Threaded Rod)

5 SECURE FIXATOR

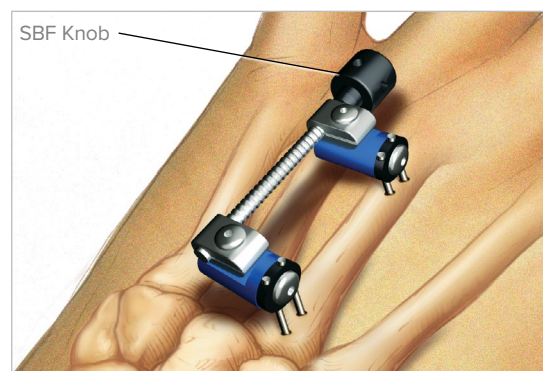
Reduce the fracture and tighten all Wire Clamp Screws and rod clamps to secure the fixator. Finally, cut all the K-wires to approximately 10 mm or less from the housings. If a third housing assembly is required for stability, it may be attached to the first rod using the Outrigger Assembly (SM-5200).



COMPRESSION OPTION

The Small Bone Fixator Knob (SBF Knob) is threaded outside of the housing onto the threaded rod. Lightly loosen the rod clamp and tighten the SBF Knob toward the housing to compress the fracture. Tighten the rod clamp.

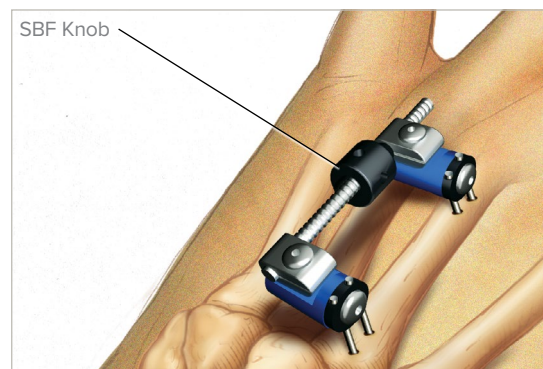
Note: Threaded rods must be used in conjunction with SBF Knob.



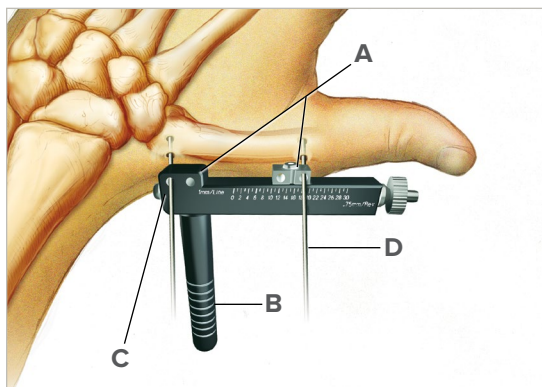
DISTRACTION OPTION

The SBF Knob is threaded inside of the housing onto the threaded rod. Lightly loosen the rod clamp and tighten the SBF Knob toward the housing away from the fracture for distraction.

Note: Threaded rods must be used in conjunction with SBF Knob.



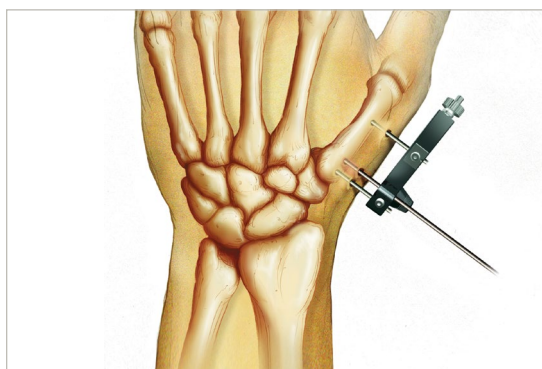
Small Bone Distractor Surgical Technique



1 INSERT FIRST K-WIRES

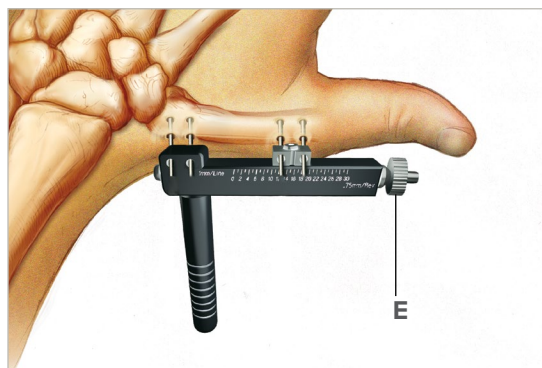
Loosen the clamp set screws (A). Using the Small Bone Distractor Handle (B) to hold the Small Bone Distractor (BD1-400) in place, insert a single K-wire through the proximal clamp (C), perpendicular to the bone. Lightly tighten the proximal clamp set screws after the wire has advanced through the far cortex. Maintaining a parallel relationship between the Small Bone Distractor and the bone, insert a second K-wire through one of the holes in the distal clamp (D). Lightly tighten the distal clamp set screws after the wire has advanced through the far cortex.

Note: Cut K-wires to approximately 10 mm or less from the Small Bone Distractor so they are out of the way for the subsequent K-wire insertion.



2 INSERT REMAINING K-WIRES

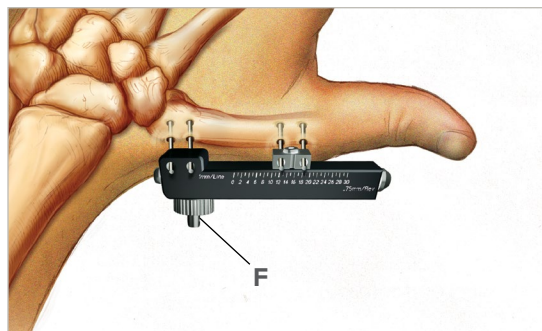
Loosen the proximal clamp set screws and insert the second K-wire until it advances through the far cortex. Tighten the clamp set screws and cut the wire to within 10 mm or less of the Small Bone Distractor. Repeat this step for the second K-wire in the distal clamp.



3 ADJUST DISTRACTION WHEEL

Adjust the 2.4 mm Bone Distractor Hex (BD1-410) (E) accordingly to achieve the desired length. Each complete revolution of the 2.4 mm Bone Distractor Hex (BD Hex) will cause 0.75 mm of travel for the distal wire clamp.

Note: Cut remaining K-wires to approximately 10 mm or less from the distractor.



4 FINAL PLACEMENT

The Small Bone Distractor Handle is discarded. The BD Hex can then be threaded into this location for storage once the desired distraction/compression is achieved (F).

Ordering Information

Small Bone Fixator Set

Small Bone Fixator/Distractor Instrument Set	SBF-0000
Small Bone Housing Assembly (Set contains four)	SM-5100
Outrigger Assembly	SM-5200
60 mm Small Bone Fixator Shaft (Carbon Fiber Rod)	SMC-5060
60 mm Small Bone Fixator Shaft (Threaded Rod)	SMT-5060
90 mm Small Bone Fixator Shaft (Carbon Fiber Rod)	SMC-5090
90 mm Small Bone Fixator Shaft (Threaded Rod)	SMT-5090
Small Bone Fixator Knob	SM-5015
Pin Guide Assembly	SM-5080
3/32" Hex Key	HK-0024
Small Bone External Fixation Tray	SM-5061
.035" x 5.75" ST Guide Wire	WS-0906ST
.045" x 6" ST Guide Wire	WS-1106ST
.062" x 6" ST Guide Wire	WS-1607ST

Small Bone Distractor

Small Bone Distractor	BD1-400
Hex Wrench	AT-7004
1.5 mm x 4" Threaded Single Trocar Guide Wire (Not included with set)	WS-1504STT
2.4 mm Bone Distractor Hex	BD1-410

The Acumed® Small Bone External Fixation System may also be used in combination with the following Acumed systems: Acu-Loc® 2 System, Acutrak®, Acutrak 2®, and/or Hand Fracture System. To order, contact your local Acumed sales representative.

To learn more about the full line of Acumed innovative surgical solutions, please contact your local Acumed sales representative, call 888.627.9957, or visit acumed.net.



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