



# A Complete Range of Solutions for Hand Fractures





Acumed products



OsteoMed products



# Our Hand Fracture Solutions Have You Covered































From straightforward to specialized, Acumed | OsteoMed offers a comprehensive portfolio of upper extremity fixation and specialty plates.

## Hand Fracture Solutions Acumed® | OsteoMed® vs the Competition\*

See below for a visual guide to how our offerings stack up against three of our competitors.

 Product in Portfolio
   Product Not in Portfolio



		Acumed	OsteoMed	DePuy Synthes	Stryker	Smith & Nephew
Carpal	Compression Staples					
	Carpal Fusion Plates					
Phalangeal & Metacarpal	Hand Fracture Plates					
	First MCP Fusion Plates					
	External Fixation					
	Specialty Hand Plates					



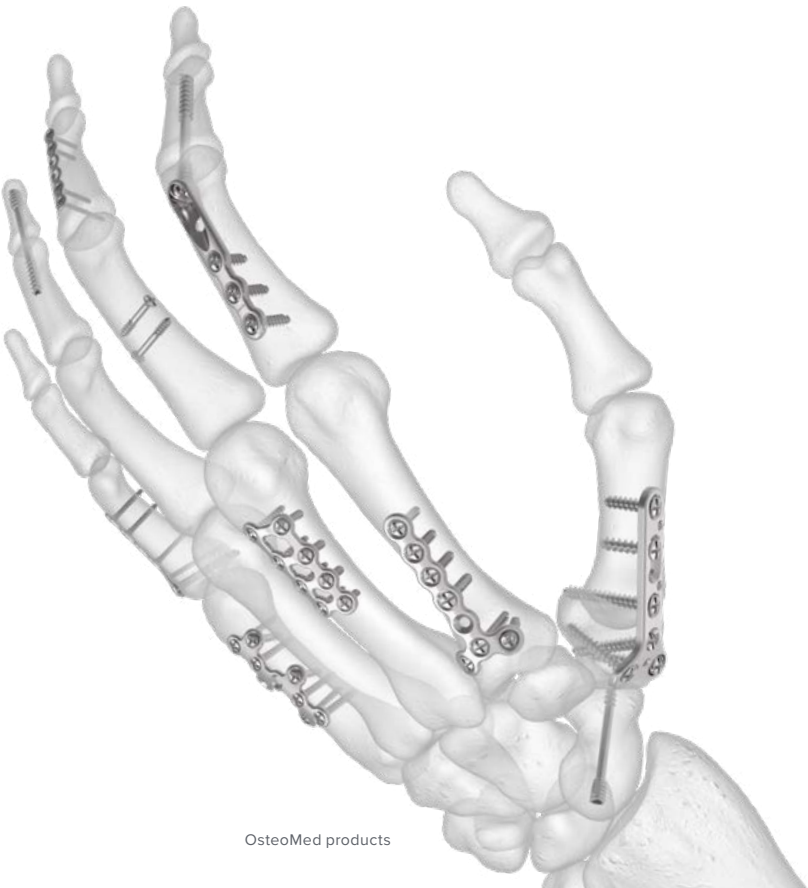
For more information:  
[go.acumed.net/hs](https://go.acumed.net/hs)  
 888.627.9957

# OsteoMed Solutions

The OsteoMed® Hand Plating System (HPS) features a full range of low-profile plates in four size modules: 1.2, 1.6, 2.0, and 2.4 mm. The HPS Plates accept up to four screw types: VA locking, nonlocking, lag, and cannulated. Also featured are hand fusion plates in two different sizes.

Highlights of the HPS system include:

- ▶ A full range with 68 plates with 4 screw diameters
- ▶ Specialty implants for CMC, PIP, and MCP fusions
- ▶ TaperLock™ Technology – Designed for a low-profile screw and plate construct
- ▶ Plates with dual compression holes
- ▶ Cannulated compression screws in 2.0, 2.4, and 3.0 mm diameters



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## Indication

## OsteoMed

## Acumed

Avulsion Fracture

1.2 mm Screw

Avulsion Hook Plate

Boxer's Fracture

Subcondylar Plate

Metacarpal Neck Fracture Plate

Transverse Fracture

Straight Plate, T Plate, L/R Plate

Straight Plate, T Plate, Medial/Lateral Plate

Short Oblique

Cannulated Lag Screws

Headless Compression Screws

Comminuted/Long Oblique

Z Plate, Offset Grid Plate

Offset Plate

Fusion

PIP/CMC Fusion Plate

Acutrak 2® Headless Compression Screws

Malunion

—

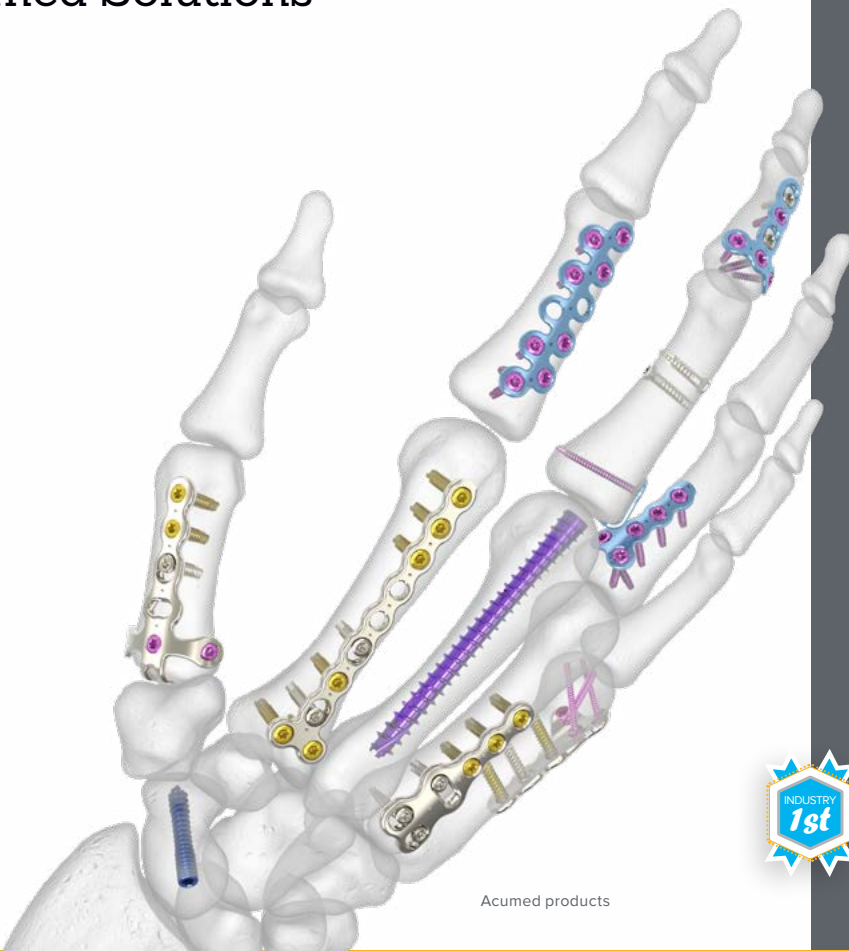
Rotational Correction Plate

Rolando/Bennett

—

Rolando Fracture Hook Plate

# Acumed Solutions



Acumed products

The Acumed® Hand Fracture System is designed to surgically treat metacarpal and phalangeal fractures, fusions, and osteotomies, and includes five solutions in one tray.

Hand Fracture System highlights include:

- ▶ Precontoured standard and specialty plates
- ▶ Acumed's Hexalobe MultiScrew technology eliminates the need for traditional locking and nonlocking screws
- ▶ Specialized instruments, including an osteotomy cutting guide, the SaveLoc compression sleeve, unique clamps and forceps, and a plate cutter
- ▶ The Acumed Small Bone Fixator and Small Bone Distractor provide external fixation and bone lengthening options



## Industry First

Launched in 2014, these are the first hand plates that accept multiple Hand Fracture System screw diameters in every hole of every plate in the system.

Acumed Standard Plates	Thickness	Length
Compression Plate, 6-hole	0.8 mm	32.3 mm
Compression Plate, 6-hole	1.3 mm	38.3 mm
Straight Plate, 10-hole	0.8 mm	50.2 mm
Straight Plate, 10-hole	1.3 mm	60.2 mm
T-Plate	0.8 mm	50.0 mm
T-Plate	1.3 mm	59.9 mm
Offset Plate	0.8 mm	35.0 mm

Acumed Specialty Plates	Thickness	Length
Curved Medial/Lateral Plate	0.8 mm	35.8 mm
Avulsion Hook Plate	0.8 mm	10.0 mm
Metacarpal Neck Plate, Left & Right	1.3 mm	27.8 mm
Rolando Fracture Hook Plate	1.3 mm	34.6 mm
Rotational Correction Plate	1.3 mm	33.7 mm

# Fracture Solutions

## OsteoMed Hand Plating System

The OsteoMed® Hand Plating System features instrumentation and low-profile implants designed specifically for treating hand trauma.

### Lag Screws

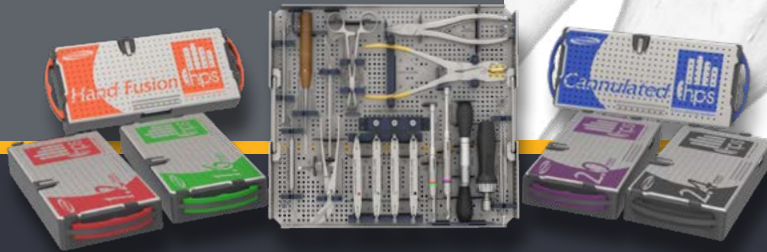
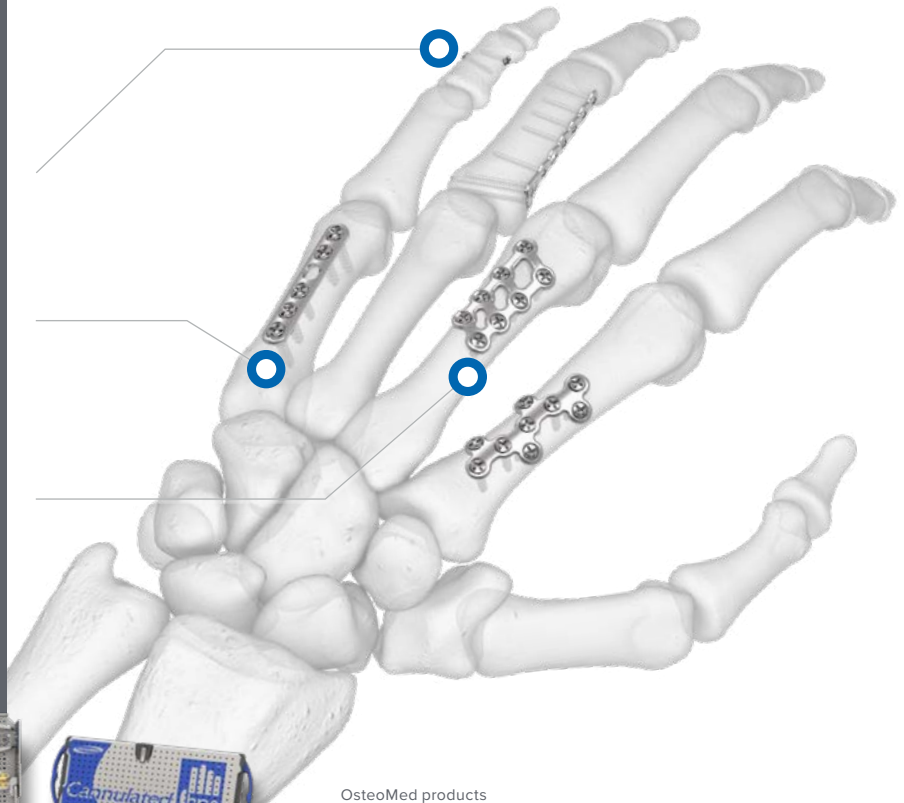
1.2 mm Lag Screws capture small avulsed fragments.

### Straight Plates

Like T and Y Plates, these may be cut to length and bent to better fit patient anatomy.

### Offset Grid Plate

Designed to provide fixation of comminuted diaphyseal fractures.



Modules	Distal Phalanges	Middle Phalanges	Proximal Phalanges	Metacarpals and Carpals
1.2 mm	●	●		
1.6 mm		●	●	
2.0 mm			●	●
2.4 mm				●



The OsteoMed Hand Plating System features **68 plates**, **4 screw types**, and **3 k-wires**



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## TaperLock™ Screw Retention Technology

The tapered driver tip press fits at .9 mm, resulting in a thinner screw head profile in all OsteoMed Hand Plating System Variable Angle Locking, Nonlocking, and Lag Screws.



# Fracture Solutions

## Acumed Hand Fracture System and Acutrak 2®

The Acumed® Hand Fracture System features both standard and specialty plates for fixation of metacarpal and phalangeal fractures, fusions, and osteotomies.

### Metacarpal Neck Fracture

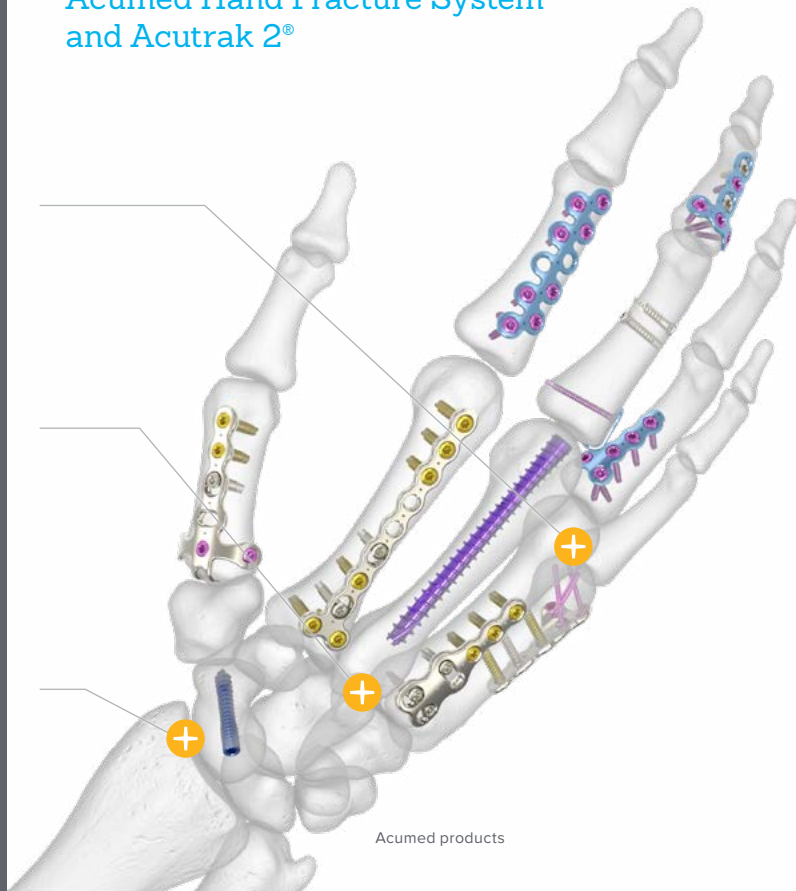
The 1.3 mm Metacarpal Neck Plate has three distally pointing converging screws to provide metacarpal head fixation.

### Rotational Malunion Osteotomy

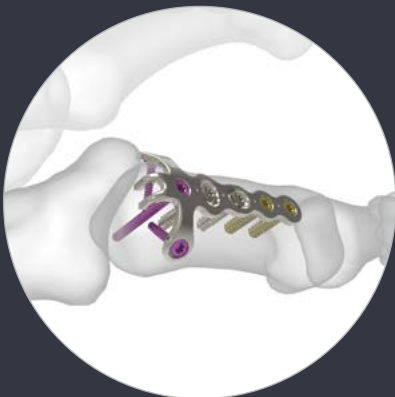
The 1.3 mm Rotational Correction Plate system includes a Rotational Osteotomy Cutting Guide designed to facilitate placement and orientation of the cut for rotational osteotomies of the metacarpals.

### Dorsal Scaphoid Fracture

The Acutrak 2® Headless Compression Screw is designed to effectively reduce and secure a fractured scaphoid and maintain rotational stability.



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### Rolando Fracture Hook Plate

The 1.3 mm Rolando Fracture Hook Plate is designed for a three-part fracture pattern at the base of the first metacarpal. The prongs on the proximal end of the plate should contact the dorsal surface of the abductor pollicis longus (APL) tendon and support any comminution of the base of the first metacarpal.

The Acumed Hand Fracture System offers plates in **0.8 mm & 1.3 mm thicknesses**



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### Avulsion Hook Plate

The 0.8 mm Avulsion Hook Plate is designed to provide more stability than a K-wire when a fragment is too small for a single lag screw. The plate's prongs can support an avulsed fragment when the fragment is too small for a lag screw and more stability is desired than pinning with K-wires alone can provide.



# Fusion Solutions

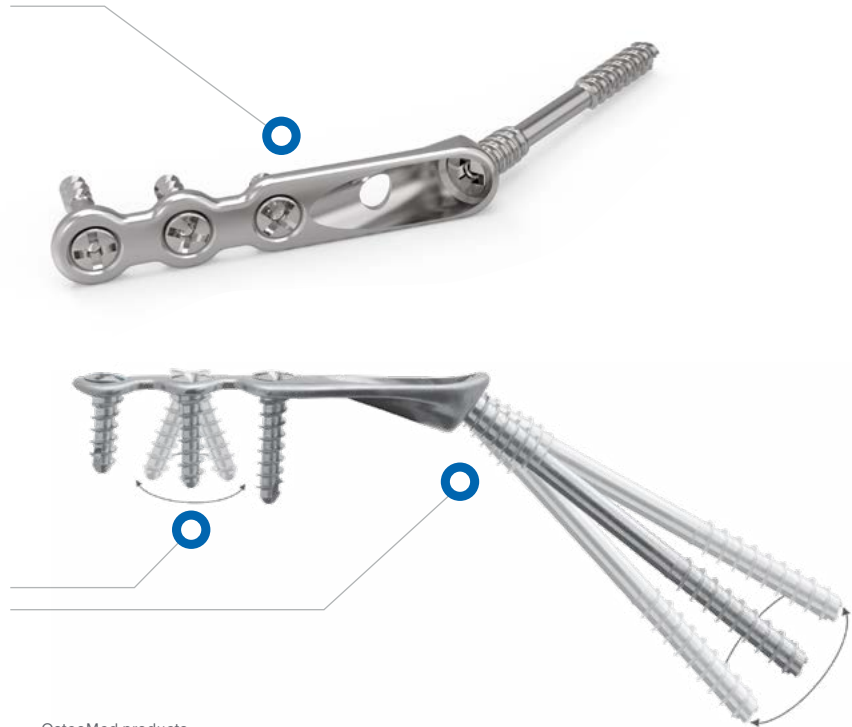
## OsteoMed® Fusion Plates and Cannulated Screws

### Hand Fusion Plate

The Hand Fusion Plate uses the plate screws from OsteoMed's Hand Plating System, combined with a Compression Screw from the Hand Fusion Module, to provide compression across the proximal interphalangeal (PIP) and metacarpophalangeal (MCP) joints.

### Fusion Screws

The industry's first cannulated compression screw with variable-angle locking capabilities, the Fusion Screw can lock up to 18 degrees from center, allowing for fusion of the joint at a natural resting angle.

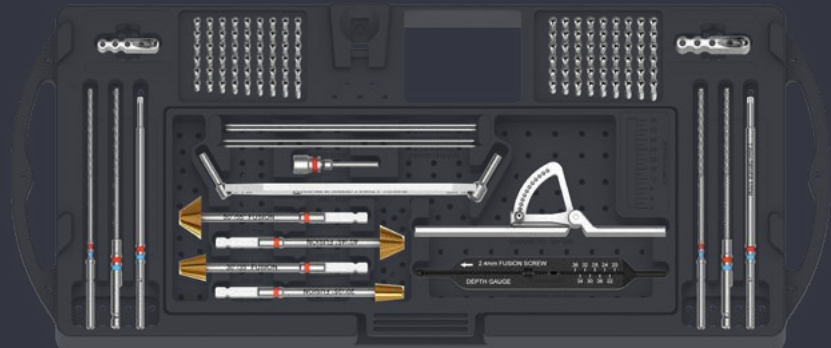


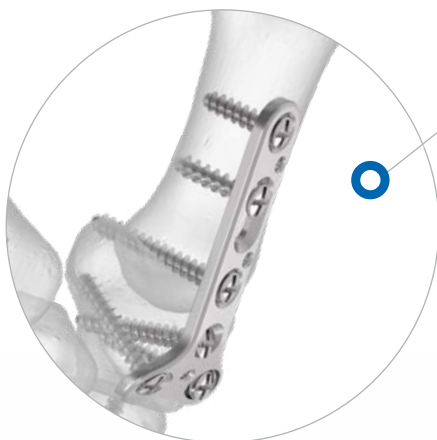
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## Specialty Instrumentation

### HPS Fusion Instrument Block

Procedure-specific instrumentation integrates with the universal instrumentation from OsteoMed's Hand Plating System.





## Thumb CMC (Carpometacarpal) Fusion Plate

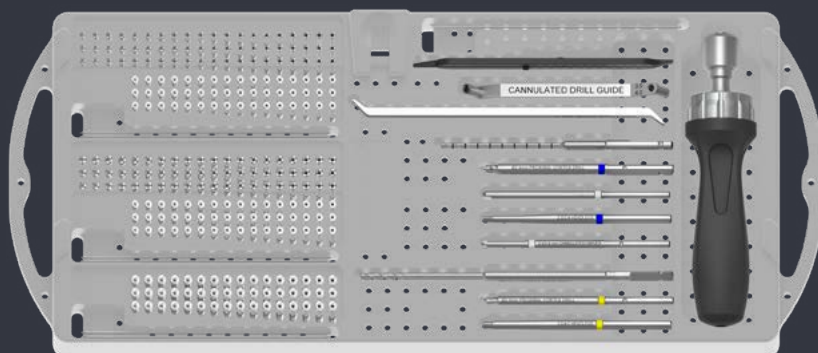
The OsteoMed CMC Fusion System provides a singular option to fuse the CMC joint. This plate is designed to fit the dorsal aspect of the thumb CMC articulation.



OsteoMed products

## OsteoMed ExtremiFix™ Cannulated Screws

OsteoMed's Headless Cannulated Compression Screws are 2.0, 2.4, and 3.0 mm and extend up to 35 mm. The 2.0 and 2.4 mm Cannulated Lag Screws can be used independently or within a plate construct.



## ExtremiFix Cannulated Screw System

Offers multiple screw and instrument options and sizes for fracture fixation, fusion, and osteotomy procedures.



### Often Imitated, Never Duplicated.

Acumed's engineering know-how and manufacturing skill have forged a legacy of Acutrak quality based on a quarter-century of expertise.

### Compression Screw Solutions for the Hand & Wrist

- ▶ Scaphoid Fractures/Nonunions
- ▶ MCP, DIP & PIP fusions
- ▶ Four-corner Fusions
- ▶ Ulnar & Radial Styloid Fracture

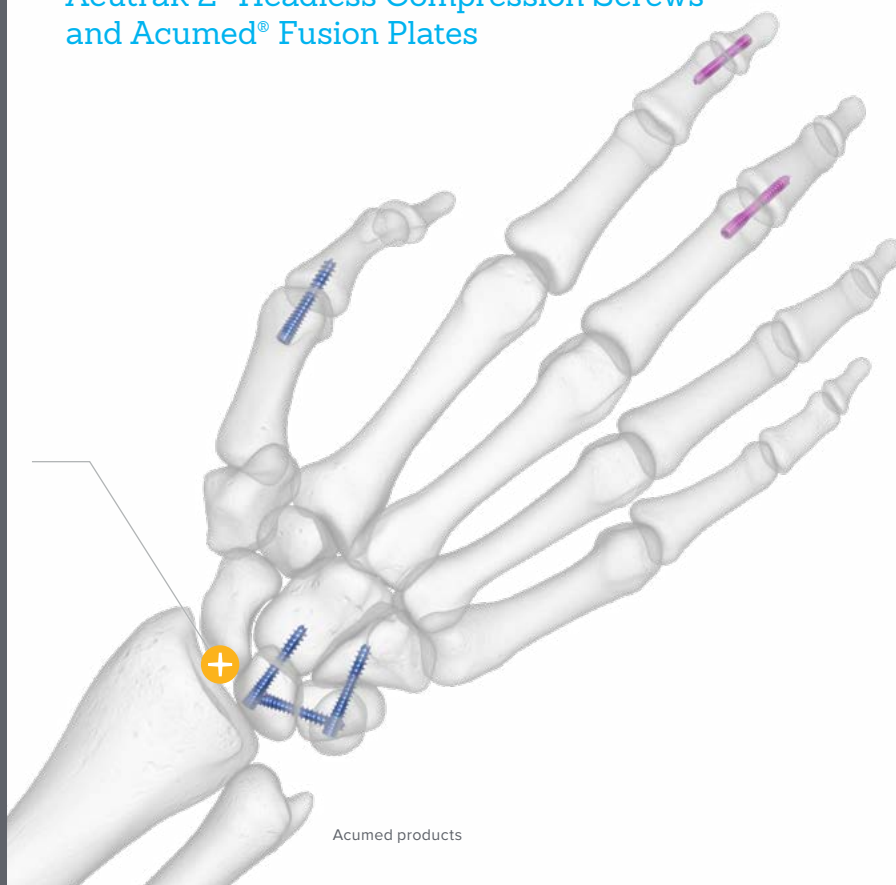
### Four-corner Fusion with the Acutrak 2 Mini

A retrospective study of patients with four-corner arthrodesis showed that, in comparison to standard fixation options, Acutrak 2 Mini headless compression screws may:

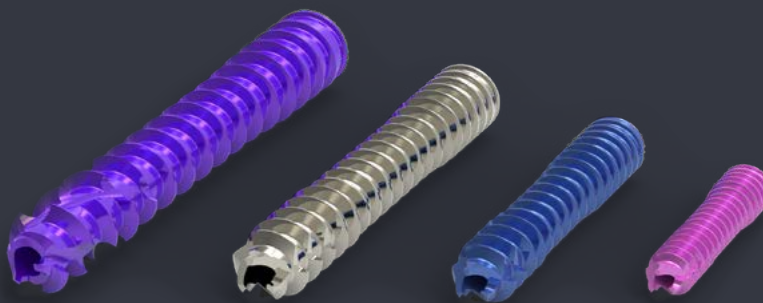
- ▶ Demonstrate less chance of nonunion<sup>1</sup>
- ▶ Have a greater chance of increasing grip strength and motion<sup>1</sup>

## Fusion Solutions

### Acutrak 2® Headless Compression Screws and Acumed® Fusion Plates



Trusted Over  
2 Million Times





## Hub Cap Fusion Plates

Designed to provide fixation and a straightforward technique for four-corner and other limited wrist fusions. They can also be used to treat osteoarthritis, post-traumatic arthritis, fractures, revision of failed partial wrist fusions, carpal instability, or rheumatoid arthritis.

## Hub Cap Limited Wrist Fusion Plate

These plates feature K-wire holes and the Hub Cap Plate Post, both of which are designed to provide early stability during screw placement.

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## MCP Fusion Plate

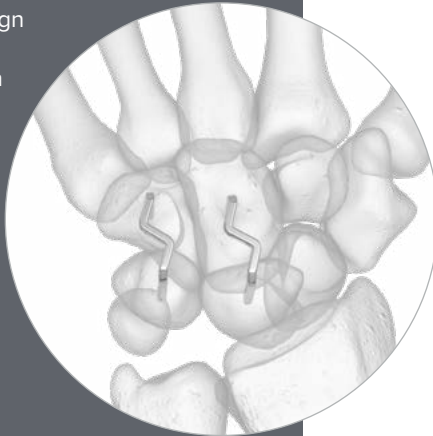
Specifically for fusions of the first metacarpophalangeal (MCP) joint of the thumb. The plate is designed to offer stability for arthritis and may address chronic instability of the MCP or carpometacarpal (CMC) joint.

# Supporting Products

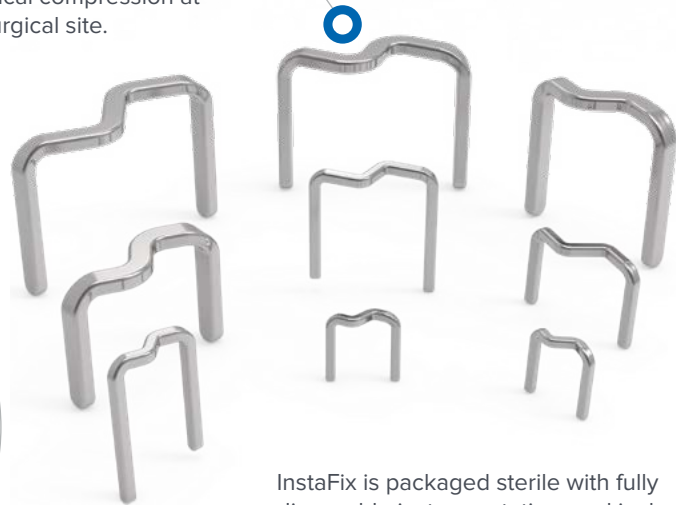
## InstaFix™ Shape Memory Fixation System

This body-temperature-activated system is indicated for arthodesis, osteotomies, and skeletal fixation procedures. The use of nitinol, a biocompatible shape memory alloy, allows dynamic compression of the InstaFix staple implant upon reaching body temperature

Low-profile design helps minimize tissue disruption



An S-back design provides continuous and active bicortical compression at the surgical site.



InstaFix is packaged sterile with fully disposable instrumentation, and includes sizes from 8x8 mm to 30x20 mm to accommodate a range of procedures.

OsteoMed products

## Bone Void Fillers

OsteoMed product



### Magnesium Phosphate Bone Void Filler

- ▶ Enhanced remodeling – 80% in 26 weeks
- ▶ Moldable or Injectable, delivery and mixing options



Distributed by Acumed

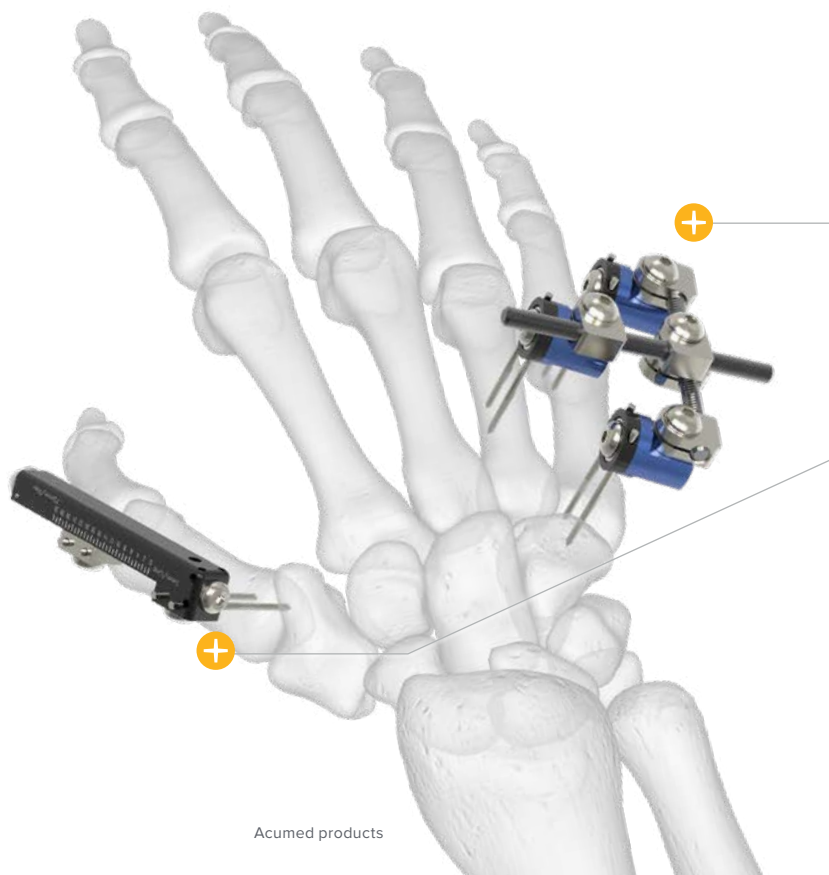


Trabex

### Osteoinductive Calcium Phosphate Bone Void Filler

- ▶ Induces recruitment of bone forming cells to the implant site\*\*
- ▶ Can be placed manually or extruded through the cannula provided
- ▶ Isothermally sets by 15 minutes





Acumed products

## A Pair of Solutions for External Fixation

### Acumed Small Bone External Fixator

Aids in reduction and compression to help realign fragmented bone. The modular design allows the light fixator frame to be built around the fracture

### Acumed Small Bone Distractor

Used for distraction lengthening of the metacarpals and phalanges as part of treatment for fractures, fusions, and osteotomies. Its adjustment wheel is designed to permit the desired amount of incremental distraction, up to 30 mm

Distributed by Acumed



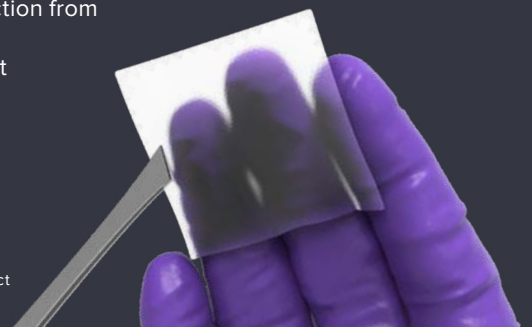
### Osteoconductive Calcium Phosphate Bone Void Filler

- ▶ Injectable through a 16G cannula
- ▶ Six minutes of handling time after mixing
- ▶ Isothermally sets by 15 minutes



## Amniotic Membrane

- ▶ Used as a covering for reconstructive procedures
- ▶ Offer protection from surrounding environment



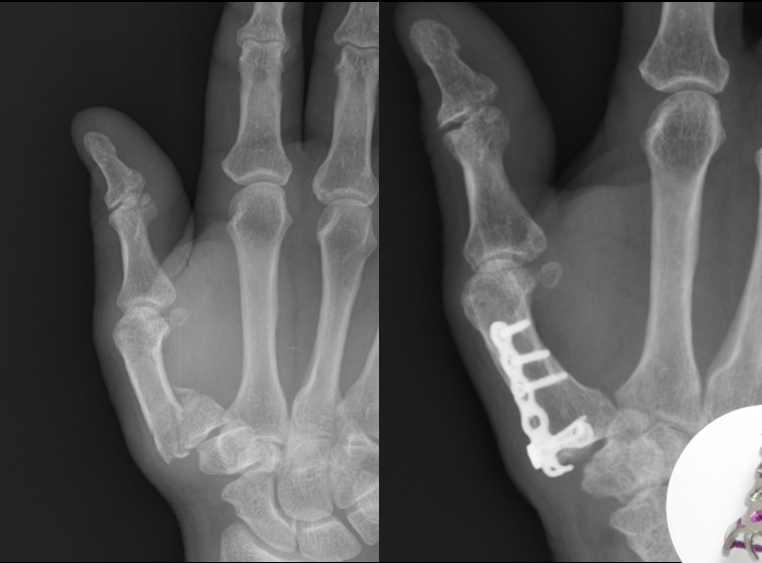
OsteoMed product

# Case Studies

## ORIF of First Metacarpal Base Fracture

**Marc J. Richard, MD**

A 55-year-old, right-hand-dominant male fractured the base of his right first metacarpal during a fall at work. He was treated with a Rolando Fracture Hook Plate from the Acumed Hand Fracture System.



[View Case Study](#)



## Open Reduction & Internal Fixation of a Fifth Metacarpal Neck Fracture

**Marc J. Richard, MD**

A 24-year-old woman sustained multiple fractures in a motor vehicle accident, including a metacarpal neck fracture. This fracture was reduced and fixed using a Metacarpal Neck Plate from the Hand Fracture System.



[View Case Study](#)



# Case Studies [continued]

## Open Reduction & Internal Fixation of the Proximal Phalanx

**Marc J. Richard, MD**

A 62-year-old man sustained a proximal phalanx fracture in Iraq. After initial external fixation, he was treated with open reduction and internal fixation using a Curved Medial/Lateral Plate from the Acumed Hand Fracture System.

View Case Study



## Phalangeal and Forearm Open Fractures Treatment With Internal and External Fixation

**Marc J. Richard, MD**

A 34-year-old gunshot wound victim with a highly comminuted forearm fracture and an index finger injury was treated with the Acumed Small Bone External Fixator and an anatomic forearm plate.

View Case Study



# Key Publications

## A Comparison of Two Headless Compression Screws for Operative Treatment of Scaphoid Fractures

“Our study demonstrates that the Synthes headless compression screw experienced a greater loss of interfragmentary compressive force from the time of installation to the final steady state compression level. The higher post-installation compression of the Acutrak 2 Standard may be attributable to the greater number of threads throughout the entire length of the screw. The clinical significance of these results, are, at this point uncertain. We do demonstrate that a fully threaded design offers a more reliable compression that may translate to more predictable bony union.”



### Reference

Grewal R, Assini J, Sauder D, Ferreira L, Johnson J, Faber K. A comparison of two headless compression screws for operative treatment of scaphoid fractures. *J Orthop Surg Res.* 2011;6:27.

## Acutrak vs Herbert Screw Fixation for Scaphoid Nonunion and Delayed Union

“The Acutrak screw enabled more accurate screw placement and achieved higher union rates and modified Mayo wrist scores than the Herbert screw did.”



### Reference

Oduwole KO, Cichy B, Dillon JP, Wilson J, O’Beirne J. Acutrak versus Herbert screw fixation for scaphoid non-union and delayed union. *J Orthop Surg (Hong Kong).* 2012;20(1):61-65.

## Outcomes of Four-Corner Arthrodesis Using the Hubcap Circular Plate

“The earlier techniques of four-corner fusions using K-wires, screws and staples, were not free of complications. These included non-union, incorrect lunate position, infections with the wires and hardware irritation or impingement. The development of a circular plate was welcomed as an elegant and safer alternative.”

“The Hubcap plate seems to be a feasible implant to achieve a stable four-corner arthrodesis, and has demonstrated good functional results in our experience.”



### Reference

Khan SK, Ali SM, McKee A, Jones JWM. Outcomes of four-corner arthrodesis using the hubcap circular plate. *HAND (NY).* 2012;Sep;7(3):281-285 doi: 10.1007/s11552-012-9417-1. PubMed PMID: 23997733.

# Key Publications [continued]

## Surgical Outcomes of Fifth Metacarpal Neck Fractures — A Comparative Analysis of Dorsal Plating Versus Tension Band Wiring

“Patients who underwent Dorsal Plating (DP) demonstrated better improvement in fracture angulation, radial-ulnar displacement, Metacarpal (MC) height ratio, and final Range of Motion (ROM) compared to those who underwent Tension Band Wiring (TB).”

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### Reference

Grewal R, Assini J, Sauder D, Ferreira L, Johnson J, Faber K. A comparison of two headless compression screws for operative treatment of scaphoid fractures. *J Orthop Surg Res.* 2011;6:27.

## Comparison of AO Titanium Locking Plate & Screw Fixation vs Anterograde Intramedullary Fixation for Isolated Unstable Metacarpal and Phalangeal Fractures

“Anterograde intramedullary (AIM) fixation, the conventional treatment for metacarpal and phalangeal fractures, has been reported to have many advantages, including minimal soft tissue dissection, smaller skin incision and potentially less tendon irritation. However, these advantages may be outweighed by inferior stability and a greater incidence of complications. In recent years, fixation with Arbeitsgemeinschaft für Osteosynthesefragen (AO) titanium locking plate and screws (ATLPS) has been used to treat unstable metacarpal and phalangeal fractures and has yielded favorable clinical outcomes.”

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Featuring 

### Reference

Zhang B, Hu P, Yu K, et al. Comparison of AO titanium locking plate and screw fixation versus anterograde intramedullary fixation for isolated unstable metacarpal and phalangeal fractures. *Ortho Surg.* 2016;8:316-322.

## A Comparison of Locking Plates and Intramedullary Pinning for Fixation of Metacarpal Shaft Fractures

“Plate fixation for metacarpal shaft fractures was found to be statistically advantageous in several parameters as compared to pin fixation. These included grip strength, digital range of motion, residual rotation, and DASH scores.”

[View Original Article](#)



Featuring 

### Reference

Dreyfuss D, Allon R, Izacson N, Hutt D. A comparison of locking plates and intramedullary pinning for fixation of metacarpal shaft fractures. *HAND.* 2018; Sep 7:558944718798854.

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1. Ozyurekoglu T, Turker T. Results of a method of 4-corner arthrodesis using headless compression screws. *J Hand Surg Am.* 2012;37(3):486–492.

\*Competitive data on file with Acumed.



GFS-00123-01 Data on file at Vivorté

\*\*Allograft component demonstrated osteoinductivity in athymic mouse model submitted for 510(k). Refer to 510(k) summary K143547. Data on file at Vivorté, Inc.

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