ACUMED®

ACUTRAK®

Headless Compression Screw

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HEADLESS COMPRESSION SCREW

Since 1988 Acumed has been designing innovative solutions for the demanding situations facing orthopedic surgeons, hospitals and their patients. Our strategy has been to know the indication, design a solution to fit, and deliver quality products and instruments.

Since its introduction, the Acutrak Headless Compression Screw has revolutionized the way surgeons gain fixation. The Acutrak System eliminates the need to countersink a head, drill a glide hole or, in many cases, make large incisions. Since 1994, the Acutrak has simplified surgical procedures, reduced post-op complications and improved the quality of patient outcomes.

CONTENTS

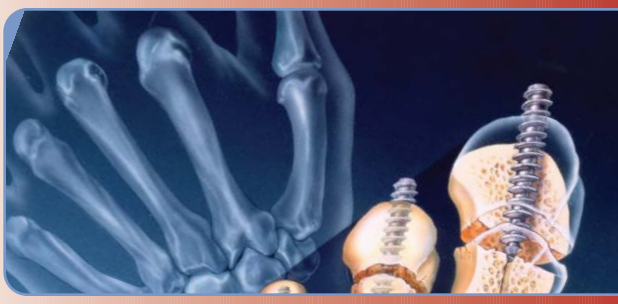
With the Acutrak Headless Compression Screw, Acumed has designed an advanced solution for repairing fractures, performing joint fusions, and fixing osteotomies throughout the upper and lower extremities. Advanced implant technology and straightforward instrumentation enable the Acutrak systems to be an effective means of fixation for a wide variety of indications. Combining versatility with an excellent rate of fixation and ongoing compression, the Acutrak is a great choice for a wide variety of indications, including:

Scaphoid Fractures • Subtalar Fusions • Radial Head Fractures • IP Fusions

Since its introduction, Acutrak has attained a 97.2% union rate for acute fractures repaired using a percutaneous technique[1,2] and an 87% union rate when utilized to treat delayed and nonunions.[3,4]

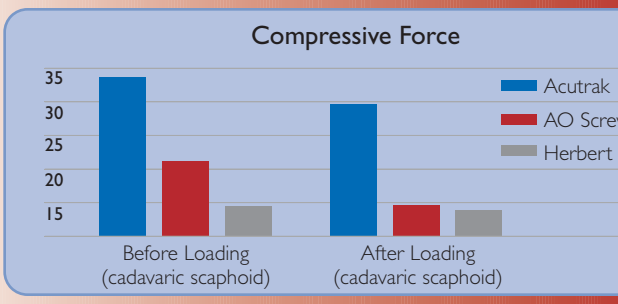
Compression

The variable thread pitch and tapered profile work together to compress two bone fragments into one rigid structure promoting union. The Acutrak's fully-threaded length assists in maintaining compression through loading until the bone fragments unite.



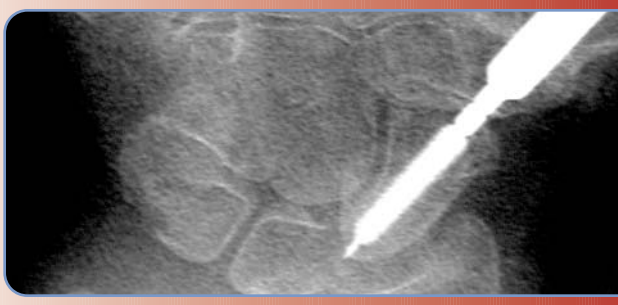
Holding Power

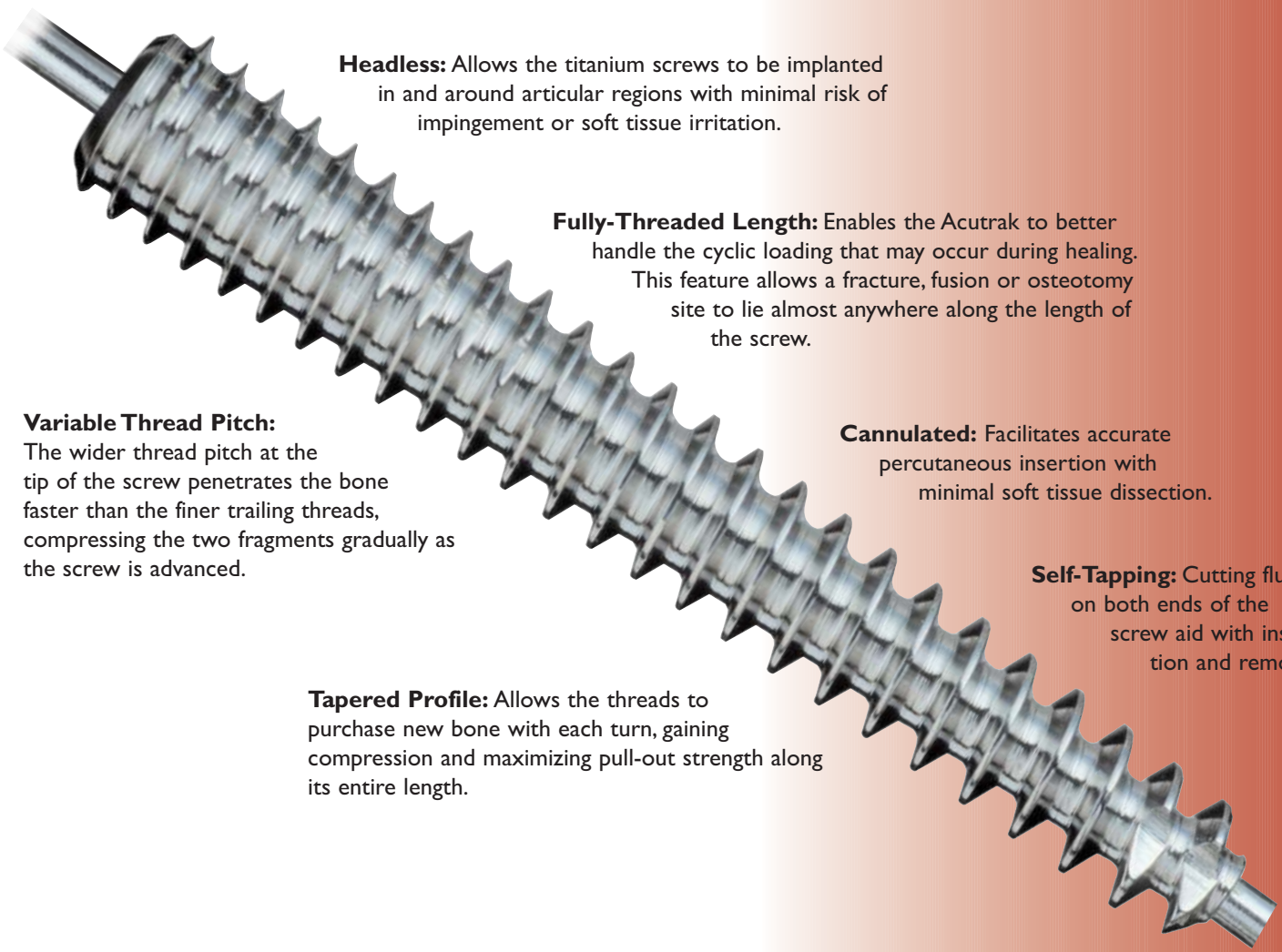
In biomechanical testing against AO headed and Herbert headless screws, the Acutrak maintained 91.3% of its compression through cyclic loading.[5] The Acutrak not only generated the most compression, but it maintained the highest percentage of compression after cyclic loading.



Straightforward Insertion Procedure

The cannulation, self-tapping threads and unique means of compression promote a straightforward surgical protocol that generates excellent compression and holding power.





Headless: Allows the titanium screws to be implanted in and around articular regions with minimal risk of impingement or soft tissue irritation.

Fully-Threaded Length: Enables the Acutrak to better handle the cyclic loading that may occur during healing. This feature allows a fracture, fusion or osteotomy site to lie almost anywhere along the length of the screw.

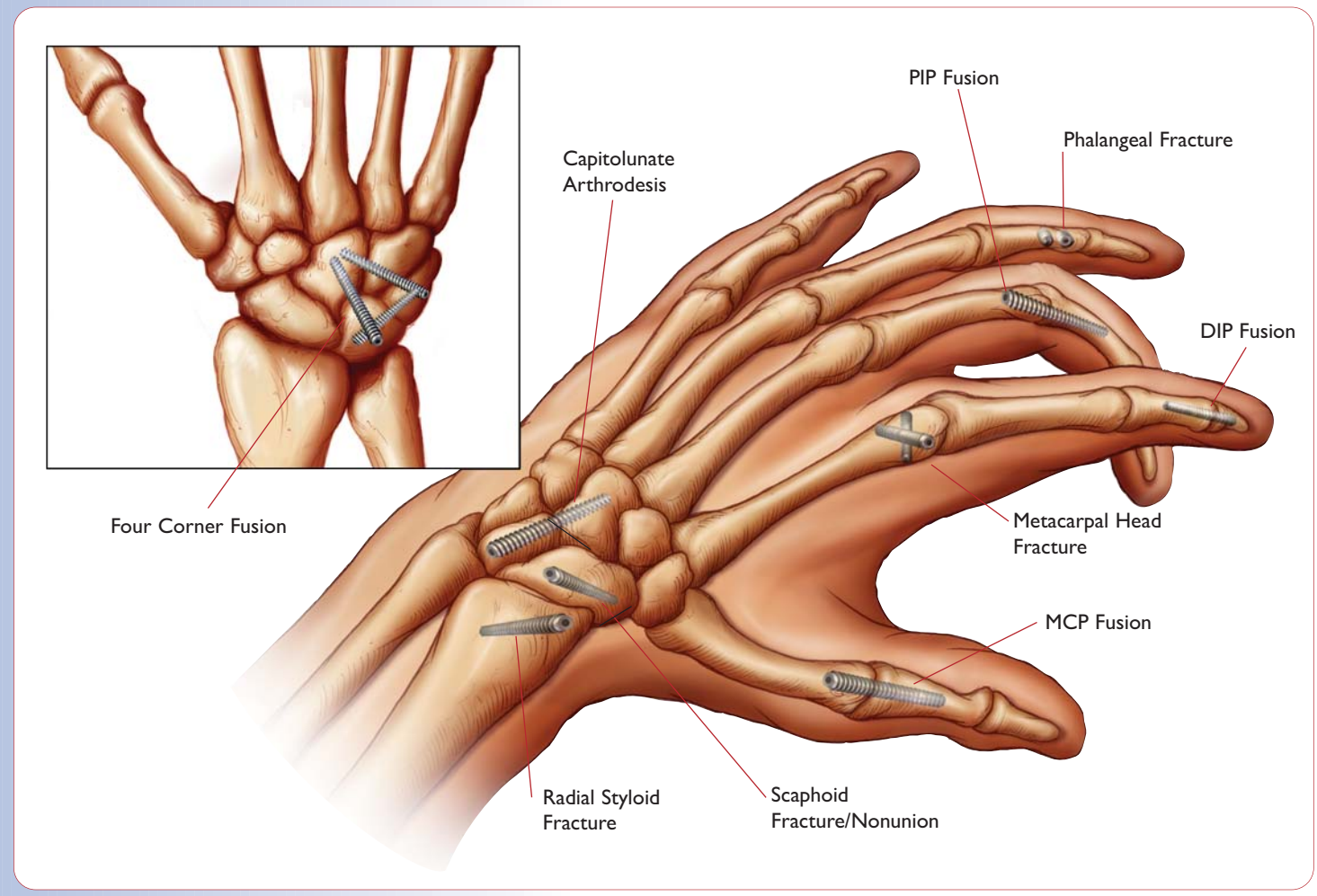
Variable Thread Pitch: The wider thread pitch at the tip of the screw penetrates the bone faster than the finer trailing threads, compressing the two fragments gradually as the screw is advanced.

Cannulated: Facilitates accurate percutaneous insertion with minimal soft tissue dissection.

Self-Tapping: Cutting flutes on both ends of the screw aid with insertion and removal.

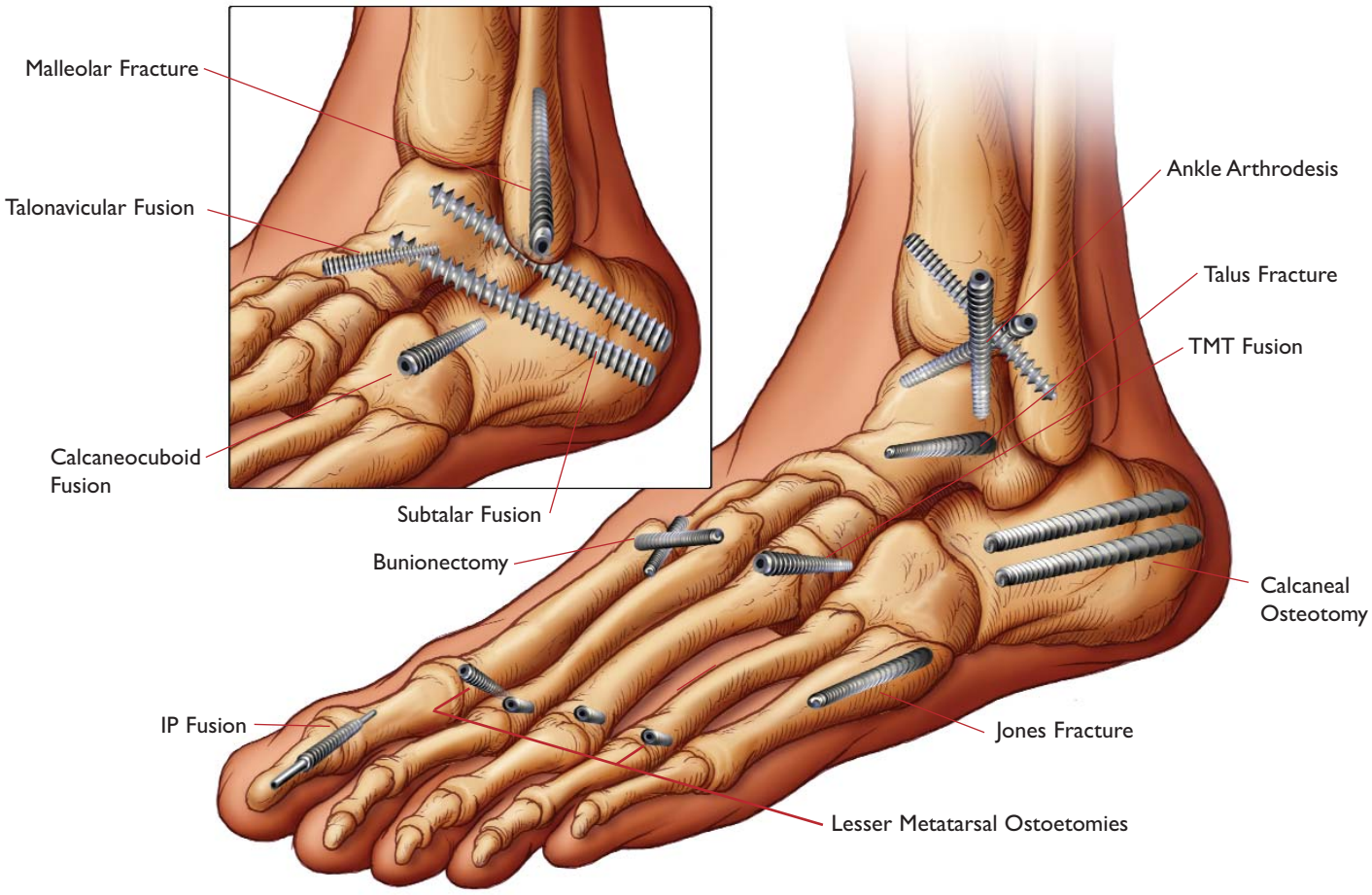
Tapered Profile: Allows the threads to purchase new bone with each turn, gaining compression and maximizing pull-out strength along its entire length.

UPPER EXTREMITY INDICATIONS



Since 1994, the Acutrak Headless Compression Screws have become well accepted implants for scaphoid fracture treatment and a wide variety of other indications in the upper extremity. Excellent compression, holding power, and straightforward surgical instrumentation has enabled surgeons to treat fractures, fusions and osteotomies with greater efficiency and effectiveness. With rigid fixation in place, patients may be able to return to normal activities sooner. The Acutrak has been recognized particularly for its success in treating scaphoid fractures and non-unions. Whether a surgeon uses a dorsal or volar, percutaneous or mini-open, direct or arthroscopic approach, the Acutrak provides excellent fixation for this indication.

The Acutrak's benefits translate equally well to a variety of other indications that are commonly seen in the upper extremity. IP fusions, carpal arthrodeses, radial head fractures, interphalangeal fractures and many others all benefit from the headless profile, strong compression and excellent holding power of the Acutrak Headless Compression Screw Systems.



The holding power of the Acutrak Headless Compression Screw is extremely beneficial in the weight bearing area of the body. Its fully-threaded length provides bony engagement along a greater portion of the screw than any other headed or headless compression screw. This translates into a greater ability to maintain compression once the patient begins bearing weight.

All of the Acutrak Headless Compression Screw Systems can be utilized in the lower extremity. Whether used for subtalar arthrodesis, bunions, Jones fractures or a wide variety of other indications in the lower extremity, the benefits of the screw consistently contribute to great results throughout the foot and ankle.

With greater bending and pullout strength than its headed competitors[6], the Acutrak provides a reliable means to fix everyday indications, as well as the more challenging cases a surgeon sees in their practice.

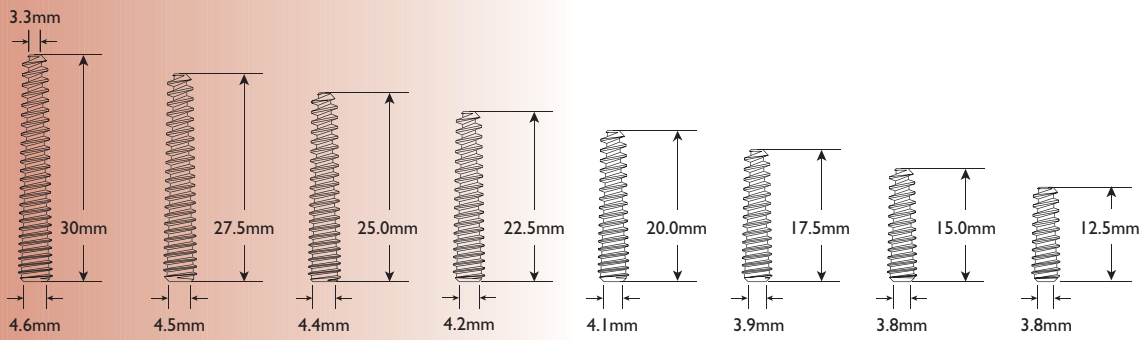
Fixation of the small to medium bones of the hand and foot where a 3.5-4.0mm headed screw or an equivalent sized headless screw could be used.

The Acutrak Standard was the first and most successful compression screw system that Acumed developed. Incorporating a variable pitch into its fully-threaded, tapered design, the Acutrak Standard proved to be much different than any other screw on the market.

After years of clinical success, along with a succession of biomechanical and clinical papers supporting the advantages of the screw, the Acutrak Standard is a well accepted means of fixation for scaphoid fractures and many other percutaneous and open indications.

Utilizing a tapered profile and variable thread pitch, to create compression, the Acutrak Standard is able to draw two fragments together without a head or the need to over drill the proximal fragment.

Ideal for:
- Scaphoid Fractures and Non-Unions
- Carpal Fusions
- Radial Styloid Fractures
- MCP Fusions
- Capitellum Fractures
- Bunionectomies - Proximal and Distal
- Tarsal Fractures
- 5th Metatarsal Fractures
- Midfoot Fusions
- OCD Repair
- Osteotomies



Guide Wire: .045" (1.1mm) Hex Size: 2.0mm Material: Titanium Alloy

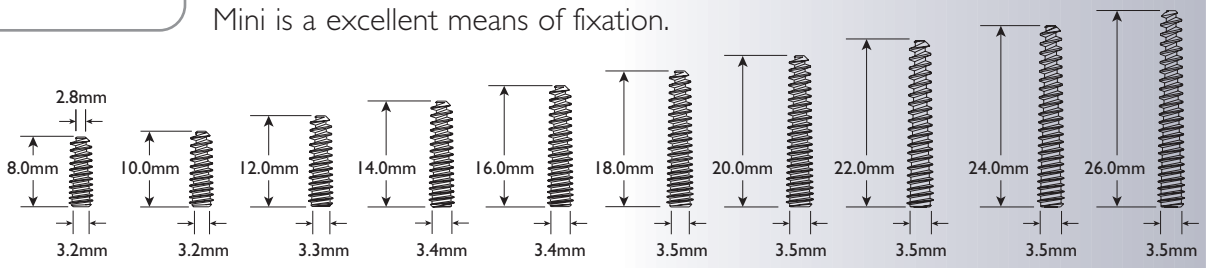
ACUTRAK® MINI

Fixation of small bones where a traditional 2.7-3.0mm headed screw or equivalent sized headless screw could be used.

Ideal for:
- Scaphoid Fractures
- Phalangeal Fractures
- Carpal Fusions
- MCP Fusions
- Radial Head Fractures
- Chevron, Akin and Weil Osteotomies
- OCD Repair

The Acutrak Mini uses the same design principles but has a smaller diameter and shorter lengths. It can be used in smaller bones or in cases where less hardware is required.

For smaller scaphoids, radial heads, bones of the foot and many other indications, the Acutrak Mini is a excellent means of fixation.

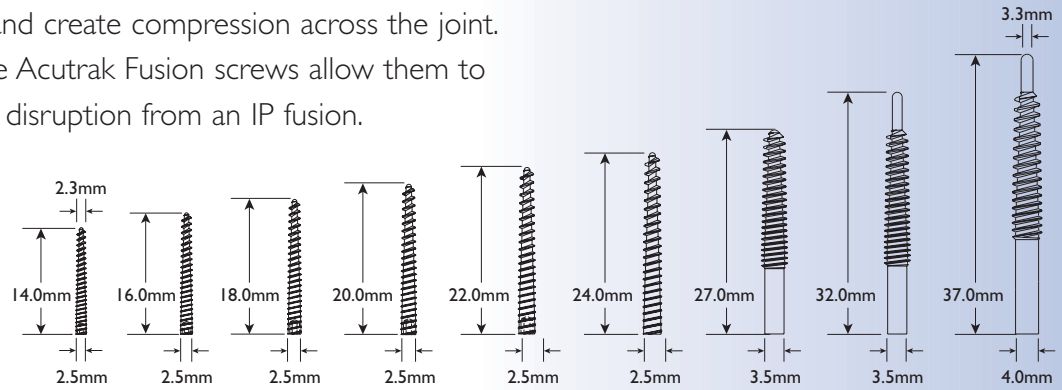


Guide Wire: .035" (.88mm) Hex Size: 1.5mm Material: Titanium Alloy

ACUTRAK® FUSION

Fixation of interphalangeal fusions in both the hand and the foot.

The Acutrak Fusion screws are the only headless compression screws designed specifically for interphalangeal joint arthrodesis. Unlike K-wires, the Acutrak Fusion screws are implanted below the surface of the bone and create compression across the joint. The small diameter of the Acutrak Fusion screws allow them to be used without nail bed disruption from an IP fusion.



Hex Size: 1.5mm & 2.0mm Material: Titanium Alloy

Fixation of medium to large bones where a traditional 6.5mm headed screw or equivalent sized headless screw could be used.

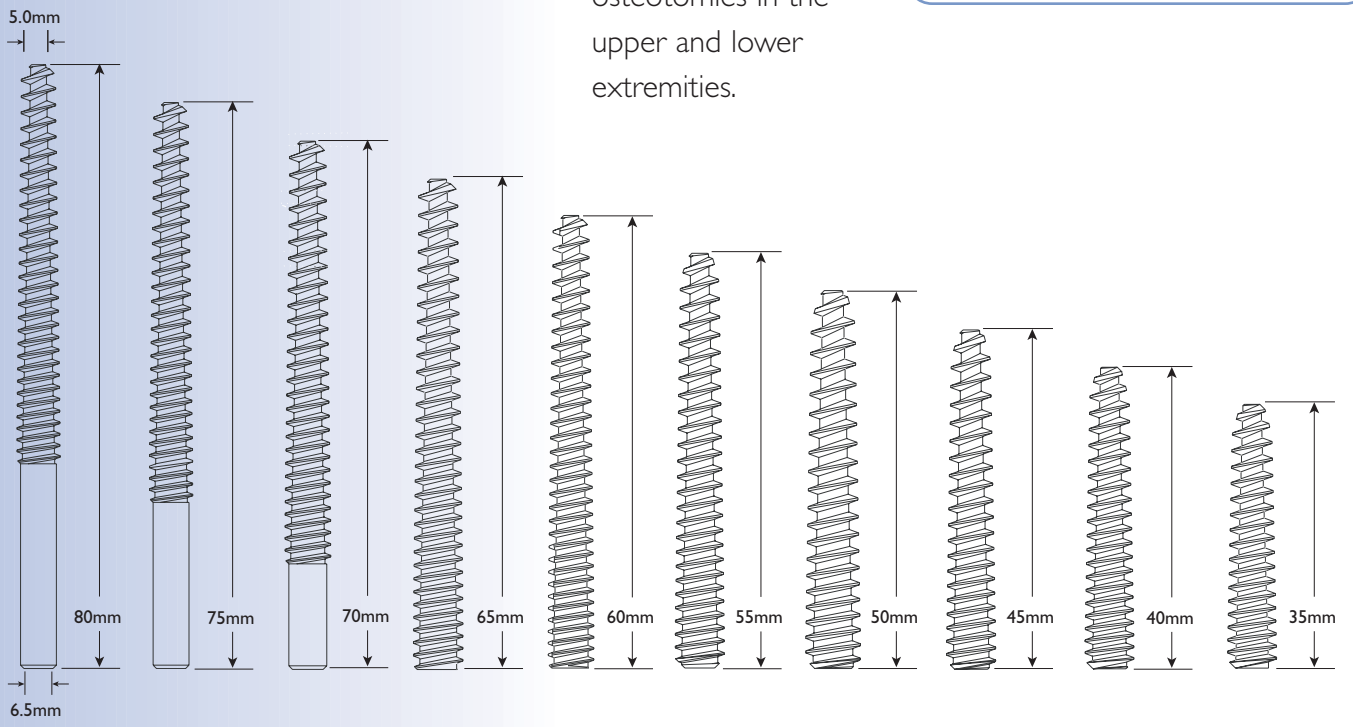
The Acutrak Plus Headless Compression Screw System is designed for use in the upper and lower extremities where larger diameter and longer length screws are needed.

A headless means of fixation is a valuable tool in patient care as it eliminates traditional hardware prominence complications. Whether on the walking surfaces of the calcaneous or the ankle, where limited soft-tissue coverage is available, headed screws can create considerable discomfort and lead to complications and/or removal procedures.

With its headless profile, the Acutrak Plus is effective in treating these areas without the concerns of prominence and soft-tissue irritation.

Combined with its excellent compression and holding power, the Acutrak Plus is an ideal means of fixation for fractures, arthrodeses and osteotomies in the upper and lower extremities.

Ideal for:
- Hindfoot Arthrodesis
- Ankle Arthrodesis
- Calcaneal Osteotomies
- Greater Tuberosity Fractures
- Tibial Plateau Fractures
- Femoral Condyle Fractures



Guide Wire: .062" (1.6mm) Hex Size: 3.0mm Material: Titanium Alloy

Fixation of medium to large bones where a traditional 4.5mm headed screw or equivalent sized headless screw could be used.

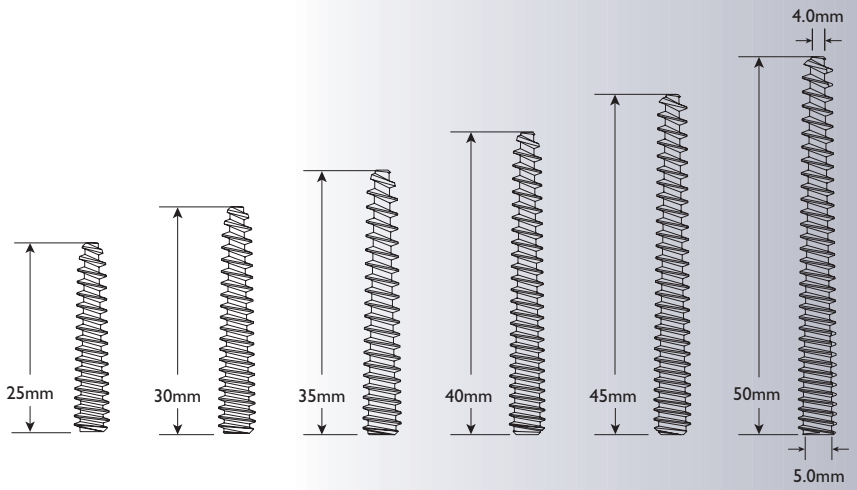
Designed initially as an extension of the Acutrak family for malleolar fractures, the Acutrak 4/5 has found several indications where its taper and headless profile make for an ideal method of fixation.

The Acutrak 4/5 provides an excellent means of fixation for Jones fractures and nonunions. Given the taper of the 5th metatarsal canal and the historical issues with screw prominence in this region, a headless, tapered screw has the ability to solve issues associated with patient discomfort.

The Acutrak 4/5 also provides an excellent biomechanical advantage. Studies found the Acutrak 4/5 to be equivalent in bending strength to a larger diameter 6.5mm headed screw in this application.[6]

Ideal for:
- Jones Fractures
- Talus Fractures
- Malleolar Fractures
- Midfoot Fusions
- MTP Fusions
- Greater Tuberosity Fractures

Fractures of the talus, distal radius, greater tuberosity and many other indications are excellent for the Acutrak 4/5 screw.



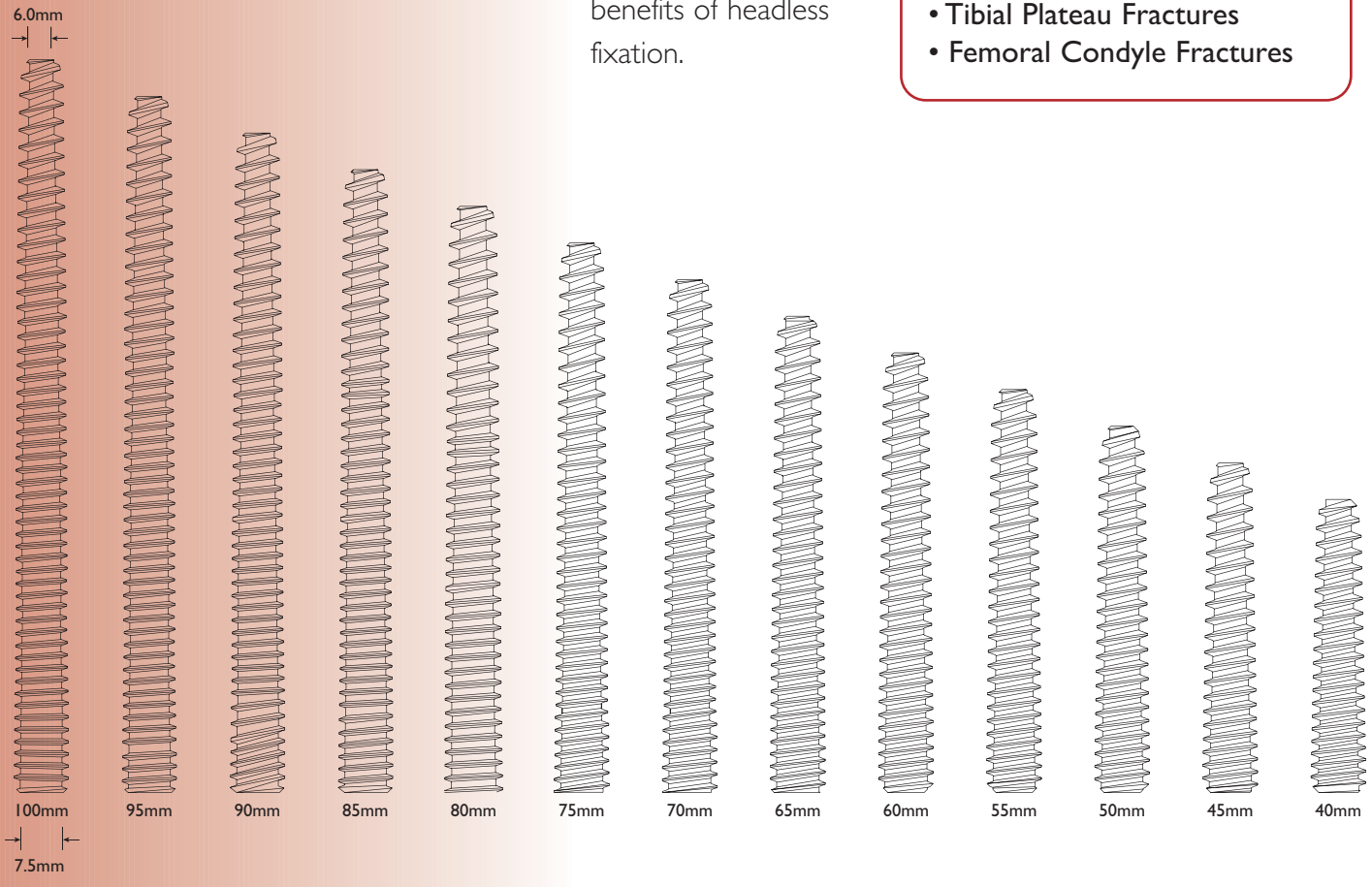
Guide Wire: .054" (1.4mm) Hex Size: 2.5mm Material: Titanium Alloy

Fixation in large bones where a traditional 7-7.3mm headed screw or equivalent sized headless screw could be used.

The Acutrak 6/7 offers a broad range of implants and innovative instrumentation for upper and lower extremity indications. Sturdy guide wires and a strong hex driver ease insertion. The long lengths and large screw diameter make fixation stronger for reconstructive procedures of the hindfoot and ankle and a number of indications in the upper extremity.

Twice as strong in bending at its midpoint as an AO 7.3mm screw[6], the Acutrak 6/7 is excellent for subtalar arthrodesis and femoral condyle fractures. These weight bearing areas can be subject to hardware loosening and/or breakage with traditional headed screw fixation. Using the Acutrak 6/7 provides a great amount of strength with the benefits of headless fixation.

Ideal for:
- Hindfoot Arthrodesis
- Ankle Arthrodesis
- Calcaneal Osteotomies
- Greater Tuberosity Fractures
- Tibial Plateau Fractures
- Femoral Condyle Fractures



Guide Wire: .094" (2.4mm) Hex Size: 4.0mm Material: Titanium Alloy

ORDERING INFORMATION

Acutrak Mini	
8mm Mini Acutrak	ATM-008-S
10mm Mini Acutrak	ATM-100-S
12mm Mini Acutrak	ATM-120-S
14mm Mini Acutrak	ATM-140-S
16mm Mini Acutrak	ATM-160-S
18mm Mini Acutrak	ATM-180-S
20mm Mini Acutrak	ATM-200-S
22mm Mini Acutrak	ATM-220-S
24mm Mini Acutrak	ATM-240-S
26mm Mini Acutrak	ATM-260-S
.035" x 6" Guide Wire	WS-0906ST
Short Cann. Drill	ATM-078
Long Cann. Drill	ATM-099
1.5mm Cannulated Driver	HD-1509
1.5mm Solid Driver	HDM-1500

Acutrak Standard	
12.5mm Acutrak Standard	AT-1125-S
15.0mm Acutrak Standard	AT-1150-S
17.5mm Acutrak Standard	AT-1175-S
20.0mm Acutrak Standard	AT-1200-S
22.5mm Acutrak Standard	AT-1225-S
25.0mm Acutrak Standard	AT-1250-S
27.5mm Acutrak Standard	AT-1275-S
30.00mm Acutrak Standard	AT-1300-S
.045" Guide Wires	WS-1106ST
Cannulated Drill Tip	AT-7032
2.0mm Cannulated Driver	HD-2011
2.0mm Solid Driver	HDL-2000
Cannulated Dense Bone Drill	AT-7044
.045" x 4" Wire Nitinol	WN-1104ST
.045" x 6" Wire Stainless	WS-1106DT

Acutrak 4/5	
25mm Acutrak 4/5	AM-0025-S
30mm Acutrak 4/5	AM-0030-S
35mm Acutrak 4/5	AM-0035-S
40mm Acutrak 4/5	AM-0040-S
45mm Acutrak 4/5	AM-0045-S
50mm Acutrak 4/5	AM-0050-S
.054" 7" Guide Wire	WS-1407ST
4/5 Cannulated Drill	AM-5010
4/5 Cannulated Dense Drill	AM-5014
2.5mm Cannulated Driver	HD-2515
4/5 Solid Drill	AM-5012
4/5 Solid Dense Drill	AM-5016
4/5 Cannulated Power Driver	HP-2515

Acutrak Plus	
35mm Acutrak Plus	AP-0035-S
40mm Acutrak Plus	AP-0040-S
45mm Acutrak Plus	AP-0045-S
50mm Acutrak Plus	AP-0050-S
55mm Acutrak Plus	AP-0055-S
60mm Acutrak Plus	AP-0060-S
65mm Acutrak Plus	AP-0065-S
70mm Acutrak Plus	AP-0070-S
75mm Acutrak Plus	AP-0075-S
80mm Acutrak Plus	AP-0080-S
.062" 9" Guide Wire	WS-1609STT
Cannulated Drill	AP-0100
Cannulated Dense Drill	AP-0104
3.0mm Cannulated Driver	HD-3016
3.0mm T-Handle Driver	TH-3000
ATP Solid Drill	AP-0102
ATP Solid Dense Drill	AP-0106
.062" x 9" Smooth Wires	WS-1609ST
3.0mm Cannulated Power Tip	HP-3016
3.0mm Solid Power Tip	HP-3000

Acutrak 6/7	
40mm Acutrak 6/7	AP-6740-S
45mm Acutrak 6/7	AP-6745-S
50mm Acutrak 6/7	AP-6750-S
55mm Acutrak 6/7	AP-6755-S
60mm Acutrak 6/7	AP-6760-S
65mm Acutrak 6/7	AP-6765-S
70mm Acutrak 6/7	AP-6770-S
75mm Acutrak 6/7	AP-6775-S
80mm Acutrak 6/7	AP-6780-S
85mm Acutrak 6/7	AP-6785-S
90mm Acutrak 6/7	AP-6790-S
95mm Acutrak 6/7	AP-6795-S
100mm Acutrak 6/7	AP-67100-S
.094" 8" Guide Wire	WS-2408ST
Cannulated Drill Small	AP-67011
Cannulated Drill Medium	AP-67012
Cannulated Drill Large	AP-67013
Cannulated Dense Drill Small	AP-67014
Cannulated Dense Drill	AP-67015
Cannulated Dense Drill Large	AP-67016
4.0mm Cannulated Driver	HT-4000
4.0mm Solid Driver	HT-4001

Acutrak Fusion	
14.0mm Acutrak Fusion	ATF-140-S
16.0mm Acutrak Fusion	ATF-160-S
18.0mm Acutrak Fusion	ATF-180-S
20.0mm Acutrak Fusion	ATF-200-S
22.0mm Acutrak Fusion	ATF-220-S
24mm Acutrak Fusion	ATF-240-S
27mm Acutrak Fusion	ATF-270-S
32mm Acutrak Fusion	ATF-320-S
37mm Acutrak Fusion	ATF-370-S
.062 6" Guide Wires	WS-1606DT
Drill for 24mm Screw	ATF-024
Drill for 27mm & 32mm Screw	ATF-032
Drill for 37mm Screw	ATF-037
1.5mm Solid Driver	HDF-1500

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3. Fox J., Weikert D. Compression Screw Fixation of Scaphoid Fractures (Scientific Paper). Presented at the American Association for Hand Surgery Meeting, Hawaii, 1999.

4. Hoy G., Powell G. Scaphoid Fixation Using the Acutrak Screw. Presented at the Australian/New Zealand Hand Surgery Meeting, Cairns, Australia, 1996.

5. Wheeler D.L., McLoughlin S.W. Biomechanical Assessment of Compression Screws. Clin Orthop. 350:237-245, 1998.

6. Data on file at Acumed.

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