ACUTRAK®

Fixation System by ACUMED®

Surgical Techniques

- *Standard Acutrak*
- *Mini-Acutrak*
- *Reduction Clamp*
- *Arthroscopic Instrumentation*
- *Acutrak 4/5*
- *Acutrak Plus*
- *Acutrak Fusion*

ACUMED®

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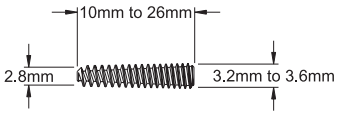
Introduction

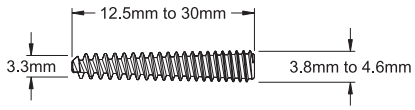
The Acutrak® bone screw is a fully threaded, conically shaped implant with variable pitch threads. The conical shape and progressive pitch of the threads cause intra-fragmental compression and stabilization upon insertion. The Acutrak is self tapping and manufactured from implant grade titanium. The Standard Acutrak, Mini-Acutrak, Acutrak 4/5, and Acutrak Plus screws are cannulated, facilitating precise placement of the screw.

MINI-ACUTRAK®



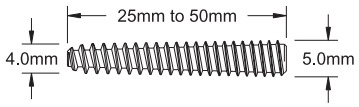
Ø.035 (.9mm) Cannulation
ATM-0160 Shown

STD. ACUTRAK®



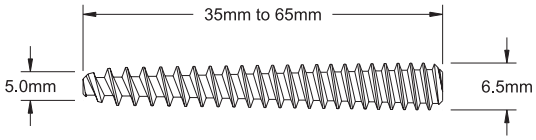
Ø.045 (1.1mm) Cannulation
AT-1250 Shown

ACUTRAK® 4/5



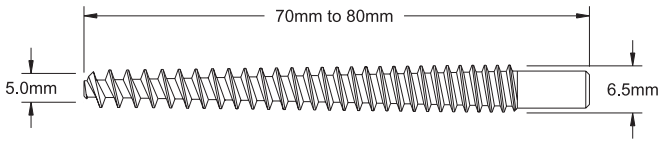
Ø.055 (1.4mm) Cannulation
AM-0030 Shown

ACUTRAK® PLUS



Ø.062 (1.5mm) Cannulation
AP-0045 Shown

ACUTRAK® PLUS



Ø.062 (1.5mm) Cannulation
AP-0070 Shown

RULES OF ACUTRAK®

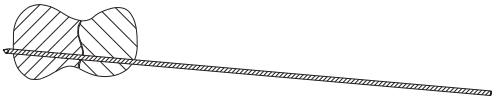
1) ***Always install a screw <u>at least one</u> size smaller than your drill depth.*** (This will assure that the screw is fully buried below the bone.)

2) ***<u>If resistance is met on insertion: STOP, remove the screw and drill at least one (1) size deeper or install a smaller screw.</u>*** (Dense bone can make a screw more difficult to bury.)

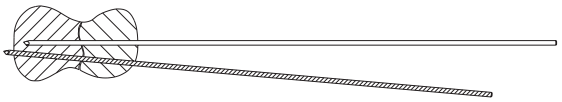
3) ***When placing a screw through thick cartilage (i.e. the hip or knee) always install a screw <u>at least two</u> sizes smaller than your drill depth.*** This will assure that the screw is below the level of the cartilage.

4) ***<u>Before drilling, be sure to advance the guide wire.</u>*** (This step will help keep the guide wire in the bone when removing the drill.)

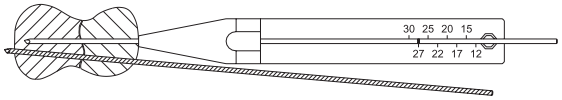
Step 1 Secure fracture site.



Step 2 Place second guide wire at screw placement location.

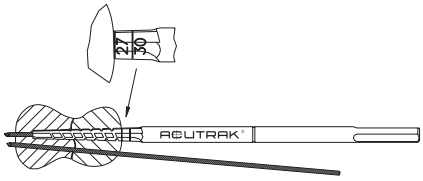


Step 3 Measure guide wire to estimate drill depth.



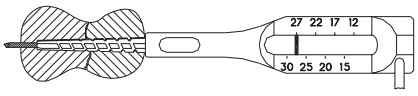
Step 4 Advance guide wire through far cortex, then drill by hand or power. Advance drill slowly, clearing debris regularly.

STANDARD

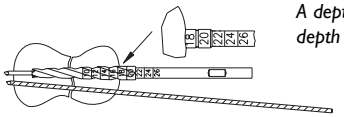


OR

Drill depth is indicated at the drill tip/bone interface or on the cannula scale as shown.

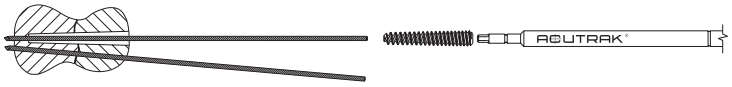


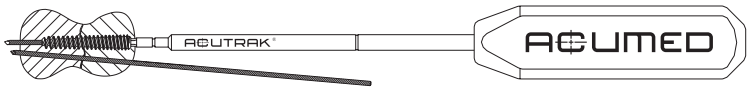
MINI



A depth scale is located on the drill tip allows surgeon to control depth while drilling.

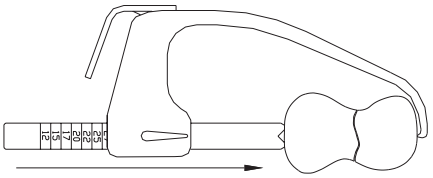
Step 5 **Install an implant that is one size under drill depth so the screw can be fully buried without overt pressure on the near cortex.**



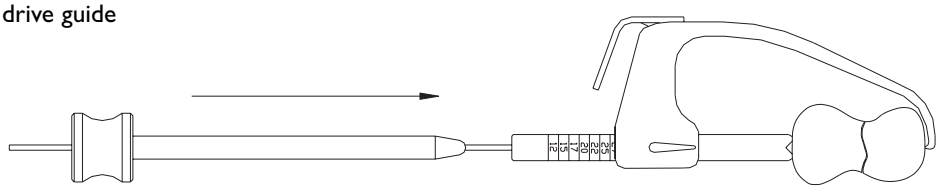


Note: *If resistance is met upon insertion:* ***STOP****, remove the screw and drill at least one (1) size deeper or install a smaller screw. (Dense bone can make a screw more difficult to bury.)*

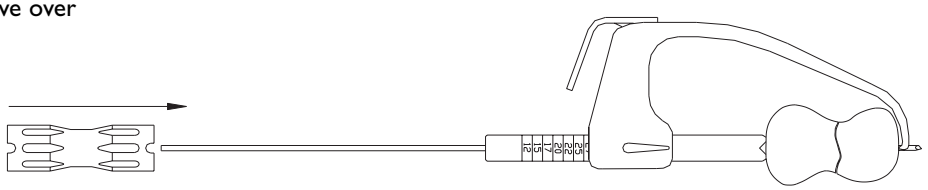
Step 1 Install clamp, then advance cannula to stabilize fragments.



Step 2 Insert probe into cannula, then drive guide wire into position.



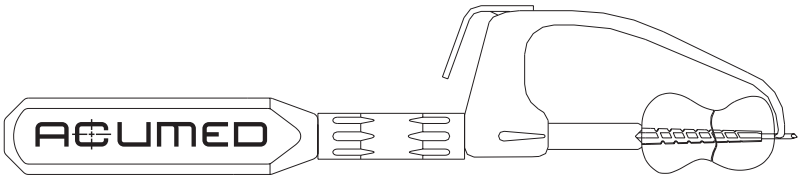
Step 3 Remove probe and slide drill sleeve over cannula.

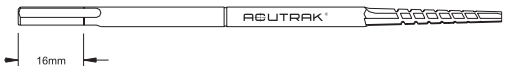


Step 4 Drill through cannula until drill handle stops on drill sleeve.

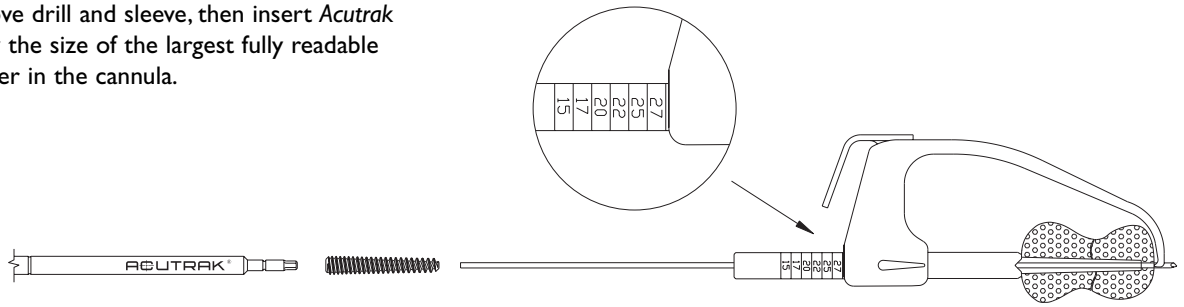
(Caution: Be sure shank of drill has been fully seated into handle to insure calibrated drill depth.)

(When drilling by power, seat shank of drill to mark,16mm {5/8"} into chuck.)

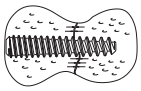




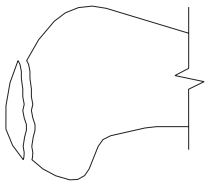
Step 5 Remove drill and sleeve, then insert *Acutrak* screw the size of the largest fully readable number in the cannula.



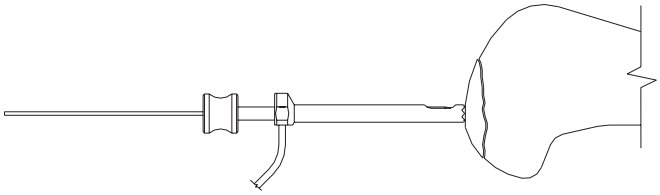
When groove on driver shaft aligns with the end of the cannula, the screw is close to being fully seated.



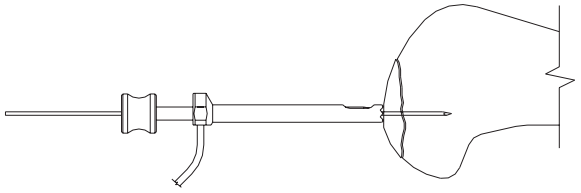
Step 1 Make a preoperative assessment of the fragment size and its ability to accommodate the *Acutrak*® screw system. Determine a suitable screw length(s) for rigid fragment fixation.



Step 2 Insert probe/cannula assembly into portal and secure fragment into correct position.

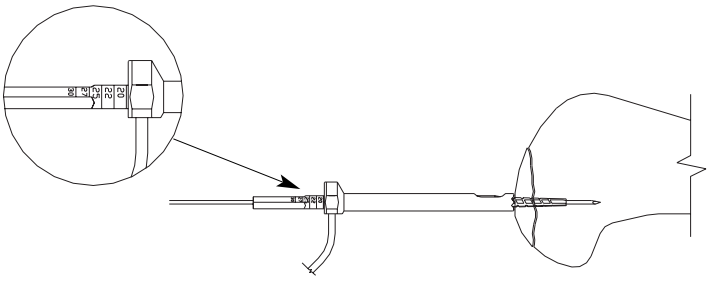


Step 3 Drive a guide wire through fragment into cancellous bone to secure the fracture site.



Step 4 With the cannula holding the fragment, remove the probe and insert the drill over the guide wire and begin to drill. For stable fixation, drill a minimum of 5mm past the fracture site.

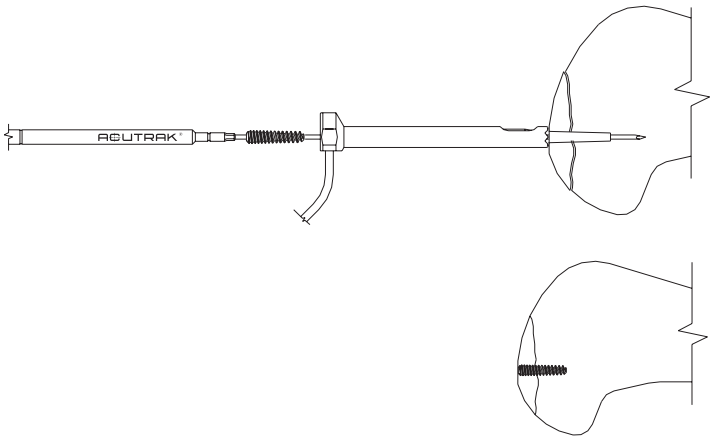
Drill depth is indicated by the scale at back of cannula. **Over drilling by <u>two</u> sizes is required in order to bury the screw below both the cartilage and the cortical bone surface.**



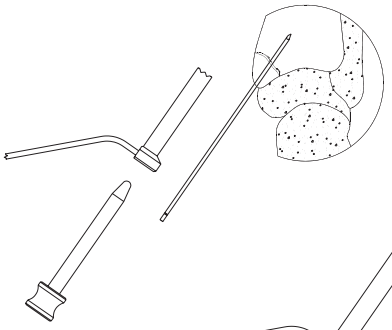
Step 5 Remove drill from the cannula and insert appropriate implant onto driver tip. Slide implant and driver over guide wire and install implant. Drive implant below the articular surface.

When the groove on driver shaft reaches the end of the cannula, the screw is close to fully seating.

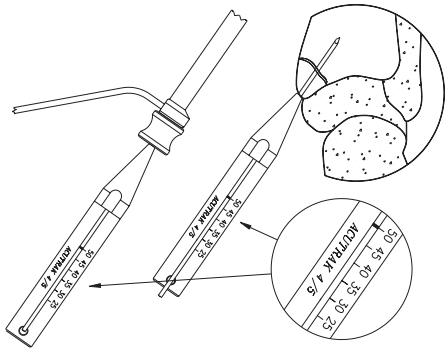
Note: *If resistance is met upon insertion:* ***STOP****, remove the screw and drill at least one (1) size deeper or install a smaller screw. (Dense bone can make a screw more difficult to bury.)*



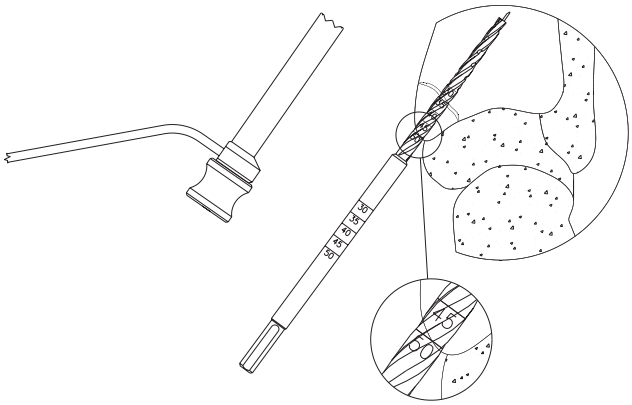
Step 1 Place guide wire at desired screw placement location.



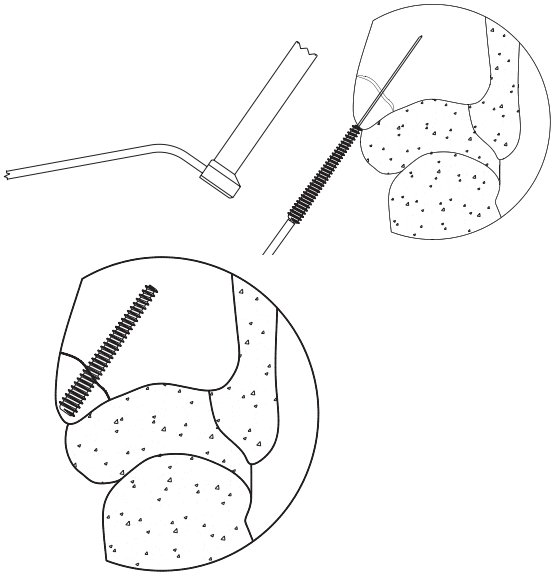
Step 2 Measure guide wire to estimate drill depth.



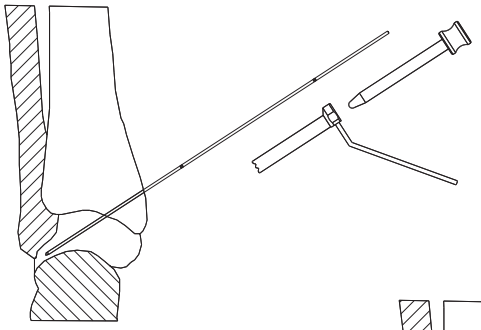
Step 3 Advance guide wire for added stabilization. Drill bone, advance drill slowly, clearing debris regularly.



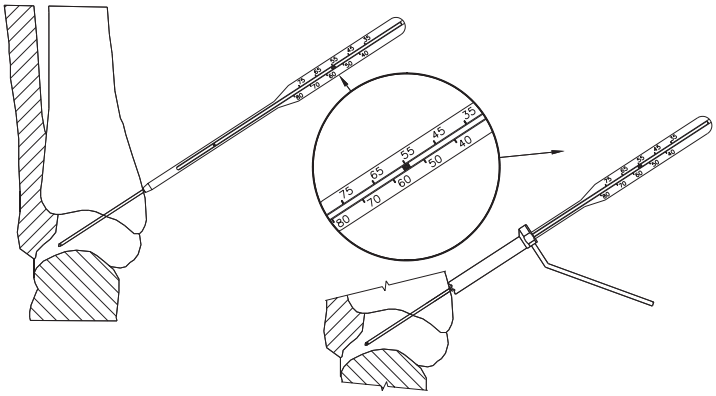
Step 4 Install implant that is one size smaller than the drill depth so that the screw can be fully buried below the cortical surface.



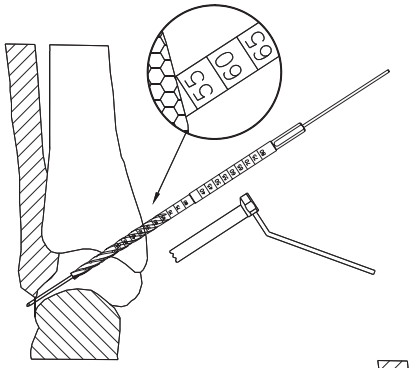
If excessive resistance is met upon installation, remove screw, and advance the drill one size deeper and reinstall screw.



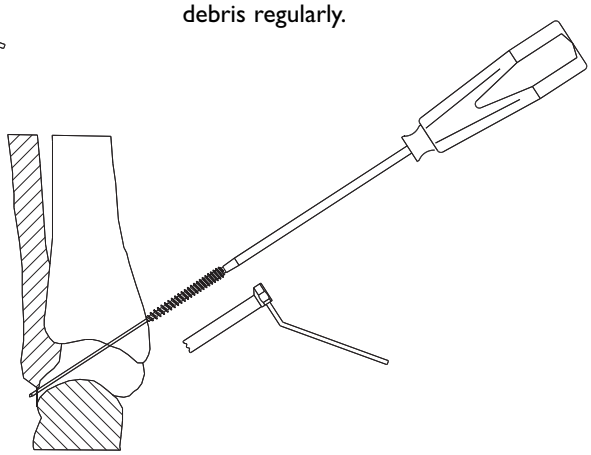
Step 1 Place guide wire at desired screw placement location.



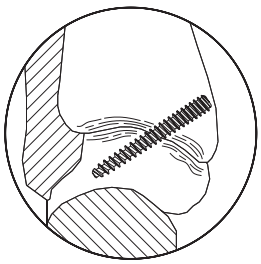
Step 2 Measure guide wire to estimate drill depth.



Step 3 Advance guide wire through far cortex. Drill bone, advance drill slowly, clearing debris regularly.



Step 4 Install implant that is one size smaller than the drill depth so that the screw can be fully buried below the cortical surface.



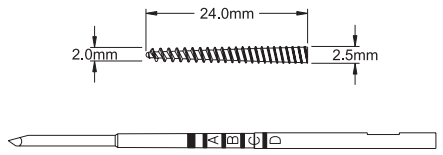
Note: *If resistance is met upon insertion:* ***STOP****, remove the screw and drill at least one (1) size deeper or install a smaller screw. (Dense bone can make a screw more difficult to bury.)*

NOTE: *All steps above can be performed via the probe/tissue protector.*

ACUTRAK® FUSION

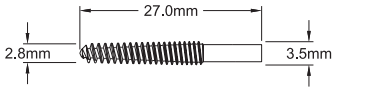
Surgical Technique

ATF-240 (24mm)



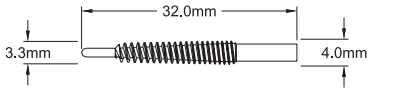
ATF-024 (Silver)

ATF-270 (27mm)



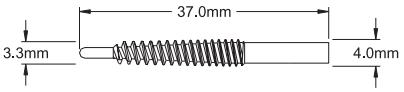
ATF-032 (Gold)

ATF-320 (32mm)



ATF-032 (Gold)

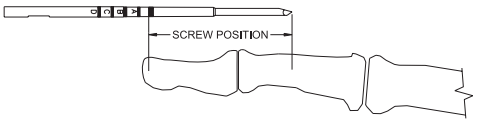
ATF-370 (37mm)



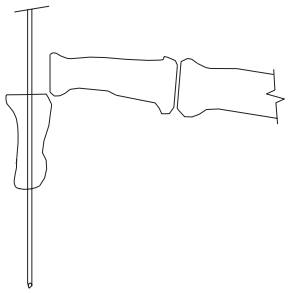
ATF-037 (Silver)

Part #	Screw Length	Drill	Driver
ATF-240	24mm	ATF-024 (Silver)	HDF-1500 (1.5mm/Gold)
ATF-270	27mm	ATF-032 (Gold)	HDF-1500 (1.5mm/Gold)
ATF-320	32mm	ATF-032 (Gold)	HDF-1500 (1.5mm/Gold)
ATF-370	37mm	ATF-037 (Silver)	HD-2000 (2.0mm/Silver)

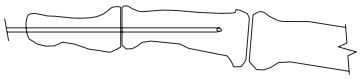
Step 1 Template to estimate screw length. Establish screw placement position, using drill scale as a reference.



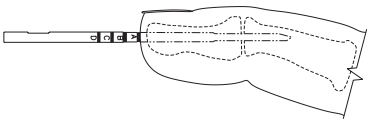
Step 2 A 1.6mm (.062") double trocar k-wire is advanced proximal to distal through a transverse incision at the tip of the digit.



Step 3 The joint is then reduced and the k-wire is driven retrograde into second phalanx.

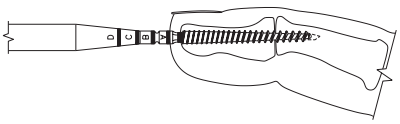


Step 4 Enlarge the canal by drilling with the appropriate drill, using the k-wire path as a guide. Use the lines on the drill shank as a depth reference.



NOTE: Reference lines on drill correspond to lines on driver. ie. drill to depth "A" then insert the screw to depth "A".

Step 5 Install the fusion implant using the lines on the driver as a reference.



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