



DISTAL FIBULA CANNULATED TAPER SCREW

Surgical Technique





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Design Features Cannulated Taper Screw

The RetroFix Screw is a single use device with patented design to accommodate each individual patient and provide maximum fixation for distal fibula fractures.

Cannulation

The screw is cannulated for ease of insertion into the distal fibula.

Fluted Head

The shape of the head is designed to be recessed into the distal fibula to reduce post-op discomfort and provide compression at the fracture site.

Partial Threads

The screw is partially threaded to provide compression once screw is inserted past the fracture site.

Taper

The taper is designed to provide greater medial-lateral fill of the distal fibula. In some cases the taper region can be used to create compression while contacting the isthmus of the intramedullary canal.

Metallurgy

Titanium is used for biocompatibility while offering superior strength.



Indications for use

The RetroFix screw is a cannulated tapered screw intended to be used as stand-alone bone screw for internal bone fixation for bone fractures of the ankle.

Lateral Malleolus Fractures

Bi Malleolar Fractures

Tri Malleolar Fractures







Contraindications

- Patients with a history of allergy to Stainless Steel, Nickel, or Titanium
- Pediatric patients with open growth plates (epiphysis)
- Active infection
- Conditions which tend to retard healing such as blood supply limitations or previous infections
- Insufficient quantity or quality of bone to permit stabilization of the fracture
- Cases with malignant primary or metastatic tumors which preclude adequate bone support or screw fixations
- Foreign-body sensitivity
- Ankle fracture with significant diastasis (to be left up to surgeons' judgement)
- Patients who cannot follow post-operative weight-bearing restrictions

Surgical Technique

Step 1).

View pre-op x-ray and use a ruler to get an estimated length of both proximal and distal portions of the screw to be used. Attention should be taken to the size of the patients canal, with the implant chosen accordingly.

Step 2).

Under Anesthesia with sterile field, set up the fluoroscopy unit to aid in the surgery. Direct surgeon visualization of the screen is recommended.

Step 3). Optional

A sterile screw from the set can be placed over the lateral malleolus while taking a fluoroscopic x-ray to help determine or verify appropriate screw sizing.

Step 4).

Make a small incision as required to expose the distal tip of the fibula.

Step 5).

With the foot inverted, insert the appropriate sized drill guide until contact is made with the distal fibula. It is required to keep the guide as medial as possible for adequate alignment.







Step 6).

Insert the appropriate drill (4.0 or 4.7) through the drill guide creating a small opening in the distal fibula. The drill can be inserted up to but not to exceed 40mm. This depth is determined by the proximal portion of the desired screw to be used. Under drilling may help create added compression during screw insertion.

Note: If drilling to the full depth of the proximal measurement of the screw, this depth can be read off of the laser marking on the drill bit.



Step 7).

Remove the drill bit and insert the 300 x 1.3mm kwire through the drill guide and up the fibular canal using low power. Utilization of AP and Lateral fluro is required as the k-wire is advanced up the canal of the fibula. Depth of the k-wire should be inserted to a depth at least 25mm past the fracture to create adequate compression.

Option: The drill bit may be left in the canal at this point as an aid to direct the k-wire up the canal. Using this method will require use of the 300 x 1.3mm k-wire.

Step 8).

Remove the drill guide and drill bit. Use the measuring device to gauge the total length of the screw to be used.

Note: If there is some displacement at the fracture site, it can be reduced before the k-wire insertion with a bone clamp through the skin of a small incision.





Step 9).

Remove the depth gauge and choose the appropriate screw diameter based on prior measurements and preoperative planning.

Step 10).

Insert the screw over the k-wire by hand with the screwdriver. Hand insertion helps gauge the feel and adequate purchase of the threads. Fluro should be used to verify placement above the fracture site. Continue until the head of the screw is flush with the distal fibula.

Note: For ease of insertion, bone wax may be utilized at surgeons' discretion.

Step 11).

Confirm by AP and Lateral Fluro the correct placement of the screw. Remove the k-wire and close the incision as desired by clip, suture, or steri-strips.

Note: Post op immobilization is at the discretion of the surgeon.





Optional Technique

Note: This advanced technique can be used by discretion of the surgeon and per patients needs.

Step 1).

Insert the 300 x 1.3 mm k-wire by power into the canal to the desired depth. Note: The drill guide may be used as desired as a tissue protector.



Step 2).

Place the measuring guide over the k-wire until the guide contacts the distal fibula. Overall screw length is read off the end of the k-wire.



Step 3).

Remove the measuring guide and drill the distal fibula over the k-wire with the appropriately sized drill to the desired depth of the proximal screw portion. Remove the drill bit.



Step 4).

Advance the appropriately sized screw up the canal over the k-wire with the screwdriver. Removing the wire after insertion.



Extracting the screw:

Should the screw need to be removed, under anesthesia make a small incision in the skin below the fibula. Insert a K-wire through the screw and use the RetroFix Screw Driver to remove the screw. Close the incision.

Note: Optional Reversed Threaded Extractor (CPRS001867) may be used in place of Screw Driver.



Product Catalog



(Diameter of 5, 5.5 or 6mm and Length of 20 to 40mm)

(Thread Diameter of 4 or 4.5) (Note: Threaded length is always 25mm)

80 mm Long Cannulated Taper Screw

Proximal Ø 5 x 20L, Distal 4	Proximal Ø 5 x 35L, Distal 4.5	Proximal Ø 5.5 x 25L, Distal 4	Proximal Ø 5.5 x 40L, Distal 4.5	Proximal Ø 6 x 30L, Distal 4
CTM000758-001 TI	CTM000758-006 TI	CTM000758-011 TI	CTM000758-016 TI	CTM000758-021 TI
Proximal Ø 5 x 25L, Distal 4.5	Proximal Ø 5 x 35L, Distal 4	Proximal Ø 5.5 x 30L, Distal 4.5	Proximal Ø 5.5 x 40L, Distal 4	Proximal Ø 6 x 35L, Distal 4.5
CTM000758-002 TI	CTM000758-007 TI	CTM000758-012 TI	CTM000758-017 TI	CTM000758-022 TI
Proximal Ø 5 x 25L, Distal 4	Proximal Ø 5 x 40L, Distal 4.5	Proximal Ø 5.5 x 30L, Distal 4	Proximal Ø 6 x 25L, Distal 4.5	Proximal Ø 6 x 35L, Distal 4
CTM000758-003 TI	CTM000758-008 TI	CTM000758-013 TI	CTM000758-018 TI	CTM000758-023 TI
Proximal Ø 5 x 30L, Distal 4.5	Proximal Ø 5 x 40L, Distal 4	Proximal Ø 5.5 x 35L, Distal 4.5	Proximal Ø 6 x 25L, Distal 4	Proximal Ø 6 x 40L, Distal 4.5
CTM000758-004 TI	CTM000758-009 TI	CTM000758-014 TI	CTM000758-019 TI	CTM000758-024 TI
Proximal Ø 5 x 30L, Distal 4	Proximal Ø 5.5 x 25L, Distal 4.5	Proximal Ø 5.5 x 35L, Distal 4	Proximal Ø 6 x 30L, Distal 4.5	Proximal Ø 6 x 40L, Distal 4
CTM000758-005 TI	CTM000758-010 TI	CTM000758-015 TI	CTM000758-020 TI	CTM000758-025 TI

90 mm Long Cannulated Taper Screw

Proximal Ø 5 x 25L, Distal 4.5	Proximal Ø 5 x 40L, Distal 4.5	Proximal Ø 5 x 30L, Distal 4.5	Proximal Ø 6 x 25L, Distal 4.5	Proximal Ø 6 x 30L, Distal 4
CTM000758-026 TI	CTM000758-030 TI	CTM000758-034 TI	CTM000758-038 TI	CTM000758-041 TI
Proximal Ø 5 x 25L, Distal 4	Proximal Ø 5 x 40L, Distal 4	Proximal Ø 5.5 x 30L, Distal 4	Proximal Ø 6 x 25L, Distal 4	Proximal Ø 6 x 40L, Distal 4.5
CTM000758-027 TI	CTM000758-031 TI	CTM000758-035 TI	CTM000758-039 TI	CTM000758-042 TI
Proximal Ø 5 x 30L, Distal 4.5	Proximal Ø 5.5 x 25L, Distal 4.5	Proximal Ø 5.5 x 40L, Distal 4.5	Proximal Ø 6 x 30L, Distal 4.5	Proximal Ø 6 x 40L, Distal 4
CTM000758-028 TI	CTM000758-032 TI	CTM000758-036 TI	CTM000758-040 TI	CTM000758-043 TI
Proximal Ø 5 x 30L, Distal 4	Proximal Ø 5.5 x 25L, Distal 4	Proximal Ø 5.5 x 40L, Distal 4		
CTM000758-029 TI	CTM000758-033 TI	CTM000758-037 TI		

100 mm Long Cannulated Taper Screw

Proximal Ø 5 x 30L, Distal 4.5	Proximal Ø 5 x 40L, Distal 4.5	Proximal Ø 6 x 30L, Distal 4.5	Proximal Ø 6 x 40L, Distal 4.5	Proximal Ø 6 x 40L, Distal 4
CTM000758-044 TI	CTM000758-046 TI	CTM000758-048 TI	CTM000758-050 TI	CTM000758-051 TI
Proximal Ø 5 x 30L, Distal 4	Proximal Ø 5 x 40L, Distal 4	Proximal Ø 6 x 30L, Distal 4		
CTM000758-045 TI	CTM000758-047 TI	CTM000758-049 TI		

110 mm Long Cannulated Taper Screw

Proximal Ø 5.5 x 30L, Distal 4	Proximal Ø 5.5 x 25L, Distal 4.5	Proximal Ø 6 x 25L, Distal 4.5	Proximal Ø 6 x 30L, Distal 4.5	Proximal Ø 6 x 40L, Distal 4
CTM000758-052 TI	CTM000758-054 TI	CTM000758-056 TI	CTM000758-058 TI	CTM000758-059 TI
Proximal Ø 5.5 x 35L, Distal 4 CTM000758-053 TI	Proximal Ø 5.5 x 30L, Distal 4.5 CTM000758-055 TI	Proximal Ø 6 x 35L, Distal 4 CTM000758-057 TI		

120 mm Long Cannulated Taper Screw

 Proximal Ø 6 x 35L, Distal 4
 Proximal Ø 6 x 35L, Distal 4.5

 CTM000758-060 TI
 CTM000758-061 TI

130 mm Long Cannulated Taper Screw

 Proximal Ø 6 x 30L, Distal 4
 Proximal Ø 6 x 30L, Distal 4.5

 CTM000758-062 TI
 CTM000758-063 TI

Associated Products

 K-Wire, 1.3 Ø x 225mm
CTM000882
K-Wire, 1.3 Ø x 300mm
CTM001055
4.0mm Drill Bit
CTM000884
4.7mm Drill Bit
CTM000936

Drill Guide- Tissue Prote CTM000886	to
Cannulated Screwdrive	er
CTM000893	
Depth Gauge	_
CTM000887	

	Caddie Assembly	
	AFNM000369	
_	Caddie Lid	
	CTM001163	
	Upper Instrument Tray	
	CTM001164	
	Lower Instrument Tray	1
	CTM001165	

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