

Rotator Cuff Repair

X-Twist™ Fixation System

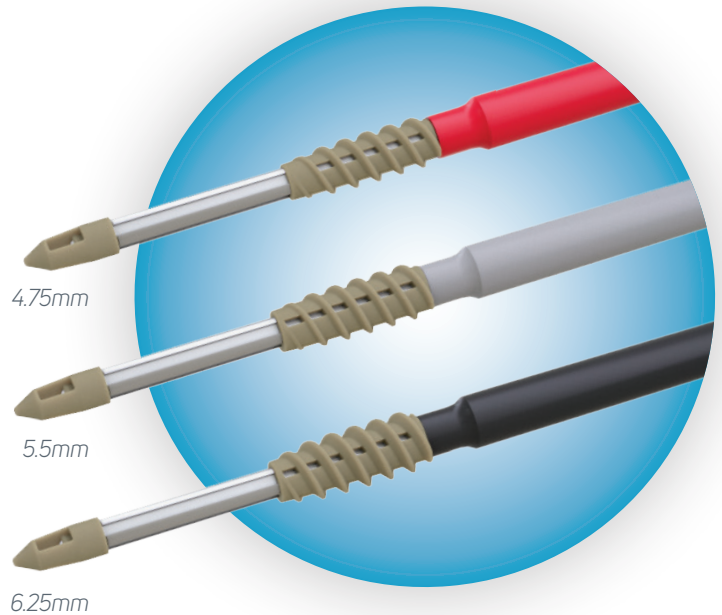
Surgical Technique Guide

X-Twist Fixation System

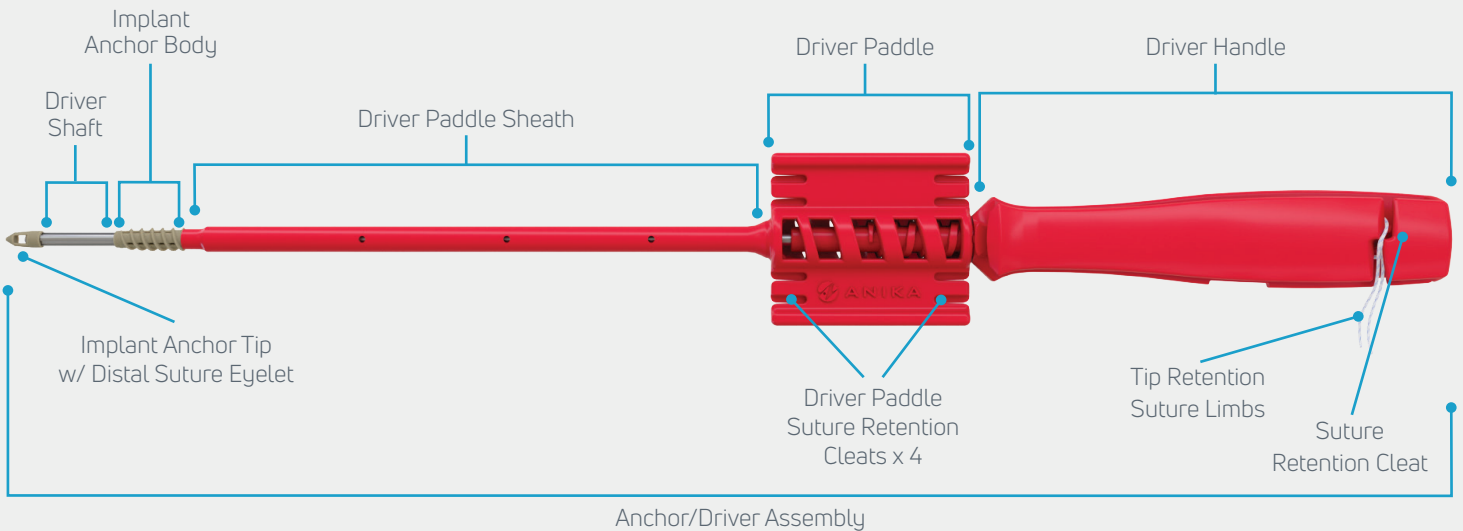
The X-Twist™ is a knotless, open architecture, and fast inserting suture anchor system available in multiple sliding suture and suture tape configurations.

Made of PEEK, the anchor is available in three diameters: 4.75mm, 5.5mm, and 6.25mm with three sliding suture and suture tape options: #2 suture, 1.6mm suture tape, and two 1.6mm suture tapes.

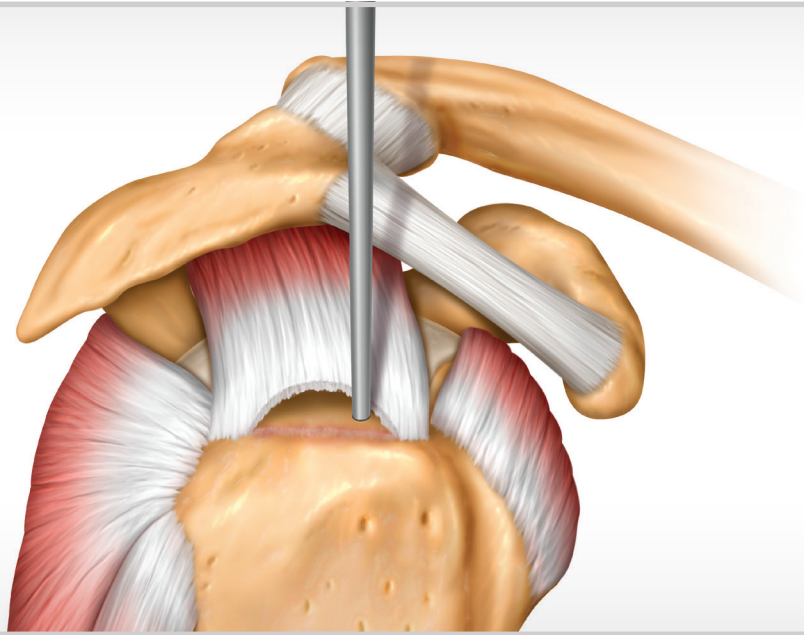
The X-Twist system is designed for versatility across procedures: single or double row, in medial and/or lateral row applications, and in both knotless and fully knotted constructs, to reproducibly and confidently repair soft tissue to bone.



X-Twist PEEK Suture Anchor



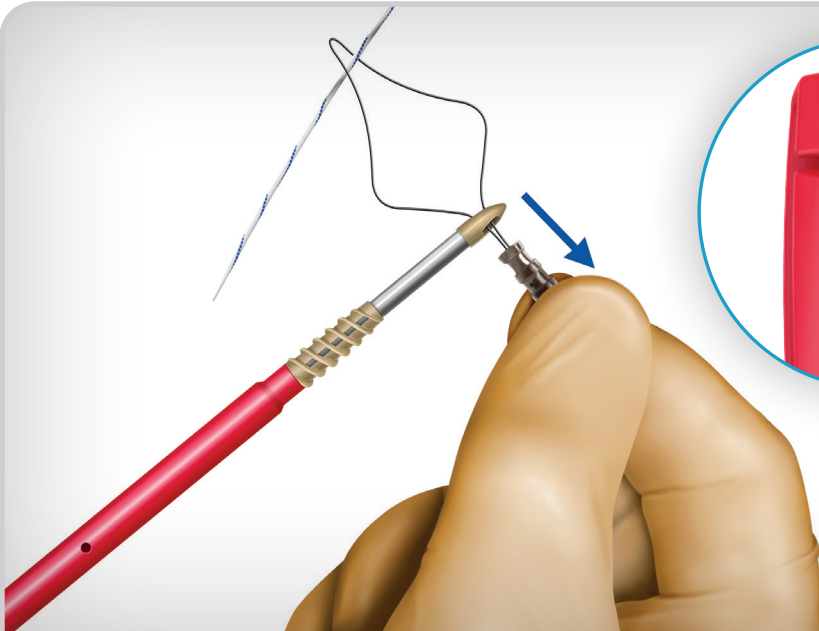
Rotator Cuff Repair *X-Twist™ Fixation System*



step
1

Prepare the rotator cuff footprint and create a medial row pilot hole near the articular margin using the X-Twist awl (XT04701). Insert the awl until the laser line is flush with the bone.

Optional: In hard bone, use the X-Twist tap (XT04700 or XT05500) after using the awl. Advance the tap until the laser line is flush with the bone.

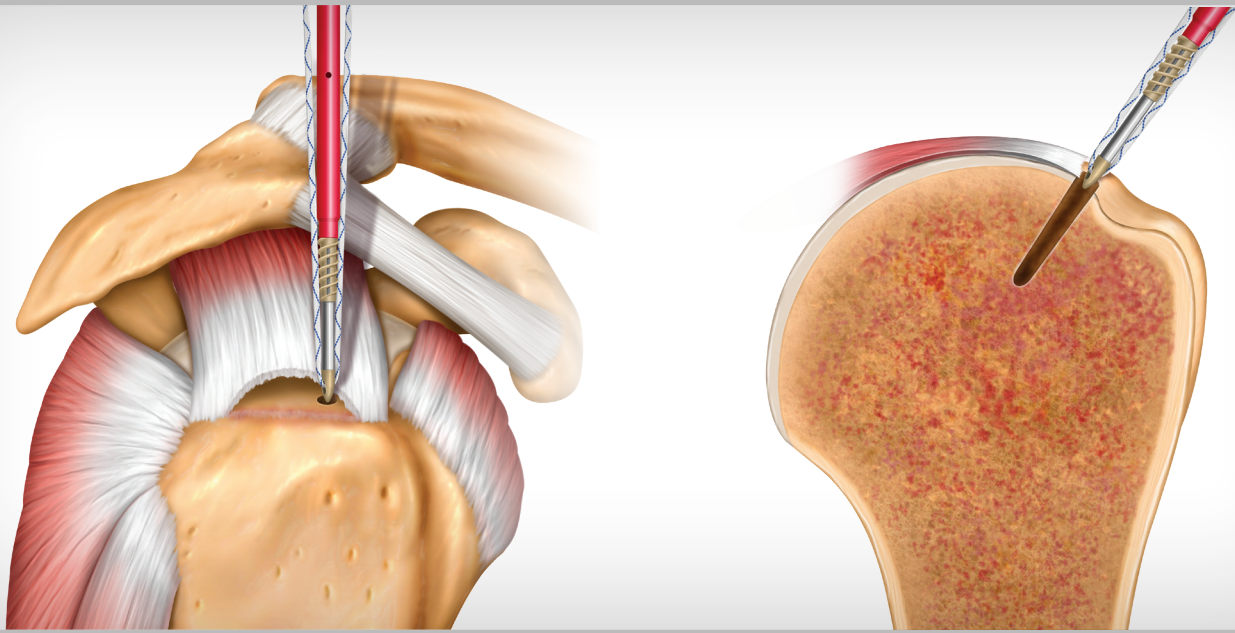


Note: If the anchor tip is pulled away from the shaft during suture passage (or at any other point), release the tip retention suture from the suture retention cleat of the driver handle. Then, re-apply tension by pulling the tip retention suture limbs simultaneously from the back of the driver handle to reapproximate the anchor tip back to the driver shaft. Once the anchor tip is resealed on the driver shaft, secure the retention suture limbs under tension back to the suture retention cleat of the driver handle.

step
2

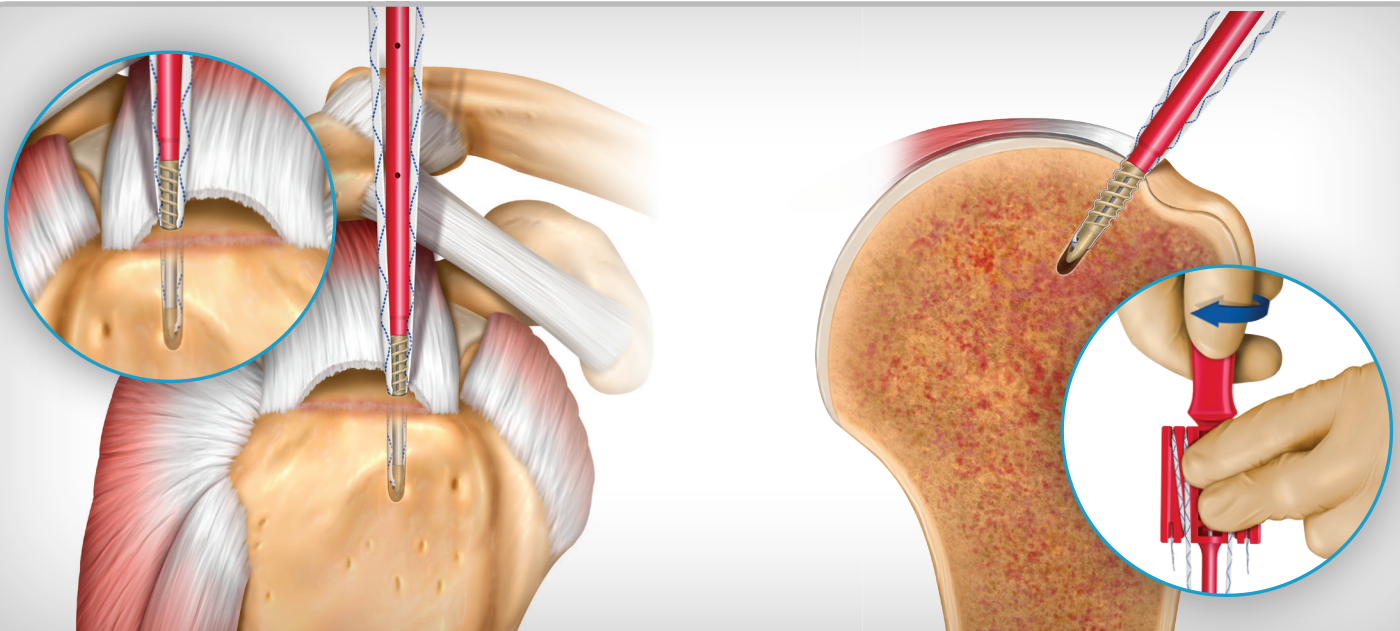
Use the suture threader to preload a 1.6mm or 2mm suture tape into the distal suture eyelet of the medial row X-Twist anchor.

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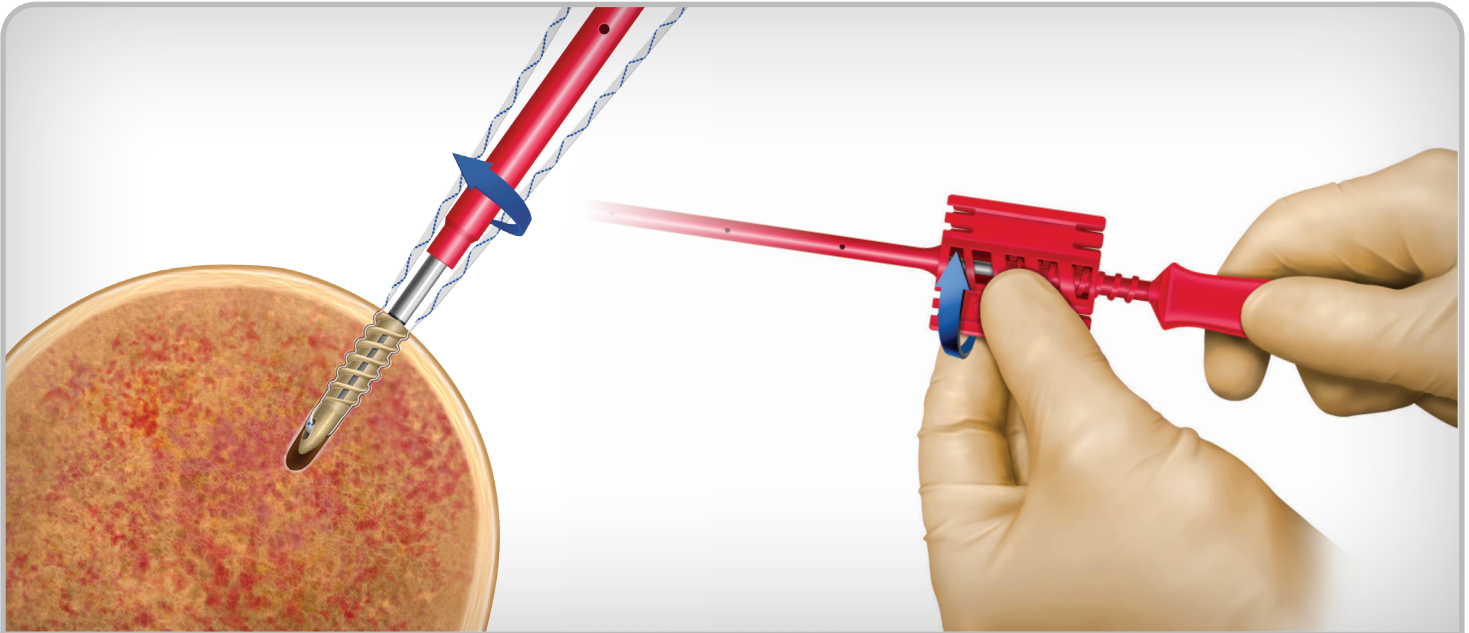
step
3

Align insertion angle with the pilot hole trajectory and advance the X-Twist anchor tip until the threaded anchor body contacts bone.



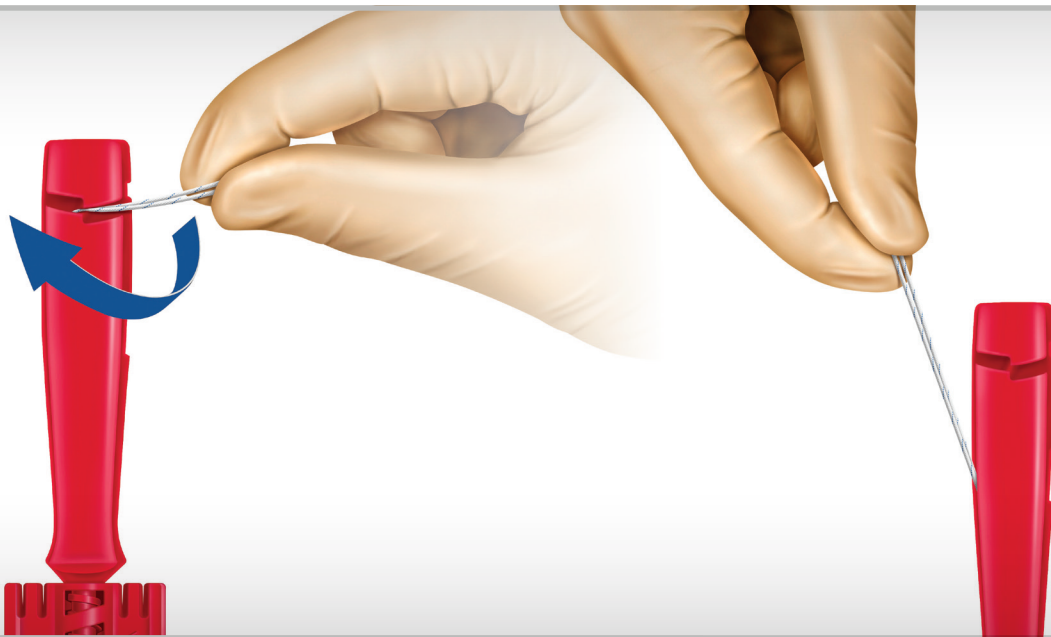
step
4

Holding the driver paddle stationary with one hand, rotate the driver handle clockwise with the other hand to advance the X-Twist anchor body down the driver shaft and into the prepared hole. Continue advancing until the proximal aspect of the anchor body remains flush with the bone.



step
4a

Optional: Following anchor body insertion, the driver paddle sheath may be partially retracted by rotating the driver paddle clockwise in order to facilitate visual confirmation of proper insertion depth. Further advancement of the anchor may proceed under direct visualization, if needed.

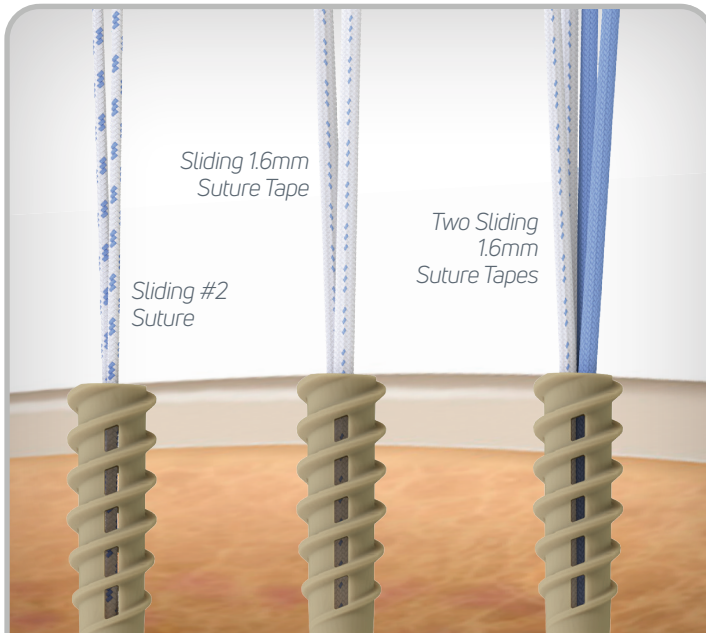


step
5

Once proper insertion depth is confirmed, unclasp and release all sutures. Pull the driver away from the implant to remove the driver.

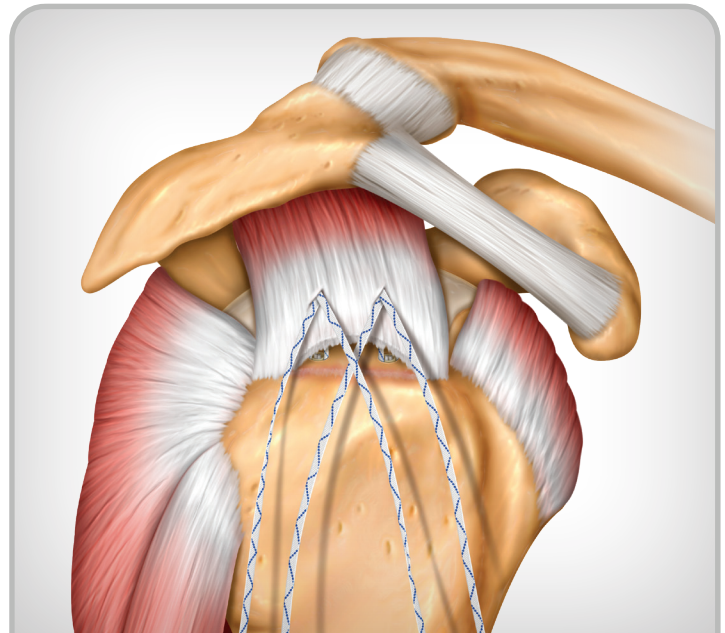
Note: Do not twist handle upon driver removal.

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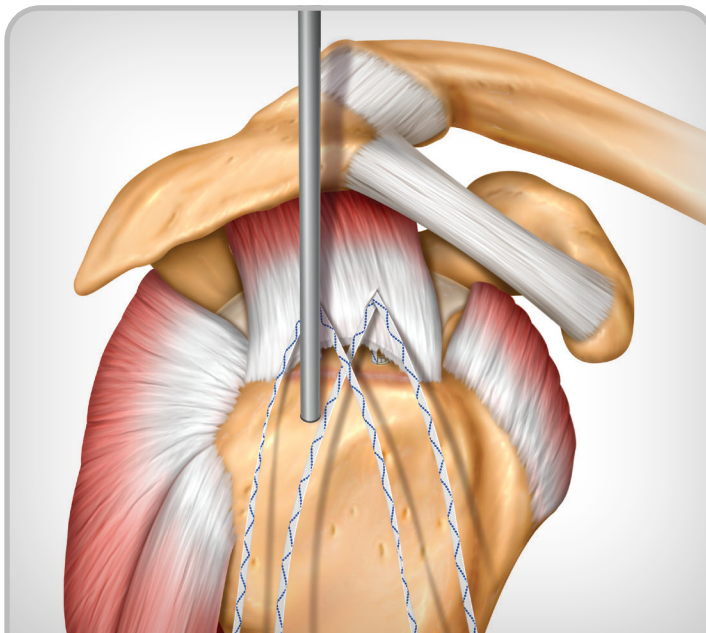
step
5a

The remaining sliding retention suture(s) may be incorporated into the repair or discarded. Repeat steps 1-5 for additional medial row anchor(s).



step
6

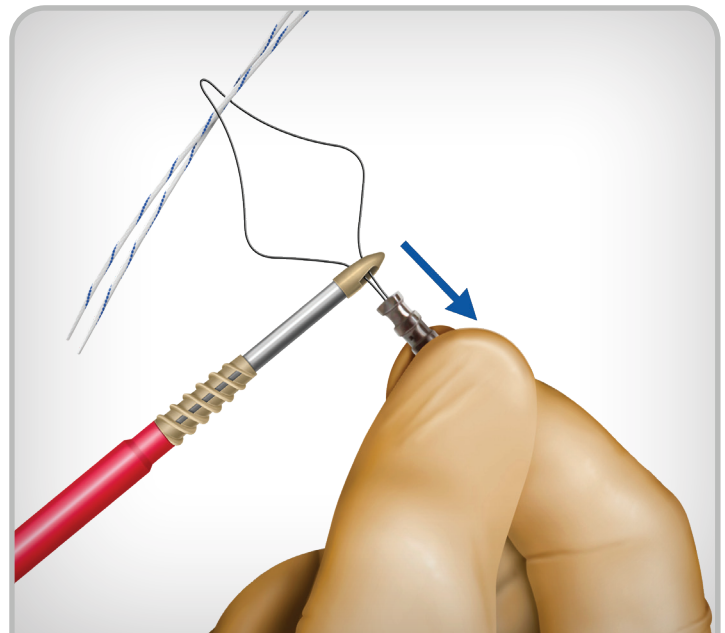
Pass the suture tapes through the rotator cuff tendon medially (lateral to the musculotendinous junction) in a mattress configuration using preferred suture passing technique.



step
7

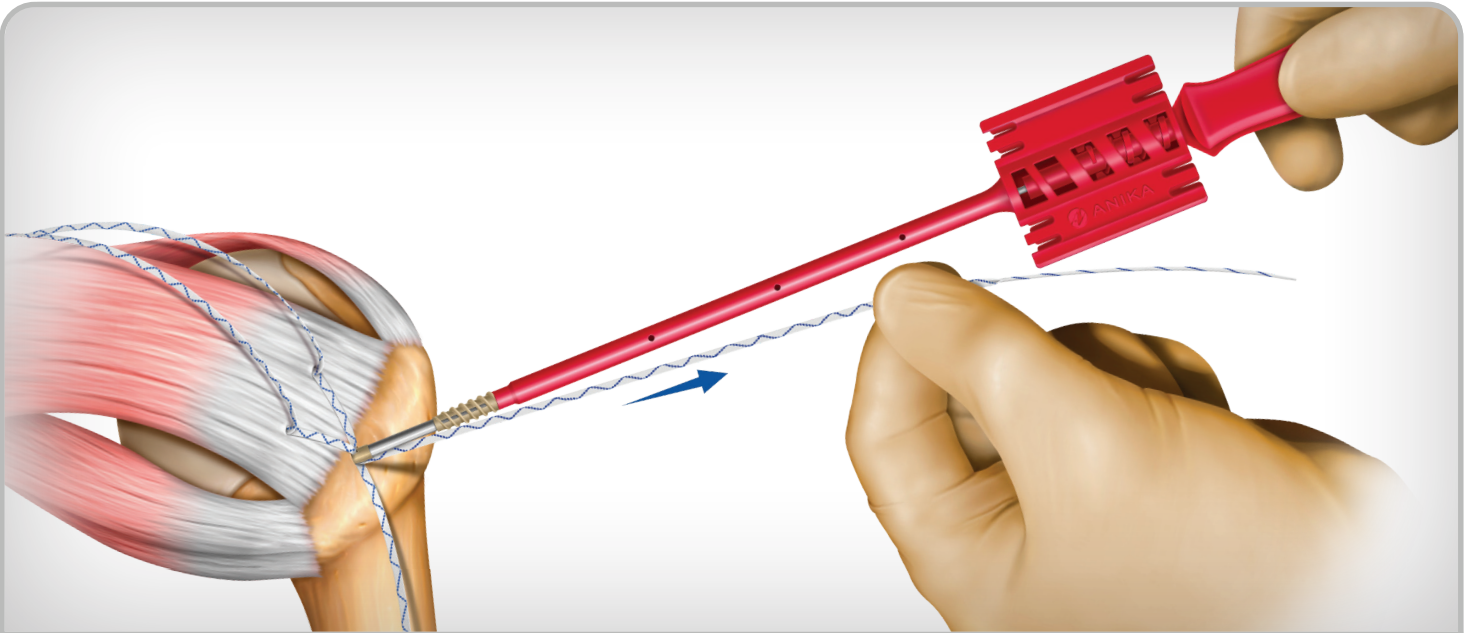
Identify the lateral anchor site and create a pilot hole using the X-Twist awl (XT04701). Insert the awl until the laser line is flush with the bone.

Optional: In hard bone, use the X-Twist tap (XT04700 or XT05500) after using the awl. Advance the tap until the laser line is flush with the bone.



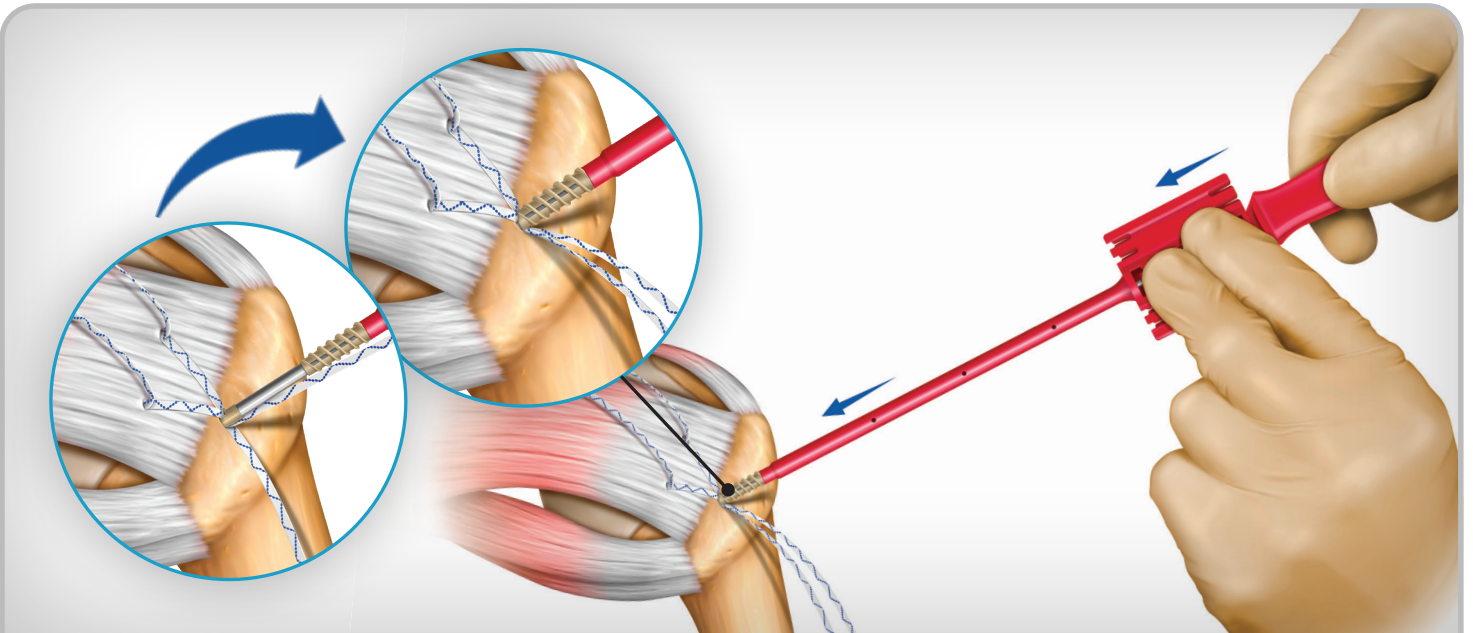
step
8

Use the suture threader to load medial row suture tape tails into the distal tip of the lateral row X-Twist suture anchor. Pull the threader tab to shuttle the loaded sutures through the anchor's distal suture eyelet.



step
9

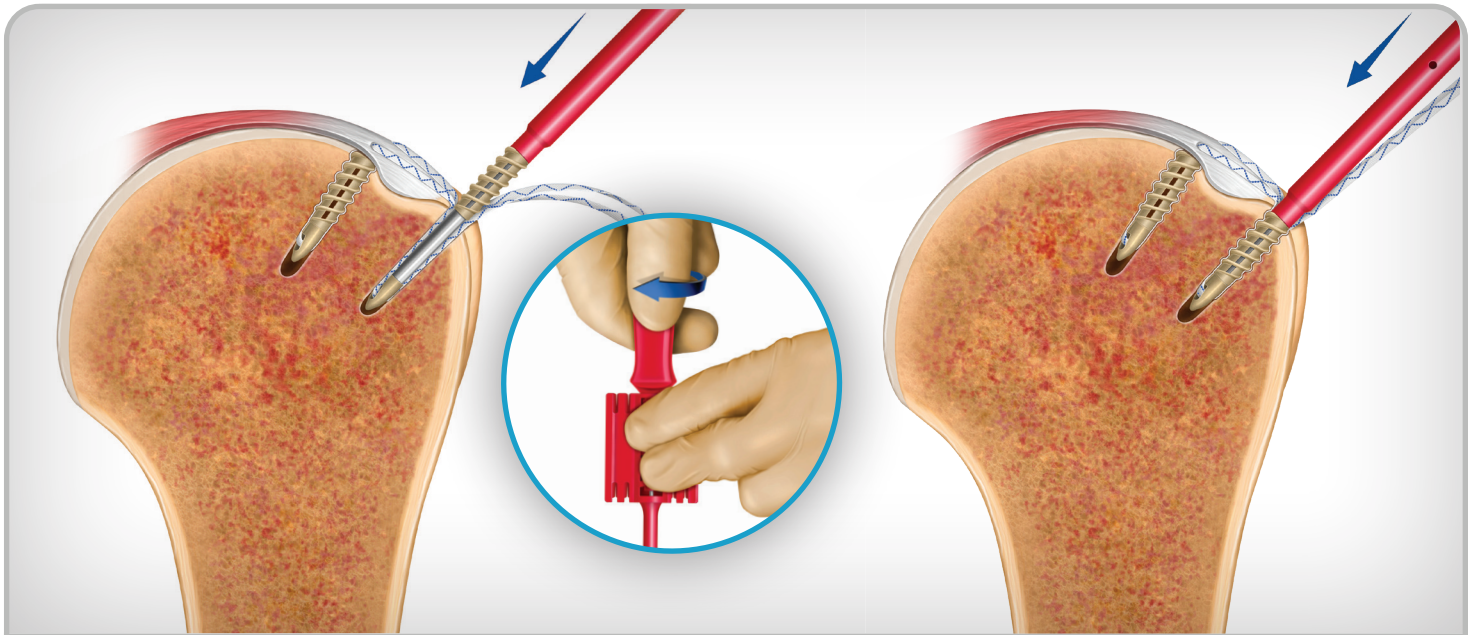
Remove slack prior to lateral anchor insertion by pulling each suture or suture tape limb individually. The X-Twist anchor tip is designed to be placed superficially in the pilot hole during this step to facilitate lateral row tensioning.



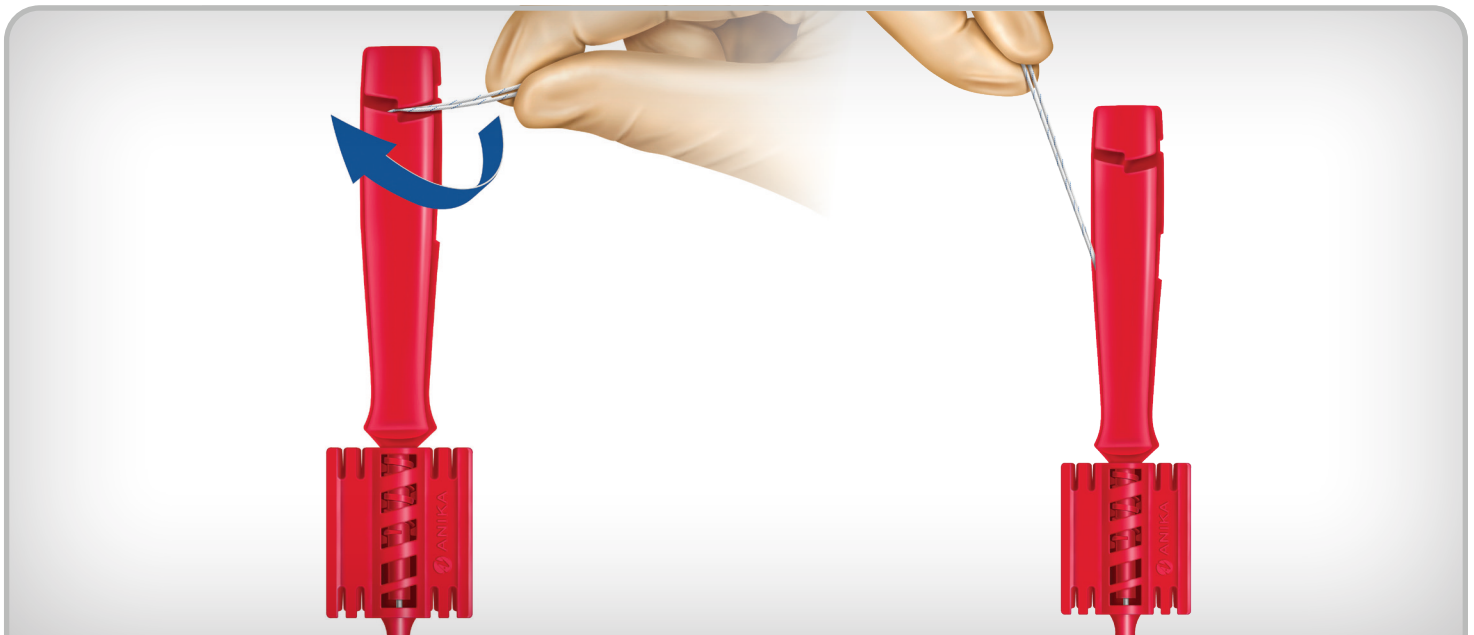
step
10

Once desired lateral row tensioning is achieved, mind the proper anchor insertion angle and push the X-Twist anchor tip into the pilot hole, advancing until the anchor body contacts bone. Confirm proper construct tensioning. Additional tension may be applied by pulling individually on suture tape tails while maintaining counterpressure on the driver handle.

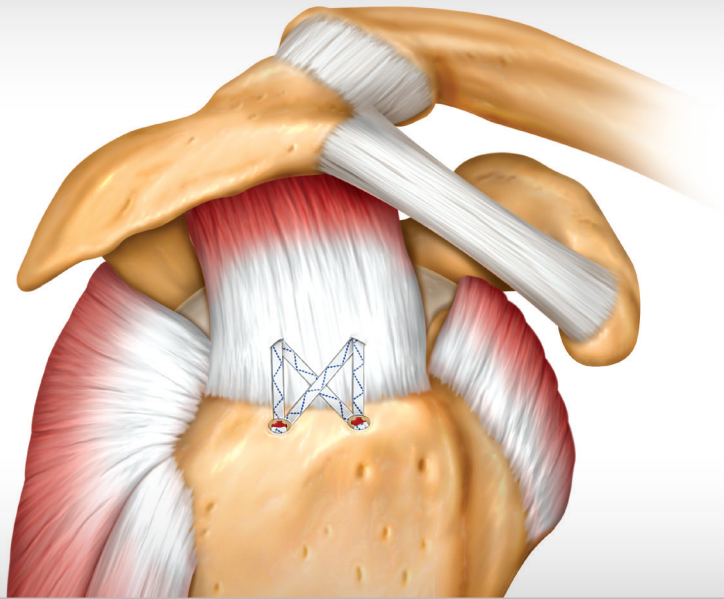
Rotator Cuff Repair *X-Twist™ Fixation System*



step 11 With the X-Twist anchor body touching bone, and proper construct tensioning confirmed, hold the driver paddle stationary with one hand while rotating the driver handle clockwise with the other hand to advance the X-Twist anchor body down the driver shaft and into the prepared hole. Continue advancing until the proximal aspect of the anchor body remains flush with the bone.
Optional: As shown in step 4a, the driver paddle sheath may be partially retracted to facilitate visual confirmation of proper insertion depth. Further advancement of the anchor may proceed under direct visualization, if needed.



step 12 Uncleave and release all sutures. Pull the driver away from the implant.
Note: Do not twist handle upon driver removal. The remaining sliding retention suture(s) may be incorporated into the repair or discarded. Cut excess suture tape limbs.



step
13

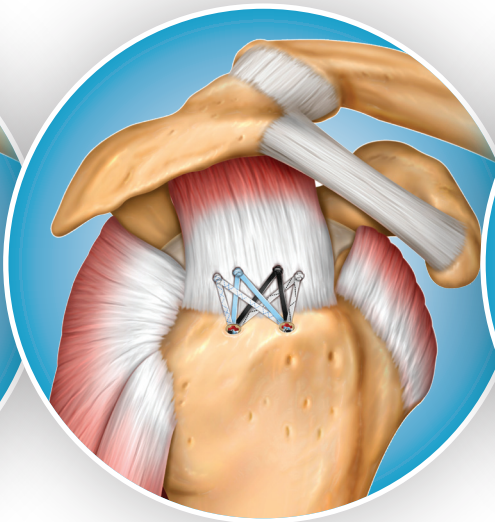
Repeat steps 7-12 to complete the double row repair with additional X-Twist lateral row anchor(s).

Alternative Repair Constructs



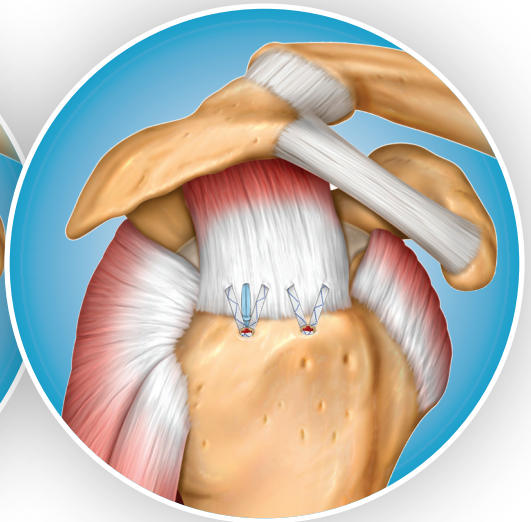
Knotless Double Row Bridge Repair

with two sets of 2mm suture tape and four suture passes



Medially Knotted Double Row Bridge Repair

with four sets of 1.6mm suture tape and a knotless lateral row



Knotless Single Row Repair

with inverted mattress stitch using 2mm suture tape, with and without a knotless rip-stop suture

Product Listing

X-Twist Fixation System

X-Twist™ Screw-In Suture Anchors				
Part #	Diameter (mm)	Length (mm)	Description	Material
XT24700	4.75	23	X-Twist PEEK 4.75mm, w/1, #2 suture (blu/wht)	PEEK
XT24701	4.75	23	X-Twist PEEK 4.75mm, w/1, 1.6mm suture tape (blu/wht)	PEEK
XT24702	4.75	23	X-Twist PEEK 4.75mm, w/2, 1.6mm suture tapes (blu, blu/wht)	PEEK
XT24703	4.75	23	X-Twist PEEK 4.75mm, w/2, 1.6mm suture tapes (blk, blk/wht)	PEEK
XT25500	5.5	23	X-Twist PEEK 5.5mm, w/1, #2 suture (blu/wht)	PEEK
XT25501	5.5	23	X-Twist PEEK 5.5mm, w/1, 1.6mm suture tape (blu/wht)	PEEK
XT25502	5.5	23	X-Twist PEEK 5.5mm, w/2, 1.6mm suture tapes (blu, blu/wht)	PEEK
XT25503	5.5	23	X-Twist PEEK 5.5mm, w/2, 1.6mm suture tapes (blk, blk/wht)	PEEK
XT26200	6.25	23	X-Twist PEEK 6.25mm, w/1, #2 suture (blu/wht)	PEEK

X-Twist Instrumentation				
Part #	Description	Sterile/Non-sterile	Single-use/Reusable	
XT04701	X-Twist 4.75-5.5mm awl	Non-sterile	Reusable	
XT04700	X-Twist 4.75mm tap	Non-sterile	Reusable	
XT05500	X-Twist 5.5mm tap	Non-sterile	Reusable	
XT00001	X-Twist sterilization tray	Non-sterile	Reusable	

Suture Tape

Part #	Size (mm)	Description	Qty/Box
20042	2	Parcus Braid® suture tape (wht/blu)	6
20042S	2	Parcus Braid suture tape (wht/blu)	1
20032S	1.6	Parcus Braid suture tape (wht/blu)	1
20034S	1.6	Parcus Braid suture tape (wht/blk)	1
20174S	1.6	Parcus Braid infinity loop (wht/blu) w/ straight needle	1

Compatible Medial Row Anchor Options

Based upon patient presentation, surgeons may choose to use an alternative medial row anchor from the Anika Sports Medicine portfolio.

Suture Based Anchors

Draw Tight™ Suture-Based Anchors				
Part #	Diameter (mm)	Description		Material
10820	3.2	Draw Tight, push-in, suture-based anchor, w/2, #2 sutures (blu & blu/blu)		UHMWPE & PEEK
10588	3.2	Draw Tight, push-in, suture-based anchor, w/2, #2 sutures (wht/blu & wht/blk)		UHMWPE & PEEK
11288	3.2	Draw Tight, push-in, suture-based anchor, w/2, 1.6mm suture tapes (blu, wht/blu)		UHMWPE & PEEK
11289	3.2	Draw Tight, push-in, suture-based anchor, w/2, 1.6mm suture tapes (blk, wht/blk)		UHMWPE & PEEK

Instrumentation for Draw Tight Suture-Based Anchors				
Part #	Diameter (mm)	Description	Sterile/Non-sterile	Single-use/Reusable
10365	3.2	Awl	Non-sterile	Reusable

PEEK Anchors

Twist SST PEEK Screw-In Suture Anchors w/ Tape				
Part #	Diameter (mm)	Length (mm)	Description	Material
11349	4.5	12.6	Twist SST, screw-in, suture anchor, w/1, 2mm suture tape (blu)	PEEK
11350	4.5	12.6	Twist SST, screw-in, suture anchor, w/1, 2mm suture tape (blk)	PEEK
11351	5.5	12.6	Twist SST, screw-in, suture anchor, w/1, 2mm suture tape (blu)	PEEK
11352	5.5	12.6	Twist SST, screw-in, suture anchor, w/1, 2mm suture tape (blk)	PEEK

Twist PEEK Screw-In Suture Anchors w/Two Suture Tapes				
Part #	Diameter (mm)	Length (mm)	Description	Material
11003	4.5	12.6	Twist, screw-in, suture anchor, w/2, 1.6mm suture tapes (wht/blu & wht/blk)	PEEK
11283	4.5	12.6	Twist, screw-in, suture anchor, w/2, 1.6mm suture tapes (blu, wht/blu)	PEEK
11285	4.5	12.6	Twist, screw-in, suture anchor, w/2, 1.6mm suture tapes (blk, wht/blk)	PEEK
11004	5.5	12.6	Twist, screw-in, suture anchor, w/2, 1.6mm suture tapes (wht/blu & wht/blk)	PEEK
11284	5.5	12.6	Twist, screw-in, suture anchor, w/2, 1.6mm suture tapes (blu, wht/blu)	PEEK
11286	5.5	12.6	Twist, screw-in, suture anchor, w/2, 1.6mm suture tapes (blk, wht/blk)	PEEK
11005	6.5	12.6	Twist, screw-in, suture anchor, w/2, 1.6mm suture tapes (wht/blu & wht/blk)	PEEK

Twist PEEK Screw-In Suture Anchors w/ Two #2 Sutures				
Part #	Diameter (mm)	Length (mm)	Description	Material
10511T	4.5	12.6	Twist, screw-in, suture anchor, w/2, #2 sutures (blu & wht/grn)	PEEK
10517T	5.5	12.6	Twist, screw-in, suture anchor, w/2, #2 sutures (blu & wht/grn)	PEEK
10518T	6.5	12.6	Twist, screw-in, suture anchor, w/2, #2 sutures (blu & wht/grn)	PEEK

Instrumentation for Twist PEEK Screw-In Suture Anchors				
Part #	Diameter (mm)	Description	Sterile/Non-sterile	Single-use/Reusable
10365	3.2	Awl	Non-sterile	Reusable
10338	4.1	Awl	Non-sterile	Reusable
10609	4.5	Punch/tap	Non-sterile	Reusable
10277	5.5	5.5mm or 6.5mm punch/tap	Non-sterile	Reusable
10540U	3.2	Drill bit, w/positive stop	Non-sterile	Reusable
10541U	4	Drill bit	Non-sterile	Reusable



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