

# Low-Profile AC Repair System

Surgical Technique



**Arthrex**® 

## Low-Profile Stabilization of Acute and Chronic Acromioclavicular Separations Using TightRope® Tensioning Technology

### Introduction

The low-profile AC implant and Dog Bone button combine to form a tensionable device optimized for the reduction and stabilization of acute and chronic acromioclavicular joint separations. This dual construct features 2 independent TightRope sutures preassembled into a clavicle insert and a Dog Bone button, which attaches to the suture loops separately after passing them antegrade through the 3 mm bone tunnels.

### Technique Uses

This technique is appropriate for acute Grade IV-VI AC separations and for Grade III separations that require operative treatment.

### Technique Note

This technique is not intended to be the sole means of reconstructing a chronic AC separation. Repair of chronic AC separations should always include a biologic component (ie, allograft or autograft).

### Titanium Clavicle Insert

- Dimensions – 10 mm diameter flange, 5 mm diameter base
- Optimized for AC joint procedures – Inserted 5 mm into unicortical clavicle tunnel, which can help prevent suture abrasion and clavicular tunnel widening
- Low-profile repair – Designed with a recessed TightRope suture hole to bury the knot stack of the final construct

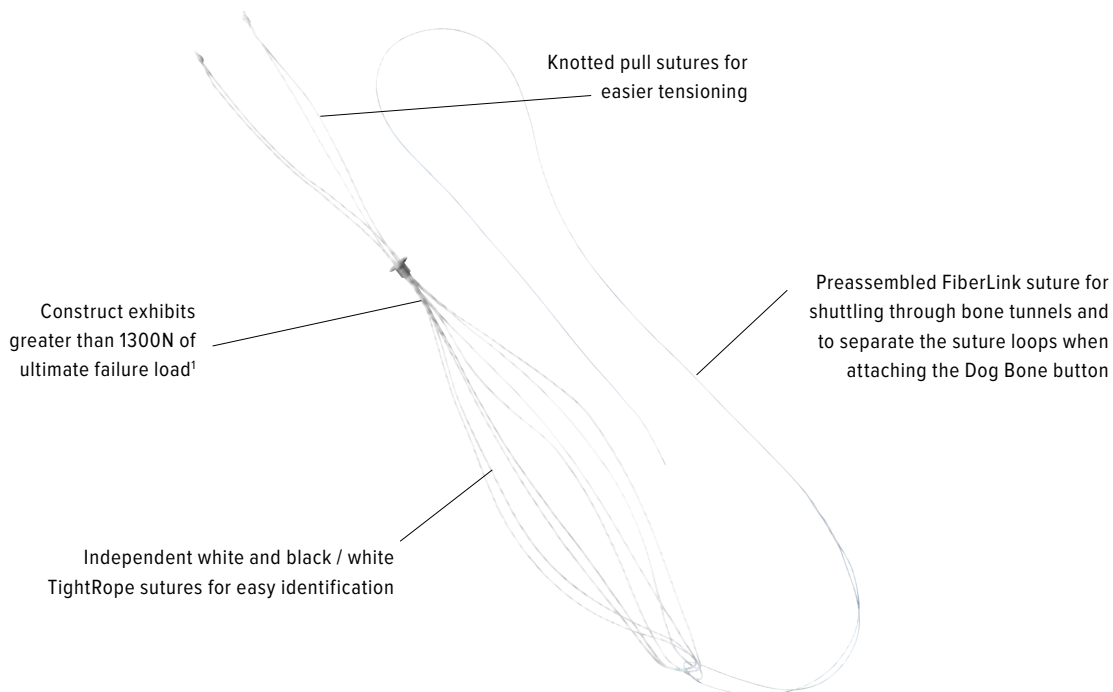
### Dog Bone™ Button

- Dimensions – 10 mm (L) × 8 mm (W)
- The Dog Bone button difference – Broad surface area to help distribute forces across the coracoid and prevent button pull-through
- Ideal design – Slots allow the button to be attached to the TightRope sutures after they are passed through the bone tunnels



## Tensionable AC TightRope® Construct

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### Reference

1. Arthrex, Inc. Data on file (APT G1114). Naples, FL; 2019.

## Surgical Technique

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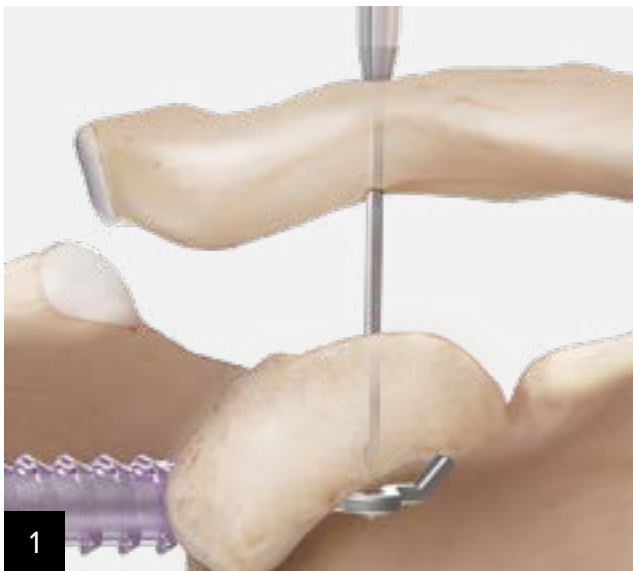
Place the patient in the lateral decubitus or beach chair position under a general anesthesia, supplemented with a scalene block (if desired). Introduce a 30° arthroscope into the glenohumeral joint via a standard posterior portal. Create an ASL portal slightly more anterior and inferior than normal, coming in at a slight angle in both the coronal and axial plane.

Insert an 8.25 mm cannula through the ASL portal. Use a shaver and/or SynergyRF bipolar ablation system with ApolloRF probe through the ASL portal to open the rotator interval and expose the coracoid.

Complete the coracoid exposure along the inferior border of the coracoid all the way to the base. A 70° arthroscope in the posterior portal can enhance arthroscopic visualization of the base of the coracoid.

Alternatively, use a 30° scope through the ASL portal to visualize the entire coracoid base. Create a low anterior portal lateral to the coracoid and insert an 8.25 mm cannula. This will be the primary working portal for the entire procedure.

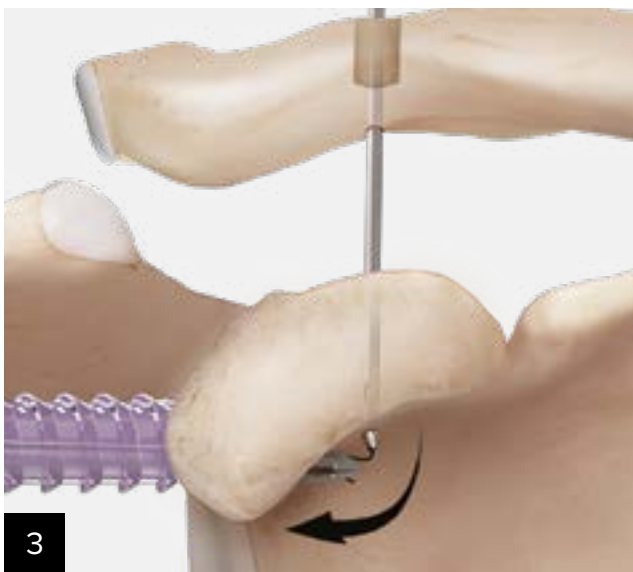




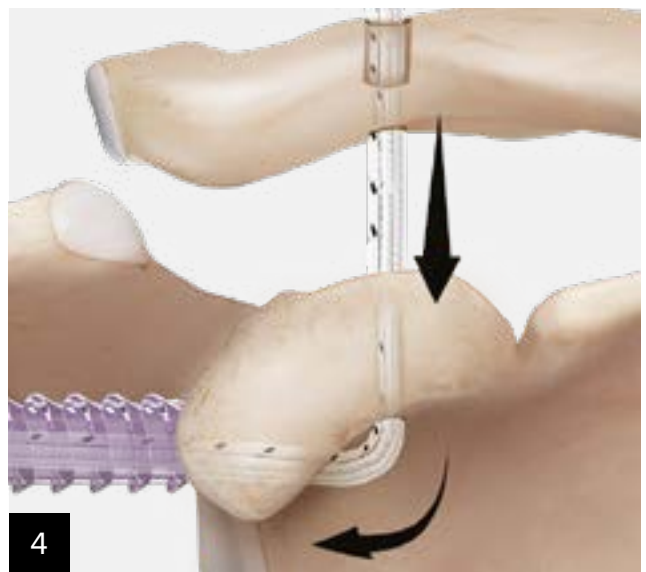
1 Drill a 3 mm tunnel through the clavicle and coracoid using the 3 mm cannulated drill.



2 Remove the guide but leave the cannulated drill in place. Ream a 5.1 mm diameter unicortical socket over the 3 mm cannulated drill using the countersink.

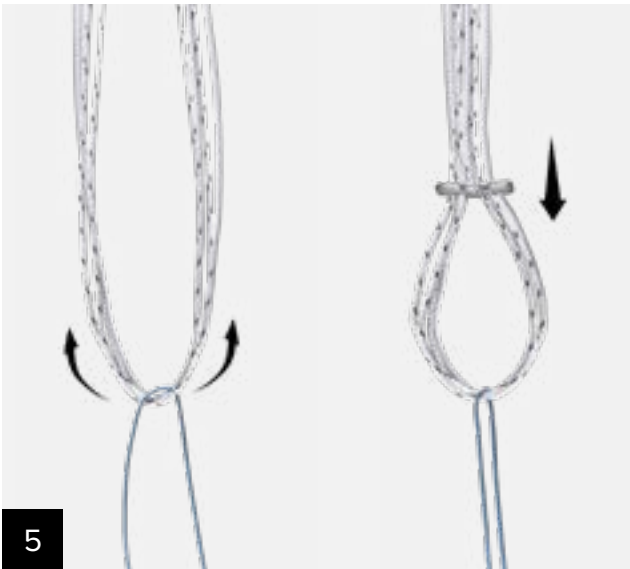


3 Remove the countersink and stylet from the 3 mm cannulated drill. Pass the SutureLasso SD suture passer wire through the drill cannulation, retrieving the tail end through the anterior portal and leaving the looped end for implant passage. Remove the cannulated drill, leaving only the wire in the tunnels.



4 Use the nitinol wire to shuttle the FiberLink suture attached to the implant antegrade through the clavicle and coracoid so that the TightRope repair loops exit the anterior cannula.

**Note: Do not cut the FiberLink suture.**



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Use the FiberLink suture to separate the TightRope implant loops. The FiberLink suture should move freely around the loops. Attach a Dog Bone button across both sides of the loops and slide it to the bottom of the loops.

**Note: Cut the FiberLink suture, if desired.**



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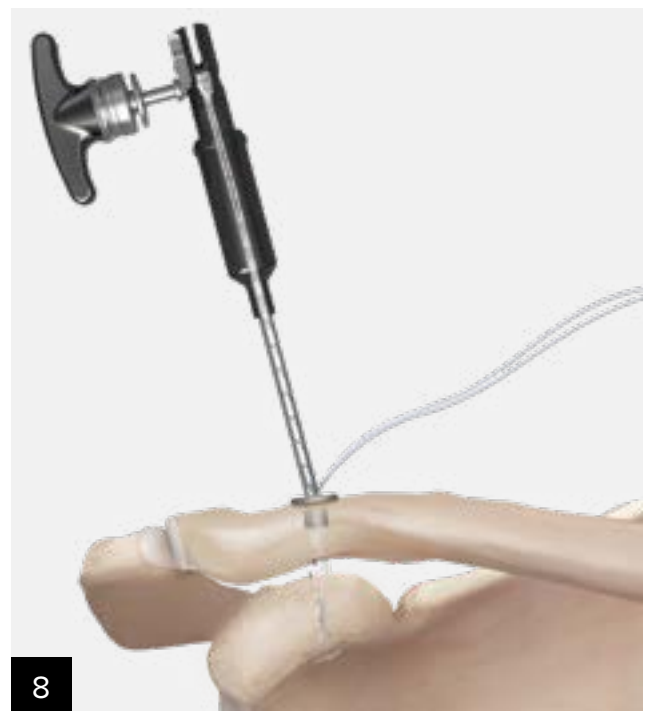
Deliver the Dog Bone button to the base of the coracoid while pulling the clavicle insert superiorly on the clavicle side. Keep tension on the device to avoid the sutures from getting tangled around the button.

**Note: Do not pull on the cinching sutures.**



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With the Dog Bone button firmly against the base of the coracoid, reduce the clavicle and sequentially pull on the free suture limbs 1 to 2 cm at a time to reduce the insert into the clavicle. A blunt hemostat may be placed under the clavicle insert to provide countertraction during reduction.



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Apply the suture tensioning instrument separately to both loops / both sutures of the same color and tension to 50 to remove remaining slack from the construct.



Remove the splice from the sutures. Tie 3 alternating half-hitch knots on the 2 black / white TightRope suture limbs and do the same with the white TightRope suture pair. Cut the remaining suture limbs.



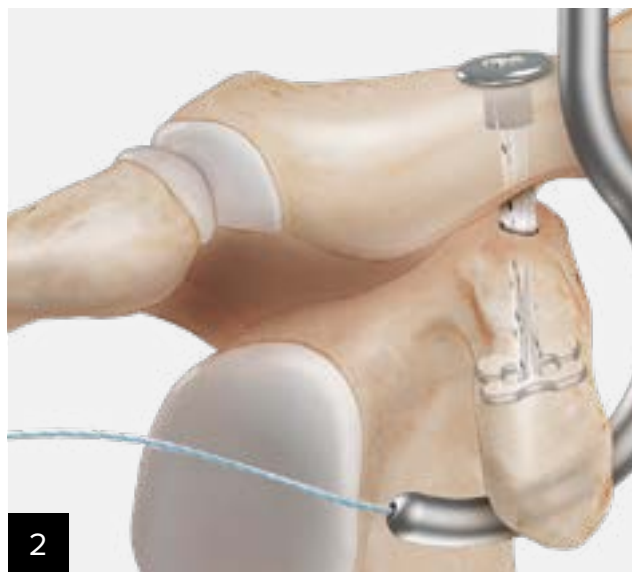
To prevent horizontal AC joint instability, an additional construct is recommended. The AC *Internal/Brace* guide can be used to prepare socket holes for an *Internal/Brace* construct.

Use a FiberTape with a 3.5 mm SwiveLock in the lateral acromion and a 4.75 mm SwiveLock in the lateral clavicle to complete the AC joint *Internal/Brace*.

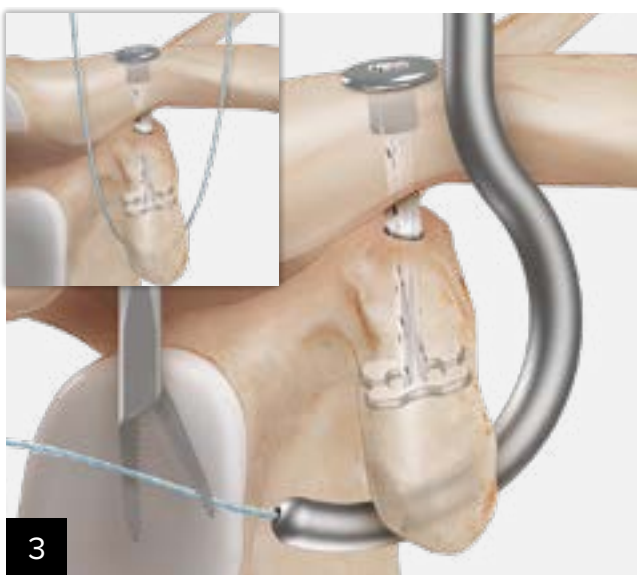
## Stabilization of Chronic Acromioclavicular Separations



Through the same incision made for the low-profile AC implant, use the coracoid passer to find the top of the coracoid. Staying on bone, slide the tip around the medial side. Lift the handle to advance the tip so it points laterally.



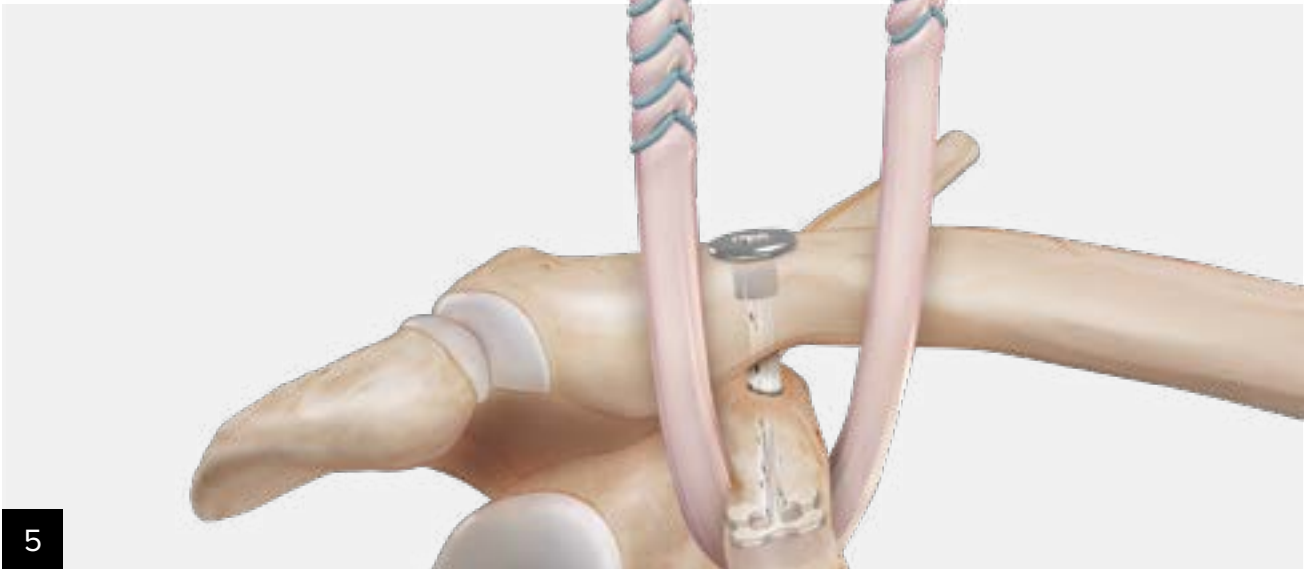
Pass a FiberStick suture through the cannulation.



Using a grasping instrument, retrieve the FiberStick suture anterior to the clavicle and lateral to the coracoid. Remove the passer once the FiberStick suture is retrieved.



Tie the medial limb of the FiberStick suture to one end of the flexible obturator and tie the whipstitched sutures from the graft to the other end. Shuttle the obturator medial to lateral until it passes fully around the coracoid. Continue to pull until the graft is around the coracoid.



The medial graft limb may be passed posterior on the clavicle to better represent the anatomic footprint of the conoid ligament. Use the coracoid passer posterior to anterior around the clavicle and pass a FiberStick suture or nitinol wire through the cannulation. Shuttle the whipstitched sutures to bring the graft limb posterior.



Sew the graft limbs together on top of the clavicle to complete the repair.



## Ordering Information

### Low-Profile AC Repair System (AR-2371)

Product Description	Item Number
Low-profile AC implant	AR-2370
Dog Bone™ button	AR-2270
Drill, cannulated for AC repair, 3 mm	AR-2257D-30
Countersink, 5.1 mm	AR-2374
SutureLasso™ SD suture passer wire loop	AR-4068-05SD

### Required Implants

Product Description	Item Number
BioComposite SwiveLock® suture anchor, vented, 3.5 mm × 15.8 mm	AR-2325BCC
BioComposite SwiveLock® C suture anchor, closed eyelet, 4.75 mm × 19.1 mm	AR-2324BCC
FiberTape® braided polyblend suture, blue, 2 mm	AR-7237-7

### Required Instruments

Product Description	Item Number
AC target guide, left	AR-2253L
AC target guide, right	AR-2253R
AC drill guide assembly	AR-2373
ACL guide frame handle assembly	AR-1510H
Drill sleeve, 3 mm	AR-2255CG-05
AC wire passer	AR-2252
FiberTape® cerclage tensioner, reusable	AR-7800
FiberTape® cerclage tensioner ratcheting handle, reusable	AR-7801
<i>Internal</i> Brace™ AC repair drill guide	AR-2276-05
SwiveLock®, drill, 3.5 mm	AR-2325D-ST
SwiveLock®, drill, 4.75 mm	AR-2276D

### Required Disposables

Product Description	Item Number
Flexible obturator	AR-2275

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