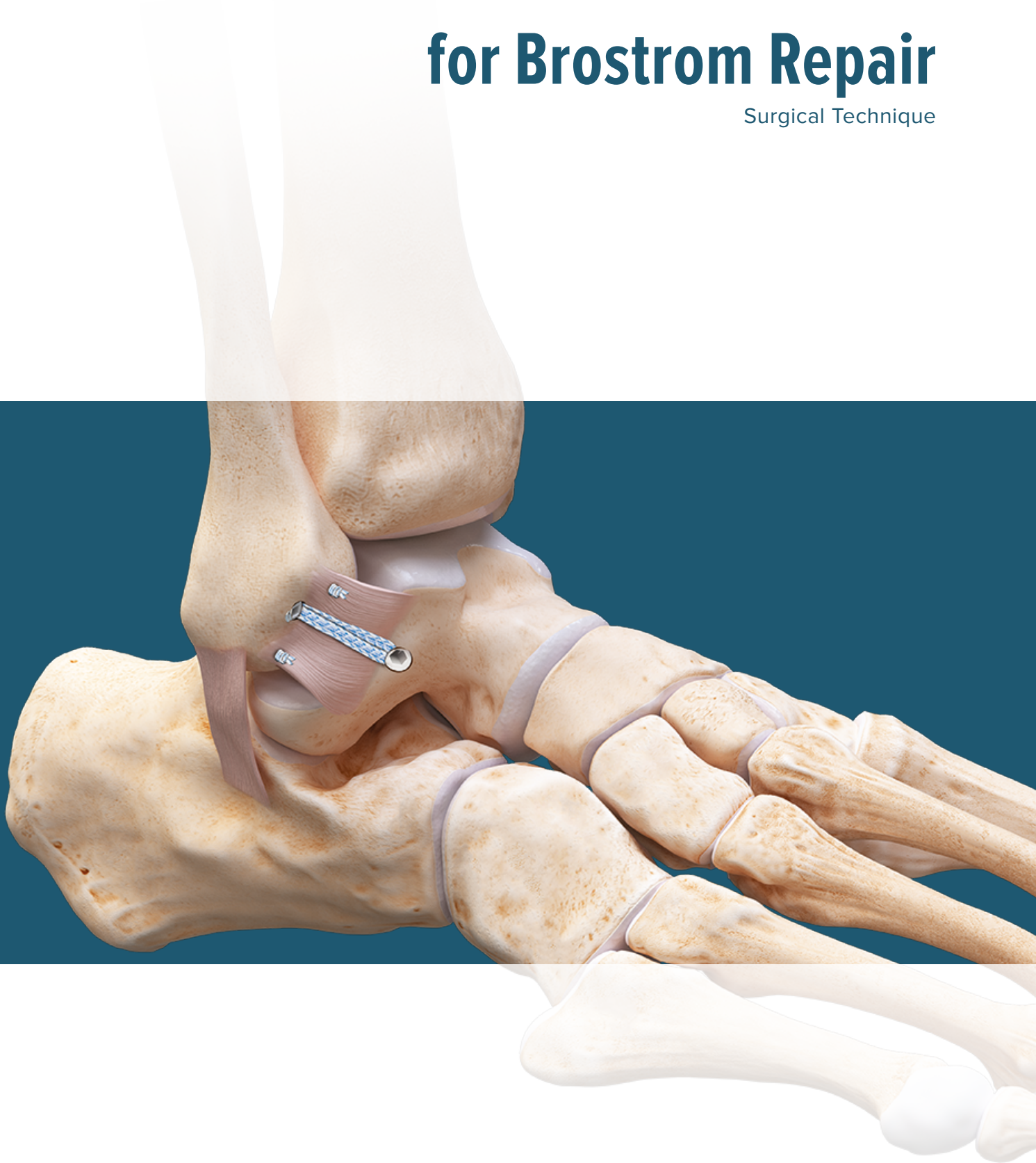


# *Internal/Brace*<sup>™</sup> Procedure for Brostrom Repair

Surgical Technique



## Brostrom Repair With *InternalBrace*™ Augmentation

*InternalBrace* ligament augmentation is a simple technique that may be used to overcome the shortcomings of the Brostrom repair. Standard repair with *InternalBrace* augmentation exceeds the native ATFL strength,<sup>1</sup> does not violate normal tissue, and helps protect the ligament repair while it matures, allowing early mobility during recovery and a quicker return to activity.<sup>2</sup>

- Talus Offset Guide – Reproducible Anatomic Placement
  - Uniquely patented design for reproducible placement of the talar SwiveLock anchor. Place the guide wire, drill, tap, and insert the anchor through the same guide without losing your position
  - Reproducible and simple targeting of talar SwiveLock fixation
- Radiopaque Marker and Laser-Line Window on SwiveLock® Driver
  - Line-to-line targeting completely eliminates guesswork to determine whether the anchor is completely seated or countersunk, if desired
- Accurate and Simple Bone Preparation
  - Cannulated or solid drill and tap options

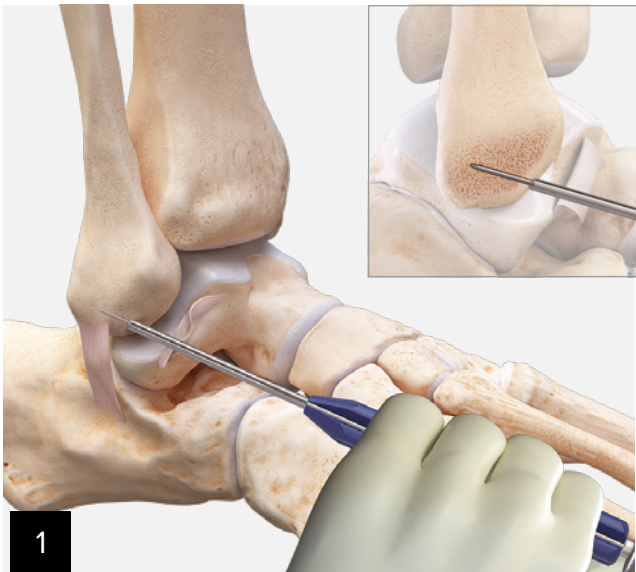
### References

1. Viens NA, Wijdicks CA, Campbell KJ, Laprade RF, Clanton TO. Anterior talofibular ligament ruptures, part 1: biomechanical comparison of augmented Brostrom repair techniques with the intact anterior talofibular ligament. *Am J Sports Med.* 2014;42(2):405-411. doi:10.1177/0363546513510141.
2. Coetzee JC, Ellington JK, Ronan JA, Stone RM. Functional results of open Brostrom ankle ligament repair augmented with a suture tape. *Foot Ankle Int.* 2018;39(3):304-310. doi:10.1177/1071100717742363.

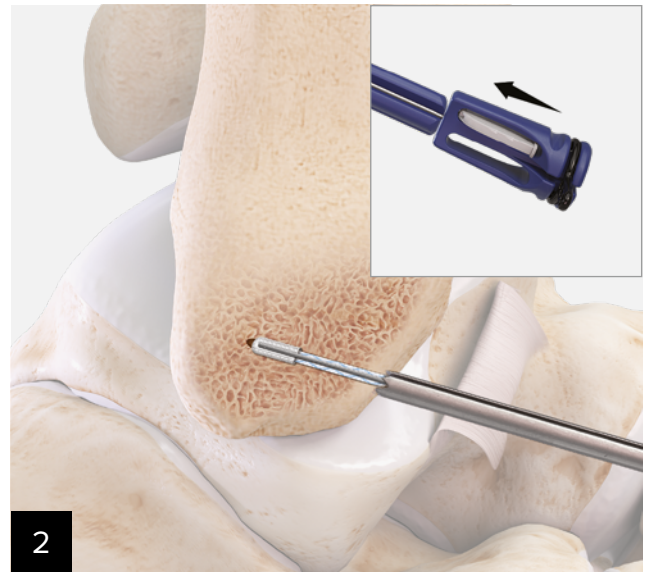
## *InternalBrace*™ Ligament Augmentation 2.0



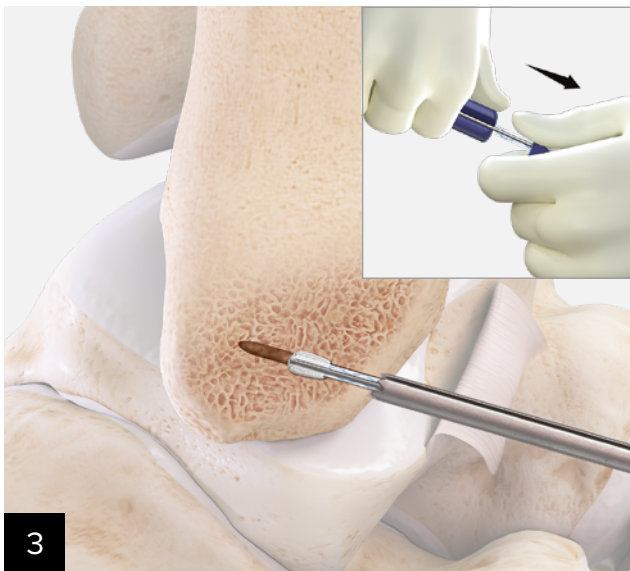
## Brostrom Repair With *Internal/Brace*™ Ligament Augmentation



Measure approximately 1 cm from the distal tip of the fibula and use the DX FiberTak drill guide and a 1.35-mm guide wire to create a bone tunnel. The drill should be inserted to the automatic stop at the back of the drill guide.



Keeping the drill guide in place, insert the DX FiberTak anchor and impact it until the handle is flush with the guide.

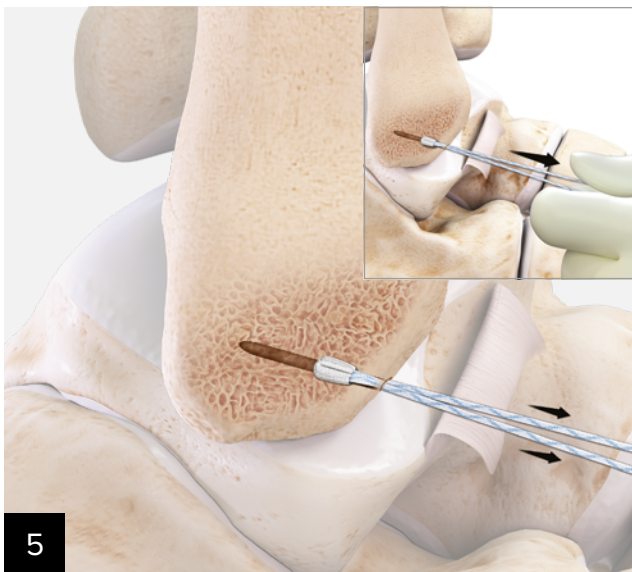


Pull back on the anchor handle about 5 - 8 mm behind the drill guide to seat the anchor against the cortical bone.



Remove the suture-release tab, needle protector, and suture from the anchor body. The open slot of the drill guide allows for easy removal of the sutures from the drill guide.

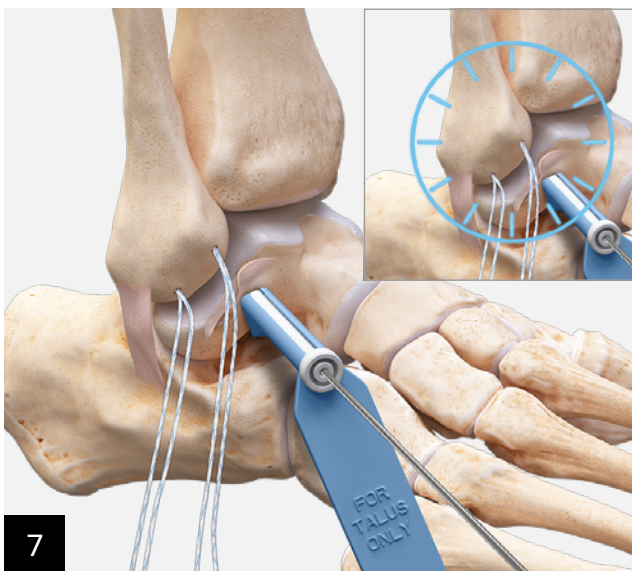
## Brostrom Repair With *Internal/Brace*™ Ligament Augmentation



After removing the drill guide, set the anchor in the bone by pulling back on the sutures.



Repeat steps 1 - 5 with the second DX FiberTak anchor, placed about 2 cm from the distal tip of the fibula. After firmly placing the second anchor in the bone, the *Internal/Brace* augmentation can be performed.

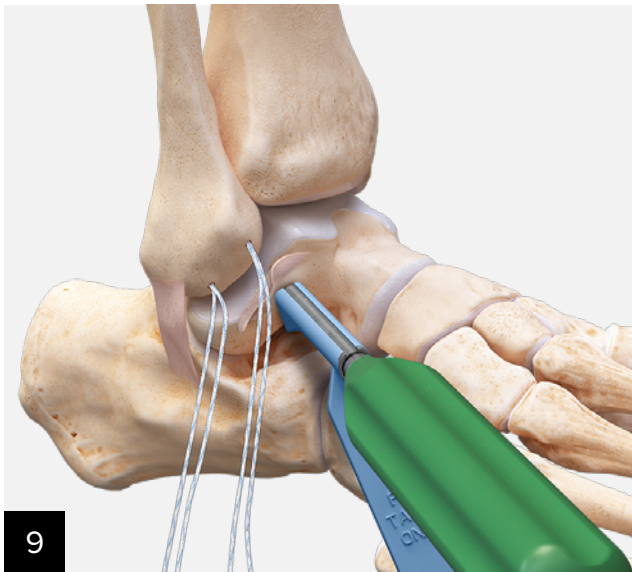


Position the talar offset guide firmly within the sinus tarsi, which is roughly 2 cm from the lateral talar process. Angle the guide approximately 40° - 45° to the sagittal plane and parallel with the longitudinal line of the foot (4:30 position on clock face for right foot, 7:30 for left foot). Insert a guide wire into the white insert of the guide for cannulated drilling, or remove the white insert if solid drilling is preferred.

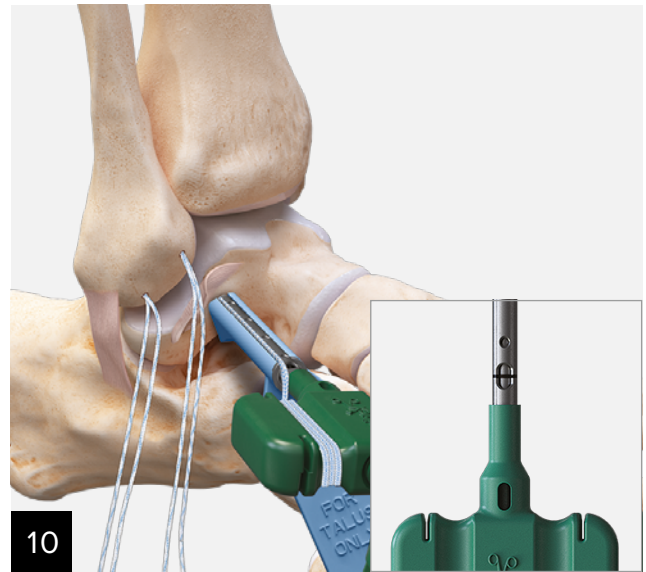


Through the talus offset guide, proceed to use the 3.4-mm drill for the 4.75 mm SwiveLock anchor.

## Brostrom Repair With *Internal/Brace*™ Ligament Augmentation



Through the guide, tap the tunnel to the laser line on the 4.75-mm tap (green handle).



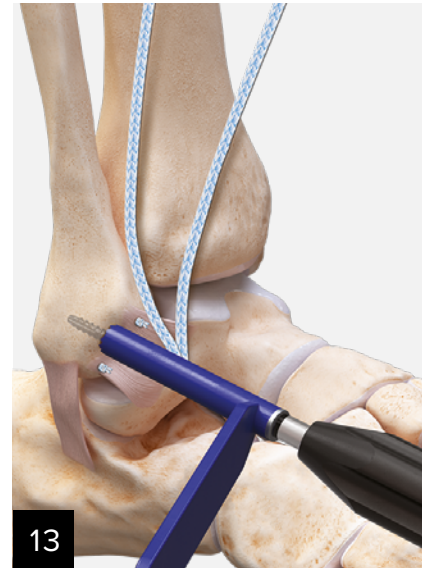
Insert the preloaded 4.75 mm SwiveLock anchor and FiberTape suture into the talar hole through the offset guide. Hold the square tab in place and turn the pear-shaped driver until the laser line can be seen in the window of the inserter. When the line appears, the anchor is flush. When the line is centered, the anchor is countersunk.



With the foot in maximum dorsiflexion and eversion, using the 1.3 mm SutureTape and needles from the DX FiberTak anchors, proceed to pass the sutures through the soft tissue and tie them down to the fibula to complete the Brostrom repair.



Measure 15 mm from the distal tip of the fibula and proceed to drill with a 3.4-mm drill.



Use the 3.5-mm tap (black handle) and tap through the guide to prepare the bone tunnel for the 3.5 mm SwiveLock anchor.

## Brostrom Repair With *Internal/Brace*™ Ligament Augmentation



14

Pass both limbs of the FiberTape suture through the eyelet of the 3.5 mm SwiveLock anchor.

**Tensioning:** With the foot in neutral inversion / eversion with approximately 10° - 15° of plantar flexion, place the eyelet at the drill hole and mark the FiberTape suture at the laser line. **Slide the eyelet to the line and insert into the drilled hole.**

**Optional:** Prior to final tensioning, insert the tip of a small curved hemostat between the FiberTape suture and the ATFL.



15

Cut the excess FiberTape suture to complete the repair with augmentation.



16

Final fixation of the Brostrom repair with *Internal/Brace* ligament augmentation.



17

**Optional:** Final fixation adding a 4.75 mm SwiveLock anchor to the calcaneus, augmenting the CFL in addition to the ATFL repair. When adding this limb from a single anchor in the fibula, be sure to place the anchor in the fibula just slightly inferior to the anatomic insertion of the ATFL.



18

Alternative option if 2 independent constructs are preferred.

## Ordering Information

### InternalBrace™ Implant System, PEEK

Product Description	Item Number
SwiveLock®, PEEK, 3.5 mm × 13.5 mm SwiveLock®, PEEK, 4.75 mm × 16.1 mm, with #2 FiberTape® Drill, 2.7 mm Drill, cannulated, 2.7 mm Drill, 3.4 mm Drill, cannulated, 3.4 mm Drill guide, with metal insert for talus Drill guide, with metal insert Tap, cannulated, for 3.5 mm SwiveLock® Tap, cannulated, with trocar tip, for 4.75 mm SwiveLock® guide wire, Guide wire sleeve Suture-passing wire, nitinol, 200 mm Free needle	<b>AR-1778P-CP</b>

### InternalBrace™ Implant System, PEEK

Product Description	Item Number
SwiveLock®, BioComposite, 3.5 mm × 15.8 mm SwiveLock®, BioComposite, 4.75 mm × 19.1 mm, with #2 FiberTape® Drill guide Drill, cannulated, 2.7 mm Drill, 2.7 mm Drill, 3.4 mm Tap, for 3.5 mm SwiveLock® Tap, for 4.75 mm SwiveLock® Guide wire, with trocar tip, 1.35 mm Free needles, qty. 2 Suture-passing wire, nitinol, 200 mm	<b>AR-1678-CP</b>

### DX FiberTak® Suture Anchor

Product Description	Item Number
DX FiberTak® suture anchor, with #1 FiberWire® suture and diamond-point needles, 26.2 mm ½ circle	<b>AR-8990-1</b>
DX FiberTak® SutureTape suture anchor, with 1.3 mm SutureTape and tapered point needles, 26.2 mm ½ circle	<b>AR-8990ST-1</b>
DX FiberTak® SutureTape suture anchor, double loaded with 0.9 mm SutureTape and tapered point needles, 26.2 mm ½ circle	<b>AR-8990ST-2-1</b>

### DX FiberTak® Disposables Kit

Product Description	Item Number
Guide wire, 1.35 mm Guide wire, 1.6 mm DX FiberTak® drill sleeve	<b>AR-8990DS-1</b>

### DX FiberTak® Reusable Instruments

Product Description	Item Number
Guide wire, 1.35 mm Guide wire, 1.6 mm DX FiberTak® drill guide	<b>AR-8990K-135S</b> <b>AR-8990K-16S</b> <b>AR-8990G</b>

### DX SwiveLock® Anchor

Product Description	Item Number
DX SwiveLock®, PEEK, 3.5 mm × 13.5 mm DX SwiveLock®, PEEK, 4.75 mm × 16.1 mm	<b>AR-8979P-1</b> <b>AR-8980P-1</b>

### 3.5 mm DX SwiveLock® Disposables Kit

Product Description	Item Number
Drill guide Drill, 3 mm Drill, 3.4 mm Bone tap	<b>AR-8979DS</b>

### 4.75 mm DX SwiveLock® Disposables Kits

Product Description	Item Number
Drill guide Drill, 3.4 mm Bone tap	<b>AR-8980DS</b>
Drill, cannulated, 3.4 mm K-wire Bone tap	<b>AR-8980DSC</b>

### Reusable Instruments

Product Description	Item Number
Drill guide Drill, 2.7 mm, for 3.5 mm SwiveLock® Tap, for 3.5 mm SwiveLock® Drill, 3.4 mm, for 4.75 mm SwiveLock® Tap, for 4.75 mm SwiveLock®	<b>AR-1678-01</b> <b>AR-1678-05-RU</b> <b>AR-1678-03</b> <b>AR-8980-03</b> <b>AR-8980-04</b>

### Reusable Talus Drill Guide Instruments

Product Description	Item Number
Talus drill guide Guide wire sleeve Drill, cannulated, 2.7 mm, for 3.5 mm SwiveLock® Tap, cannulated, for 3.5 mm SwiveLock® Drill, cannulated, 3.4 mm, for 4.75 mm SwiveLock® Tap, cannulated, for 4.75 mm SwiveLock®	<b>AR-1678C-01</b> <b>AR-1678C-02</b> <b>AR-1678C-04</b> <b>AR-1678C-06</b> <b>AR-1678C-03</b> <b>AR-1678C-05</b>

### Disposables

Product Description	Item Number
Guide wire, with trocar tip, 1.35 mm × 165 mm Guide wire, with trocar tip, 1.35 mm × 150 mm Guide wire, with trocar tip, 1.35 mm × 150 mm, sterile	<b>AR-1678K</b> <b>AR-8737-01</b> <b>AR-8737-01S</b>

### Optional Instruments

Product Description	Item Number
Drill bit, for very hard bone, 4 mm, sterile Bone tap, cannulated, AO, 3.5 mm Bone tap, cannulated, AO, 4.75 mm	<b>AR-1788-40S</b> <b>AR-1788T-35S</b> <b>AR-1788T-475S</b>



This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of specific Arthrex products. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations in product usage and technique. In doing so, the medical professional should rely on their own training and experience, and should conduct a thorough review of pertinent medical literature and the product's directions for use. Postoperative management is patient-specific and dependent on the treating professional's assessment. Individual results will vary and not all patients will experience the same postoperative activity level and/or outcomes.

View U.S. patent information at [www.arthrex.com/corporate/virtual-patent-marking](http://www.arthrex.com/corporate/virtual-patent-marking)

**arthrex.com**

© Arthrex GmbH, 2022. All rights reserved. LT2-000160-en-US\_D

