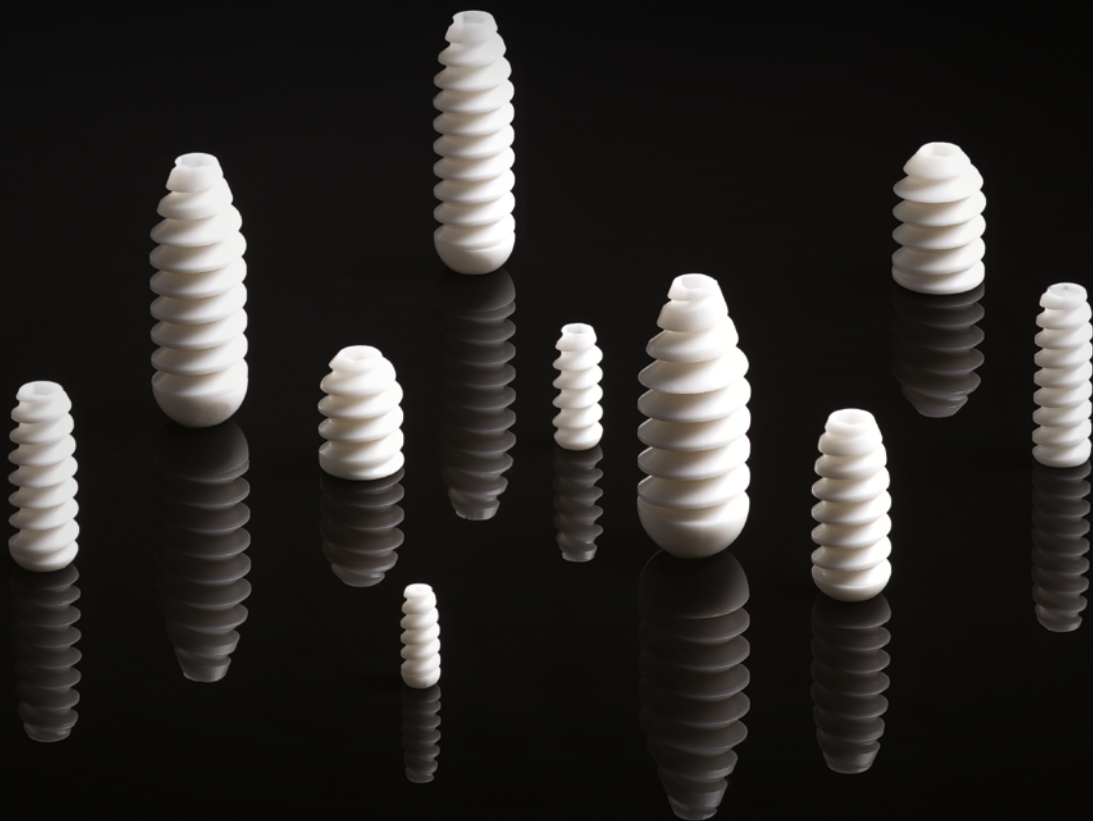


Tenodesis Screw System

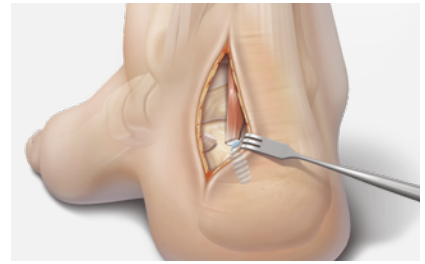
Product Information



Arthrex® 

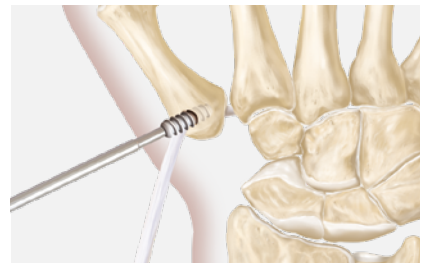
Foot and Ankle

Achilles repair, lateral stabilizations, and FDL / FHL tendon transfers



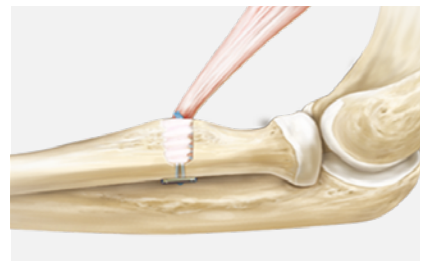
Hand and Wrist

Ligament reconstruction tendon interposition (LRTI), scapholunate ligament reconstruction, and collateral ligament reconstruction



Elbow

UCL and distal biceps tendon repair



Shoulder

Proximal biceps tendon repair and rotator cuff repair





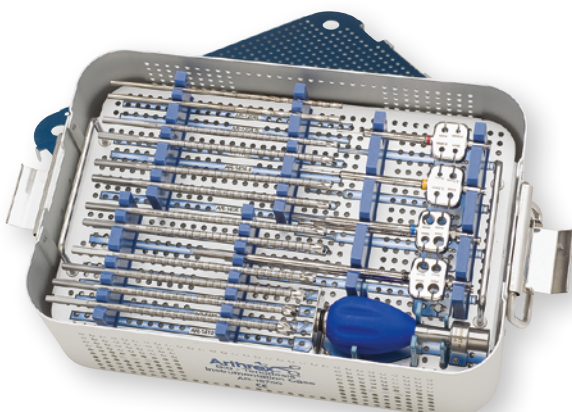
The tenodesis screw system eliminates transosseous tunnels in tendon repairs and ligament reconstructions. Tenodesis screws may be used in conjunction with # 2 or # 2-0 FiberWire suture to facilitate intraoperative tissue-tensioning and fixation in a predrilled socket. The predrilled socket minimizes incision length, dissection, and overall morbidity. BioComposite and vented PEEK tenodesis screw insertion provides fixation for foot and ankle indications such as Achilles repair, FDL / FHL tendon transfers, and lateral ligament stabilization.^{1,2,3}

The system can also be used for applications in the hand and elbow. This construct allows for direct tendon-to-bone healing, without hardware prominence.

Reference

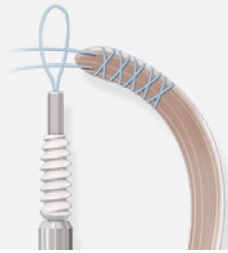
1. Benca E, Willeger M, Wenzel F, et al. Biomechanical evaluation of two methods of fixation of a flexor hallucis longus tendon graft. *Bone Joint J.* 2018;100-B(9):1175-1181. doi:10.1302/0301-620X.100B9.BJJ-2018-0100.R2.
2. Schuberth JK, Smith PR, Jennings MM. An anatomic and autologous lateral ankle stabilization. *J Foot Ankle Surg.* 2009;48(6):700-705. doi:10.1053/j.jfas.2009.07.006. Epub 2009 Sep 10.
3. Jeys LM, Harris NJ. Ankle stabilization with hamstring autograft: a new technique using interference screws. *Foot Ankle Int.* 2003;24(9):677-679. doi:10.1177/107110070302400904.

Tenodesis master instrument set – AR-1675S

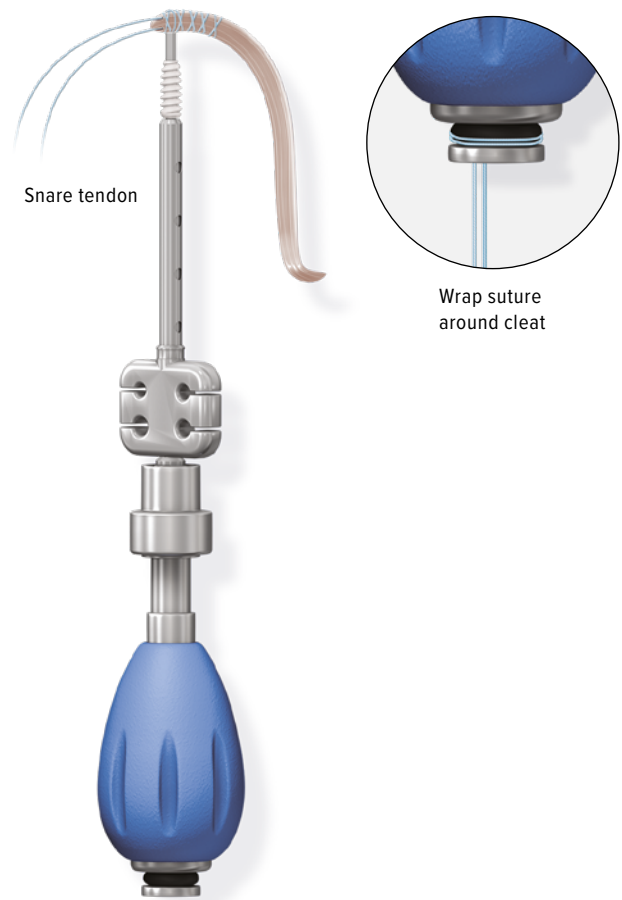


Creation of the FiberWire® Suture Loop

Nitinol suture-passing wire is used to load the FiberWire suture loop, which is then used to pass the tendon through.



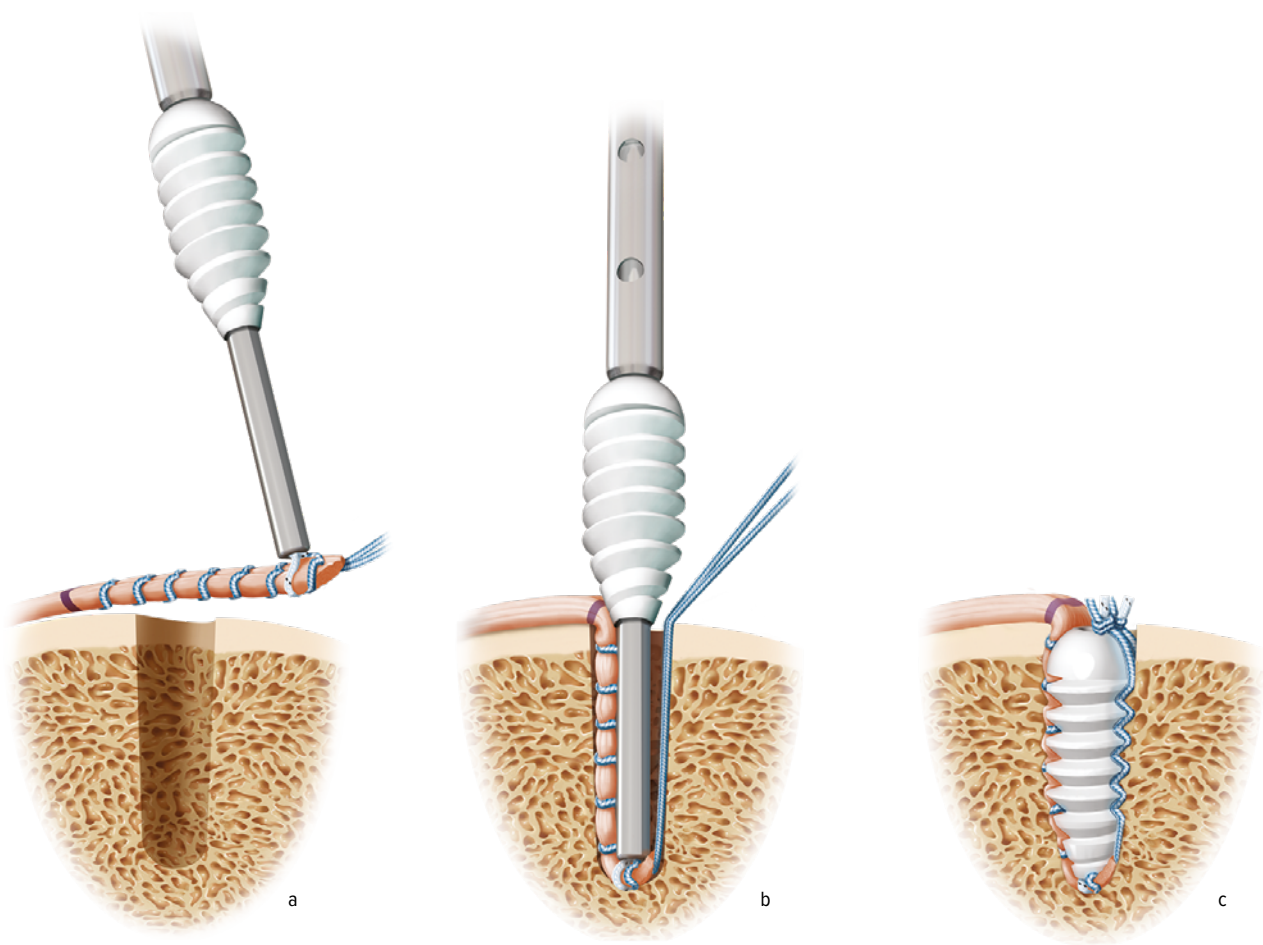
A FiberWire suture loop at the tip of the driver is created to snare the tendon so it can be placed in the bone tunnel. The FiberWire suture loop is created by a disposable nitinol suture-passing wire and # 2 FiberWire suture found in the tenodesis disposables kit. Snare the tip of the whipstitched tendon 2 mm from the end of the graft. Place tension on the sutures exiting the back of the tear drop handle and wrap them once around the O-ring inside the cleat, as shown. It is important to maintain maximum tension between the driver tip and the tendon during initial placement of the tendon in the tunnel.



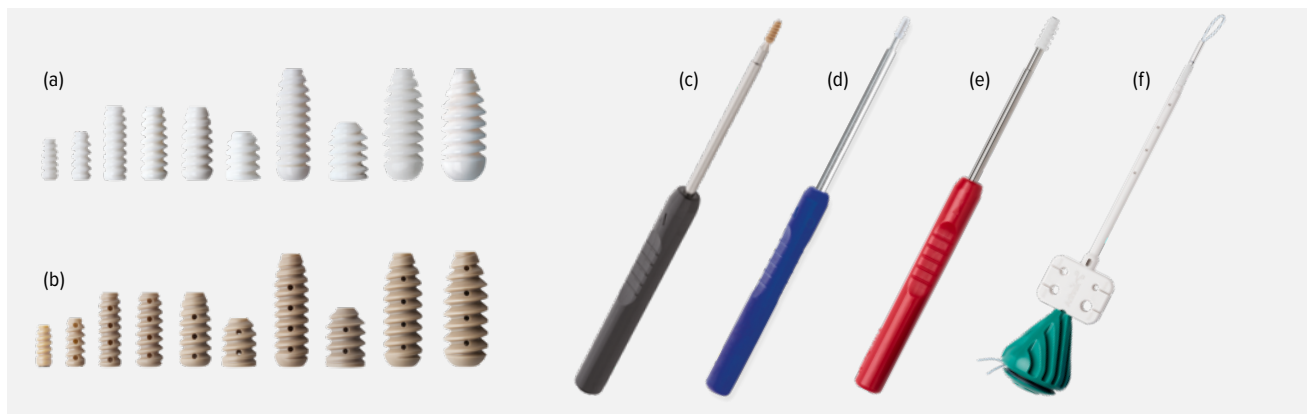
Pilot Hole Surgical Technique

- Determine the anatomic attachment site and use a power drill to insert a guide pin
- Create a bone socket to a depth 2 mm longer than the screw used. An optional tap may be used if extra hard bone is encountered
- Tension the tendon graft anatomically over the socket and draw a line on the tendon at the inner socket rim to mark the appropriate tensioned graft length
- Pass the FiberLoop suture over the free end of the graft. Pass the needle through the graft at the proximal starting point. After passing and tensioning the first stitch, spread the suture strands on either side of the graft and drop the graft between the strands. Pass the needle through the graft distal to the first pass, towards the end of the graft. Repeat this process until the desired stitching length is obtained
- Insert the appropriately sized screw onto the tenodesis driver and create a FiberWire suture loop around the tendon the length of the screw, away from the mark (a)
- Insert the extended tenodesis driver tip into the socket with the graft end until the mark lies over the socket rim (b)
- Insert the screw, maintaining tension on the graft. After full insertion of the screw, remove the driver and tie the graft-passing sutures exiting the screw / socket interface with the FiberWire suture loop exiting the screw cannulation over the screw rim as additional fixation (c)

Note: Please use the reference chart to help select the appropriate implant, driver, and diameter for the reamed socket.



Tenodesis, BioComposite and PEEK



The tenodesis screw system has been developed for the bony refixation of tendons and ligaments. With a comprehensive product line including BioComposite and PEEK, the system provides superior and immediate fixation for hand, wrist, and elbow procedures such as LRTI for CMC arthroplasty, collateral ligament reconstruction, and biceps tendon repair.

Implants

| Product Description | Item Number |
|--|--------------|
| BioComposite Tenodesis Screws (a) | |
| 3 mm × 8 mm, with handled inserter (d) | AR-1530BC |
| 4 mm × 10 mm | AR-1540BC |
| 4 mm × 10 mm, with disposable driver, qty. 5 | AR-1540CDS |
| 4 mm × 10 mm, with disposable driver (e) | AR-1540CDS-1 |
| 4.75 mm × 15 mm | AR-1547BC |
| 4.75 mm × 15 mm, with disposable driver, qty. 5 | AR-1547CDS |
| 4.75 mm × 15 mm, with disposable driver (f) | AR-1547CDS-1 |
| 5.5 mm × 15 mm | AR-1555BC |
| 5.5 mm × 15 mm, with disposable driver, qty. 5 | AR-1555CDS |
| 5.5 mm × 15 mm, with disposable driver | AR-1555CDS-1 |
| 6.25 mm × 15 mm | AR-1562BC |
| 6.25 mm × 15 mm, with disposable driver, qty. 5 | AR-1562CDS |
| 6.25 mm × 15 mm, with disposable driver | AR-1562CDS-1 |
| 7 mm × 10 mm | AR-1670BC |
| 7 mm × 23 mm | AR-1570BC |
| 8 mm × 12 mm | AR-1680BC |
| 8 mm × 23 mm | AR-1580BC |
| 9 mm × 23 mm | AR-1590BC |
| PEEK Tenodesis Screws (b) | |
| 2.5 mm × 6 mm, with handled inserter, qty. 5 (c) | AR-1525PS |
| 2.5 mm × 6 mm, with handled inserter | AR-1525PS-1 |
| 3 mm × 8 mm, with handled inserter | AR-1530PS |
| 4 mm × 10 mm | AR-1540PS |
| 4.75 mm × 15 mm | AR-1547PS |
| 5.5 mm × 15 mm | AR-1555PS |
| 6.25 mm × 15 mm | AR-1562PS |
| 7 mm × 10 mm | AR-1670PS |
| 7 mm × 23 mm | AR-1570PS |
| 8 mm × 12 mm | AR-1680PS |
| 8 mm × 23 mm | AR-1580PS |
| 9 mm × 23 mm | AR-1590PS |

Tenodesis Screw Master Set (AR-1675S)

| Product Description | Item Number |
|--|------------------|
| Drill, cannulated, 4 mm | AR-1204L |
| Drill, cannulated, 4.5 mm | AR-1204.5L |
| Headed reamers, cannulated, 5 - 10 mm | AR-1405 to -1410 |
| Sizes: 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9 and 10 mm | |
| Teardrop handle, with suture cleat | AR-2001BT |
| Driver, for 10 mm tenodesis screws | AR-1540DB |
| Driver, for 10 and 12 mm tenodesis screws | AR-1670DB |
| Driver, for 15 mm tenodesis screws | AR-1350D |
| Driver, for 23 mm Bio-Tenodesis™ screws | AR-1570DB |
| Bio-Tenodesis™ screw instrumentation case | AR-1675C |

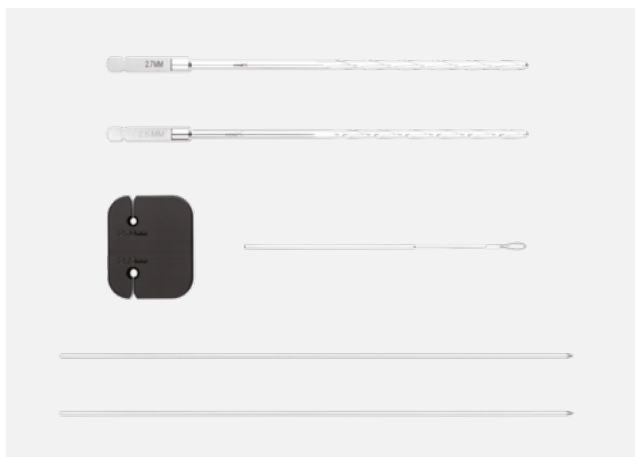
Disposables

| Product Description | Item Number |
|---|-------------|
| Disposables kit for 2.5 mm × 6mm tenodesis screw, qty. 5 | AR-1525DS |
| Disposables kit for 2.5 mm × 6 mm tenodesis screw, qty. 1 | AR-1525DS-1 |
| Disposables kit for 3 mm × 8 mm tenodesis screw, qty. 3 | AR-1530DS |
| Disposables kit for 3 mm × 8 mm tenodesis screw, qty. 1 | AR-1530DS-1 |
| Bio-Tenodesis™ disposables kit, qty. 5 | AR-1676DS |
| Bio-Tenodesis™ disposables kit, qty. 1 | AR-1676DS-1 |

Accessories (Optional)

| Product Description | Item Number |
|----------------------|-------------|
| Tenodesis Tap | |
| 4 mm × 10 mm | AR-1540T |
| 4.75 mm × 15 mm | AR-1547T |
| 5.5 mm × 15 mm | AR-1555T |
| 6.25 mm × 15 mm | AR-1562T |
| 7 mm × 10 mm | AR-1670T |
| 7 mm × 23 mm | AR-1570T |
| 8 mm × 12 mm | AR-1680T |

Disposables Kits



Disposable kit AR-1525DS for 2.5 mm x 6 mm tenodesis screw

Disposables Kit for 2.5 mm × 6 mm Tenodesis Screw

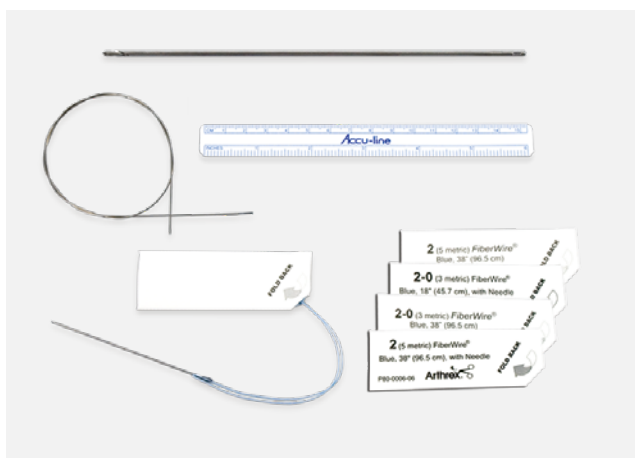
| Product Description | Item Number |
|---|------------------|
| Guide wire, with trocar tip, 1.2 mm, qty. 2 | AR-1525DS |
| Tendon sizer, 2 mm / 2.5 mm | |
| Suture passing wire, 1.1 mm | |
| Drill bit, cannulated, AO, 2.5 mm | |
| Drill bit, cannulated, AO, 2.7 mm | |



Disposable kit AR-1530DS for 3 mm x 8 mm tenodesis screw

Disposable Kit for 3 mm x 8 mm Tenodesis Screw

| Product Description | Item Number |
|---|------------------|
| Guide wire, 1.1 mm | AR-1530DS |
| Suture passing wire, 190.5 mm long (1.1 mm) | |
| Suture passing wire, 203 mm long (74 mm) | |
| Drill bit, AO, cannulated, 2.5 mm | |
| Drill bit, AO, cannulated, 3 mm | |
| Drill bit, AO, cannulated, 3.5 mm | |
| # 2-0 FiberWire® suture, blue, 45.7 cm, with needle | |

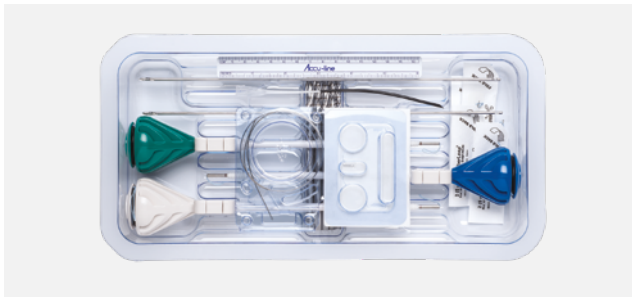


Disposable kit AR-1676DS for all larger tenodesis screws (excl. drill)

Tenodesis Disposables Kit

| Product Description | Item Number |
|---|------------------|
| Guide pin with eyelet, short, 2.4 mm | AR-1676DS |
| Suture passing wire | |
| # 2 FiberWire® suture, blue | |
| # 2 FiberWire® suture, blue, with needle | |
| # 2-0 FiberWire® suture, blue | |
| # 2-0 FiberWire® suture, blue, with needle | |
| FiberLoop® suture, blue, with straight needle | |
| Ruler, 15.2 cm | |

Lateral Ankle Reconstruction Implant System



The implant kit includes BioComposite tenodesis screws, instruments, and accessories, reducing OR inventory and sterilization costs. By using a free graft to recreate the ATFL and CFL ligaments, surgeons are able to achieve a reproducible, rigid, and anatomic reconstruction necessary for patients with ligamentous laxity or surgical revisions.

Lateral Ankle Reconstruction Implant System

| Product Description | Item Number |
|---|---------------------|
| BioComposite tenodesis screw on disposable tenodesis driver: 4.75 mm × 15 mm (fibula) 5.5 mm × 15 mm (talus) 6.25 mm × 15 mm (calcaneus) # 2 FiberWire® suture, blue, 96 mm # 2 FiberLoop® sutures, blue, with straight needle, qty. 3 QuickPass Tendon Shuttle® instrument, small Ruler, 15.2 cm Suture passing wire Guide pin, short, 2.4 mm, qty. 2 Drills, cannulated, 5 mm, 5.5 mm, 6 mm, 6.5 mm | AR-1675BC-CP |

Literature

| Product Description | Item Number |
|--|--------------------|
| Five Comprehensive Solutions for Tendon and Ligament Reconstruction Using the Tenodesis Screw System, brochure | LB2-0005-EN |

Deltoid Reconstruction Implant System



The deltoid ligament reconstruction implant system provides a turnkey repair technique to treat chronic deltoid ligament pathology. By using a free tendon graft to recreate both the superficial and deep bands of the deltoid ligament, surgeons are able to achieve a reproducible, rigid, anatomic reconstruction for patients presenting with chronic medial instability.

Deltoid Ligament Reconstruction Kit

| Product Description | Item Number |
|--|------------------|
| TightRope® RT Implant BioComposite tenodesis screw on disposable tenodesis driver: 4.75 mm × 15 mm (green) 5.5 mm × 15 mm (blue) 6.25 mm × 15 mm (white) Spade tip pin, 4 mm Guide pins with eyelet, 2.4 mm, qty. 3 # 2 FiberLoop® suture, blue, with straight needle, qty. 2 # 2 FiberWire® suture, blue, with single curved needle, qty. 2 # 2 FiberTape® suture, blue, qty. 2 Cortical button on inserter Free needle, curved Drill bits, cannulated, 5, 5.5, 6, and 6.5 mm Ruler, 15.2 cm | AR-8918CP |

Literature

| Product Description | Item Number |
|---|---------------------|
| Deltoid Ligament Reconstruction System, surgical technique | LT1-00002-EN |
| The Arthrex Deltoid Reconstruction Implant System, product and technique highlights | LS2-0418-EN |

CMC Ligament Reconstruction Implant System



The CMC ligament reconstruction implant system provides a convenient all-in-one solution for ligament reconstruction of the base of the thumb. By combining our state-of-the-art tenodesis screw system with a convenient disposables kit, the CMC ligament reconstruction implant system may enable a faster, more convenient repair.

CMC Ligament Reconstruction Implant System

| Product Description | Item Number |
|--------------------------------------|--------------|
| Guide pin | AR-1677BC-CP |
| Drill bit, cannulated, 4 mm | |
| QuickPass Tendon Shuttle® instrument | |
| Tenodesis screw, 4 mm × 10 mm | |
| Tenodesis driver, 4 mm × 10 mm | |
| Suture passing wire, 1.1 mm | |
| Ruler, 15.2 cm | |

Literature

| Product Description | Item Number |
|--|-------------|
| Ligament Reconstruction – Tendon Interposition for Thumb CMC Arthritis, surgical technique | LT1-0410-EN |

FiberLoop® Suture



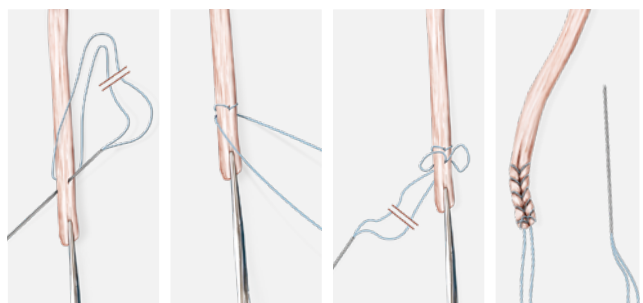
FiberLoop suture is an excellent suture option for multistrand tendon repairs. These small-diameter looped FiberWire suture products allow for strong multistrand flexor and extensor tendon repairs, while reducing tendon damage from multiple needle passes. FiberLoop suture is available with multiple needle options to prevent cutting suture while stitching.

| Product Description | Item Number |
|---|-------------|
| # 2-0 FiberLoop® suture, blue, 35.5 cm, with tapered needle, 18 mm, 3/8 circle | AR-7232-05 |
| # 4-0 FiberLoop® suture, white, 15.2 cm, with tapered needle, 12.7 mm, 1/2 circle (c) | AR-7249-12 |
| # 4-0 FiberLoop® suture, white, 25.4 cm, with tapered needle, 12.7 mm, 1/2 circle | AR-7249-20 |
| # 4-0 FiberLoop® suture, blue, 15.2 cm, with tapered needle, 17.9 mm, 3/8 circle (a) | AR-7229-12 |
| # 4-0 FiberLoop® suture, blue, 25.4 cm with tapered needle, 17.9 mm, 3/8 circle | AR-7229-20 |

Literature

| Product Description | Item Number |
|---|-------------|
| SpeedWhip™ Technique with FiberLoop® and TigerLoop®, surgical technique | LT0135 |

| Product Description | Item Number |
|--|-------------|
| # 2 FiberLoop® suture, blue, 50.8 cm, with straight needle, 76 mm, with 7 mm loop | AR-7234 |
| # 0 FiberLoop® suture, blue, 33 cm, with straight needle, 76 mm, with 7 mm loop | AR-7253 |
| # 0 TigerLoop® suture, white / black, 33 cm, with straight needle, 76 mm, with 7 mm loop | AR-7253T |
| # 2-0 FiberLoop® suture, blue, 76.2 cm, with diamond point needle, 48 mm, 3/8 circle (b) | AR-7232-01 |
| # 2-0 FiberLoop® suture, blue, 60.9 cm, with diamond point needle, 26.2 mm, 3/8 circle (d) | AR-7232-02 |
| # 2-0 FiberLoop® suture, blue, 33 cm, with diamond point straight needle, 64.8 mm | AR-7232-03 |



SpeedWhip tendon preparation technique with FiberLoop suture

Reference Chart

- Implant diameter should be as close to the graft diameter as possible by measuring 0 to 25 mm from the tip of the tendon
- Drill diameter should be 0.5 to 1 mm larger than the tendon diameter, assuming the screw selected is within 1 mm of the tendon diameter
- Drill depth should be 2 mm deeper than the length of the screw selected
- Drill selection is based on the diameter size of the tendon and quality of bone

| Graft Diameter | Implant Diameter | Implant Length | Screw Part Number | Drill Depth | Drill Diameter | Suture Loop | Driver Part Number |
|----------------|------------------|----------------|-------------------|-------------|-------------------|-------------|--------------------|
| 2 - 2.5 mm | 2.5 mm | 6 mm | AR-1525PS | Bicortical | 2.5 or 2.7 mm | N/A | AR-1525DS |
| 2.5 - 3.5 mm | 3 mm | 8 mm | AR-1530BC/PS | Bicortical | 2.5, 3, or 3.5 mm | N/A | AR-1530DS |
| 3 - 4 mm | 4 mm | 10 mm | AR-1540BC/PS | 12 mm | 4 or 4.5 mm | # 2-0 | AR-1540DB |
| 3.5 - 4.5 mm | 4.75 mm | 15 mm | AR-1547BC/PS | 17 mm | 4.5 or 5.5 mm | # 2 | AR-1350D |
| 4.5 - 5.5 mm | 5.5 mm | 15 mm | AR-1555BC/PS | 17 mm | 5.5 or 6.5 mm | # 2 | AR-1350D |
| 4.5 - 5.5 mm | 5.5 mm | 8 mm | AR-1655PS | 17 mm | 5.5 or 6.5 mm | # 2 | AR-1350D |
| 4.5 - 5.5 mm | 5.5 mm | 10 mm | AR-1655PS-10 | 17 mm | 5.5 or 6.5 mm | # 2 | AR-1350D |
| 4.5 - 5.5 mm | 5.5 mm | 12 mm | AR-1655PS-12 | 17 mm | 5.5 or 6.5 mm | # 2 | AR-1350D |
| 5 - 6 mm | 6.25 mm | 15 mm | AR-1562BC/PS | 17 mm | 6 or 7 mm | # 2 | AR-1350D |
| 4.5 - 7 mm | 7 mm | 10 mm | AR-1670BC/PS | 12 mm | 7 or 8 mm | # 2 | AR-1670DB |
| 4.5 - 7 mm | 7 mm | 23 mm | AR-1570BC/PS | 25 mm | 7 or 8 mm | # 2 | AR-1570DB |
| 5.5 - 8 mm | 8 mm | 12 mm | AR-1680BC/PS | 14 mm | 8 or 9 mm | # 2 | AR-1670DB |
| 5.5 - 8 mm | 8 mm | 23 mm | AR-1580BC/PS | 25 mm | 8 or 9 mm | # 2 | AR-1570DB |
| 7 - 9 mm | 9 mm | 23 mm | AR-1590BC/PS | 25 mm | 8 or 10 mm | # 2 | AR-1570DB |



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

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