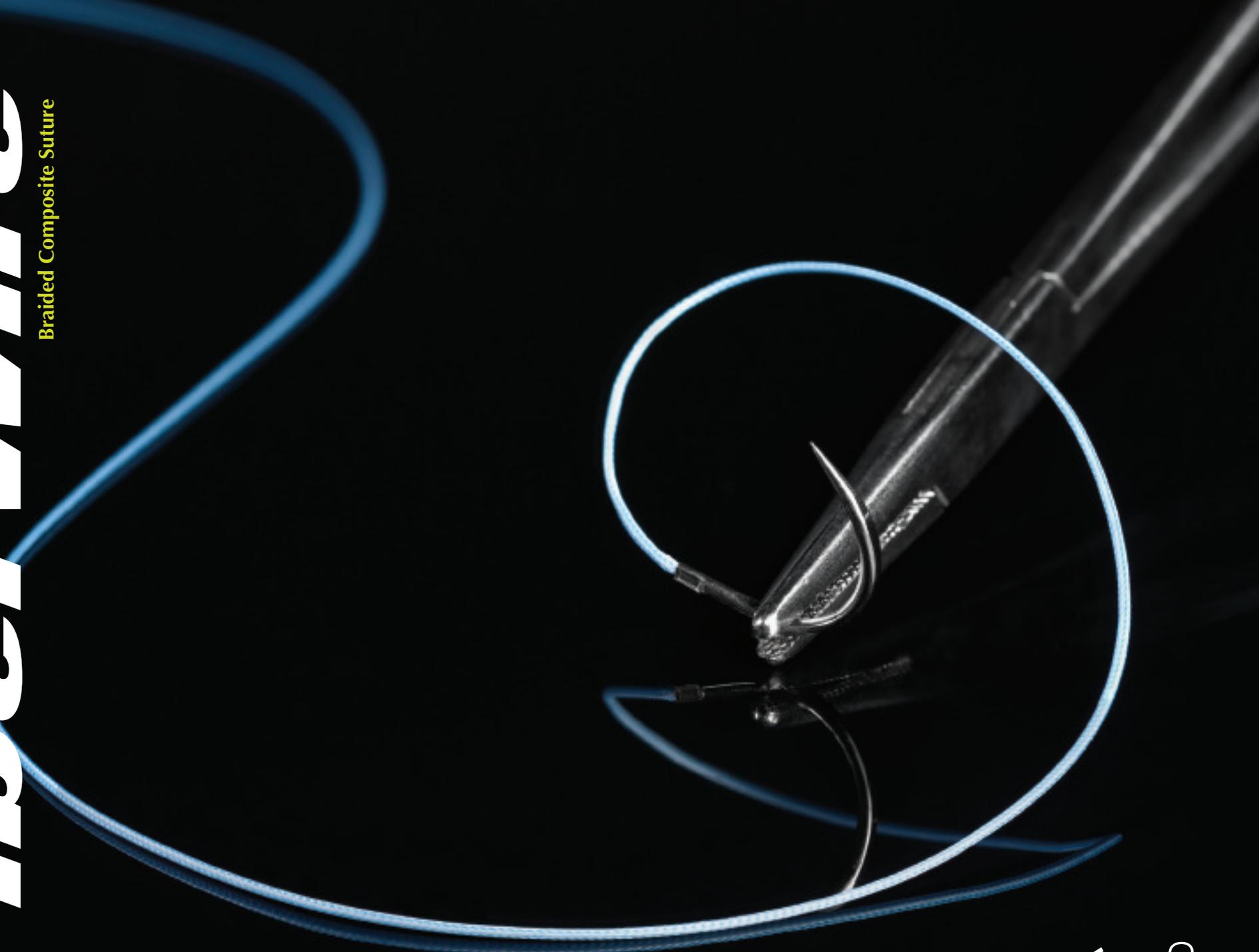


FiberWire[®]

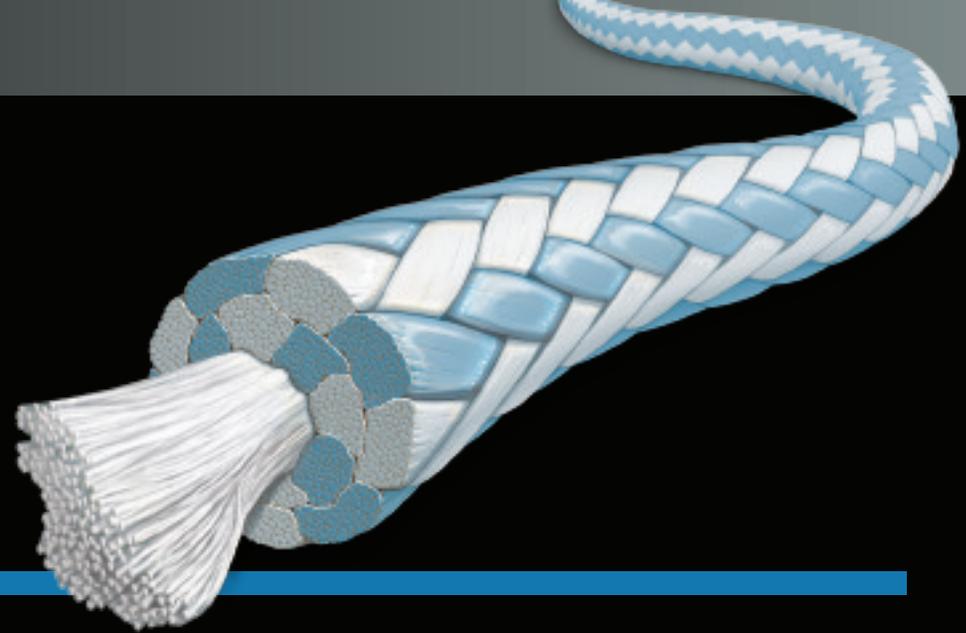
Braided Composite Suture



Arthrex[®] 

REVOLUTIONIZING Orthopaedic Surgery

FiberWire® suture is constructed of a multi-strand, long chain ultra-high molecular weight polyethylene (UHMWPE) core with a braided jacket of polyester and UHMWPE that gives FiberWire superior strength, soft feel and abrasion resistance that is unequaled in orthopaedic surgery. Suture breakage during knot tying is virtually eliminated, which is especially critical during arthroscopic procedures.



Strength

FiberWire has greater strength than comparable size standard polyester suture. Multiple independent scientific studies document significant increases in strength-to-failure, stiffness, knot strength and knot slippage with much less elongation¹.

(References on pg. 6)

Biocompatibility

Extensive biocompatibility, animal and clinical testing prove that FiberWire demonstrates biocompatibility characteristics equivalent to standard polyester suture. Over ten years of successful clinical outcomes in several million orthopaedic procedures substantiate excellent biocompatibility. Biocompatibility, strength and testing results are available upon request².

Tie Ability and Knot Profile

Orthopaedic surgeons enthusiastically endorse FiberWire for its feel and knot tying ability. The first throw stays down, facilitating reproducible tissue repair. Sliding knots advance smoothly easing arthroscopic knot tying procedures. Superior strength allows tighter loop security during knot tying, increasing knot integrity while reducing the knot profile compared to standard polyester suture.

Abrasion Resistance

The multi-strand long chain ultra-high molecular weight polyethylene core dramatically increases FiberWire abrasion resistance. Surgical procedures that create bone edges, tunnel edges, and articulating surface abrasion areas are appropriate indications for FiberWire. FiberWire is more than five times more abrasion resistant than standard polyester suture.

Variety

The FiberWire family range in sizes 4-0 through #5, including designs such as FiberStick, FiberSnare, FiberTape, LabralTape and TigerTail that provide innovative solutions to arthroscopic suture passing. TigerWire has a black spiral thread for easier arthroscopic visualization, identification, sizing and motion detection. FiberLoop is ideal for multi-strand tendon repairs.

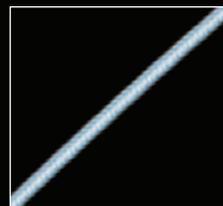
Safety in Numbers

Trusted by leading orthopaedic surgeons worldwide since its introduction in 2001, FiberWire has contributed to successful surgical outcomes in a quarter of a billion orthopaedic procedures ranging from Achilles tendon repair to rotator cuff repair. Multiple scientific publications have confirmed the advantages of FiberWire in orthopaedic surgery^{3,4}.

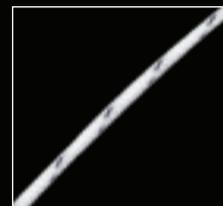
FiberWire

FiberWire suture has greater strength than similarly sized polyester suture with superior feel, smooth tie ability and lower knot profile. FiberWire is the ideal suture for most orthopaedic soft tissue repairs, virtually eliminating suture breakage during knot tying.

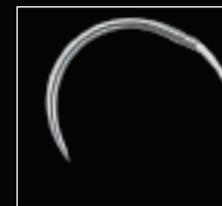
#5 FiberWire, 38 inches (blue)	AR-7210
#5 FiberWire, 38 inches (blue) w/Conventional Cutting Needle, 48 mm ½ circle	AR-7211
#5 FiberWire, 38 inches (1 blue, 1 white, 1 white/black) w/Conventional Cutting Needle, 48 mm ½ circle	AR-7212
#5 FiberWire, 38 inches (blue) w/Conventional Cutting Needle, 48 mm ½ circle, and Tapered Needle, 26.5 mm ½ circle	AR-7213
#2 FiberWire, 38 inches (blue) w/Tapered Needle, 26.5 mm ½ circle	AR-7200
#2 FiberWire, 38 inches (blue) w/Tapered Needle, 26.5 mm ½ circle, collagen coated	AR-7200B
#2 FiberWire, 38 inches (blue) w/Reverse Cutting Needle, 36.6 mm ½ circle	AR-7202
#2 FiberWire, 38 inches (blue) w/two Tapered Needles, 26.5 mm ½ circle	AR-7205
#2 FiberWire, 38 inches (blue) w/Tapered Needle, 36.6 mm ½ circle	AR-7206
#2 FiberWire, 38 inches (1 blue, 1 white/black) w/Tapered Needle, 26.5 mm ½ circle	AR-7208
#2 FiberWire, 38 inches (3 blue, 1 white, 1 white/black) w/Tapered Needle, 26.5 mm ½ circle	AR-7214
#2 FiberWire, 38 inches (1 blue, 1 white/black) w/Reverse Cutting Needle, 36.6 mm ½ circle	AR-7217
#2 FiberWire, 38 inches (blue) w/Diamond Point Needle, straight	AR-7246
#2 FiberWire, 38 inches (blue) w/two Diamond Point Needles, straight	AR-7246-02
#2 FiberWire, 38 inches (blue)	AR-7233
#2 FiberWire, 38 inches (1 blue, 1 white/black)	AR-7201
#2 FiberWire, 38 inches (1 white, 1 blue/black)	AR-7240
#1 FiberWire, 38 inches (blue)	AR-7216
0 FiberWire, 38 inches (white)	AR-7255
0 FiberWire, 38 inches (blue), w/Tapered Needle, 22.2 mm ½ circle	AR-7250
0 FiberWire, 38 inches (blue), w/Diamond Point Needle, 22.2 mm ½ circle	AR-7251
2-0 FiberWire, 18" (blue) w/Tapered Needle, 17.9 mm ¾ circle	AR-7220
2-0 FiberWire, 38" (blue)	AR-7221
2-0 FiberWire, 18" (blue) w/Tapered Needle, 26.5 mm ½ circle	AR-7242
3-0 FiberWire, 18" (blue) w/Diamond Point Needle, 26.2 mm ¾ circle	AR-7225
3-0 FiberWire, 18" (blue) w/Tapered Needle, 15 mm ¾ circle	AR-7227-01
3-0 FiberWire, 18" (blue) w/Reverse Cutting Needle, 16.3 mm ¾ circle	AR-7227-02
4-0 FiberWire, 18" (blue) w/Diamond Point Needle, 18.7 mm ¾ circle	AR-7228
4-0 FiberWire, 18" (blue) w/Tapered Needle, 12.3 mm ¾ circle	AR-7230-01
4-0 FiberWire, 18" (blue) w/Reverse Cutting Needle, 11.9 mm ¾ circle	AR-7230-02
4-0 FiberWire, 18" (white) w/Tapered Needle, 12.7 mm ½ circle	AR-7248



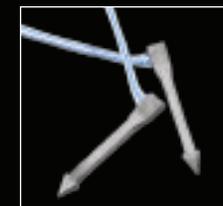
FiberWire



TigerWire



FiberWire Needle

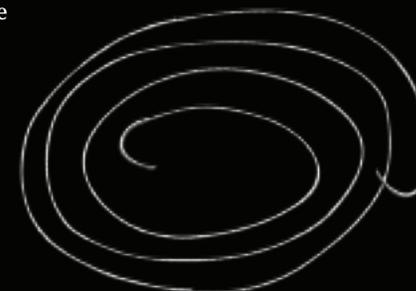


NeedlePunch Needles

TigerWire®

TigerWire suture uses the same high strength construction as FiberWire except that it contains a black marker strand in the suture weave. This strand appears as a stripe in the suture, making suture identification easier during joint reconstruction and soft tissue repairs.

#2 FiberWire, 38" (blue, white/black)	AR-7201
#2 TigerWire, 38" (white/black)	AR-7203
#2 TigerWire, 38" (white/black) w/two Tapered Needles, 26.5 mm ½ circle	AR-7205T
#2 FiberWire, 38" (1 white, 1 blue/black)	AR-7240
#1 TigerWire, 38" (white/black)	AR-7216T



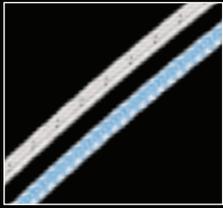
FiberStick™ and TigerStick®

The stiffened end of FiberStick and TigerStick sutures allows convenient and easy advancement through most cannulated instruments or spinal needles, alleviating the need for a monofilament suture or wire suture shuttle. FiberStick and TigerStick come with a thin plastic tube that protects the stiffened suture end until use.

FiberStick, #2 FiberWire, 50" (blue) one end stiffened, 12"	AR-7209
TigerStick, #2 TigerWire, 50" (white/black) one end stiffened, 12"	AR-7209T
2-0 FiberStick, 2-0 FiberWire, 50" (blue) one end stiffened, 12"	AR-7222

NeedlePunch®

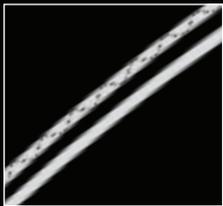
FiberWire Loop w/Needle for NeedlePunch	AR-7204
#2 FiberWire w/two Needles (for side-to-side cuff repairs)	AR-7207
Suture Shuttle, (one to a pack/15 packs to a box)	AR-7224
Suture Shuttle, Long (for thick tissue) (one to a pack/15 packs to a box)	AR-7224L



FiberTape® and TigerTape®

FiberTape is an ultra-high strength 2 mm wide tape using a similar long chain polyethylene structure as the FiberWire suture. In addition to high-demand applications like AC joint reconstruction, the broad footprint of the FiberTape is appropriate for repairs in degenerative cuff tissue where tissue pull-through may be a concern.

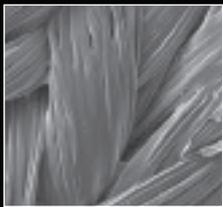
FiberTape, 2 mm, 36" (blue) each end tapered to #2 FiberWire	AR-7237
FiberTape, 2 mm, 7" (blue) each end tapered to #2 FiberWire	AR-7237-7
FiberTape, 2 mm, 7" (blue) each end tapered to #2 FiberWire, collagen coated	AR-7237-7B
FiberTape, 2 mm, 17" (blue) each end tapered to #2 FiberWire w/Tapered Needle, 26.5 mm ½ circle	AR-7237-17N
TigerTape, 2 mm, 7" (white/black) each end tapered to #2 FiberWire	AR-7237-7T
FiberTape Loop, 2 mm, 8" (blue), tapered to #2 FiberWire	AR-7275
TigerTape Loop, 2 mm, 8" (white/black), tapered to #2 TigerWire	AR-7275T



LabralTape™

LabralTape is a smooth, low profile, 1.5 mm specialty tape that is made from polyethylene. This product provides a wider footprint and is 37 percent more resistant to tissue tear-through vs. a #2 suture. LabralTape is the ideal suture for the restoration of labral height in instability repairs.

LabralTape, 1.5 mm, 36 inches (white)	AR-7276
LabralTape, 1.5 mm, 36 inches (white/black)	AR-7276T



Collagen Coated FiberWire

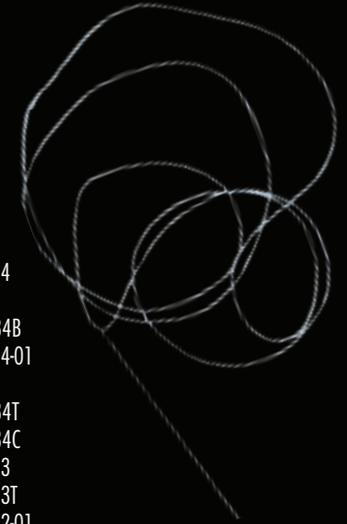
Collagen Coated FiberWire has taken some of the popular FiberWire products and coated them with a Type-1 bovine collagen. This offers our superior mechanical performance along with a softer coating for improved handling characteristics. These sutures are ideal for all knotted and knotless repairs.

#2 FiberWire, 38 inches (blue) w/Tapered Needle, 26.5 mm ½ circle, collagen coated	AR-7200B
#2 FiberLoop w/Straight Needle, 20 inches (blue), 76 mm Needle w/7 mm Loop, collagen coated	AR-7234B
FiberTape, 2 mm, 7 inches (blue) tape w/each end tapered to #2 FiberWire, 30 inches, collagen coated	AR-7237-7B

FiberLoop®

FiberLoop is a suture option for multi-strand tendon repairs. These small diameter looped FiberWire products, in 12- and 20-inch lengths, allow for strong multi-strand flexor and extensor tendon repairs while reducing tendon damage from multiple needle passes. FiberLoop is available with 17.9 mm tapered needles to prevent cutting suture while stitching.

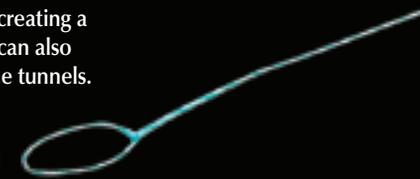
#2 FiberLoop w/Straight Needle, 20" (blue), 76 mm needle w/7 mm loop	AR-7234
#2 FiberLoop w/Straight Needle, 20" (blue), 76 mm needle w/7 mm loop collagen coated	AR-7234B
#2 FiberLoop w/Straight Needle, 20" (white), 76 mm needle w/7 mm loop	AR-7234-01
#2 TigerLoop w/Straight Needle, 20" w/TigerWire (white/green), 76 mm needle w/7 mm loop	AR-7234T
#2 FiberLoop w/Curved Needle, 20" (blue), ½ circle	AR-7234C
0 FiberLoop w/Straight Needle, 13" (blue), 76 mm needle w/7 mm loop	AR-7253
0 TigerLoop w/Straight Needle, 13" (white/black), 76 mm needle w/7 mm loop	AR-7253T
2-0 FiberLoop, 30" (blue) w/Diamond Point Needle, 48 mm ½ circle	AR-7232-01
2-0 FiberLoop, 24" (blue) w/Diamond Point Needle, 26.2 mm ¾ circle	AR-7232-02
2-0 FiberLoop, 13" (blue) w/Diamond Point Straight Needle, 64.8 mm	AR-7232-03
4-0 FiberLoop, 6" (white) w/Tapered Needle, 12.7 mm ½ circle	AR-7249-12
4-0 FiberLoop, 10" (white) w/Tapered Needle, 12.7 mm ½ circle	AR-7249-20
4-0 FiberLoop, 6" (blue) w/Tapered Needle, 17.9 mm ¾ circle	AR-7229-12
4-0 FiberLoop, 10" (blue) w/Tapered Needle, 17.9 mm ¾ circle	AR-7229-20



FiberSnare®

FiberSnare with a closed loop provides an easy one-step approach to creating a FiberWire loop on the tip of the Bio-Tenodesis Driver. The FiberSnare can also be used as a suture shuttle for passage of traction sutures through bone tunnels.

#2 FiberSnare, #2 FiberWire, 26 inches (green) w/¼ inch closed loop, 12 inches stiffened	AR-7209SN
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FiberLink™

The closed loop on FiberLink is designed to facilitate the application of a cinch stitch by simply passing the suture through tissue and feeding the free end through the loop and tensioning. The loop length will ensure the loop fully encapsulates the tissue prior to tapering down to the single strand.

FiberLink, #2 FiberWire, 26" (blue), w/closed loop	AR-7235
TigerLink, #2 FiberWire, 26" (white/black), w/closed loop	AR-7235T



FiberChain®

FiberChain is a single strand #2 FiberWire suture that transitions to chain links of interwoven FiberWire. It is intended for use with SwiveLock® anchors.

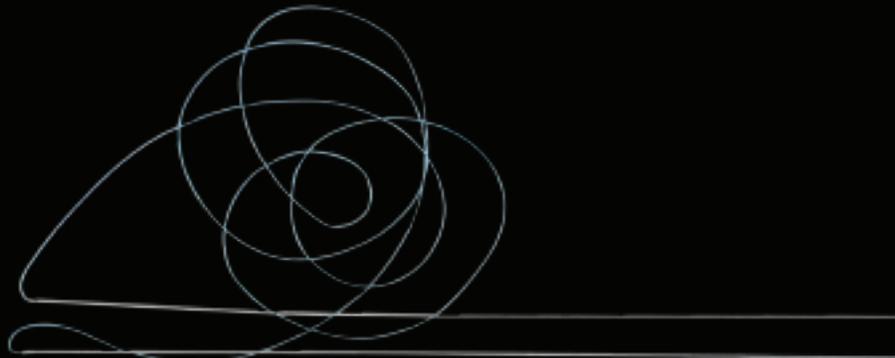
FiberChain, #2 FiberWire w/ten 7 mm long loops (required w/SwiveLock) AR-7270



2-0 FiberWire Meniscus Repair Needles

2-0 FiberWire with Meniscus Needles is an excellent option for standard outside/in meniscus repair. The swedged-on FiberWire suture enables the surgeon to efficiently slide low profile knots, while creating the strongest suture repair possible. The stainless steel meniscal needles easily pass through meniscal and soft tissues.

2-0 FiberWire Meniscus Repair Needles AR-7223
 2-0 FiberWire Meniscus Repair Needles, small AR-7223SM



FiberWire Suture Kit

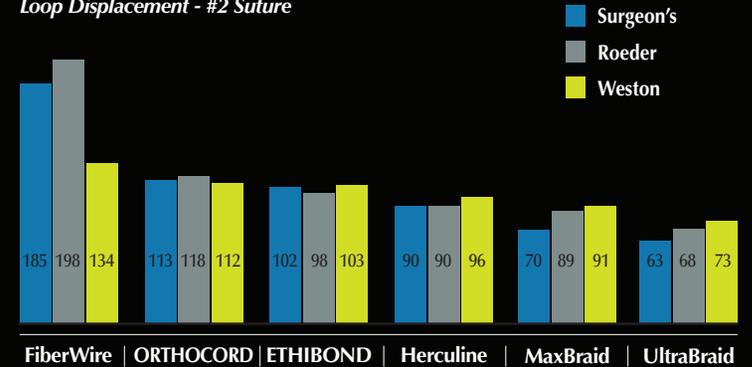
The FiberWire Suture Kit is available for larger complex soft tissue approximation procedures. This kit contains a total of 18 sutures including three different colored versions of #5 FiberWire for easy suture differentiation, large cutting Spring Eye Free Needles, and #2 FiberWire in one convenient package.

FiberWire Suture Kit AR-7219



Knot Security

Average Force (N) Causing 3 mm Loop Displacement - #2 Suture

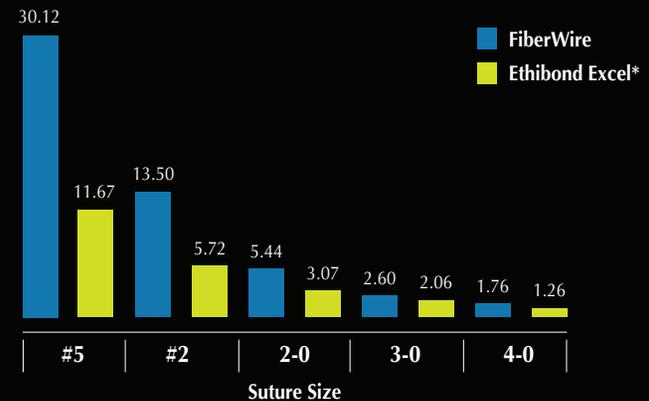


Suture Products

Data on file

Knot Strength Comparison

Peak Load in KG Force (average)



* ETHIBOND EXCEL is a registered trademark of Johnson & Johnson



Suture Cutters



FiberTape Cutter

Suture Cutters

The Suture Cutter's precision jaws prevent knot cutting by leaving a length of reproducible suture tail, 3 mm for the 4.2 mm outer diameter cutter and 1 mm for the 2.75 mm outer diameter cutters, without direct visual control. The blunt tip of the cutter is excellent for knot pushing.

The open-ended Suture Cutter was designed to speed up the suture cutting process. This cutter allows for quick and efficient suture tail cutting under direct visual control through the same or alternate cannula or portal. The notch on the side of the cutter tip automatically guides the suture tails into the front cutting slot for an accurate cut from any angle.

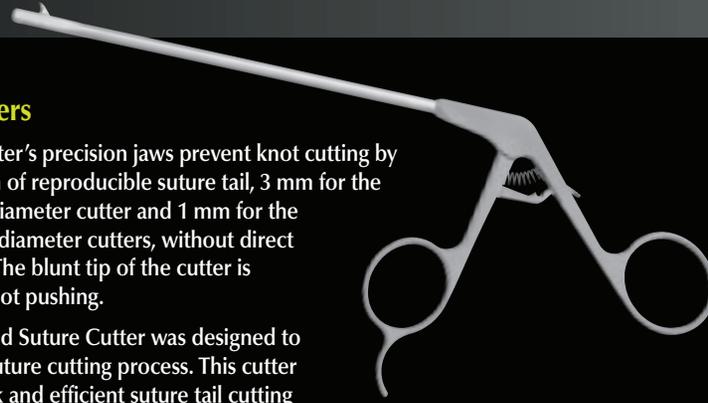
The FiberTape Cutters were designed to cut two strands of FiberTape flush to the anchor site without direct visual control.

2-0 Suture Cutter, 2.75 mm, straight	AR-11790
2-0 Suture Cutter, 15° up curve	AR-11791
Suture Cutter, 4.2 mm, straight (used w/#2 & #5 suture)	AR-12250
Suture Cutter, 4.2 mm, closed end w/WishBone Handle, straight	AR-12250W
Suture Cutter, 4.2 mm, open end, left notch (used w/all suture)	AR-11794L
Suture Cutter, 4.2 mm, w/WishBone Handle, open end, left notch (used w/all suture)	AR-11794WL
Mini Suture Cutter, 3.4 mm, straight (used w/#2 FiberWire and LabralTape)	AR-13255
Mini Suture Cutter, 3.4 mm, straight w/WishBone Handle (used w/#2 FiberWire and LabralTape)	AR-13255W
FiberTape Cutter	AR-13250
FiberTape Cutter w/WishBone Handle	AR-13250W

FingerShield™

The FingerShield is a woven polyester sleeve with an embedded radiopaque blue marker designed to reduce pressure induced lacerations to the digits of the hand caused by repetitive knot tying during surgery. They slip right over sterile gloves when needed. The tips are left open to allow pinch grasp of suture strands, while still protecting the IP joint area of each digit. Suture slides over the FingerShield smoothly and effortlessly.

FingerShield, 2/pk	AR-7199
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FiberWire Scissor

The FiberWire Scissor was designed to cut any size or style suture, especially FiberWire, in open surgical cases where an arthroscopic Suture Cutter is not necessary. With its specially designed cutting edges, it can cut FiberWire cleanly and effortlessly without frayed edges. The color-coded handle facilitates instrument differentiation in large instrument packs.

FiberWire Scissor	AR-11796
FiberWire Scissor, small	AR-11797



Knot Pushers

The Single-Hole Knot Pusher provides a simple method to advance sliding knots and half-hitches. The closed end Knot Pusher has a modified handle that provides an ergonomic feel. The distal tip has also been modified for easier advancement of slip knots and half-hitches.

Single-Hole Knot Pusher	AR-1299
Knot Pusher, closed end	AR-1305



6th Finger Knot Pusher

The unique double tube design allows the surgeon to apply and maintain tension to the first throw, while advancing subsequent throws with the sliding plastic outer tube. The inner tube allows subsequent "past pointing" to apply opposite suture tension to the knot similar to open knot tying techniques. A wire loop is incorporated inside the disposable, sterile 6th Finger Knot Pusher for easy suture loading.

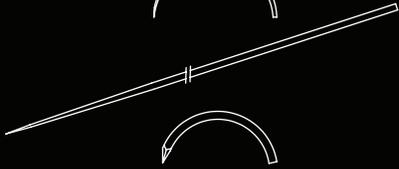
6th Finger Knot Pusher w/Suture Passer	AR-1930S
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References:

- Lo I KY, Burkhart SS, Chan KC, Athanasiou K, Arthroscopic Knots: The Optimal Balance of Loop Security and Knot Security, *Arthroscopy*, 2004; 20(5):489-502.
- FiberWire: Collective Summary of Strength and Biocompatibility Testing Data Comparisons of Polyester and Polyblend Sutures, study presented from in-house testing, 2001; LA0235
- Lo I KY, Burkhart SS, Biomechanical Principles of Arthroscopic Repair of the Rotator Cuff, *Operative Techniques in Orthopaedics*, 2002; 12(3):140-155.
- Deakin M, Stubbs D, Goldberg J, Bruce W, Gillies RM, Walsh WR, Effect of Suture Type, Anchor and Testing Orientation of the Static Properties of Suture Anchors, A Poster Presentation, #1536 (50th Annual Meeting of the Orthopaedic Research Society).

FiberWire Needle Reference Chart

Size	Available Colors	Needle Descriptions	Needle Dimensions	
4-0 (1.5 metric)	Blue White	Diamond Point Tapered Reverse Cutting	18.7 mm $\frac{3}{8}$ circle 12.3 mm $\frac{3}{8}$ circle 11.9 mm $\frac{3}{8}$ circle	
3-0 (2 metric)	Blue	Diamond Point Tapered Reverse Cutting	26.2 mm $\frac{3}{8}$ circle 15 mm $\frac{3}{8}$ circle 16.3 mm $\frac{3}{8}$ circle	
2-0 (3 metric)	Blue	Tapered (heavy duty) Tapered	26.5 mm $\frac{1}{2}$ circle 17.9 mm $\frac{3}{8}$ circle	
0 (3.5 metric)	Blue White/Black White White/Green	Tapered Tapered Diamond Point	76 mm, straight 26.5 mm $\frac{5}{8}$ circle 22.2 mm $\frac{1}{2}$ circle	
#1 (4 metric)	Blue N/A White/Black	N/A	N/A	
#2 (5 metric)	Blue White/Black White Blue/Black	Diamond Point Reverse Cutting Tapered Tapered	76 mm, straight 36.6 mm $\frac{1}{2}$ circle 36.6 mm $\frac{1}{2}$ circle 26.5 mm $\frac{1}{2}$ circle	
#5 (7 metric)	Blue White/Black White	Conventional Cutting Tapered	48 mm $\frac{1}{2}$ circle 26.5 mm $\frac{1}{2}$ circle	
1.5 mm LabralTape	White White/Black	N/A	N/A	
2 mm FiberTape	Blue White/Black	Tapered	26.5 mm $\frac{1}{2}$ circle	
<i>Additional Needles</i>	Reverse Cutting Needle w/Nitinol Loop Tapered Needle w/Nitinol Loop	AR-7280 AR-7281		



U.S. PATENT NOS. 6,716,234; 7,029,490; 7,147,651; 7,803,173; 8,012,172 and PATENTS PENDING.

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