

RetroConstruction™

SYSTEM

THE MOST ADVANCED TECHNIQUES IN
ACL/PCL RECONSTRUCTION



The RetroConstruction™ product line allows surgeons to perform the most anatomic, minimally invasive, and biomechanically sound ligament reconstruction techniques currently available. Advancements in graft harvesting, graft preparation, retrograde drilling, and graft fixation provide reproducible techniques for the best possible outcomes.

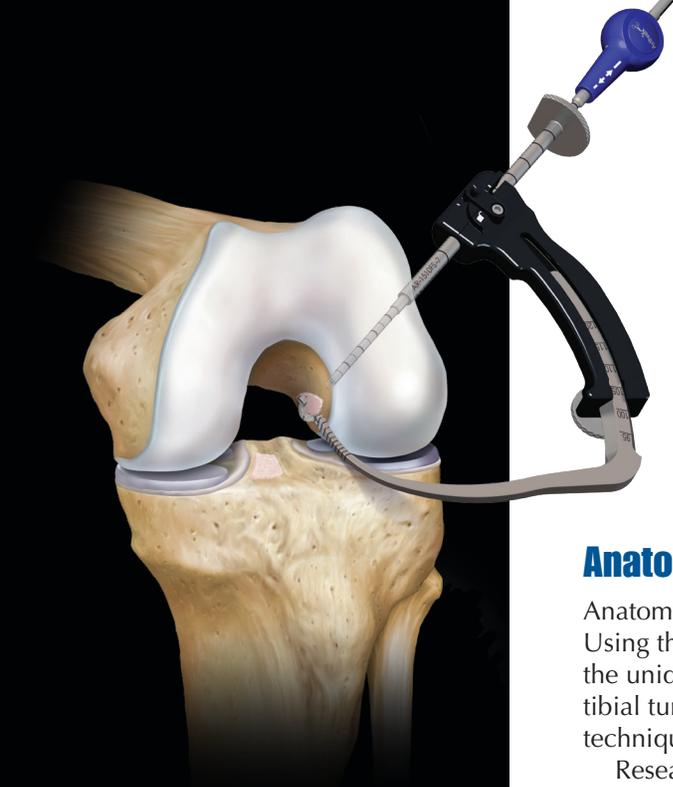
"I have used the RetroConstruction technique on all my ACL reconstructions, primary, and revision. This technique allows the optimum choice for femoral tunnel position without dependence on tibial tunnel positioning. Femoral tunnels can be in a more lateral and posterior position which is more anatomic and allows more normal biomechanics. One of the major reasons for failed ACL surgery can be averted.

This technique has also been helpful in ACL reconstruction in young patients by allowing tunnels within the epiphysis which do not cross the physis. It is also applicable to revision surgery by allowing femoral tunnel placement in a more anatomic position which usually results in no overlap of the new tunnel and the previous tunnel which has often been placed too vertically.

The RetroDrill® reamer and FlipCutter® drill are also an excellent adjunct in PCL surgery especially for double bundle techniques.

Most importantly, routine use of the RetroConstruction technique keeps the surgeon from settling on tunnel positions which are 'almost' ideal. The tunnels can be placed in the desired anatomic location with cortical integrity maintained for excellent fixation with shorter grafts."

William E. Garrett, MD, PhD, Duke University
Past President, AOSSM



Anatomic ACL Socket Placement

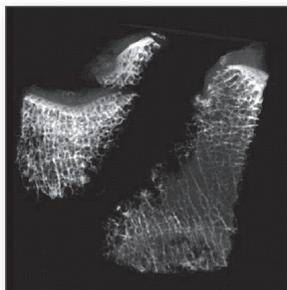
Anatomic femoral socket placement is paramount to successful ACL reconstruction. Using the FlipCutter® reamer with the femoral ACL marking hooks allows surgeons the unique opportunity to drill the femoral socket completely independent of the tibial tunnel or medial portal, without the additional morbidity of a 2-incision technique.

Research has shown that independent femoral socket creation, using RetroConstruction™ instrumentation facilitates anatomic socket creation more accurately and consistently than transtibial techniques.¹ Postoperative studies have demonstrated knee kinematics and stability more similar to the native knee.²

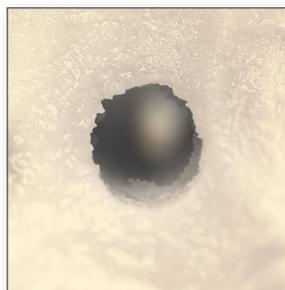
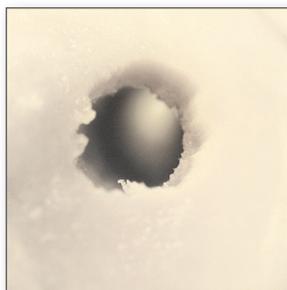
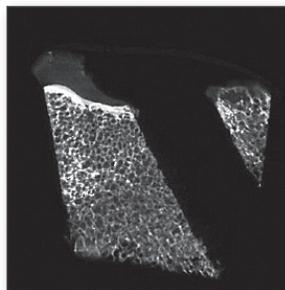
Superior Tunnel and Socket Quality

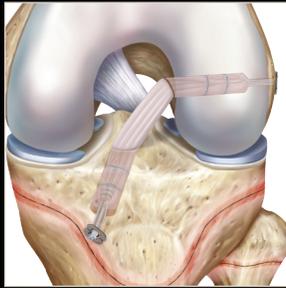
Inside/out retrograde drilling of bone sockets and tunnels has been proven to reduce fragmentation of intra-articular tunnel rims and leave smooth, consistent tunnel walls compared to standard antegrade drilling.^{3,4} Maintaining cortical rim integrity provides a better graft/tunnel interface and may lead to superior fixation and graft incorporation with decreased tunnel widening.

Antegrade Drill



RetroDrill® Reamer





RetroConstruction™ Instrumentation for Pediatric and Revision Surgery

RetroConstruction instrumentation is ideal for avoiding anatomic structures and hardware. The small diameter pin and inside/out drilling facilitates passage around growth plates and old implants. Several technique articles and studies show effective use of RetroConstruction instruments for these unique applications.⁵⁻⁸

Least Invasive Techniques and Superior Graft Fixation Options⁹⁻¹⁴

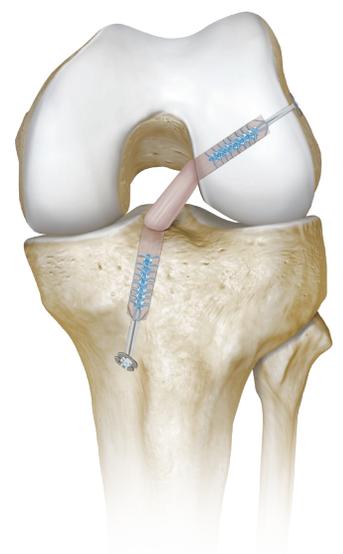
The ability to drill sockets instead of tunnels in the femur and tibia reduces morbidity and improves cosmesis, while preserving tissue and bone. Leaving intact cortices allows consistent cortical fixation over the femur and tibia with TightRope® button implants. Adjustable TightRope implants facilitate strong cortical fixation, while allowing graft adjustment and tensioning on both sides of the graft.



Semitendinosus Autograft or Preconstructed Allograft



Patella Tendon



Minimally Invasive Quad Tendon



FlipCutter® Reamer

The innovative FlipCutter all-in-one guide pin and reamer allows minimally invasive socket creation from the inside/out.

FlipCutter reamers allow a whole new level of freedom in socket positioning and are ideal for hard-to-reach areas such as tibial socket creation for PCLR, anatomic femoral socket creation for ACLR, socket creation for meniscal allograft, meniscal root avulsion repair, and retrograde OATS® technique of the patella.

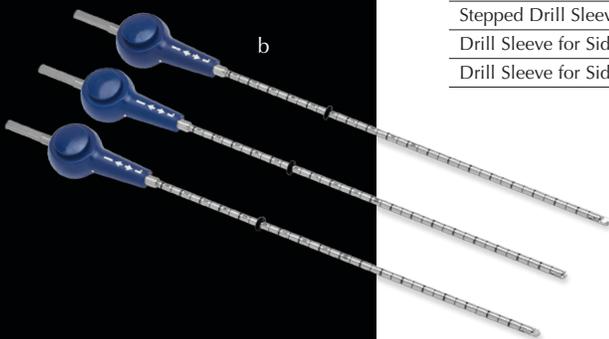
Disposables

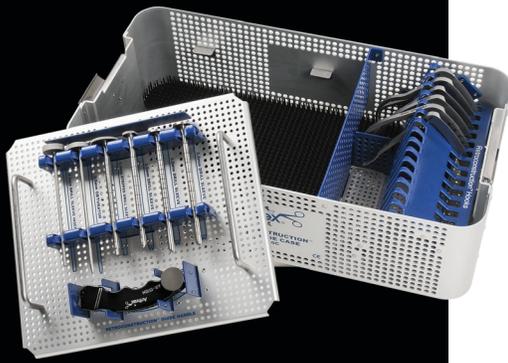
FlipCutter Reamers, 5 mm-13 mm (a)	AR-1204AF-50 – 130
FlipCutter Reamers, 6 mm × 6 mm-13 mm	AR-1204F-60 – 130
BTB TightRope® Implant System w/ 10 mm FlipCutter II Reamer	AR-1588BTB-02
TightRope RT Implant System w/ 8 mm FlipCutter II Reamer	AR-1588RT-07
TightRope RT Implant System w/ 9 mm FlipCutter II Reamer	AR-1588RT-18
TightRope RT Implant System w/ 10 mm FlipCutter II Reamer	AR-1588RT-11
TightRope RT Implant System w/ 11 mm FlipCutter II Reamer	AR-1588RT-13

Short FlipCutter Reamer

The Short FlipCutter II reamer is 3.54 in shorter than the standard FlipCutter II reamer. This shorter length decreases the distance surgeons must reach while drilling, enabling more control and accuracy. The short FlipCutter II reamer is also ideal for pediatric procedures when using a C-arm. Together with the side-release RetroConstruction™ handle, the short FlipCutter II reamer makes anatomic, minimally invasive drilling easier than ever.

Short FlipCutter II Reamers, 5 mm-12 mm (b)	AR-1204AS-50 – 120
Side-Release RetroConstruction Handle (c)	AR-1510HR
Stepped Drill Sleeve for Side-Release Handle, ratcheting	AR-1510FS-7
Drill Sleeve for Side-Release Handle, ratcheting, 2.4 mm	AR-1510FD-24
Drill Sleeve for Side-Release Handle, ratcheting, 3.0 mm	AR-1510FD-30





RetroConstruction™ Drill Guide Set

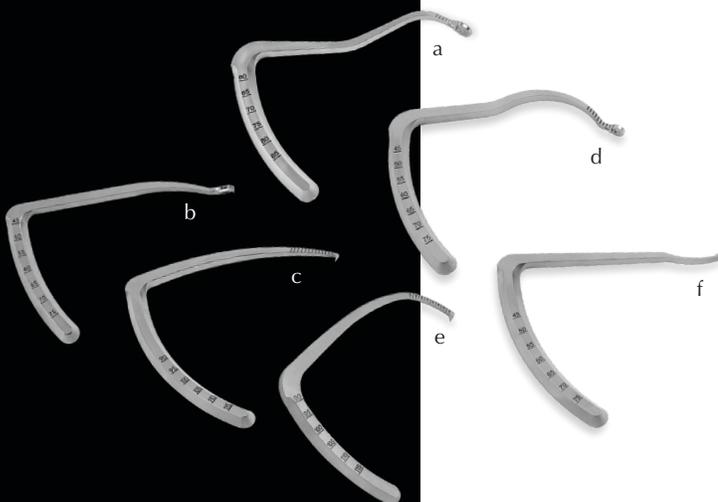
The small, easy-to-manage RetroConstruction drill guide set provides 6 different marking hook options for multiple applications. The adjustable C-ring allows several drilling angles without sacrificing accuracy. The additional stepped drill sleeve acts as a depth stop for retrograde drilling with the FlipCutter® reamer, helping to preserve the cortex and staying in the bone after reamer removal for insertion of graft-passing suture.

RetroConstruction Drill Guide Set (AR-1510S) includes

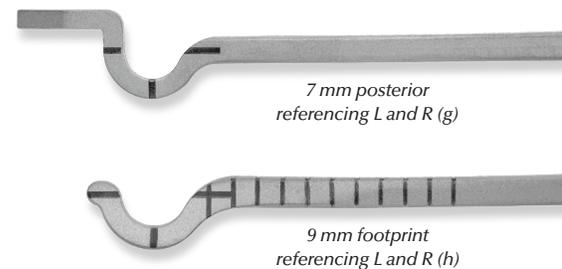
Side-Release RetroConstruction Handle	AR-1510HR
Drill Sleeve for RetroConstruction Drill Guide, 3.5 mm	AR-1510D
Drill Sleeve for Side-Release Handle, ratcheting, 2.4 mm	AR-1510FD-24
Drill Sleeve for Side-Release Handle, ratcheting, 3.0 mm	AR-1510FD-30
Stepped Drill Sleeve for Side-Release Handle, ratcheting	AR-1510FS-7
Tibial ACL Marking Hook for RetroConstruction Drill Guide (b)	AR-1510T
Femoral ACL Marking Hook for RetroConstruction Drill Guide (c)	AR-1510F
Femoral ACL Marking Hook for RetroConstruction Drill Guide, curved (e)	AR-1510F-01
Tibial PCL Marking Hook for RetroConstruction Drill Guide (a)	AR-1510PT
Femoral PCL Marking Hook for RetroConstruction Drill Guide (d)	AR-1510PF
Multiuse Marking Hook for RetroConstruction Drill Guide (f)	AR-1510M
RetroConstruction Drill Guide System Case	AR-1510C

Optional

Pin Tip Tibial ACL Drill Guide	AR-1510GT
RetroConstruction Marking Hook for Tibial ACLR, 52.5° (for RetroDrill® reamer)	AR-1510R
Footprint Femoral ACL Guide, left (h)	AR-1510FL
Footprint Femoral ACL Guide, right	AR-1510FR
Footprint Femoral ACL Guide w/ 7 mm Offset, left (g)	AR-1510FPL
Footprint Femoral ACL Guide w/ 7 mm Offset, right	AR-1510FPR
Anatomic Contour PCL Guide, left	AR-1510PTL
Anatomic Contour PCL Guide, right	AR-1510PTR
Drill Tip Guide Pin, 3.5 mm (predrill for FlipCutter reamer)	AR-1250F
Pin Tip Tibial Marking Hook ACL Guide, small angle	AR-1510GTS
Footprint Femoral ACL Guide, small angle, right	AR-1510FRS
Footprint Femoral ACL Guide, small angle, left	AR-1510FLS



Optional Hooks for Femoral ACLR



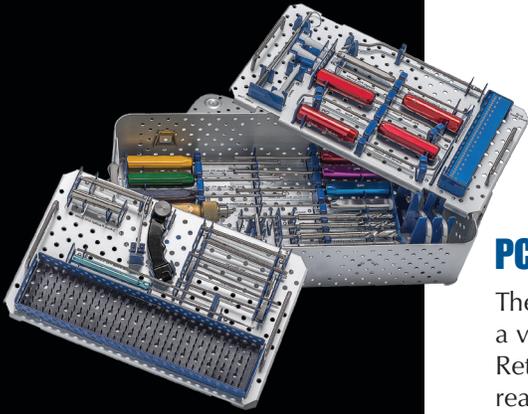


ACL ToolBox Instrumentation Set

The ACL ToolBox was designed to fit the needs of modern ACL reconstructions. The streamlined 3-layer case contains all the reusable instruments needed to complete the majority of common ACL procedures and contains an additional “pin mat” area for customization. The ACL ToolBox now contains the RetroConstruction™ guide system with commonly used ACL marking hooks such as the footprint guides for femoral ACL drilling. Variable drill sleeves are included for all techniques and can be used with standard 2.4 mm pins, 3 mm RetroDrill® pins, and 3.5 mm FlipCutter® reamers. Everything needed to complete an ACL reconstruction can be found in this case including graft harvesting, notch preparation, tunnel drilling, graft passing, and fixation.

ACL ToolBox Reconstruction Set (AR-1900S) includes

Chuck Key	AR-8241
Hook Probe 3.4 mm Tip w/ 5 mm Markings	AR-10010
Side-Release RetroConstruction Handle	AR-1510HR
Drill Sleeve for Side-Release Handle, ratcheting, 2.4 mm	AR-1510FD-24
Drill Sleeve for Side-Release Handle, ratcheting, 3.0 mm	AR-1510FD-30
Stepped Drill Sleeve for Side-Release Handle, ratcheting	AR-1510FS-7
Cannulated Drill, 8 mm	AR-1208L
Cannulated Drill, 9 mm	AR-1209L
Cannulated Drill, 10 mm	AR-1214L
Cannulated Drill, 11 mm	AR-1217L
Parallel Guide Sleeve, 2.4 mm Pins	AR-1245L
Offset Drill Guide, 3.5 mm	AR-1246-1
Offset Drill Guide, Pin, 3.5 mm	AR-1246-3
Tunnel Plug for 8 mm-12 mm Drill Holes	AR-1258
Semitendinosus Stripper, 7 mm	AR-1278L
Pigtail Hamstring Tendon Stripper, open end, 5 mm	AR-1278P
Tunnel/Notchplasty Rasp	AR-1282
Cannulated Headed Reamers, 8 mm-11 mm	AR-1408 – AR-1411
Reamer Handle and Pin Puller	AR-1415
Graft Harvesting Retractor	AR-1420
Femoral ACL Marking Hook, curved	AR-1510F-01
Footprint Femoral ACL Guide, left	AR-1510FL
Footprint Femoral ACL Guide, right	AR-1510FR
Tibial ACL Marking Hook	AR-1510T
RetroScrew® Driver, thin	AR-1586R
Insert, 2.4 mm	AR-1204F-24I
Obturator, 3.5 mm	AR-1204F-OB
Transportal ACL Guide, 6 mm offset	AR-1800-06
Transportal ACL Guide, 7 mm offset	AR-1800-07
Transtibial Femoral ACL Drill Guide, 6 mm	AR-1804
Transtibial Femoral ACL Drill Guide, 7 mm	AR-1801
Reusable Obturator for Tibial Tunnel Cannula	AR-1807
Graft Harvesting Cutting Guides, 8.5 mm, 9.5 mm and 10.5 mm	AR-1809, 10, & 11
Notchplasty and Graft Harvesting Osteotome, 5 mm	AR-1830
Tunnel Notcher	AR-1844
Graft Sizing Block, 4.5 mm-12 mm holes (in 0.5 mm increments)	AR-1886
BioComposite Interference Screw Driver	AR-1996CD-1
Cannulated Screwdriver Shaft for Delta Bio-Interference Screw	AR-1997D
Cannulated Screwdriver Shaft, 3.5 mm Hex	AR-1998
BioComposite Interference Screw Taps, 7 mm-10 mm, quick connect	AR-1998CT-07 – 10
Ratcheting Screwdriver Handle	AR-1999
Parallel Graft Knife Handle	AR-2285H
ACL Cruciate ToolBox Instrumentation Case	AR-1900C



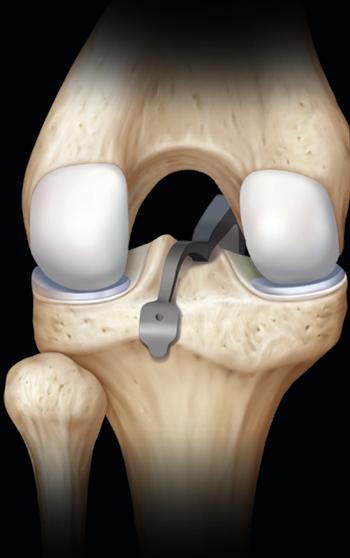
PCL Toolbox Instrumentation Set

The streamlined PCL Toolbox provides all the necessary instruments for performing a variety of modern PCL reconstruction techniques. The set includes the RetroConstruction™ drill guide system with drill sleeves for use with FlipCutter® reamer, RetroDrill® reamer, and standard 2.4 mm guide pins. Femoral and tibial RetroConstruction™ marking hooks allow reproducible and safe placement of pins and drills into the anatomic footprints. The set also includes femoral double-bundle drill guides, curved instruments for tibial preparation, knee obturator for easy posterior portal placement, curving suture passer, tunnel plugs, drills, screwdrivers, notchers, and other accessories. The PCL Toolbox facilitates standard transtibial PCL reconstruction as well as modern techniques such as the arthroscopic inlay and GraftLink® all-inside PCL technique.

PCL Toolbox Reconstruction Set (AR-1269S) includes

Hook Probe, 3.4 mm	AR-10010
Drill Sleeve for RetroConstruction Drill Guide, stepped	AR-1204FDS
Obturator, 3.5 mm	AR-1204F-OB
Insert, 2.4 mm	AR-1204F-24i
Cannulated Drill, 9 mm	AR-1209L
Cannulated Drill, 10 mm	AR-1214L
Cannulated Drill, 11 mm	AR-1217L
Parallel Guide Sleeve, 2.4 mm pins	AR-1245L
Offset Drill Guide, 3.5 mm	AR-1246-1
Offset Drill Guide, 3.5 mm pins	AR-1246-3
Tunnel Plug	AR-1258
PCL Suture Pusher	AR-1263
PCL Rasp	AR-1264
Knee Obturator for Posterior Portal	AR-1266
PCL Popliteal Protector Cap	AR-1267
Curving Suture Passer	AR-1268D
Cannulated Headed Reamers, 8 mm-11 mm	AR-1408 – AR-1411
Jacob's Chuck Handle	AR-1415
Side-Release RetroConstruction Handle	AR-1510HR
Tibial PCL Marking Hook for RetroConstruction Drill Guide	AR-1510PT
Femoral PCL Marking Hook for RetroConstruction Drill Guide	AR-1510PF
Anatomic Contour PCL Guide, left	AR-1510PTL
Anatomic Contour PCL Guide, right	AR-1510PTR
Drill Sleeve for RetroConstruction Drill Guide, 2.4 mm	AR-1778R-24
Drill Sleeve for RetroConstruction Drill Guide, 3 mm	AR-1778R-30
Obturator for AR-1802D	AR-1807
Tunnel Notcher	AR-1845
Graft Sizing Block	AR-1886
BioComposite Driver, quick connect	AR-1996CD-1
Cannulated Screwdriver Shaft for Delta Bio-Interference Screw	AR-1997D
Cannulated Screwdriver Shaft, 3.5 mm Hex	AR-1998
Ratcheting Screwdriver Handle	AR-1999
Double Bundle PCL Guides, 6 mm-11 mm	AR-5015-06 – 11
PCL Curved Curette, closed end	AR-5013
PCL Straight Curette, closed end	AR-5014
Chuck Key	AR-8241
PCL Cruciate Toolbox Instrumentation Case	AR-1269C

PCL RECONSTRUCTION



Anatomic Contour PCL Tibial Guide

These trans tibial PCL guides simplify tibial pin positioning by referencing anatomic constants. The “over-the-back” hook grasps the distal edge of the posterior facet, guiding the pin into the proper position in the sagittal plane. The wide, convex tip helps position the guide properly in the coronal plane, between the mamillary bodies.

The unique left- and right-specific curves facilitate positioning around the ACL for isolated PCL reconstructions, which can often lead to medialized placement of the tunnel with straight guides. These curves also guide the surgeon with proper positioning of the guide in the coronal plane adjacent to the anteromedial tibial crest for proper pin positioning.

Anatomic Contour PCL Guide, left	AR-1510PTL
Anatomic Contour PCL Guide, right	AR-1510PTR



Tibial PCL Marking Hook

The PCL reconstruction guide may be used for the inlay procedure and allows socket placement within the posterior facet for anatomic inlay positioning. By using the FlipCutter® reamer and PCL TightRope® implant, an inlay construct may be achieved in a minimally invasive way.

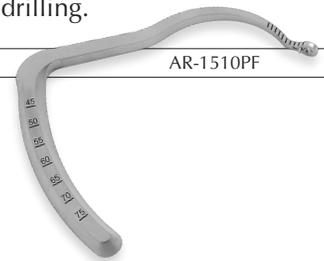
Tibial PCL Marking Hook for RetroConstruction™ Drill Guide	AR-1510PT
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Femoral PCL Marking Hook

The Femoral PCL marking hook allows for variable-angle drilling to help reduce the “killer corner” angle of the femoral socket. The 8 mm “footprint” marking hook also allows visualization of the socket before drilling.

Femoral PCL Marking Hook for RetroConstruction Drill Guide	AR-1510PF
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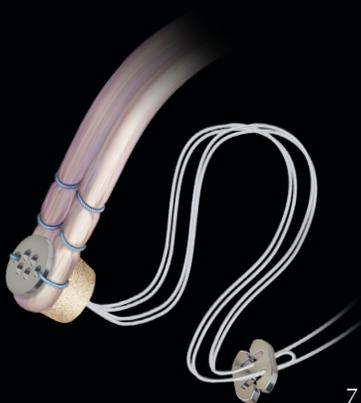


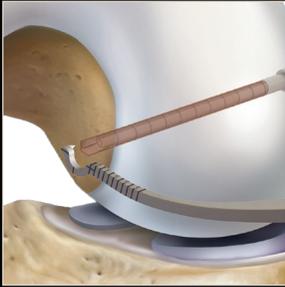
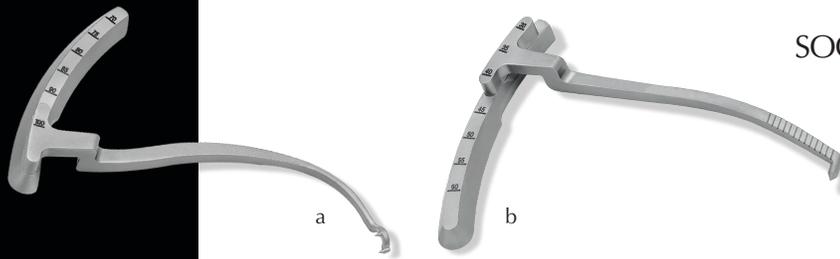
PCL TightRope® Suture

The unique PCL TightRope construct simplifies graft preparation and passing, while strengthening fixation.¹⁵⁻¹⁹ The construct includes a proprietary, self-reinforcing 4-point locking system that resists cyclic displacement.

The round graft button secures the bone plug into the tibial socket. Suture holes in the button allow incorporation of whipstitched sutures into the fixation, which facilitates graft passing and augments fixation. The larger, attachable distal button is placed onto the implant after passing through the tibial tunnel and locks into place securely.

PCL TightRope Construct	AR-1588TP
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Small Marking Hooks for All-Epiphyseal ACLR

Staying true to the RetroConstruction™ product line, these unique small-angle marking hooks facilitate referencing of the native ACL footprint and bony landmarks while providing ergonomics to reproducibly perform all-epiphyseal ACL reconstruction in skeletally immature patients. Ideal for use with short FlipCutter® drills and the side-release RetroConstruction handle.

Footprint Femoral ACL Guide, small angle, right (a)	AR-1510FRS
Footprint Femoral ACL Guide, small angle, left	AR-1510FLS
Pin Tip Tibial Marking Hook ACL Guide, small angle (b)	AR-1510GTS

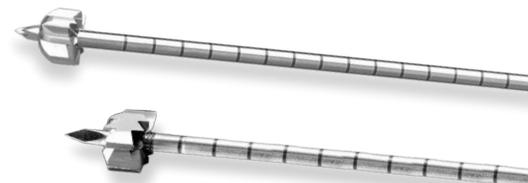
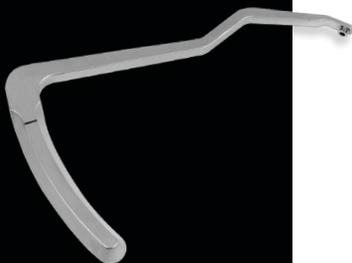


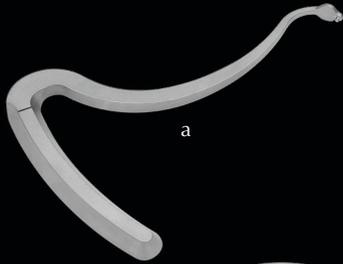
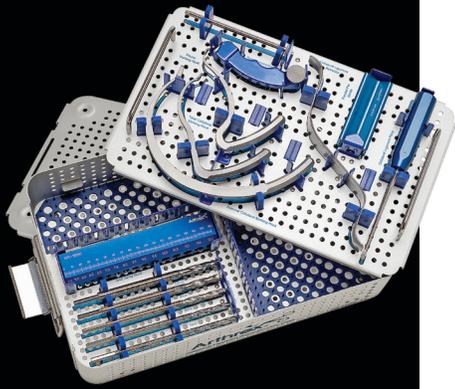
RetroDrill® Reamer

RetroCutter® reamers are designed with reverse flutes to cut from the inside out. This reaming mechanism produces “milled” sockets and tunnels which avoids ovalization and fragmentation of tunnel rims common with outside/in drilling. RetroCutter reamers are available in 5 mm-12 mm diameters and are for single use to assure optimal sharpness for every case.

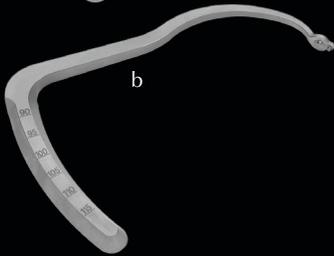
The cannulated RetroDrill guide pin allows passage of a FiberStick™ suture or Nitinol suture-passing wire for graft passing or screw transport. The noncannulated RetroDrill guide pin provides extra stiffness and is ideal for drilling tunnels. The noncannulated RetroDrill guide pin may also be used to drill sockets in conjunction with the RetroPasser® device (see page 15). RetroDrill guide pins and RetroCutter sutures are sterile and for single use.

RetroDrill Guide Pin, 3 mm, cannulated	AR-1250RP
RetroDrill Guide Pin, 3 mm, noncannulated	AR-1250RS
Transtibial RetroDrill Pin, 3 mm, w/ suture eye	AR-1250RT
RetroCutter Reamer, 5 mm (c)	AR-1204R-05S
RetroCutter Reamer, 5.5 mm	AR-1204R-55S
RetroCutter Reamer, 6 mm	AR-1204R-06S
RetroCutter Reamer, 6.5 mm	AR-1204R-065S
RetroCutter Reamer, 7 mm	AR-1204R-07S
RetroCutter Reamer, 7.5 mm	AR-1204R-075S
RetroCutter Reamer, 8 mm	AR-1204R-08S
RetroCutter Reamer, 8.5 mm	AR-1204R-085S
RetroCutter Reamer, 9 mm	AR-1204R-09S
RetroCutter Reamer, 9.5 mm	AR-1204R-095S
RetroCutter Reamer, 10 mm	AR-1204R-10S
RetroCutter Reamer, 10.5 mm	AR-1204R-105S
RetroCutter Reamer, 11 mm	AR-1204R-11S
RetroCutter Reamer, 12 mm	AR-1204R-12S
Dual RetroCutter Reamers, 6 mm-11 mm	AR-1204RD-06S - 11S
Marking Hook for RetroConstruction Drill Guide	AR-1510R

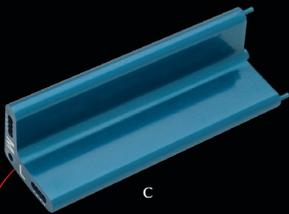




a



b



c



Collateral Ligament Reconstruction Set

Each component of the Collateral Ligament Reconstruction Set was carefully developed based on more than a decade of scientific research identifying the need for improved safety and accuracy during posterolateral and medial/posteromedial reconstructions. Detailed anatomic studies have led to precise, biomechanically validated anatomic reconstructions of individual components and main structures of the posterolateral and medial knee.²⁰⁻²⁴

The unique fibular marking hook provides anatomic precision for minimally invasive and open techniques for fibular-based reconstructions. The hook's shape tightly contours the fibular head, enabling surgeons to get around anatomic structures when placing the 8 mm diameter paddle that is designed specifically to fit onto the fibular attachment of the popliteofibular ligament (PFL).

The tibial marking hook is designed for both posterolateral and medial/posteromedial tibial-based reconstructions. The ergonomic 8 mm-diameter paddle provides tactile feedback upon entry into the posterior popliteal sulcus and confirms the exit point of the zebra guide pin during posterolateral corner reconstructions.

The parallel drill guide reduces divergent tunnels and allows precision placement at multiple incremental distances for medial and lateral femoral-based reconstructions, increasing the efficiency of anatomic tunnel drilling.

Collateral Ligament Reconstruction Set (AR-5500S) includes

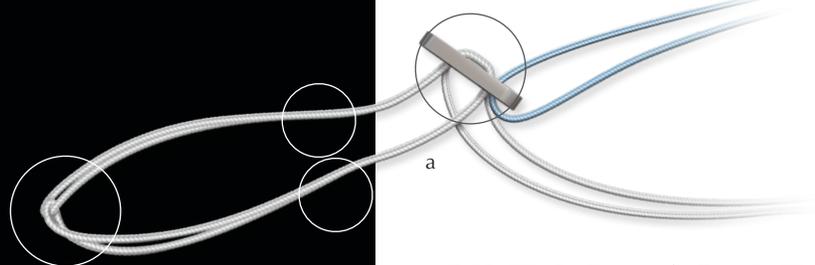
Fibular Marking Hook (a)	AR-5500
Tibial Collateral Marking Hook (b)	AR-5501
Femoral Collateral Marking Hook	AR-5502
Parallel Drill Guide (c)	AR-5503
Collateral Ligament Retractor (d)	AR-5504
Drill Sleeve, 2.4 mm	AR-5505
Collateral Ligament Rasp	AR-5506
RetroConstruction™ Handle	AR-1510H
Cannulated Drill, 6 mm	AR-1206L
Cannulated Drill, 7 mm	AR-1207L
Cannulated Drill, 8 mm	AR-1208L
Cannulated Drill, 9 mm	AR-1209L
Cannulated Drill, 10 mm	AR-1214L
Graft Sizing Block	AR-1886

Accessories

Zebra Guide Pin, 2.4 mm, open eyelet	AR-1250Z
Drill Pin II, ACL TightRope® Implant, open eyelet, 4 mm	AR-1595T
Tunnel Notcher for Bio-Interference Screw	AR-1845
#2 FiberLoop® Suture w/ Straight Needle	AR-7234
#2 FiberStick™ Suture, 50 in (blue), one end stiffened, 12 in	AR-7209



d



ACL TightRope® Graft Fixation

The ACL TightRope implant builds on Arthrex's TightRope technology to offer adjustable cortical fixation for anterior cruciate ligament reconstruction. Arthrex's proprietary 4-point knotless fixation (a) resists cyclic displacement and offers strong pullout strength.²⁵ The ACL TightRope implant eliminates the need for multiple implant sizes, facilitates graft-fill of short sockets, and allows retensioning of grafts after fixation and cycling.

ACL TightRope Implant	AR-1588T
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ACL TightRope RT Implant

The ACL TightRope RT implant allows surgeons to advance the graft by pulling the tensioning strands in the same direction of graft advancement. This innovation eliminates the need to retrieve shortening strands from the joint and allows the surgeon to pull in-line with graft advancement.

ACL TightRope RT Implant, double-loaded (a)	AR-1588RT-J
ACL TightRope RT Implant	AR-1588RT
TightRope RT Implant Systems, w/ 8 mm-11 mm FlipCutter® II reamer	AR-1588RT-07,18,11,13
ACL TightRope RT Implant Delivery System, w/ ACL TightRope drill pin	AR-1588RTS

ACL TightRope DB Implant

Offering the same simplicity and strength as the ACL TightRope implant, the ACL TightRope DB implant provides aperture graft compression and greater coverage of the ACL footprint. The implant comes with a disposable driver that can be attached to the graft and implant to facilitate graft advancement and orientation.

ACL TightRope DB Implant, 7 mm wedge	AR-1588TDB-7
ACL TightRope DB Implant Delivery System, w/ ACL TightRope reamer pin	AR-1588TDB-7S

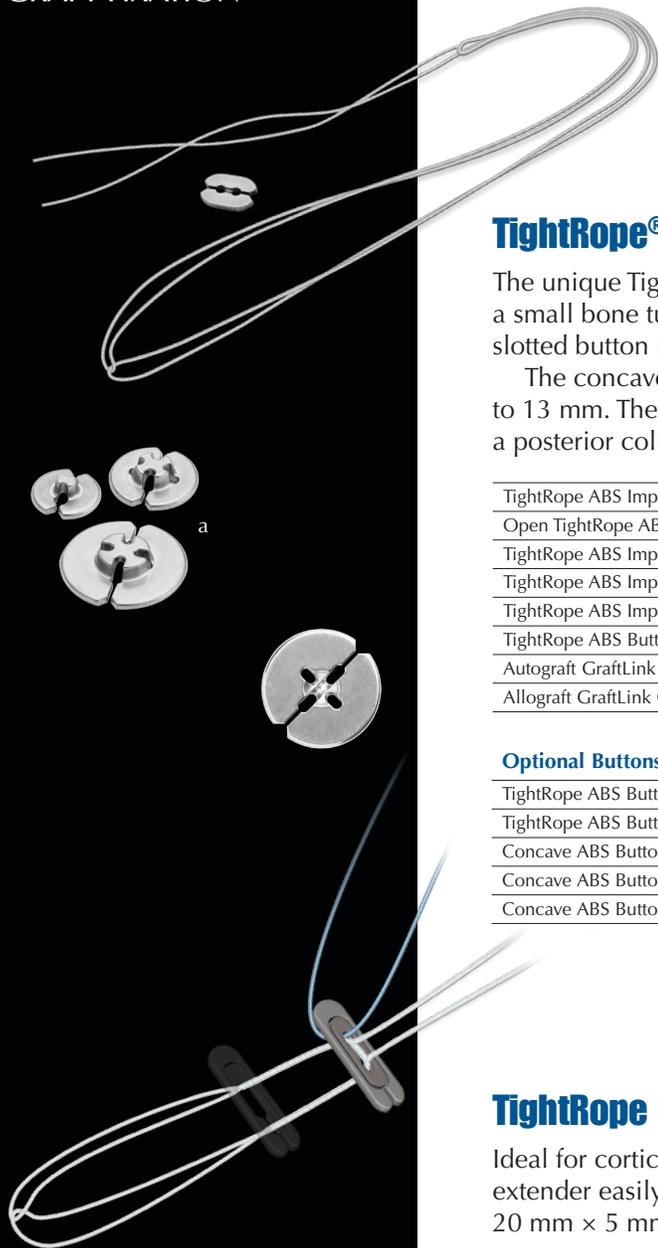
BTB (Bone-Tendon-Bone) TightRope Implant

The simplicity and strength of the ACL TightRope RT implant can now be used with bone-tendon ACL grafts. The BTB TightRope implant offers the same adjustable, 4-point locking system as the ACL TightRope RT implant but allows placement through a small drill hole in the cortical bone block.

BTB TightRope Implant	AR-1588BTB
BTB TightRope Implant, double-loaded	AR-1588BTB-J
ACL BTB TightRope Implant Delivery System w/ 10 mm FlipCutter II Reamer	AR-1588BTB-02

Accessories for all TightRope implants except ABS

Drill Pin, ACL TightRope implant, open eyelet, 4 mm	AR-1595T
ACL TightRope Drill Pin, closed eyelet, 4 mm	AR-1595TC
TightRope Suture Cutter	AR-4520



TightRope® ABS (Attachable Button System)

The unique TightRope ABS allows the ACL TightRope implant to be passed through a small bone tunnel without a button. Once passed through the tunnel, a large slotted button may be assembled to the TightRope implant.

The concave ABS buttons provide a larger footprint for full tunnels from 4 mm to 13 mm. The center of the button is concave which countersinks suture and has a posterior collar to keep the button centered and stable in the tunnel.

TightRope ABS Implant	AR-1588TN
Open TightRope ABS Implant	AR-1588TN-1
TightRope ABS Implant w/ 11 mm Concave Button	AR-1588TN-2
TightRope ABS Implant w/ 14 mm Concave Button	AR-1588TN-3
TightRope ABS Implant w/ 20 mm Concave Button	AR-1588TN-4
TightRope ABS Button, 8 mm × 12 mm	AR-1588TB
Autograft GraftLink Convenience Pack	AR-1588AU-CP
Allograft GraftLink Convenience Pack	AR-1588AL-CP

Optional Buttons

TightRope ABS Button, round, 14 mm	AR-1588TB-1
TightRope ABS Button, oblong, 3.4 mm × 13 mm	AR-1588TB-2
Concave ABS Button, 11 mm w/ 4 mm collar (a)	AR-1588TB-3
Concave ABS Button, 14 mm w/ 7 mm collar (a)	AR-1588TB-4
Concave ABS Button, 20 mm w/ 9 mm collar (a)	AR-1588TB-5

TightRope Button Extender

Ideal for cortical blowouts, revisions, and full tunnels, the TightRope button extender easily loads onto a TightRope button without removing the graft. A large 20 mm × 5 mm footprint maximizes button-to-bone contact against the cortex.

TightRope Button Extender	AR-1589RT
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TightRope Suture Tensioner Handles

The TightRope suture tensioner handles offer surgeons the ability to tension TightRope implants more effectively while avoiding the discomfort that sometimes occurs with repetitive tightening over the course of several surgeries. The TightRope suture tensioner handles can be connected to keep them together when not in use (b).

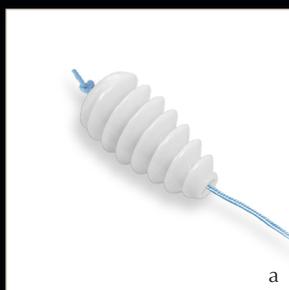
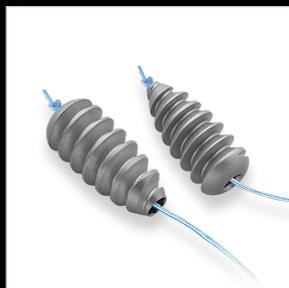
TightRope Suture Tensioner Handles	AR1588H
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RetroScrew® Fixation

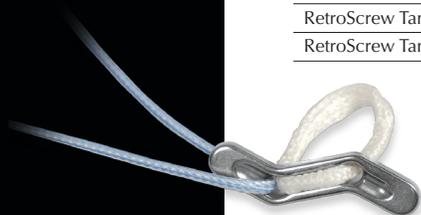
A revolutionary advancement in graft fixation, the PLLA, titanium, or BioComposite RetroScrew device allows true tunnel orifice graft fixation with a round head to minimize graft abrasion, tunnel widening and maximize graft fixation and stiffness. Retrograde insertion provides maximum graft tensioning and fixation in cortical bone.



RetroScrew Device, 7 mm × 20 mm	AR-1586RB-07
RetroScrew Device, 8 mm × 20 mm	AR-1586RB-08
RetroScrew Device, 9 mm × 20 mm	AR-1586RB-09
RetroScrew Device, 10 mm × 20 mm	AR-1586RB-10
Femoral RetroScrew Device, 7 mm × 20 mm	AR-1586FRB-07
Femoral RetroScrew Device, 8 mm × 20 mm	AR-1586FRB-08
Femoral RetroScrew Device, 9 mm × 20 mm	AR-1586FRB-09
Femoral RetroScrew Device, 10 mm × 20 mm	AR-1586FRB-10
Titanium Femoral RetroScrew Device, 7 mm × 20 mm	AR-1586FR-07
Titanium Femoral RetroScrew Device, 8 mm × 20 mm	AR-1586FR-08
Titanium Femoral RetroScrew Device, 9 mm × 20 mm	AR-1586FR-09
Titanium Femoral RetroScrew Device, 10 mm × 20 mm	AR-1586FR-10
Titanium Tibial RetroScrew Device, 8 mm × 20 mm	AR-1586R-08
Titanium Tibial RetroScrew Device, 9 mm × 20 mm	AR-1586R-09
Titanium Tibial RetroScrew Device, 10 mm × 20 mm	AR-1586R-10
Reverse Thread RetroScrew Device, 8 mm × 20 mm	AR-1586LB-08
Reverse Thread RetroScrew Device, 9 mm × 20 mm	AR-1586LB-09
Reverse Thread RetroScrew Device, 10 mm × 20 mm	AR-1586LB-10
BioComposite RetroScrew Device, 7 mm × 20 mm	AR-1586RC-07
BioComposite RetroScrew Device, 8 mm × 20 mm	AR-1586RC-08
BioComposite RetroScrew Device, 9 mm × 20 mm	AR-1586RC-09
BioComposite RetroScrew Device, 10 mm × 20 mm (a)	AR-1586RC-10

Accessories

RetroScrew Driver, thin	AR-1586R
Retro Tunnel Notcher	AR-1843BT
Shoehorn Cannula, 6 mm I.D. × 9 cm, qty. 5	AR-6565
FiberStick Suture, #2 FiberWire suture, 50 in (blue), one end stiffened, 12 in, qty. 5	AR-7209
RetroScrew Tamp, straight	AR-1586ST
RetroScrew Tamp, 90°	AR-1586ST-90



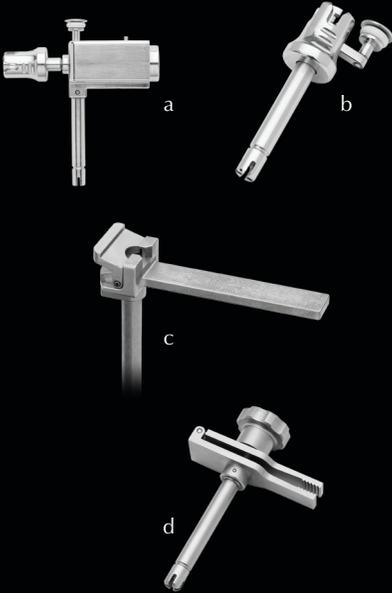
RetroButton® XL Device

The RetroButton XL device's unique button design facilitates greater button coverage over cortical bone, while minimizing the distance the button must travel past the cortex to flip. The Z-shaped button covers 20 mm of bone with only 18 mm of overall length. This facilitates flipping and decreases the chance of catching soft tissue under the button.

The short 11 mm loop allows the graft to be positioned directly under the button, maximizing soft-tissue fill in short tunnels. Use the RetroButton XL device when the femoral cortex is inadvertently damaged during drilling, for revision ACLR or when the femoral condyle is too small for a socket.

RetroButton XL Device, 20 mm long, 11 mm loop	AR-1592
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GRAFT PREPARATION



GraftPro™ Graft Preparation System

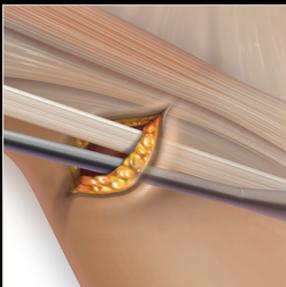
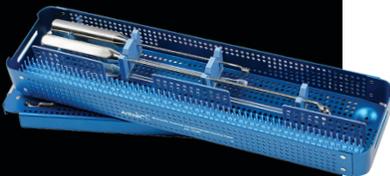
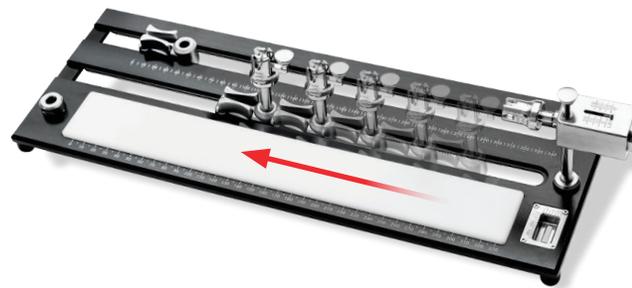
The GraftPro system brings graft preparation and tensioning to a new level of simplicity and convenience. The unique ratcheting adjustment track system allows one-handed movement of attachments along the length of the board and locks them into place automatically. All attachments are interchangeable from the adjustable tracks to the fixed positions. Two (2) parallel rails allow simultaneous preparation and tensioning of 2 grafts at a time for single- or double-bundle grafts. The BTB well facilitates stable cutting of patella tendon bone blocks to size and drilling of suture holes through the board. New enhanced attachments hold a variety of implants and grafts in place firmly and atraumatically.

GraftPro Graft Preparation System (AR-2950DS) includes

GraftPro Case	AR-2950DC
GraftPro Board	AR-2950D
GraftPro Posts, qty. 2	AR-2950AP
GraftPro GraftLink Tensioner (a)	AR-2950GT
GraftPro GraftLink Holder (b)	AR-2950GH
GraftPro Button Holder (c)	AR-2950BH
GraftPro Soft Tissue Clamp, qty. 2 (d)	AR-2950SC

Optional

Cutting Board Clamp	AR-2950CBC
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Minimally Invasive Hamstring Harvesting Set

The minimally invasive hamstring harvest technique allows for removal of the hamstring tendons through a small posteromedial incision. Because the hamstring tendons lie more superficial in the popliteal crease, they are easily exposed and released from proximal attachments. The small incision also improves cosmesis and may decrease post-op morbidity.

The set includes 2 harvesters made specifically for the minimally invasive technique. Shorter shafts improve stiffness and facilitate harvesting from the posteromedial incision. The open harvester is large enough to load the thicker, more proximal portion of the hamstring tendons. The closed distal harvester is slightly sharper, permitting elevation of the tendons off the tibial insertion.

Minimally Invasive Hamstring Harvesting Set

AR-1279S

FiberWire® With Straight Needles

These constructs include a 38 in FiberWire suture with a 64 mm needle on one end or a 38 in FiberWire suture with a 64 mm needle on both ends. Each product is packaged in a box of 12.

These products are ideal for quickly creating locking stitches for graft prep, as well as tendon avulsions.

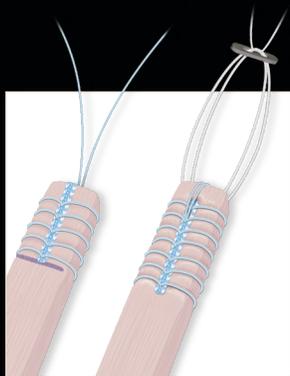
#2 FiberWire Suture w/ Straight Needle	AR-7246
#2 FiberWire Suture w/ 2 Straight Needles	AR-7246-02
#2 FiberLoop® Suture w/ Swaged-on Straight Needle	AR-7284



Suture Tensioner With Tensiometer

The suture tensioner with tensiometer allows simplified ACL graft tensioning over a suture button for all-inside ACLR, or through a tibial tunnel when used with the optional foot. The built-in tensiometer approximates graft tension in Newtons and pounds, allowing surgeons to standardize the procedure. Compared to standard tensioning devices, the suture tensioner is much less cumbersome, more versatile, and simple to use.

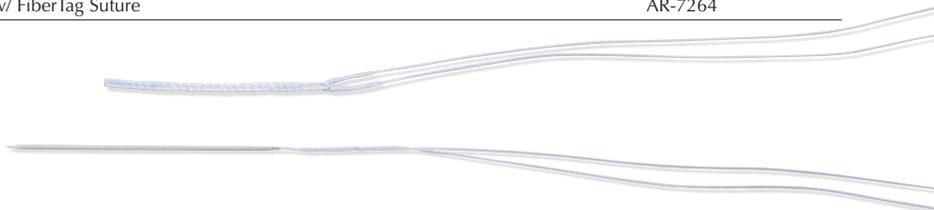
Suture Tensioner w/ Tensiometer	AR-1529
Tensiometer Foot	AR-1530



FiberLoop With FiberTag® Suture

The SpeedWhip™ rip-stop technique eliminates the weak link in graft preparation by reinforcing the suture/tissue interface with a FiberTag suture. FiberTag suture can be placed onto a graft end to facilitate attachment of the ACL TightRope® implant.

FiberLoop w/ FiberTag Suture	AR-7264
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FiberLoop and TigerLoop™ Suture

The #2 FiberLoop and TigerLoop sutures are continuous loops of #2 FiberWire suture on a thin, straight Nitinol needle or a curved tapered needle. The straight needle is easy to handle and moves freely on the suture to recenter itself after passing through tissue and facilitates even tensioning.

Graft preparation using the SpeedWhip™ technique reduces time spent preparing the graft, uniformly compresses the graft, improves strength,²⁶ and allows for last-minute adjustments in graft length.

#2 FiberLoop Suture (blue), w/ straight needle	AR-7234
#2 TigerLoop Suture (green/white), w/ straight needle, w/ TigerWire® suture	AR-7234T
#2 FiberLoop Suture (blue), w/ curved needle, 20 in, 1/2 circle	AR-7234C
0 FiberLoop Suture (blue), w/ straight needle, 13 in, 76 mm needle w/ 7 mm loop	AR-7253
0 TigerLoop Suture (white/black), w/ straight needle, 13 in, 76 mm needle w/ 7 mm loop	AR-7253T



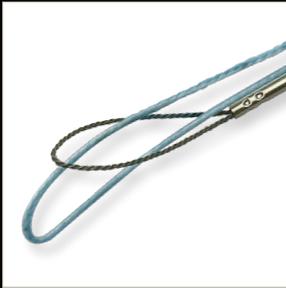
Titanium Buttons and FiberWire® Suture

Two and 4-hole titanium suture buttons are ideal for primary or backup FiberWire fixation of ACL/PCL grafts and augmenting bone bridges. Suture buttons come presterilized, ready for use.

Suture Button, 3.5 mm	AR-8920
Suture Button, 12 mm round	AR-8922
Suture Button Inserter	AR-8923
Concave ABS Button, 11 mm w/ 4 mm collar	AR-1588TB-3
Concave ABS Button, 14 mm w/ 7 mm collar	AR-1588TB-4
Concave ABS Button, 20 mm w/ 9 mm collar	AR-1588TB-5

Recommended Suture

#5 FiberWire Suture, 38 in (blue), qty. 12	AR-7210
Suture Passing Wire	AR-1255-18
#2 FiberWire Suture, 38 in 2 strands (1 blue, 1 white/black), qty. 12	AR-7201



RetroPasser® Suture Shuttle

Use the RetroPasser suture shuttle to pass suture retrievers through the guide pin sleeve and guide pin tunnel during RetroConstruction™ procedures. After retrograde drilling and socket creation, remove the RetroDrill® guide pin and immediately replace with the RetroPasser® device. The Nitinol wire with wire loop passes a #2 FiberWire suture loop into the joint for retrieval and subsequent passing of graft passing sutures from the anteromedial portal.

RetroPasser Suture Shuttle	AR-1259
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CoolCut™ Calibrator Ablator

Anatomic socket placement is paramount to successful ACL reconstruction. Despite extensive research on the location of the native ACL, identification and referencing of the ACL footprint and bony landmarks can be difficult in a live arthroscopic setting. The direct measurement technique has been shown to reproducibly locate the average center of the native ACL in a surgical setting.²⁷

The CoolCut Calibrator ablator further simplifies direct measurement by allowing surgeons to arthroscopically measure the femur and tibia and mark desired guide pin location for reference. The mark can then be referenced for FlipCutter® guide placement or with a standard guide pin and low-profile reamer through the anteromedial portal.

CoolCut Calibrator Ablator	AR-9802C
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