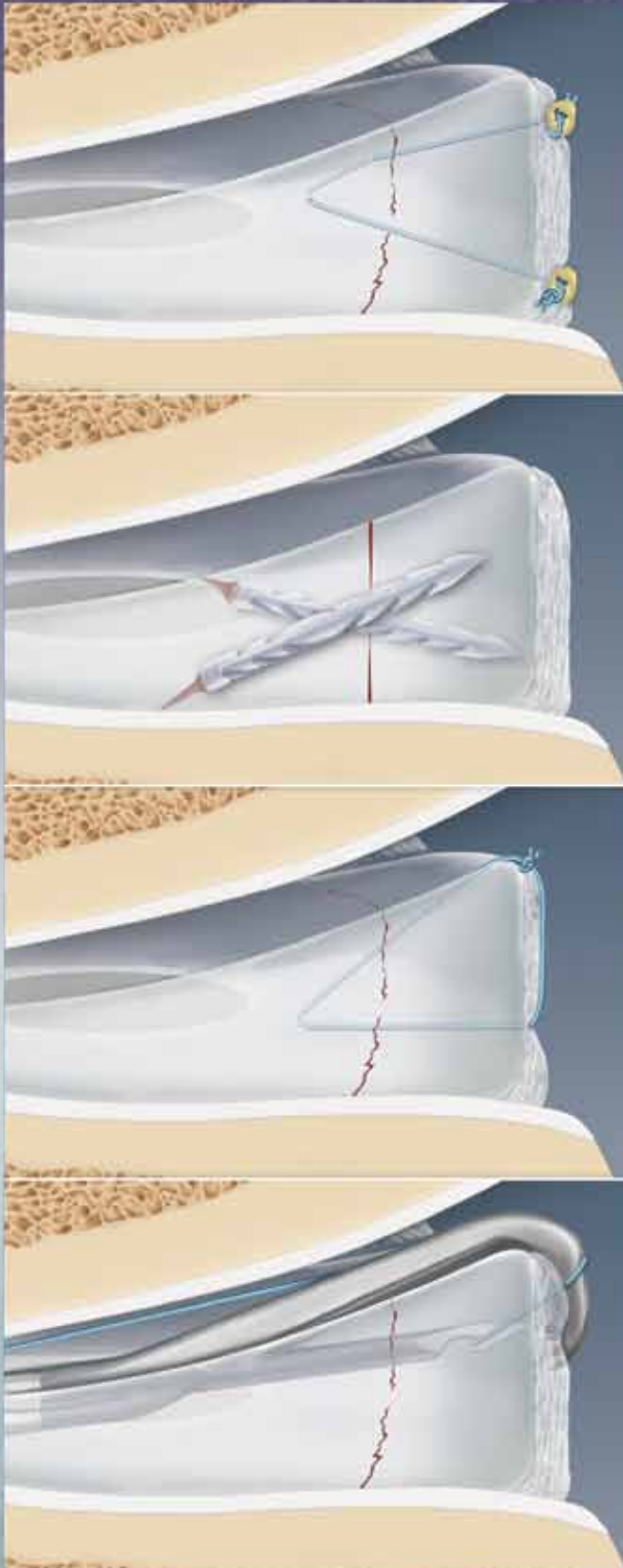


COMPREHENSIVE SOLUTIONS TO ARTHROSCOPIC Meniscal Repair



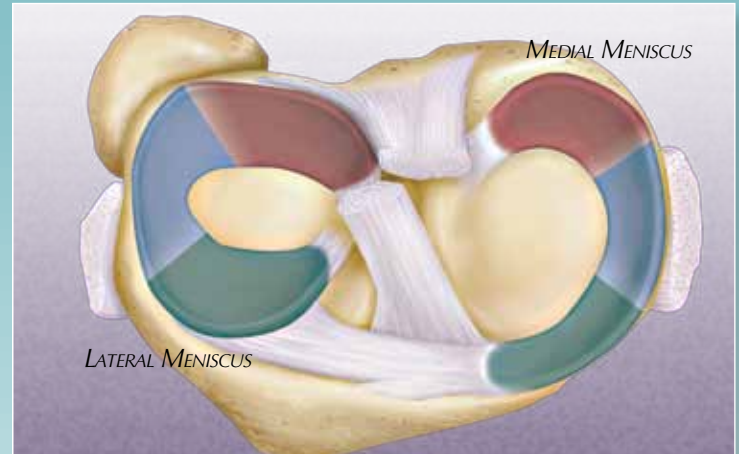
- PROTECTOR MENISCUS SUTURING SET
- MENISCAL CINCH™ SYSTEM
- MENISCAL DARTSTICK™ AND JOYSTICK™ SYSTEM
- CLINICAL OUTCOMES OF THE MENISCAL DART™
- FIBERWIRE® MENISCUS REPAIR NEEDLES
- MENISCAL VIPER™
- MICRO SUTURELASSOS™ FOR MENISCAL REPAIR

WHY MULTIPLE MENISCAL REPAIR OPTIONS?

The Comprehensive Solutions to Meniscal Repair provides orthopaedic surgeons unique options based on tear patterns, neurovascular safety and surgical time constraints.

All-inside, inside/out and outside/in technique options are essential to safely address every anatomical meniscal tear pattern encountered during arthroscopy.

The diagram to the right represents *zone-specific considerations* for safe and effective arthroscopic meniscal repair based on tear location.



RED ZONE

- Meniscal Viper
- DartStick
- Meniscal Cinch

BLUE ZONE

- DartStick
- 2-0 FiberWire Meniscus Repair Needles (inside/out technique)
- Protector Meniscus Suturing Set (inside/out technique)
- Meniscal Cinch

GREEN ZONE

- Micro SutureLasso (outside/in technique)



PROTECTOR MENISCUS SUTURING SET

The Protector Meniscus Suturing Set provides a safer, versatile system to perform either inside/out or all-inside meniscus suturing.

The single use Malleable Curved Cannula and integrated plastic handle has a Nitinol needle and needle pusher for convenience. The Cannula Bending Tool facilitates simple custom cannula bending to accommodate every anatomical variation.

The unique Nitinol memory suture needle remains straight after exiting the curved cannula for greater control of needle placement to avoid neurovascular structures.

The Needle Catcher facilitates two options to guide needles safely away from neurovascular structures.

MENISCAL REPAIR ACCESSORIES

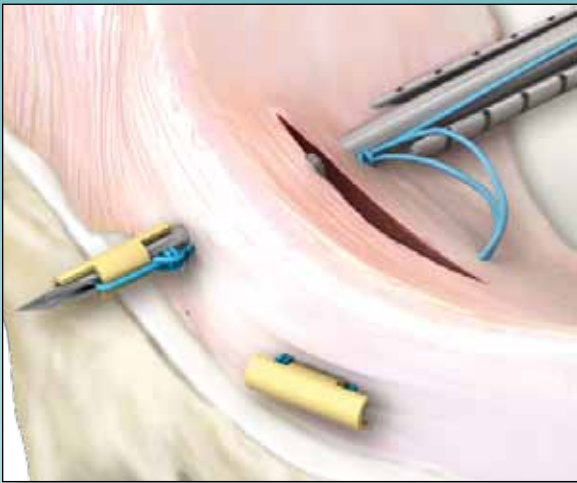
The Malleable Dart Measuring Probe (a) measures the width of the meniscus.

The angled tip of the Meniscal Rasp (b) is ideally shaped to access inside the meniscal tear for debridement prior to the repair.

The Shoehorn™ Cannula (c) facilitates insertion of the Meniscal Viper (c1) and alleviates knot hang-up in the fat pad during suture knot advancement.

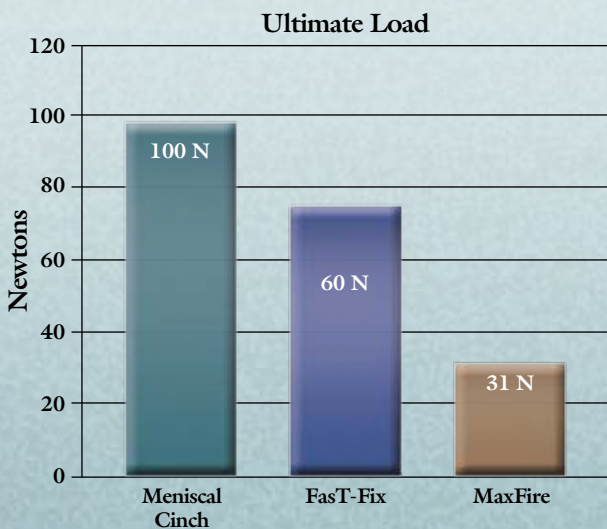


c1



MENISCAL CINCH

The Meniscal Cinch allows surgeons to consistently repair meniscus tears with an all-inside arthroscopic technique, eliminating the need for accessory incisions required for traditional inside/out techniques that often result in additional morbidity. The low profile PEEK implants are loaded with a pretied 2-0 FiberWire that slides easily and allows proper tensioning across the tear. The ergonomic handle and sturdy open delivery cannula make for easy insertion into the joint and enable precise positioning over the meniscus. The external depth stop ensures that the implant is deployed into the capsule, protecting posterior structures in the knee. The 2-0 suture tail is extraarticular and can be tensioned to reduce suture slack in the joint for better visualization. The Knot Pusher/Suture Cutter (a) allows the sliding knot to be countersunk under the meniscus and removal of the suture tail in one easy step.



Data on file



MENISCAL DARTSTICK SYSTEM

The DartStick offers an improved manual insertion technique for the Meniscal Dart. The disposable DartStick inserter securely holds each implant for simplified insertion through a straight or curved up disposable small diameter sheath. This allows multiple Dart placement on the femoral or tibial surface of the meniscus even in the most confined joint spaces. The headless, reverse-barbed 1.3 mm diameter PLDLA Dart facilitates full intrameniscal implantation to eliminate potential hyaline cartilage contact damages caused by headed implants. The amorphous PLDLA copolymer implant in 10, 12 or 14 mm lengths safely degrades within 36 weeks.

With over 50,000 implantations over a five year history, clinical follow-up studies support the Dart system as clearly safe and effective for arthroscopic meniscal repair.

MENISCAL REPAIR JOYSTICK SYSTEM

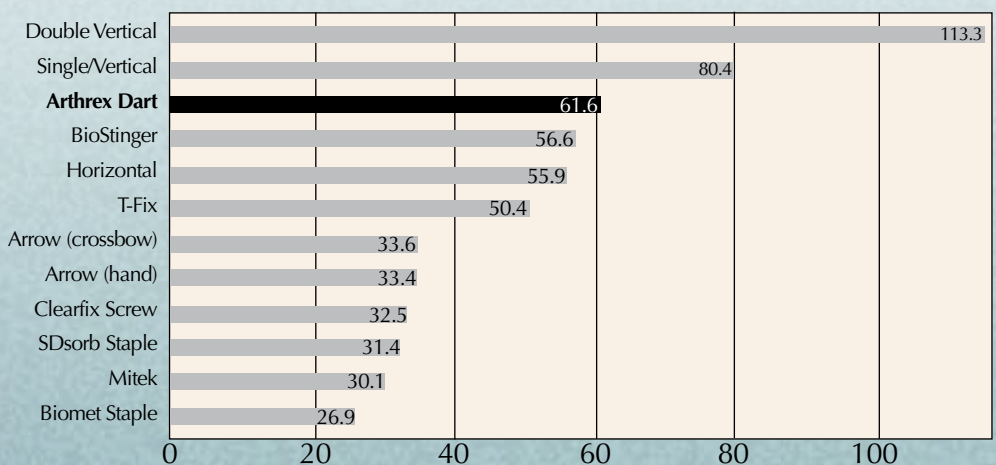
Used in conjunction with the DartStick or inside/out suture needles with 2-0 FiberWire, the Joystick provides an ergonomic handle for maximum control of implant or suture placement. Great for hybrid repairs when combined use of suture and Darts are indicated.

Fully autoclavable and reusable, the Joystick also provides an economical option to the disposable DartStick sheaths.

CLINICAL OUTCOMES OF THE MENISCAL DART

The Meniscal Dart has a reverse barb configuration to maintain compression applied during insertion. Pull-out strengths for the Dart are second only to suture repairs.

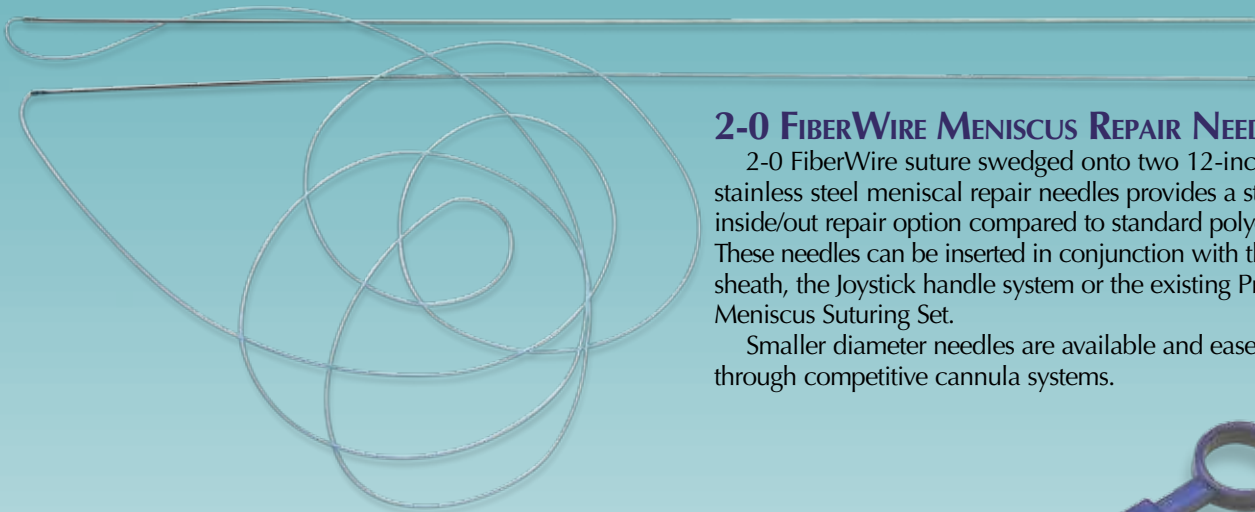
The Dart was tested according to the protocol set forth by F. Alan Barber, M.D., et al in *Arthroscopy*, Vol 16, No 6 (September), 2000; pp 613-618. The following table compares the results of Arthrex testing compared to results of the devices tested by Barber et al: 80 repairs on meniscal tears were performed from 1999 to 2002 by Craig Morgan, M.D.:



74 with ACL reconstructions and six isolated, ACL normal, lateral meniscus repairs. Follow-up period ranged from 2-5 years.

Conclusions:

- All clinically symptom free
- 0 infections/inflammatory reactions
- 0 neurovascular injuries
- 0 implant failures
- Four second-look arthroscopies were performed: *meniscus completely healed without signs of articular cartilage damage*



2-0 FIBERWIRE MENISCUS REPAIR NEEDLES

2-0 FiberWire suture swedged onto two 12-inch (30 cm) stainless steel meniscal repair needles provides a stronger inside/out repair option compared to standard polyester suture. These needles can be inserted in conjunction with the DartStick sheath, the Joystick handle system or the existing Protector Meniscus Suturing Set.

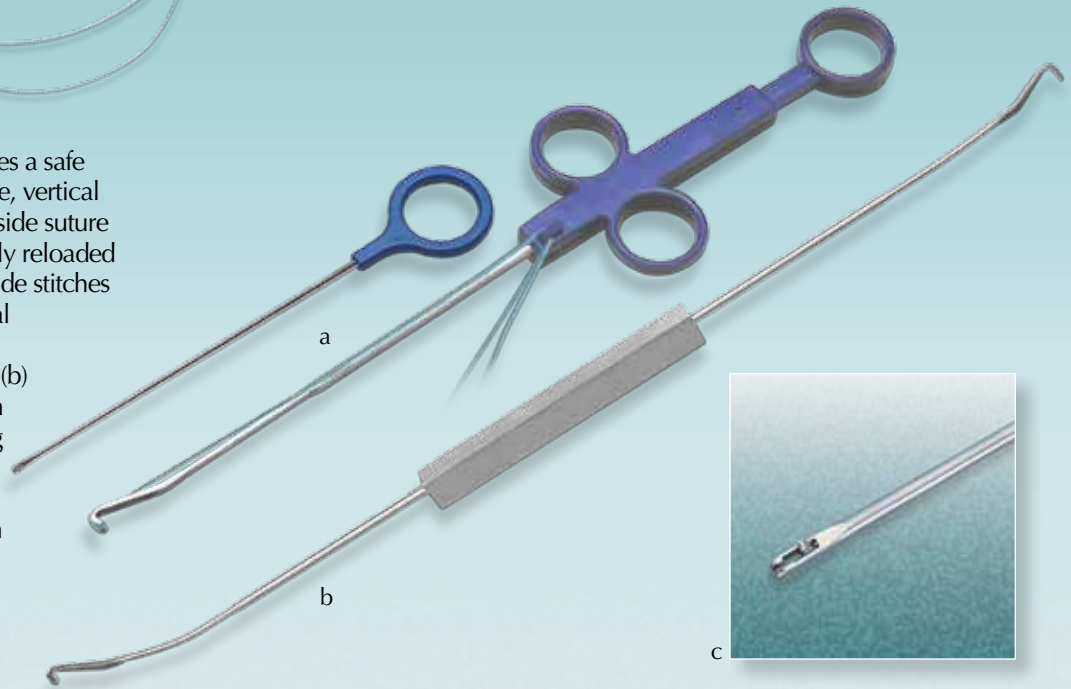
Smaller diameter needles are available and ease insertion through competitive cannula systems.

MENISCAL VIPER

The Meniscal Viper Repair Kit provides a safe and effective method of passing a double, vertical loop of 2-0 FiberWire suture in an all-inside suture repair technique. The Viper can be simply reloaded with 2-0 FiberWire for additional all-inside stitches to complete the repair without additional instrumentation costs.

An autoclavable Meniscal Viper Trial (b) instrument confirms instrument insertion and meniscal reduction prior to opening of the sterile kit.

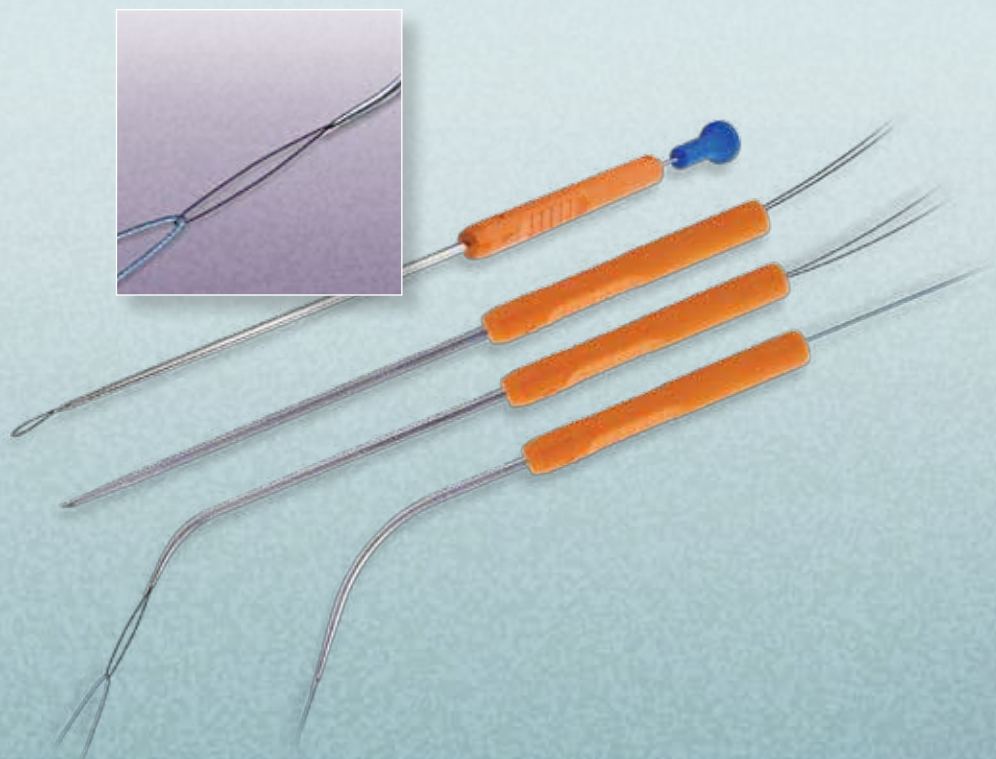
Each sterile kit (a) contains a small or medium disposable Meniscal Viper with preloaded 2-0 FiberWire and the small diameter, flexible Small Knot Pusher. The FiberWire is cut with the small diameter 2-0 Suture Cutter (c).



MICRO SUTURELASSOS

For outside/in meniscal repairs, the Micro SutureLassos provide a more ergonomic alternative to spinal needles. They have an integrated small diameter nitinol loop that facilitates easy passing of suture to complete the repair.

Straight or curved tips, that taper from 20 to 16 gauge, provide easier perforation yet greater stiffness than 18 gauge spinal needles. After needle placement, a 2-0 FiberStick can be passed through one needle and arthroscopically placed in the Nitinol loop of the second needle for single step completion of the repair.



ORDERING INFORMATION

Meniscal Cinch System

Meniscal Cinch	AR-4500
Knot Pusher/Suture Cutter	AR-4515
Measurement Probe	AR-13920P
2-0 Suture Cutter, straight	AR-11790
2-0 Suture Cutter, 15° up	AR-11791

Meniscal Implants and Disposables (sterile & single use):

Meniscal DartStick, 10 mm, qty. 3	AR-3007B-10
Meniscal DartStick, 12 mm, qty. 3	AR-3007B-12
Meniscal DartStick, 14 mm, qty. 3	AR-3007B-14
Meniscal Dart Sheath w/Cannula, straight	AR-3007
Meniscal Dart Sheath w/Cannula, 15° up	AR-3007-15
Meniscal Dart Measuring Probe, qty. 5	AR-4008

Meniscal Repair Joystick System Set (AR-4007JS) includes:

Meniscal Dart Joystick Driver	AR-4006D
Meniscal Dart Joystick Trocar	AR-4006T
Meniscal Dart Gun Sheath, 15° up	AR-4006-15
Meniscal Dart Gun Sheath, straight	AR-4006-3
Meniscal Dart Joystick Instrumentation Case	AR-4007JC

Meniscal Viper Kits (sterile & single use):

Meniscal Viper Repair Kit, small	AR-13920DS
Meniscal Viper Repair Kit, medium	AR-13930DS

(each kit includes a disposable Meniscal Viper and a Small Knot Pusher)

Meniscal Viper Instrumentation:

Meniscus Repair Rasp	AR-4130
Meniscal Viper Sizing Probe	AR-13920P
2-0 Suture Cutter, 2.75 mm, 15° up curve	AR-11791
Meniscal Viper Trial	AR-13920T

Suture Passing Instruments (sterile & single use):

Micro SutureLasso, minor bend	AR-8701
Micro SutureLasso, major bend	AR-8702
Micro SutureLasso, straight	AR-8703
Micro SutureLasso Retriever	AR-8701SR

Protector Meniscus Suturing Set (AR-4060S) includes (sterile & single use):

Malleable Curved Cannula w/Handle, qty. 1	
Nitinol Suture Needle w/Wire Loop End, qty. 1	
Adjustable Needle Holder, qty. 1	

(Accessories: Needle Catcher, AR-6660 and Cannula Bending Tool, AR-6650)

Meniscus Needles & FiberWire:

2-0 FiberWire Meniscus Repair Needles, qty. 5	AR-7223
2-0 FiberWire Meniscus Repair Needles, small, qty. 5	AR-7223SM
Nitinol Suturing Needle w/Wire Loop End, qty. 2	AR-1291
2-0 FiberWire, 38 inches, qty. 12	AR-7221
2-0 FiberStick, 50 inches, one end stiffened, 12 inches, qty. 5	AR-7222

Meniscal Repair Accessories:

Meniscal Dart Measuring Probe, sterile, single use, qty. 5	AR-4008
Meniscus Repair Rasp	AR-4130
Shoehorn Cannula, 6 mm I.D. x 9 cm, sterile, single use, qty. 5	AR-6565



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U.S. PATENT NOS. 6,056,778; 6,716,234; 6,991,636 and PATENTS PENDING

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