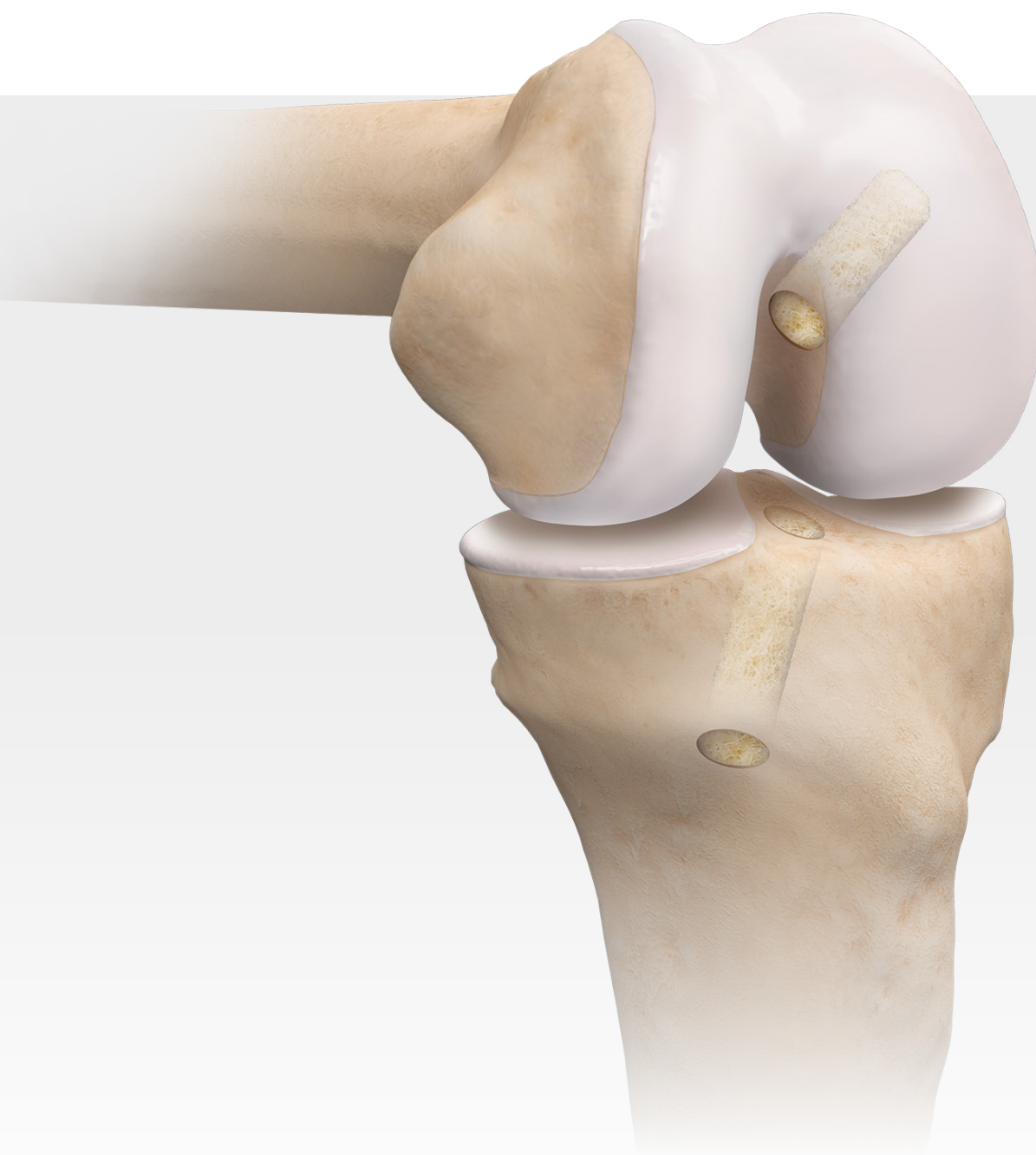


Bone Dowel Revision Kit

Surgical Technique



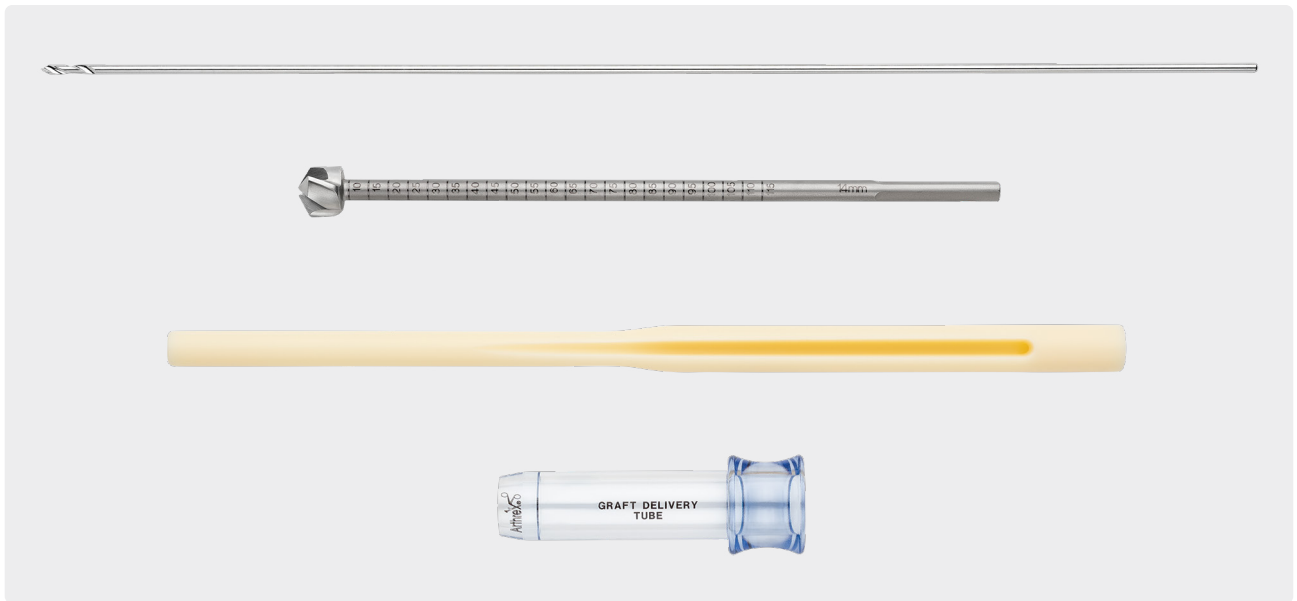
Bone Dowel Revision Kit

A System for Implanting Biologic Scaffolds

The Cannulated Bone Dowel Kit simplifies bone tunnel restoration for staged revision ACL procedures by combining properly sized reamers and a cannulated bone tamp in a single-use kit. The bone tamp was designed for use with a guide pin to ensure proper placement of the cannulated bone dowels into bone tunnels. Using allograft bone dowels to fill bone voids allows for the immediate management of widened tunnels and cystic bone areas.¹

It is estimated that between 1.8% and 10.4% of patients with an ACL reconstruction will require a revision.² Restoration of previously malpositioned ACL tunnel placement or widened tunnels can be challenging, sometimes requiring a two-stage approach.³

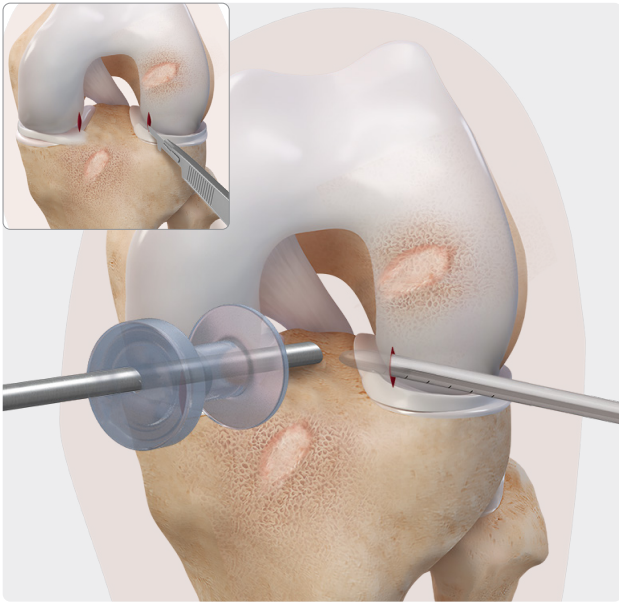
Favorable outcomes have been reported for patients undergoing single-stage ACL reconstruction using allograft bone dowels.⁴



Bone Dowel Revision Kit, 14 mm (ABS-2850-14)

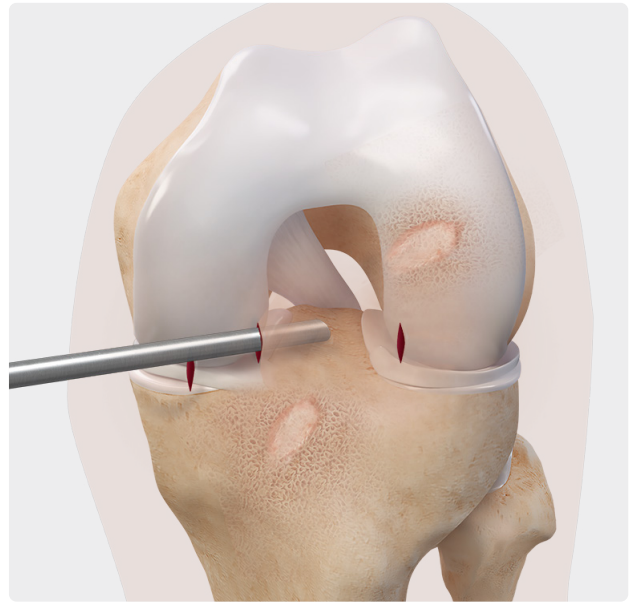
Bone Dowel Revision Kit Surgical Technique

As described by Mark D. Miller, MD (Charlottesville, VA)



1

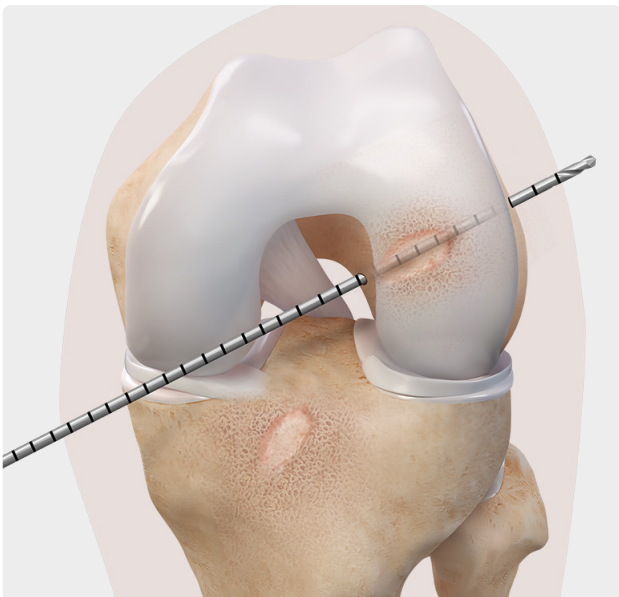
Establish standard arthroscopic portals in the knee and thoroughly debride the fat pad, ACL graft, and any loose soft tissue from the area.



2

Establish an accessory portal for inserting the allograft bone dowel into the femur.

Note: In some cases, it may be best to prepare the tibial tunnel first without grafting it. This will allow access to the femoral tunnel through the tibial tunnel, which is often larger than the femoral socket.



3

Using a wire driver, advance the 2.4 mm guide pin through the center of the failed graft location through the femur and out the skin. It is often helpful to use a tunnel dilator to center the pin.



4

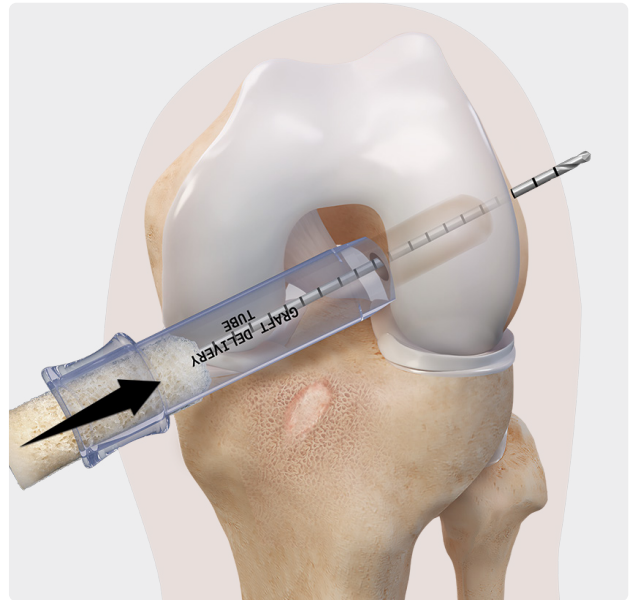
Advance the reamer over the 2.4 mm guide pin to a depth matching the length of the planned dowel into the femur. Serial reaming is done at 2 mm intervals until healthy bone surrounds the tunnel.

Note: Use a portal skid (AR-4505) behind the reamer to protect the femoral condyle and soft tissues.



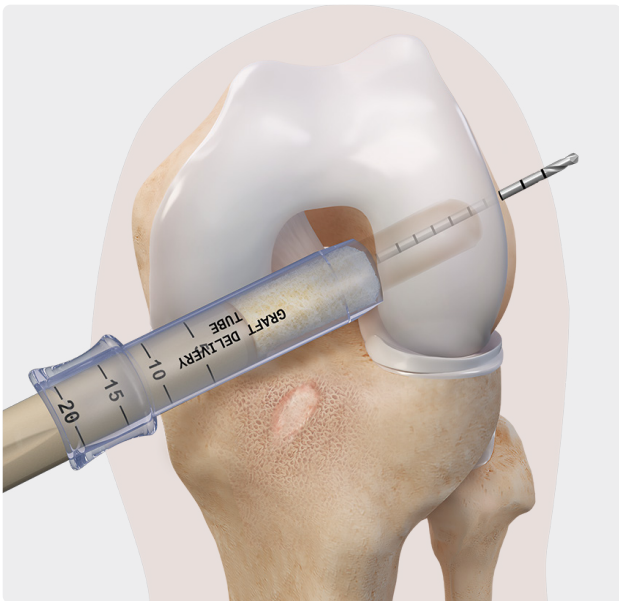
5

Inspect the tunnel and remove any loose bodies, soft tissue, and unwanted particulate after each reaming and debridement during serial reaming.



6

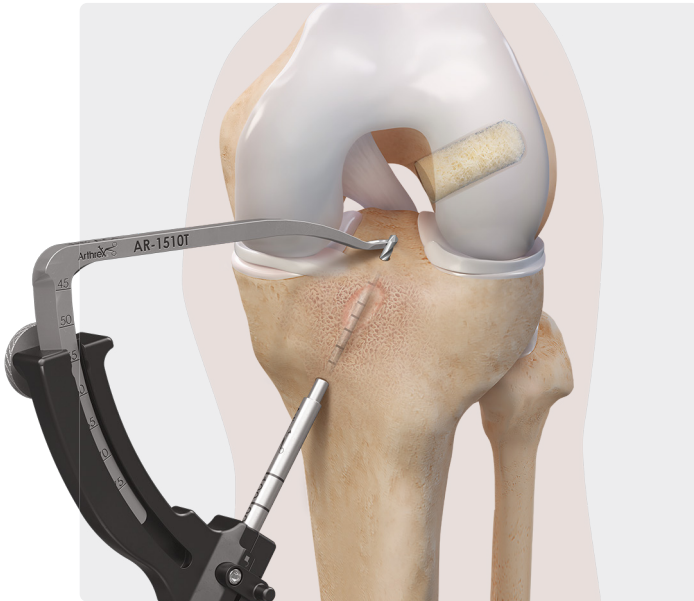
Place the delivery sleeve over the guide pin and into the portal. An obturator may be used to help with introduction of the delivery sleeve. Load the allograft bone dowel (tapered side first) over the guide pin and advance into the delivery sleeve.



7

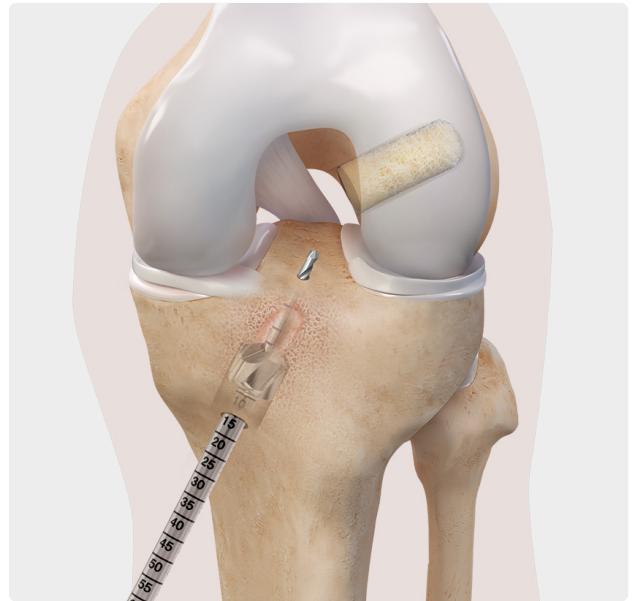
Insert the tamp over the guide pin and gently tap the dowel through the delivery sleeve and into the socket. Impact the back end of the tamp with a mallet until the dowel is flush or slightly proud into the socket.

Tibial Socket Preparation



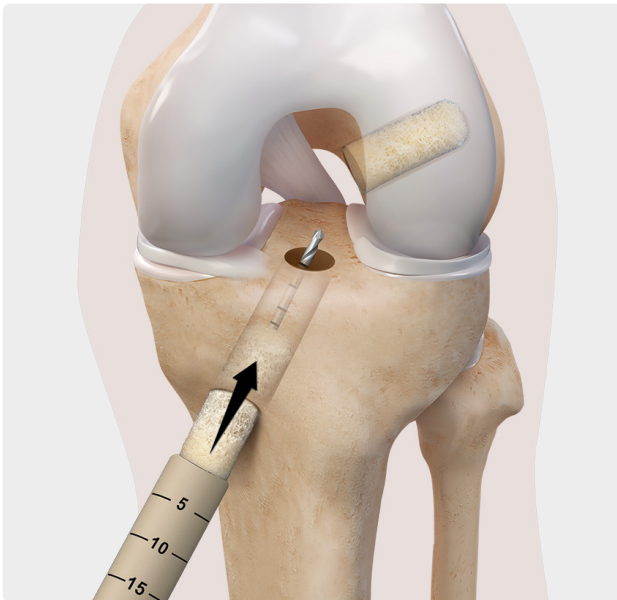
1

Using the anteromedial incision, expose the tibia and identify the tibial tunnel. A dilator may be helpful for centering the guide pin. An ACL tibial guide can be used. The sleeve of the guide should fit into the center of the previous tunnel.



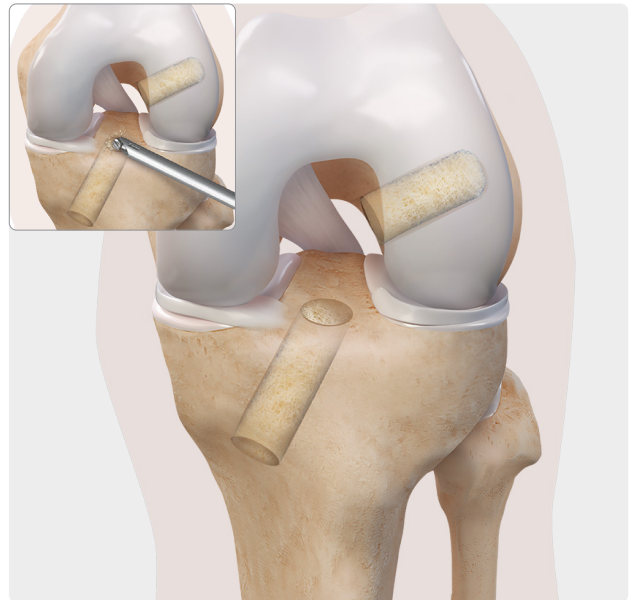
2

Once the 2.4 mm guide pin is centered, remove the drill guide. Place the reamer over the guide pin and advance the drill (antegrade) until the reamer exits into the intra-articular space. Continue serial reaming until all soft tissue is cleared from the tunnel, as viewed arthroscopically.



3

Place the allograft bone dowel over the guide pin (tapered end first) and advance to the proximal edge of the bone tunnel. Place the tamp over the guide pin and up to the back end of the bone dowel.



4

Impact the back end of the tamp to advance the bone dowel until the allograft is fully inserted into the tunnel and flush with the tibial plateau surface.

A burr may be used to shape the femoral and tibial dowel edge to fit flatter at the surface.

Ordering Information

Bone Dowel Revision Kits

Bone Dowel Revision Kit, 9 mm	ABS-2850-09
Bone Dowel Revision Kit, 10 mm	ABS-2850-10
Bone Dowel Revision Kit, 11 mm	ABS-2850-11
Bone Dowel Revision Kit, 12 mm	ABS-2850-12
Bone Dowel Revision Kit, 13 mm	ABS-2850-13
Bone Dowel Revision Kit, 14 mm	ABS-2850-14
Bone Dowel Revision Kit, 16 mm	ABS-2850-16
Bone Dowel Revision Kit, 18 mm	ABS-2850-18

Note: Kits contain a cannulated bone tamp, 2.4 mm guide pin, delivery tube, and cannulated reamer.

FlexiGRAFT® Cannulated Revision Dowels

Bone Dowel Diameter	Standard Length (25-29 mm)	Extra Long Length (30-35 mm)
9 mm	PCD 9	PCDXL 9
10 mm	PCD 10	PCDXL 10
11 mm	PCD 11	PCDXL 11
12 mm	PCD 12	PCDXL 12
13 mm	PCD 13	PCDXL 13
14 mm	PCD 14	PCDXL 14
16 mm	PCD 16	PCDXL 16
18 mm	PCD 18	PCDXL 18

Note: The FlexiGraft cannulated revision dowels must be ordered through LifeNet Health Customer Service at 888-847-7831.

Bone Dowel Revision Kits

Arthrex ACP® Double-Syringe System	ABS-10010S
Angel® cPRP and BMA Tray	ABS-10062T
JumpStart® Antimicrobial Wound Dressing, 2 in × 5 in, single layer	ABS-4025
Energel® Wound Hydrogel	AGL-L075-10
Portal Skid	AR-4505
Obturator	AR-6531

Products advertised in this brochure/surgical technique guide may not be available in all countries. For information on availability, please contact Arthrex Customer Service or your local Arthrex representative.

References

1. Demyttenaere J, Claes S, Bellemans J. One-stage revision anterior cruciate ligament reconstruction in cases with excessive tunnel osteolysis. Results of a new technique using impaction bone grafting. *Knee In Press*. 2018;25(6):1308-1317. doi:10.1016/j.knee.2018.08.015.
2. MARS Group, Ding DY, Zhang AL, et al. Subsequent surgery after revision anterior cruciate ligament reconstruction: rates and risk factors from a multicenter cohort. *Am J Sports Med*. 2017;45(9):2068-2076. doi:10.1177/0363546517707207.
3. Richter DL, Werner BC, Miller MD. Surgical pearls in revision anterior cruciate ligament surgery: When must I stage? *Clin Sports Med*. 2017;36(1):173-187. doi:10.1016/j.csm.2016.08.008
4. Werner BC, Gilmore CJ, Hamann JC, et al. Revision ACL reconstruction: results of a single-stage approach using allograft dowel bone grafting for femoral defects. *J Am Acad Orthop Surg*. 2016;24(8):581-587. doi:10.5435/JAAOS-D-15-00572.

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 or outcomes.



Arthrex manufacturer, authorized representative, and importer information (Arthrex eIFUs)



US patent information