## ACL Reconstruction for BTB Grafts

### Surgical Technique

#### ACL ToolBox AR-1900S

- GraftPro Graft Preparation System AR-2950DS

#### Biocomposite and PEEK Screws

- Biocomposite Interference Screw, w/disposable sheath, 6 mm x 23 mm AR-1360C
- Biocomposite Interference Screw, w/disposable sheath, 7 mm x 23 mm AR-1370C
- Biocomposite Interference Screw, w/disposable sheath, 8 mm x 23 mm AR-1380C
- Biocomposite Interference Screw, w/disposable sheath, 9 mm x 23 mm AR-1390C
- Biocomposite Interference Screw, w/disposable sheath, 10 mm x 23 mm AR-1400C

#### PEEK Interference Screw

- PEEK Interference Screw, 6 mm x 23 mm AR-1360P
- PEEK Interference Screw, 7 mm x 23 mm AR-1370P
- PEEK Interference Screw, 8 mm x 23 mm AR-1380P
- PEEK Interference Screw, 9 mm x 23 mm AR-1390P
- PEEK Interference Screw, 10 mm x 23 mm AR-1400P

#### Transtibial ACL Reconstruction Disposable Kits

##### ACL Disposable Kit, with Saw Blade, includes:

- ACL Disposables Kit, with Saw Blade, includes: AR-1897S

- Threaded Fixation Pins, qty. 2
- Hall威K式锯片 (other blade styles available)
- Hall Tenotome Blade, 2.4 mm
- Hall Tenotome Blade, 2.6 mm
- Guide Pin w/Suture Eye, 2.4 mm
- Drill Tip Guide Pin, 2.4 mm
- Guide Pin w/25 mm and 30 mm depth markings, 2.0 mm
- Nitinol Guide Pin, 1.1 mm
- Tibial Tunnel Cannula and Backflow Cap
- Marking Ruler, 153 mm and Marking Pen, sterile, single use

#### ACL Disposable Kit, without Saw Blade, includes:

- ACL Disposables Kit, without Saw Blade, includes: AR-1898S

- Parallel Graft Knife Blades; 8 mm-11 mm, qty. 5 ea. AR-2285-08 - 11
- Guide Wire Introducer, 1.1 mm AR-4069
- FiberWir® #2 FiberWire® Suture, 38 inches w/Tapered Needle, Box of 12 AR-7200

#### Tibial Tunnel Bone Graft Harvesting (optional):

- Coring Reamer and Collared Pin, 9 mm, sterile, single use AR-1223S
- Coring Reamer and Collared Pin, 10 mm, sterile, single use AR-1224S
- Coring Reamer and Collared Pin, 11 mm, sterile, single use AR-1225S

Refer to the online Product Catalog or comprehensive knee brochure (LB1-0115-EN) for additional ACL reconstruction instrumentation and accessories.
femoral tunnel to graft patellar-bone-tendon harvest sites. Saw blades with 7 mm
the tunnel in extension.
of the graft against the posterior rim of the femoral tunnel
insertion of interference
cally
guide pin placement by referencing the over-the-top posi
reproducible ACL tunnel and socket placement.
that provides
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Reliable, Reproducible ACL Reconstruction
Reference Anatomical Constants for
is confirmed.
accurate placement of 1.1 mm diameter guide pins.
ally engaged the screw. The screw is inserted until
ful reconstruction.
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Nitinol
The Transtibial ACL Reconstruction System offers orthopedic surgeons instrumentation that provides reliable, reproducible ACL tunnel and socket placement. The Transtibial Femoral ACL Drill Guide allows precise guide pin placement by identifying the correct angulation and position to reliably produce a femoral tunnel with a consistent cortical bone contact ensuring pin accuracy. The Full Thread Biocomposite and PEEK Interference Screws are specifically designed for the single-incision technique to help reduce fluid loss. The appropriate offset Transtibial Femoral ACL Drill Guide (TTG) is selected based on the required femoral socket depth. The appropriate diameter Cannulated Drill or Coring Reamer is inserted through the tibial tunnel. The knee is placed at least 10° of flexion and the BioFlex® notch is opened. The notch is seated into the guide pin exiting the drill handpiece is recommended to monitor the implantation depth of the screw to ensure that the tip of the screw inserted into the tibial tunnel is not protruding into the joint. A Tap may be used at this point for Biocomposite Screws. A notch is created at the level of the tibial tunnel entrance. The methylene blue line should be flush with the femoral socket rim and the tendon fibers oriented posteriorly. The graft is fixed in this position. Following tibial fixation, a full range of motion and ligament stability tests should be carried out to confirm ful reconstruction.

The appropriately sized guide is placed on the patella and the guide pin exiting the drill handpiece is lightly struck with a mallet until the laser depth mark is flush with the femoral socket. A mallet may be used to break the bone block and the tendon fibers oriented posteriorly. The graft is pulled into the socket, leaving a 2 mm backwall. The graft is fixed in this position. Following tibial fixation, a full range of motion and ligament stability tests should be carried out to confirm ful reconstruction.

To reliably produce a femoral tunnel with a consistent cortical bone contact, maximizing pin accuracy. The appropriately sized guide is placed on the patella and the guide pin exiting the drill handpiece is lightly struck with a mallet until the laser depth mark is flush with the femoral socket. A mallet may be used to break the bone block and the tendon fibers oriented posteriorly. The graft is pulled into the socket, leaving a 2 mm backwall. The graft is fixed in this position. Following tibial fixation, a full range of motion and ligament stability tests should be carried out to confirm ful reconstruction.

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The Tendonfix ACL Reconstruction System offers orthopaedic surgeons instrumentation that provides reliable, reproducible ACL tunnel and socket placement.

The Tendonfix ACL Drill Guide allows precise guide pin placement by indicating the correct position to reliably produce a femoral tunnel with a consistent cortical bone contact, maximizing pin accuracy.

The 2 mm depth stop prevents precise depth control and eliminates migration of the graft against the posterior rim of the femoral tunnel and guarantees the graft's posterior cortex contact, maximizing pin accuracy.

The sizer tools provide precise depth control. If desired, a special saw blade with 7 mm depth stop may be used to harvest the desired bone block. The 2.5 mm depth stop may be used to harvest the desired femoral tunnel with the Femoral Footprint Marking Hook.

A methylene blue line is created at the bony landmarks. The guide is placed on the GraftPro® workstation.

Grafts are precisely sized to fit the bone block. If a standard tibial tunnel is desired, the appropriate diameter Cannulated Headed Reamer is inserted through the anteromedial portal with the knee in maximum flexion. A Tap may be used at this point for Biocomposite Screws. A notch is created in the femoral socket with the Tunnel Notcher and a window is positioned superiorly to provide clear visualization of the femoral socket. The Guide Pin Sleeve is placed in the tibial tunnel and past the PCL. A drilling depth of 4 cm, 5 cm or 6 cm (not shown) is removed, the round reamer is tapped, extracting the round bone graft. The graft may be split longitudinally. The appropriate diameter Cannulated Drill or Coring Reamer is introduced over the pin and guided distally until the knee is flexed to 90°.

If a round bone graft from the tibial tunnel is desired to graft the bone block, the appropriately sized guide is placed on the patella and a precise guide pin placement by referencing the over-the-top position of the femoral tunnel and eliminates migration of the graft against the posterior rim of the femoral tunnel and guarantees the graft's posterior cortex contact, maximizing pin accuracy. The hole is tapped, leaving a 2 mm backwall. A 4 mm drill bit is used to establish a hole for the appropriate interference screw placement. The socket diameter is confirmed with the 5 mm graduated depth mark (inset).

If a standard tibial tunnel is desired, an appropriate diameter Cannulated Reamer (TTG) is selected based on the required femoral socket size. A Tap may be used at this point for Biocomposite Screws. A notch is created in the femoral socket with the Tunnel Notcher and a window is positioned superiorly to provide clear visualization of the femoral socket.

The femoral guide is inserted through the tibial tunnel with the help of a guide pin exiting the drill handpiece is allowed to engage the screw. The screw is inserted until the head is flush with the femoral socket rim and the tendon fibers oriented posteriorly. A Tap may be used at this point for Biocomposite Screws. A notch is created in the femoral socket with the Tunnel Notcher and a window is positioned superiorly to provide clear visualization of the femoral socket.

The guide pin, screwdriver and excess FiberWire suture are removed. The guide pin is inserted through the anteromedial portal, the headed reamer fully accommodates the 25 mm length bone block. If the guide pin is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block.

A plastic Backflow Cap added to the end of the handle prevents fluid backflow. The Femoral Guide is inserted through the tibial tunnel and past the PCL. A drilling depth of 4 cm, 5 cm or 6 cm (not shown) is removed, the round reamer is tapped, extracting the round bone graft. The graft may be split longitudinally. The appropriate diameter Cannulated Drill or Coring Reamer is introduced over the pin and guided distally until the knee is flexed to 90°. A Tap may be used at this point for Biocomposite Screws.

The Blue tibial tunnel cannula is placed in the tibial tunnel to reduce fluid loss. The appropriate Tendonfix ACL Drill Guide (TTG) is selected based on the required femoral socket size. A 4 cm (not shown), 5 cm or 6 cm (not shown) guide pin is placed through the anteromedial portal and the sheath is removed. A 4 mm drill bit is used to establish a hole for the appropriate interference screw placement. The socket diameter is confirmed with the 5 mm graduated depth mark (inset).

The knee is placed to at least 120° of flexion and the synovial fluid is aspirated through the anteromedial portal up to the second laser line. A Lancet Chuck Handle is inserted into the femoral sheath and the femoral sheath is removed posteriorly. The guide pin is inserted through the anteromedial portal until the head is flush with the femoral socket rim. A Tap may be used at this point for Biocomposite Screws. A notch is created in the femoral socket with the Tunnel Notcher and a window is positioned superiorly to provide clear visualization of the femoral socket. The guide pin, screwdriver and excess FiberWire suture are removed. The guide pin is inserted through the anteromedial portal, the headed reamer fully accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block. If the graft is placed through the anteromedial portal, the headed reamer accommodates the 25 mm length bone block.
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Surgical Technique

ACL ToolBox AR-1900S

GraftPrep Graft Preparation System AR-3900DS

Biocomposite and PEEK Screws

- Biocomposite Interference Screw, 6 mm x 23 mm AR-1360C
- Biocomposite Interference Screw, 7 mm x 23 mm AR-1370C
- Biocomposite Interference Screw, 8 mm x 23 mm AR-1380C
- Biocomposite Interference Screw, 9 mm x 23 mm AR-1390C
- Biocomposite Interference Screw, 10 mm x 23 mm AR-1400C
- PEEK Interference Screw, 6 mm x 23 mm AR-1360P
- PEEK Interference Screw, 7 mm x 23 mm AR-1370P
- PEEK Interference Screw, 8 mm x 23 mm AR-1380P
- PEEK Interference Screw, 9 mm x 23 mm AR-1390P
- PEEK Interference Screw, 10 mm x 23 mm AR-1400P

Transtibial ACL Reconstruction Disposable Kits

- ACL Disposables Kit, with Saw Blade, includes: AR-1897S
  - Threaded Fixation Pins, qty. 2
  - Hall Style Sagittal Saw Blade (other blade styles available)
  - Tibial Tunnel Bone Graft Harvesting Kit
  - Drill Tip Guide Pin, 2.4 mm
  - Guide Pin w/Suture Eye, 2.4 mm
  - Guide Pin w/25 mm and 30 mm depth markings, 2.0 mm
  - Nitinol Guide Pin, 1.1 mm
  - Tibial Tunnel Cannula and Backflow Cap
  - Marking Ruler, 153 mm and Marking Pen, sterile, single use

- ACL Disposables Kit, without Saw Blade, includes AR-1896S
  - Needle Hub with Marking and Suture (three per box)
  - Parallel Graft Knife Blades, 8 mm-11 mm, qty. 5 ea. AR-2285-08 - 11
  - Guide Wire Introducer, 1.1 mm AR-4069
  - #2 FiberWire® Suture, 38 inches w/Tapered Needle, box of 12 AR-7200

- Tibial Tunnels Bone Graft Harvesting (optional): AR-1223S
  - Coring Recess and Collared Pin, 9 mm, sterile, single use
  - Coring Recess and Collared Pin, 10 mm, sterile, single use

Refer to the online Product Catalog or comprehensive knee brochure (LB1-0115-EN) for additional ACL reconstruction instrumentation and accessories.

This description of technique is provided as an educational tool and clinical aid to assist properly licensed medical professionals in the usage of their products in proper application. As part of this professional usage, the medical professional must use their professional judgment in making any final determinations on product usage and techniques. In using it, the medical professional must also take into account the patient’s medical condition and the associated surgical risks, which is a normal routine through review of pre-exist medical literature and the product’s Directions for Use. Postoperative management of patients varies and depends on the medical professional’s judgment. Individual patient and surgeon results vary and not all patients experience the same postoperative activity levels or outcomes.


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ACL Reconstruction for BTB Grafts

Surgical Technique

**ACL ToolBox AR-1900S**

**GraftPro® Graft Preparation System AR-2950DS**

**Biocomposite and PEEK Screws**
- Biocomposite Interference Screw, 6 mm x 23 mm AR-1360C
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- PEEK Interference Screw, 8 mm x 23 mm AR-1380P
- PEEK Interference Screw, 9 mm x 23 mm AR-1390P
- PEEK Interference Screw, 10 mm x 23 mm AR-1400P

**Transitibial ACL Reconstruction Disposable Kits**

**ACL Disposables Kit, with Saw Blade, includes:**
- ACL Disposables Kit, Saw Blade, qty 1
- Hall Style Sagittal Saw Blade, qty 1 (other blade styles available)
- Drill, 2.4 mm, 2 ea.
- Guide Pin w/25 mm and 30 mm depth markings, 2.0 mm
- Needle Grasps, 1.1 mm
- Tibial Tunnels Cannula and Backflow Cap
- Marking Ruler, 153 mm and Marking Pen, sterile, single use
- ACL Disposables Kit, without Saw Blade, includes:
  - Hall Style Sagittal Saw Blade, qty 1
  - Parallel Graft Knife Blades; 8 mm-11 mm, qty 5 ea.
  - Guide Wire Introducer, 1.1 mm
  - #2 FiberWire® Suture, 38 inches w/Tapered Needle, box of 12

**Tibial Tunnel Bone Graft Harvesting (optional):**
- Coating Rester and Collared Pin, 9 mm, sterile, single use
- Coating Rester and Collared Pin, 11 mm, sterile, single use

Refer to the online Product Catalog or comprehensive knee brochure (LB1-0115-EN) for additional ACL reconstruction instrumentation and accessories.

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View U.S. patent information at www.arthrex.com/corporate/virtual-patent-marking

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