The EZLoc™ Femoral Fixation Device is available in three lengths.

Simple
- Surgical technique features minimal steps with reliable and sensate deployment
- Easy technique for the occasional ACL surgeon and technician

Strong
- Titanium device that with excellent strength properties
- Cortical fixation allows for optimal strength

Stiff
- Device captures the cortical bone of the femur to reduce movement under cyclic loading

Slippage Resistant
- 100% titanium construction eliminates slippage between implant and cortical bone

This brochure is presented to demonstrate the surgical technique utilized by Stephen M. Howell, M.D., Biomet Sports Medicine, as the manufacturer of this device, does not practice medicine and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any procedure is responsible for determining and utilizing the appropriate techniques for such procedure for each individual patient. Biomet Sports Medicine is not responsible for selection of the appropriate surgical technique to be utilized for an individual patient.

Rehabilitation activities vary depending on the individual patient and physician’s recommendations.

The EZLoc™ Femoral Fixation Device was developed in conjunction with Stephen M. Howell, M.D., Sacramento, California.
Introduction

The EZLoc™ Femoral Fixation Device for soft tissue ACL fixation combines superior fixation properties (1427N strength, ∞N/mm stiffness and high resistance to slippage) with a reliable surgical technique featuring minimal steps. This simplifies and shortens the procedure for both occasional and experienced ACL surgeons. The advantage of the EZLoc™ Femoral Fixation technique is that passage and fixation of the graft in the femur is accomplished in ONE step.

The hamstring autograft and tibialis allograft require no special preparation and are easily passed as tunnels are drilled to match the graft diameter. The EZLoc™ Femoral Fixation Device comes pretensioned on a passing pin with a #2 MaxBraid™ PE Suture. The sharp end of the passing pin is inserted through the tunnels and through the skin of the lateral thigh. The gold lever arm of the EZLoc™ device is rotated lateral and the soft tissue graft is passed through the loop in the fixation device. The length of the lateral wall of the femoral tunnel, determined by a depth gauge, is marked on the graft. The passing pin is pulled until the mark enters the femoral tunnel, the suture is cut, the pin is removed, the suture is tensioned to deploy the lever arm and the EZLoc™ device is seated on the femoral cortex by tensioning the distal end of the graft.

There are fewer surgical steps with the EZLoc™ Femoral Fixation Device than with other femoral fixation methods. Drilling a single open-ended femoral tunnel avoids the extra steps of drilling a step-down tunnel or use of a U-guide to drill a cross pin tunnel, thereby eliminating the lateral incision and the chance of cutting the graft when impacting the cross pin. Eliminating the suture stiffens the construct and minimizes micromotion or the bungee effect. In addition, the absence of an interference screw reduces fixation complications.

Combining the EZLoc™ Femoral Fixation Device with the WasherLoc™ Tibial Fixation Device (905N, 273N/mm) and with the compaction of a bone dowel in the tibial tunnel (58N/mm), creates the strongest, stiffest and most slippage resistant ACL graft construct available.²,⁶,⁸ The optimal fixation properties of this ACL graft construct and the ability of the graft to heal circumferentially to all walls of the tunnel allows for an early, aggressive, brace-free rehabilitation that can return patients back to sport as early as four months.³,⁵,⁷
**Surgical Technique**

**Prepare the Soft Tissue ACL Graft**
Select a DLSTG hamstring autograft or a single loop tibialis or peroneal tendon allograft. Sew a suture to the end of each tendon. These will be used later in the procedure to tension the graft.

**Size the Soft Tissue ACL Graft**
Use the 7–8mm and 9–10mm sizing sticks to size the diameter of the soft tissue ACL graft (Figure 1). Slide the soft tissue ACL graft halfway through the loop of the 7–8mm sizing stick. Pull the 7–8mm sizing stick and graft through the 7 and 8mm diameter sizing sleeves. Repeat these steps with the 9–10mm sizing stick and 9 and 10mm sizing sleeves.

**Choose the Diameter of the EZLoc™ Femoral Fixation Device**
Identify the smallest sizing sleeve that freely passes over the graft and use the diameter of the sizing sleeve to drill the tibial and femoral tunnels (Figure 2). Use a 7–8 EZLoc™ Femoral Fixation Device with a 7 or 8mm tunnel and a 9–10 EZLoc™ Femoral Fixation Device with a 9 or 10mm tunnel. Keep the graft inside the sizing sleeve. Submerge graft in saline.

**Prepare Tibial Tunnel**
Insert the tip of the Howell™ 65° Tibial Guide through the medial portal. Check the clearance between the lateral femoral condyle and PCL. Widen the notch until the tip passes freely. Keep the bump on the guide inside the notch and extend the knee. Insert the coronal alignment rod through the proximal hole on the lateral side of the guide, and align the rod parallel to the joint line and perpendicular to the tibia. Insert the bullet and drill the guide wire through the lateral hole. Harvest an autogenous bone dowel from the tibial tunnel. Prepare the counterbore for the WasherLoc™ Tibial Fixation Device.
Create a Pilot Hole for the Femoral Tunnel

Use a curette and remove the ACL origin off the posterior femur. Insert the Size-Specific Femoral Aimer through the tibial tunnel and hook the tip in the over-the-top position. Allow gravity to flex the knee, which locks the guide in place; do not hyperflex the knee. Rotate the femoral aimer lateral, which moves the femoral tunnel away from the PCL to minimize PCL impingement. Create a pilot hole by drilling the guide wire 5mm into the femur (Figure 3).

Redirect the Femoral Tunnel

Redirect the pathway of the femoral guide wire to shorten the length of the femoral tunnel between 35 – 50mm. Remove the femoral guide wire and femoral aimer. Reinsert the femoral guide wire through the tibial tunnel and into the pilot hole. Flex the knee greater than 90 – 100 degrees (Figure 4), and adjust the aim so that the trajectory of the femoral guide wire is more medial to lateral (Figure 5). Drill the guide wire through the lateral femoral cortex. Verify that the cross marked section on the femoral guide wire is partially inside the femur when the wire passes through the lateral femoral cortex, which confirms the length of the femoral tunnel is between 35-50mm.
Drill the Femoral Tunnel

Use the one-inch femoral reamer and drill the femoral tunnel through the lateral femoral cortex (Figure 6). Piston the one-inch femoral reamer in and out through the cortex, which smooths the exit of the femoral tunnel. Smoothing the femoral tunnel and drilling with a one-inch reamer instead of an acorn-shaped femoral reamer allows easier passage of the EZLoc™ Femoral Fixation Device.

Measure the Length of the Open-ended Femoral Tunnel

Insert the femoral tunnel depth gauge through the tibial tunnel, intercondylar notch and femoral tunnel. Hook the tip of the depth gauge on the lateral wall of the femoral tunnel (Figure 7). Read the length of the femoral tunnel where the depth gauge leaves the intercondylar notch and enters the femoral tunnel (Figure 8). This measurement is the total length of the open-ended femoral tunnel.
Choose the Length of the EZLoc™ Femoral Fixation Device

Determine the length of the graft inside the femoral tunnel by subtracting the three different EZLoc™ Femoral Fixation Device lengths of 7, 12 and 22mm from the length of the femoral tunnel. Choose the EZLoc™ device that gives 25 – 35mm of graft length inside the femoral tunnel. For example, using a standard EZLoc™ device in a 45mm femoral tunnel gives a graft length of 33mm.

<table>
<thead>
<tr>
<th>Length of EZLoc Device</th>
<th>Femoral Tunnel Length</th>
<th>Length of Graft in Femoral Tunnel (FT)</th>
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</thead>
<tbody>
<tr>
<td>Short (7mm)</td>
<td>35mm or Shorter</td>
<td>35mm FT – 7mm = 28mm of Graft in Tunnel</td>
</tr>
<tr>
<td>Standard (12mm)</td>
<td>35 – 50mm</td>
<td>45mm FT – 12mm = 33mm of Graft in Tunnel</td>
</tr>
<tr>
<td>Long (22mm)</td>
<td>50mm or Longer</td>
<td>55mm FT – 22mm = 33mm of Graft in Tunnel</td>
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</table>

Graft Passage

The EZLoc™ device is prepackaged connected to a passing pin by a suture tied under tension. Insert the passing pin through the tibial and femoral tunnels until the sharp tip penetrates the skin of the lateral thigh (Figure 9). Orient the gold lever arm lateral, and pass the soft tissue ACL graft halfway through the loop of the EZLoc™ device (Figure 10). Mark the length of the femoral tunnel on the graft by measuring from the distal tip of the lever arm (Figure 11). Pull the passing pin proximally until the lever arm enters the notch. Confirm that the lever arm points lateral (Figure 12), then pull the EZLoc™ device until the mark enters the femoral tunnel (Figure 13).
Fixation in the Femoral Tunnel
Cut the suture and remove the passing pin from the EZLoc™ device (Figure 14). Tension the suture to deploy the lever arm (Figure 15). Pull on the distal end of the soft tissue ACL graft (Figure 16). Feel the firm, sudden grip of the lever arm on the lateral femoral cortex fixing the graft.

Fixation in the Tibial Tunnel
Tension and fix the soft tissue graft with the WasherLoc™ device (Figure 17). Impact the autogenous bone dowel anterior to the soft tissue graft to increase graft stiffness and mechanically and biologically fix the graft at the joint line.
The information contained in this package insert was current on the date this brochure was printed. However, the package insert may have been revised after that date. To obtain a current package insert, please contact Biomet Sports Medicine at the contact information provided herein.


## EZLoc™ Femoral Fixation

<table>
<thead>
<tr>
<th>EZLoc™ Femoral Fixation Device</th>
<th>Femoral Tunnel Depth Gauge</th>
<th>Sizing Stick</th>
<th>EZLoc™ Etched Guide Wire</th>
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</thead>
<tbody>
<tr>
<td>904788 7-8 mm Short (used in tunnels &lt;35mm)</td>
<td>904761</td>
<td>904762 7-8 mm</td>
<td>904764</td>
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<tr>
<td>904789 9-10mm Short (used in tunnels &lt;35mm)</td>
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<td>904763 9-10 mm</td>
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<tr>
<td>904780 7-8mm Standard (used in tunnels 35–50mm)</td>
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<tr>
<td>904781 9-10mm Standard (used in tunnels 35–50mm)</td>
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<td></td>
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<tr>
<td>904784 7-8mm Long (used in tunnels &gt;50mm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>904785 9-10mm Long (used in tunnels &gt;50mm)</td>
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## WasherLoc™ Tibial Fixation

<table>
<thead>
<tr>
<th>WasherLoc™ Tibial Fixation Device</th>
<th>WasherLoc™ Cancellous Screw</th>
<th>Bone Dowel Harvester</th>
</tr>
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<tbody>
<tr>
<td>908434 14mm</td>
<td>908824 24mm</td>
<td>9007737 7mm</td>
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<tr>
<td>908436 16mm</td>
<td>908826 26mm</td>
<td>9007738 8mm</td>
</tr>
<tr>
<td>908469 18mm Extended Spike</td>
<td>908828 28mm</td>
<td>9007739 9mm</td>
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<tr>
<td>908438 16mm Extended Spike</td>
<td>908830 30mm</td>
<td>900740 10mm</td>
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<tr>
<td>908468 18mm Extended Spike</td>
<td>908832 32mm</td>
<td>900741 11mm</td>
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## Bone Dowel Harvester

<table>
<thead>
<tr>
<th>Harvesting Tubes (Disposable)</th>
<th>9007737 7mm</th>
<th>9007738 8mm</th>
<th>9007739 9mm</th>
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<tbody>
<tr>
<td></td>
<td>900740 10mm</td>
<td>900741 11mm</td>
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