# All Inclusive ACL Portfolio





## Zimmer Biomet Sports Medicine's heritage

is founded on teaming with leading visionaries in the field to deliver innovative, outcome-focused ACL Reconstruction solutions. Over the past quarter century, this unflinching focus has resulted in the industry's leading and most differentiating portfolio of ACL solutions.

## **Femoral Tunnel Preparation**

## **Outside-In Approach**

## SwitchCut<sup>™</sup> Reaming System

- System consists of left or right specific guide, bullet, and reamer with Nitinol passer
- 6 12 mm reamer sizes, including half sizes
- Quick and easy deployment of reamer blade by simply switching power on the drill from forward to reverse
- Blade will deploy once it contacts bone in a reverse setting
- Cannulated reamers allow for passing of the Nitinol loop through the tunnel to assist in keeping tunnel placement





## **Medial Portal Approach**

### Precision Flexible Reaming Instrumentation

- Two plane bend geometry allows the knee to stay at 90° and enters through a medial portal rather than an accessory medial portal
- Two alignment options limit the guesswork of the femoral tunnel
- Comprehensive sizing for flexible reamers and femoral guides

I have been utilizing a medial portal technique for femoral drilling during ACL Reconstruction for seven years and the Precision Flexible System from Zimmer Biomet Sports Medicine has distinct advantages.

The most exciting feature for my practice is the two-plane bend geometry of the guide. This medial/lateral curvature allows the opportunity to utilize a standard medial portal and keeps the reamer away from the medial condyle. The increased curvature on the aimer also allows the ability to drill and ream without excessive hyperflexion.

I personally prefer flexible reamers, like the Precision Flexible System from Zimmer Biomet, to the outside drilling for femoral tunnels because of the simplicity and accuracy in placing the guide wire in the I.D.E.A.L.™ tunnel position.

-Andrew Pearle, MD\* Hospital for Special Surgery (HSS)

\*Endorsement provided at the request of Zimmer Biomet. This surgeon has received financial remuneration from Biomet.



### **Standard Medial Portal Femoral Aimers**

- Ranging in sizes from 5–12 mm offset, allowing for surgeon backwall preference
- Color coded system provides a 1 mm back wall
- Allows good visibility of femoral guide wire

### Low Profile Drill & EZ Shuttle<sup>®</sup> Suture Loop

- Single paddle design provides a low profile which avoids condylar abrasion
- Sterile packed for convenience and dependability
- Includes EZ Shuttle Suture Loop for shuttling grafts from the anteromedial portal thru the tibial tunnel

## Transtibial Approach

## **Transtibial Femoral Aimers**

- Ranging in sizes from 5–12 mm offset, allowing for surgeon backwall preference
- Color coded system provides a 1 mm backwall





## **Tibial Tunnel Preparation**

## **Anatomy Specific Tibial Guide**

- Tip of the guide yields the ability to position the tibial tunnel to accommodate the variability and roof angle of a particular patient's anatomy
- Anatomy specific tunnels referenced off of boney anatomy
- Designed to limit PCL and roof impingement



## **Point and Shoot Guides**

- Rigidly constructed guides designed to help the surgeon with accurate pin placement
- Three options per surgeon preference
  - Point and Shoot
  - Point to Hole
  - Point to Point

## SwitchCut Tibial Guide

• Specifically created to be utilized with the SwitchCut Reaming System for an outside-in approach

SwitchCut Tibial Guide

## **Graft Preparation**





## **Sizing Block**

- Comprehensive sizing block that includes desirable sizes including half sizes
- Slotted holes for easy sizing

## KARL STORZ Graft Table & Notcher

- Robust design and ease of use
- Adjustable for use in all-inside graft preparation
- Includes tensioning capabilities to limit graft creep

## **Femoral Fixation**

## ToggleLoc<sup>™</sup> with ZipLoop<sup>™</sup> Technology

- First adjustable loop implant on the market
- One size implant fits all, eliminating the need for multiple sizing options
- Convenient disposable kit that includes 4.5 mm drill

## ToggleLoc with ZipLoop Technology for BTB

 Includes a continuous loop at the distal portion of the ZipLoop strands, which is utilized to create a "luggage tag" around the bone block

### ToggleLoc with ZipLoop Inline Technology

- Ability to zip from the femoral side
- Reduces surgical steps by not having to pull the zipstrand out of the medial portal

ToggleLoc with ZipLoop Technology

ToggleLoc with ZipLoop Technology for BTB

> ToggleLoc with ZipLoop Inline Technology

13 mm



## ToggleLoc XL with ZipLoop Technology

- Optimal for the unanticipated intra-operative cortical breaching cases and primary repair
- Provides larger surface area for instances where larger tunnels are encountered
- Button is 20 mm, 7 mm longer than the standard ToggleLoc button

## **Femoral Fixation**

## **AFX<sup>®</sup> Femoral Implant**

• Short, stiff construct is designed to minimize graft micro motion and maximizes stability

Cay

- Circumferential graft compression promotes tendon-to-bone contact
- All-inside femoral repair avoids pin passage through the lateral femoral cortex
- Screw-in deployment designed to allow for a quick and simple surgical technique

----



## **EZLoc<sup>™</sup> Device**

- Simple technique featuring minimal steps
- Maintains optimal stability and resists slippage in vivo<sup>1</sup>
- Convenient disposable kit that includes EZLoc femoral pin and 3.2 mm WasherLoc<sup>™</sup> drill

## **Tibial Fixation**

## **TunneLoc<sup>®</sup> Device**

- Hands-free tensioner removes creep from the system and maintains tension during implant insertion
- Graft tensioner and inserter shaft eliminate the need for reusable instruments, saving costly preparation time
- PEEK-OPTIMA<sup>®</sup> implant affixes the soft tissue graft in the tibial tunnel with one simple surgical step
- Size of implants range from 8 11 mm

## WasherLoc<sup>™</sup> Device

- Bicortical fixation with cortical or cancellous screws
- Maintains optimal stability and resists slippage in vivo<sup>1</sup>
- Countersunk to limit hardware prominence and patient discomfort





## AperFix<sup>®</sup> II Tibial Sheath and Screw System

- Active intra-tunnel compression maximizes graft fixation strength<sup>8</sup>
- Precise, anatomic positioning of the tibial graft
- All-PEEK construct for biocompatibility<sup>9</sup> All-inclusive tibial system contains everything needed for a fast and simple procedure

## Interference Screws

## **Titanium Interference Screw**

- Full range of sizes
- Available in fully threaded and round head designs for tibial and femoral fixation

## iFix<sup>®</sup> Interference Screw System

The first self-tapping, PEEK-OPTIMA<sup>®</sup> bone tendon bone interference screw, the iFix system offers a strong, reproducible solution for fixation.

• A full range of sizes are available





### **ComposiTCP™ Interference Screw**

- ComposiTCP 30, made with a composite blend of 70% PLDLA and 30% beta Tri-Calcium Phosphate (designed for ACL fixation)
- ComposiTCP 60, made with a composite blend of 40% PLDLA and 60% beta Tri-Calcium Phosphate (designed for soft-tissue fixation)
- Available in both fully threaded and round head sizing options
- All screw sizes compatible with 1.1 mm guide wire

#### ComposiTCP 30 Interference Screws



		F	lound Hea	d				Fu	lly Thread	ed	
-				Cumito	-						
7 x 20 mm	7 x 25 mm	8 x 20 mm	8 x 25 mm	8 x 30 mm	9 x 25 mm	9 x 30 mm	7 x 20 mm	7 x 25 mm	8 x 20 mm	8 x 25 mm	9 x 25 mm

## Disposables

## General ACL Disposable Kit – Instrumentation Only

- One of the most cost effective offerings of the current Biomet ACL kits
- Includes new cannulated bone plug, graft protection sheath and 1.1 mm calibrated Nitinol guide wire

## **Cannulated Bone Plug**

- Designed to hold water in joint space while allowing for instruments to pass through
- Soft silicone material fits in various tunnel sizes



## Spade Tip Beath Pin

• 4.5 mm

-

- Reduces surgical steps by eliminating the 4.5 mm reamer
- Depth markings on beath pin to measure the femoral tunnel length

## **ZipLoop Puller**

- Effective while zipping the graft into the tunnel
- Surgeon should be able to easily facilitate toggling of the zip strands while zipping down the graft
- Designed to reduce stress on surgeon's hands and gloves
- Reusable and disposable option

## Implant System Kits

## **Implant System Kits**

The ToggleLoc implant system kits include the implant and disposables necessary to complete the procedure, which provides a convenience factor to the hospital and surgeon.

- ToggleLoc with ZipLoop Technology
- ToggleLoc with ZipLoop Technology for BTB
- ToggleLoc with ZipLoop Inline Technology



## **Ordering Information**

## SwitchCut Reaming System

PRODUCT	DESCRIPTION	PART NUMBER	
SwitchCut Reamer w/ Nitinol Passers	4.5 x 6.0 mm	110027674	
	4.5 x 6.5 mm	110027675	
	4.5 x 7.0 mm	110027676	
	4.5 x 7.5 mm	110027677	
	4.5 x 8.0 mm	110027678	
	4.5 x 8.5 mm	110027679	
	4.5 x 9.0 mm	110027680	
	4.5 x 9.5 mm	110027681	
	4.5 x 10.0 mm	110027682	
	4.5 x 11.0 mm	110027684	
	4.5 x 12.0 mm	110027686	
Nitinol Loop Passer		110026884	
SwitchCut Guide Bullet	4.5 mm ID	110026898	
SwitchCut Guide Bullet	6.0 mm ID	110026902	
SwitchCut Universal Guide Body		110026899	
SwitchCut Femoral Guide Arm Right		110026900	
SwitchCut Femoral Guide Arm Left		110026901	
SwitchCut Tibial Guide Arm		110026903	
SwitchCut Caddy		110026911	
SwitchCut Centering Sleeve	2.4 mm	110026904	

## Precision Flexible Reaming System

PRODUCT	DESCRIPTION	PART NUMBER	
Precision Disposable Flexible Reamer	4.5 mm	110004180	
	7.0 mm	110004185	
	7.5 mm	110010577	
	8.0 mm	110004186	
	8.5 mm	110010578	
	9.0 mm	110004187	
	9.5 mm	110010579	
	10.0 mm	110004188	
	10.5 mm	110010580	
	11.0 mm	110004189	
	11.5 mm	110010581	
	12.0 mm	110004190	
Precision Curved Femoral Guide-Left	5–6 mm	110010621	
	7–8 mm	110004074	
	9–10 mm	110004075	
	11–12 mm	110004076	
	Universal	110004080	
Precision Curved Femoral Guide-Right	5–6 mm	110010622	
	7–8 mm	110004077	
	9–10 mm	110004078	
	11–12 mm	110004079	
	Universal	110004081	
Precision Depth Gauge	_	110009768	
Precision Graft Sizing Block	_	110010813	
Precision Curved Aimer Handle	_	110004073	

## Precision Flexible Reaming System (cont.)

PRODUCT	DESCRIPTION	PART NUMBER
Precision Flexible Nitinol Guide Wire	Single	110009769
Precision Flexible Nitinol Guide Wire	5 pk	110008343

### Low Profile Drill & EZ Shuttle Suture Loop & Removal Coring Reamer

PRODUCT	DESCRIPTION	PART NUMBER
Low Profile Drill & EZ Shuttle Suture Loop	9mm, Sterile	CM-7609
Low Profile Drill & EZ Shuttle Suture Loop	10mm, Sterile	CM-7610
Low Profile Drill & EZ Shuttle Suture Loop	11mm, Sterile	CM-7611
Removal Coring Reamer	9mm, Sterile	CM-7109ST
Removal Coring Reamer	10mm, Sterile	CM-7110ST
Removal Coring Reamer	11mm, Sterile	CM-7111ST

## Anatomy Specific Tibial Guide

PRODUCT	DESCRIPTION	PART NUMBER
Anatomy Specific Tibial Guide	-	909601
Drill Guide Bullet-Calibrated (for Tibial Guide)	-	909602
Anatomy Specific Tibial Guide Cross Pin	-	909507

## **Tibial Guides**

PRODUCT	DESCRIPTION	PART NUMBER
Point & Shoot Tibial Guide	-	909511
Point to Point Tibial Guide	-	110010399
Point to Hole Tibial Guide	-	110010400
Point & Shoot Tibial Bullet	_	909512

## **Graft Preparation**

PRODUCT	DESCRIPTION	PART NUMBER
Tendon Stripper-Closed	-	909990
Tendon Stripper-Open	-	909992
ExpressBraid White Suture	10 pk	110003463
ExpressBraid White Suture	Single	110003540
ExpressBraid Blue/White Suture	10 pk	110003464
ExpressBraid Blue/White Suture	Single	110003539
Graft Sizing Block	-	110010813
KARL STORZ Tendon Board with Fliptak Retainer	-	28729SB
KARL STORZ Tendon Board	-	28729SBD
KARL STORZ Fin Shaped Notcher	-	28729N

## **Femoral Fixation**

PRODUCT	DESCRIPTION	PART NUMBER	
AperFix II Femoral Implant with Inserter	9 mm x 29 mm	CM-2909	
	10 mm x 29 mm	CM-2010	
	11 mm x 29 mm	CM-2911	

## Femoral Fixation (cont.)

PRODUCT	DESCRIPTION	PART NUMBER
ToggleLoc Device with ZipLoop Technology	-	904755
ToggleLoc Device with ZipLoop Technology for BTB	-	904756
ToggleLoc Device with ZipLoop Inline Technology	-	110005087
ToggleLoc XL with ZipLoop Technology	-	110005089
ToggleLoc XL with ZipLoop Inline Technology	-	110005090
EZLoc Femoral Fixation	7-8 mm STD9-10 mm STD7-8 mm Long(For tunnels over 50 mm)9-10 mm Long(For tunnels over 50 mm)7-8 mm Short(For tunnels under 35 mm)9-10 mm Short(For tunnels under 35 mm)	904780 904781 904784 904785 904788 904789

## **Tibial Fixation**

PRODUCT	DESCRIPTION	PART NUMBER	
TunneLoc Tibial Fixation	8 mm	906512	
	9 mm	906513	
	10 mm	906514	
	11 mm	906515	
AperFix II Tibial Implant with Driver	8 x 30 mm	CM-3008	
Cannulated Tibial Implant with Driver	9 x 30 mm	CM-3009C	
	10 x 30 mm	CM-3010C	
	11 x 30 mm	CM-3011C	
WasherLoc Tissue Fixation-Washer	14 mm	908434	
	16 mm	908436	
	18 mm	908438	

## Tibial Fixation (cont.)

PRODUCT	DESCRIPTION	PART NUMBER
WasherLoc Tissue Fixation-Extended Spike Washer	16 mm	908469
	18 mm	908468
WasherLoc Cancellous Screw	4.5 x 30 mm	908630
	4.5 x 32 mm	908632
	4.5 x 34 mm	908634
	4.5 x 36 mm	908636
	4.5 x 38 mm	908638
	4.5 x 40 mm	908640
	4.5 x 42 mm	908642
	4.5 x 44 mm	908644
	4.5 x 46 mm	908646
	4.5 x 48 mm	908648
	4.5 x 50 mm	908650
	4.5 x 52 mm	908652
	4.5 x 54 mm	908654
	4.5 x 56 mm	908656
	4.5 x 58 mm	908658
	4.5 x 60 mm	908660
	6.0 x 24 mm	908824
	6.0 x 26 mm	908826
	6.0 x 28 mm	908828
	6.0 x 30 mm	908830
	6.0 x 32 mm	908832
	6.0 x 34 mm	908834
	6.0 x 36 mm	908836
	6.0 x 38 mm	908838
	6.0 x 40 mm	908840
	6.0 x 42 mm	908842
	6.0 x 44 mm	908844
	6.0 x 46 mm	908846
	6.0 x 48 mm	908848
	6.0 x 50 mm	908850
	6.0 x 52 mm	908852
	6.0 x 54 mm	908854
	6.0 x 56 mm	908856
	6.0 x 58 mm	908858
	6.0 x 60 mm	908860

## **Ordering Information**

## **Interference Screws**

PRODUCT	DESCRIPTION	PART NUMBER
iFix Interference Screws	7 x 20mm	CM-1720
	7 x 25mm	CM-1725
	8 x 20mm	CM-1820
	8 x 25mm	CM-1825
	8 x 30mm	CM-1830
	9 x 20mm	CM-1920
	9 x 25mm	CM-1925
	9 x 30mm	CM-1930
	10 x 25mm	CM-1025
	10 x 30mm	CM-1030
	11 x 30mm	CM-1130
	12 x 30mm	CM-1230
ComposiTCP 60 Interference Screw-Round Head	9 x 25 mm	905256
	9 x 30 mm	905257
	9 x 35 mm	905258
ComposiTCP 60 Interference Screw-Fully Threaded	10 x 25 mm	905259
	10 x 30 mm	905261
	10 x 35 mm	905262
	11 x 30 mm	905263
	11 x 35 mm	905264
ComposiTCP 30 Interference Screw-Fully Threaded	7 x 20 mm	110004594
	7 x 25 mm	110004595
	8 x 20 mm	110004598
	8 x 25 mm	110004599
	9 x 25 mm	110004602
ComposiTCP 30 Interference Screw-Round Head	7 x 20 mm	110004604
	7 x 25 mm	110004605
	8 x 20 mm	110004608
	8 x 25 mm	110004609
	8 x 30 mm	110004611
	9 x 25 mm	905216
	9 x 30 mm	905217

## Interference Screws (cont.)

PRODUCT	DESCRIPTION	PART NUMBER	
Titanium Screw-Round Head	7 x 20 mm	909658	
	7 x 25 mm	909660	
	7 x 30 mm	909662	
	8 x 20 mm	909666	
	8 x 25 mm	909668	
	8 x 30 mm	909670	
	9 x 20 mm	909674	
	9 x 25 mm	909677	
	9 x 30 mm	909680	
	10 x 25 mm	909689	
Titanium Screw-Fully Threaded	7 x 20 mm	909659	
	7 x 25 mm	909661	
	7 x 30 mm	909663	
	8 x 20 mm	909667	
	8 x 25 mm	909669	
	8 x 30 mm	909671	
	9 x 20 mm	909675	
	9 x 25 mm	909679	
	9 x 30 mm	909681	

## **Ordering Information**

## Disposables

PRODUCT	DESCRIPTION	PART NUMBER
General ACL Kit-Instrumentation Only	-	110004136
Cannulated Bone Plug	5 pk	110003541
Spade Tip Calibrated Guide Pin	4.5 mm	110007425
ZipLoop Puller-Disposable	-	904794
EZLoc/WasherLoc Disposable Kit	_	909836
ToggleLoc/WasherLoc Disposable Kit	-	909846
AperFix and iFix ACL Disposable Procedure Kit	Sterile	CM-1501

## **Reusable ZipLoop Puller**

PART NUMBER	DESCRIPTION	PRODUCT
904776	-	ZipLoop Puller-Reusable

### **Implant System Kits**

PART NUMBER	DESCRIPTION	PRODUCT
909848	-	ToggleLoc with ZipLoop Technology Kit
909849	-	ToggleLoc with ZipLoop Technology for BTB Kit
110007421	-	ToggleLoc with ZipLoop Inline Technology Kit

#### References

- 1. Smith, C.K., MD; Howell, S.M., MD; Hull, M.L., MD.: Anterior Laxity, Slippage, and Recovery of Function in the First Year After Tibialis Allograft Anterior Cruciate Ligament Reconstruction. *Am J Sports Med*, 39(1): 78-88, 2011.
- 2. Cayenne Medical Whitepaper. 11093 Rev A
- 3. Gadikota, HR et al. Biomechanical Comparison of Single-Tunnel–Double- Bundle and Single-Bundle Anterior Cruciate Ligament Reconstructions. Am J Sports Med. 2009; 37 (5): 962-969.
- Weiler A, Hoffman RFG, Bail HJ, et al: Tendon Healing in a Bone Tunnel. Part II: Histologic Analysis After Biodegradable Interference Fit Fixation in a Model of Anterior Cruciate Ligament Reconstruction in Sheep. Arthroscopy: The Journal of Arthroscopic and Related Surgery, Vol 18, No 2 (February), 2002: pp 124–135.
- 5. G Görmeli, CA Görmeli, M Karakaplan, MF Korkmaz, U Diliçıkık, H Gözükara. Outcome of transtibial AperFix system in anterior cruciate ligament injuries. *Indian J Orthop*. 2015 Mar-Apr; 49(2): 150–154.
- 6. Uribe JW, Arango D, Frank J, Kiebzak GM. Two-year Outcome With the AperFix System for ACL Reconstruction. Orthopedics. 2013; 36(2): 159-164.
- MK Mulcahey, TS David, DM Epstein, MJ Alaia, KD Montgomery. Transtibial Versus Anteromedial Portal Anterior Cruciate Ligament Reconstruction Using Soft-Tissue Graft and Expandable Fixation. Arthroplasty. November 2014. Volume 30, Issue 11, Pages 1461–1467.
- 8. Aga C, Rasmussen MT, Smith SD, Jansson KS, LaPrade RF, Engebretsen L, Wijdicks CA. Biomechanical Comparison of Interference Screws and Combination Screw and Sheath Devices for Soft Tissue Anterior Cruciate Ligament Reconstruction on the Tibial Side. *Am J Sports Med.* 2013 Apr;41(4):841-8.2.
- 9. Toth JM. Biocompatibility of PEEK Polymers. Presentation at First PEEK Biomaterials Conference. Philadelphia, PA April 2013.
- Powers, D.L.; Sonawala, M.; Woolf, S.K.; An, Y.H.; Hawkins, R.; Pietrzak, W.S.: Comparison of the Biomechanics and Histology of Two Soft Tissue Fixators Composed of Bioabsorbable Copolymers. J Biomed Mater Res (Appl Biomater) 58: 486-295, 2001.

KARL STORZ is the legal manufacturer of the KARL STORZ Graft Table & Notcher.

SBM is the legal manufacturer of the ComposiTCP Interference Screw.

TAG is the legal manufacturer of the SwitchCut Reaming System.

All content herein is protected by copyright, trademarks and other intellectual property rights, as applicable, owned by or licensed to Zimmer Biomet or its affiliates unless otherwise indicated, and must not be redistributed, duplicated or disclosed, in whole or in part, without the express written consent of Zimmer Biomet.

This material is intended for health care professionals. Distribution to any other recipient is prohibited.

For product information, including indications, contraindications, warnings, precautions, potential adverse effects and patient counseling information, see the package insert and www.zimmerbiomet.com.

Check for country product clearances and reference product specific instructions for use.

Cayenne Medical is the legal manufacturer for the following products: Low Profile Drill & EZ Shuttle Suture Loop, AFX Femoral Implant and AperFix System, AperFix II Tibial Sheath and Screw System, and iFix Interference Screw System.

PEEK-OPTIMA is a registered trademark of Invibio Limited.

© 2019 Zimmer Biomet



0207.3-US-en-REV0619

Caye 1659 Suite

**Legal Manufacturer** Cayenne Medical Inc. 16597 N. 92nd St

Suite 101 Scottsdale, AZ 85260 USA

Zimmer Biomet Sports Medicine 56 East Bell Drive P.O. Box 587

Warsaw, Indiana 46581 USA

zimmerbiomet.com