

BIOLOGICALLY ORIENTED PROSTHESES

**BIOPRO**

# Accu-Cut<sup>®</sup> Osteotomy Guide System

**Surgical Technique**



# Contents

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# Indications & Contraindications

## **Indications for use:**

1. For correction of bunion deformity requiring either varus or valgus correction
2. For correction of bunion deformity requiring joint decompression

## **Contra-indications:**

1. A general health problem that might pose a significant threat to the life of the patient if subjected to a major surgical procedure.
2. An active infection or a previous infection of the lower extremity that has not been quiescent for at least six months.
3. A local or systemic infection.
4. Significant deficiency in the vascular supply to the extremity.

## **Precautions and Handling**

- Saw blades and k-wires are only for use with surgical power instruments designed for small bone surgery.
- Only use the provided saw blades and k-wires within the sterile package.
- Inspect the sterile blisters prior to use. Sterilization cannot be assured, and devices should not be used if blister or seal is damaged.
- Devices are single use only.
- Do not autoclave devices.

## **Potential Complications and Adverse Effects**

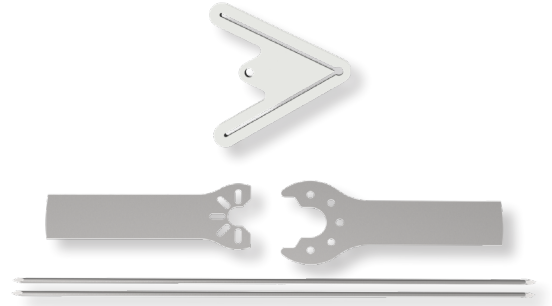
- Delayed or non-union of bone
- Delayed healing
- Guides may be cut or broken
- K-wires may bend or break

# Guide Specifications

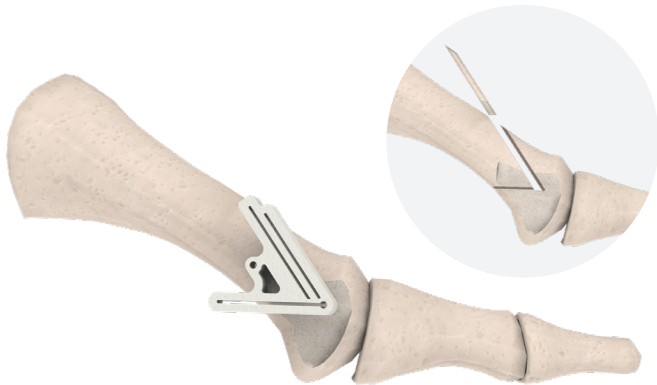


## Chevron (Austin) Guide

The standard Chevron Guide offers a classic v-shape chevron osteotomy to address hallux valgus by lateral transposition of the metatarsal head. The guide features a 55° angle with 16mm long cutting slots.

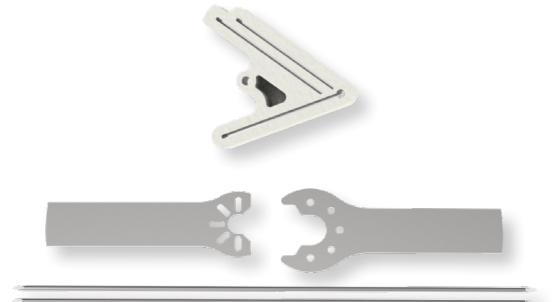


Item #	Description
19505	Standard Chevron Kit



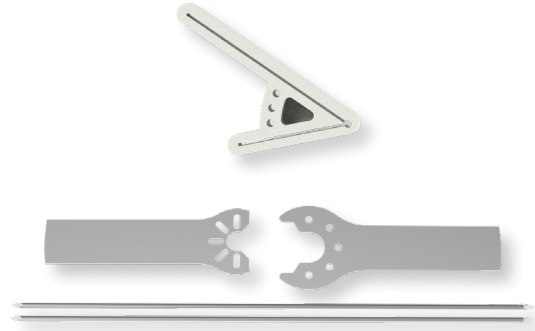
## Youngswick Guide

The Youngswick Guide is available in either 1mm, 2mm, or 3mm dorsal wedges for performing a Youngswick chevron modification to address both hallux valgus and hallux rigidus. The guides feature a 55° angle with 16 and 19mm long cutting slots.



Item #	Description
19506	Youngswick 1mm Kit
19507	Youngswick 2mm Kit
19508	Youngswick 3mm Kit

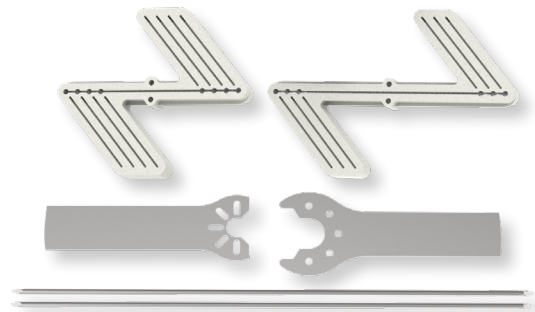
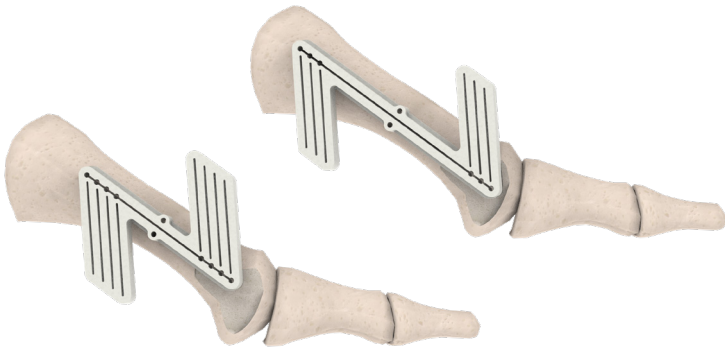
# Guide Specifications



## Long-Arm Chevron Guide

The Long-Arm Guide is a chevron modification with a long dorsal arm for multiple screw fixation. The guide features a 45° angle with a 28mm long dorsal cutting slot and 16mm long plantar cutting slot. Additionally, the guide offers three proximal mounting holes spaced 11° apart, allowing intra-operative adjustment of the cut angle.

Item #	Description
19510	Long-Arm Chevron Kit



## Scarf Guide

The Scarf Guide is a "Z" shaped guide to assist in the popular Scarf procedure. The system includes two guides, a large and a small for customization of the osteotomy based on the anatomy of the patient's metatarsal.

Item #	Description
19511	Scarf "Z" Guide Kit

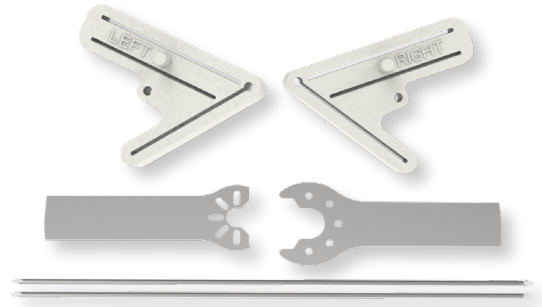
The short guide features a 38mm long transverse cutting slot with four distal dorsal and four proximal plantar cutting slots.

The long guide features a 50mm long transverse cutting slot with three distal dorsal and three proximal plantar cutting slots.

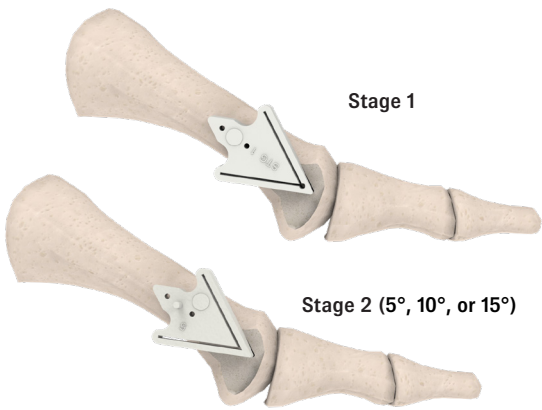


### DMAA Guide

The DMAA Guide allows for correction of DMAA (Distal Metatarsal Articular Angle) or PASA (Proximal Articular Set Angle) with one simple guide. The guide features a chevron cut with a second dorsal slot, angled at 10°. This allows for lateral transposition plus rotation of the head.

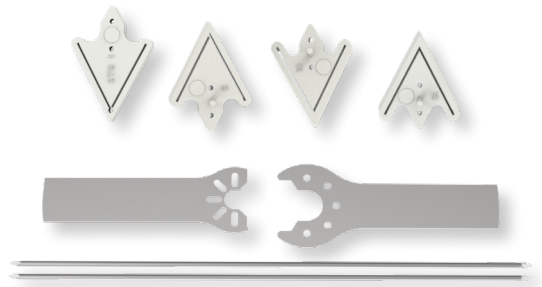


Item #	Description
19720	DMAA Guide Kit



### 2-Stage Guide

The 2-Stage Guide allows for correction of DMAA (Distal Metatarsal Articular Angle) or PASA (Proximal Articular Set Angle) with two guides similar to the Reverdin-Gerbert procedure. The system includes a Stage-1 guide for a standard 55° chevron cut, along with three angled Stage-2 guides allowing 5°, 10°, or 15° of rotation along with lateral transposition.



Item #	Description
19509	2-Stage Guide Kit

# Sterile Kit Specifications

## Sterile kits

Accu-Cut Guides are individually sterile packed and include two sterile saw blades and two 0.045" double trocar K-wires providing the surgeon with everything needed to perform the desired osteotomy.

Depending on guide selection, you may receive more than one guide in your sterile packed instrument kit.

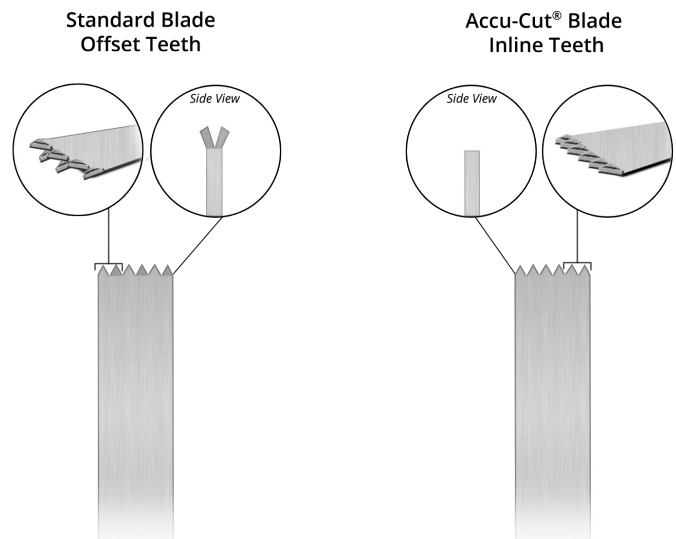


## Saw blades

It is important to only use the provided saw blades. The blades are universal and should fit most saw systems. Traditional saw blades have offset teeth, meaning the blade is thicker at the teeth than the rest of the blade. The provided blades have inline teeth, for a low-profile, uniform thickness. This allows for tighter tolerances within the guide slots.

### Caution

Blades not designed for the Accu-Cut will not fit properly within the guide slots and can damage the guide or produce material debris.



# Surgical Technique

The following technique is performed with the Chevron Guide. The same basic principles apply to all of the Accu-Cut Osteotomy Guides.



**Step One:**

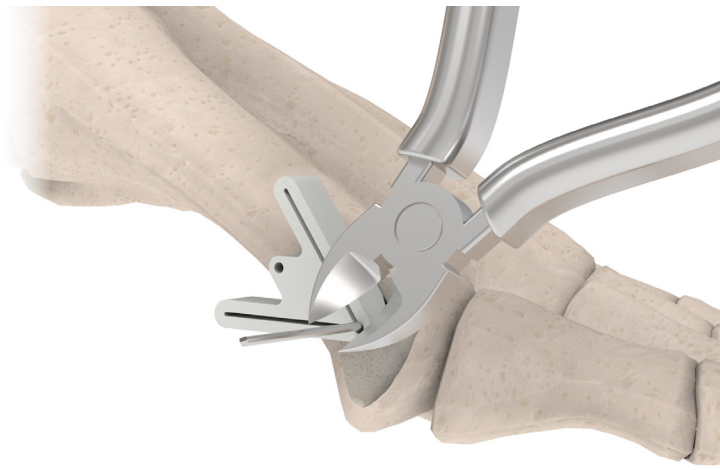
Resect a small wafer of medial eminence from the metatarsal head, thereby creating a flat medial surface.



**Step Two:**

Drive one of the provided 0.045" double-trocar K-wires into the metatarsal head at the desired apex point of the osteotomy, ensuring it passes through the lateral cortex.





**Step Three:**

Slide the apex hole of the Accu-Cut Guide onto the K-wire until flush against the metatarsal head. Using wire cutters, cut the K-wire flush against the guide surface.



**Step Four:**

Place the cut end of the K-wire used in step three back into the wire driver with the trocar point exposed. Align the posterior hole of the Accu-Cut Guide at the desired point on the metatarsal's medial bisection and drive the wire through the guides posterior hole and bone until through the lateral cortex.

**Important Note**

This creates a stable two-point fixed system to eliminate saw cut migrations.

**Step Five:**

Cut the posterior K-wire leaving 5-6mm exposed.



**Step Six:**

Place a small hemostat over the posterior K-wire, flush with the Accu-Cut Guide to stabilize the guide against the bone surface. This will prevent migration of the guide medially on the K-wires during sawing.

**Step Seven:**

Insert the sagittal saw with the provided custom blade into the dorsal cutting slot until the blade is adjacent to the bony surface. Activate the saw and perform the through and through cuts. Repeat on the plantar cutting slot until the capital fragment is free.

**Caution**

Always insert the blade into the slot before activating the saw.

**Important Note**

Depending on the size of the metatarsal, you may need to tilt the saw blade in order to cut through the dorsal cortex of the metatarsal.

**Important Note**

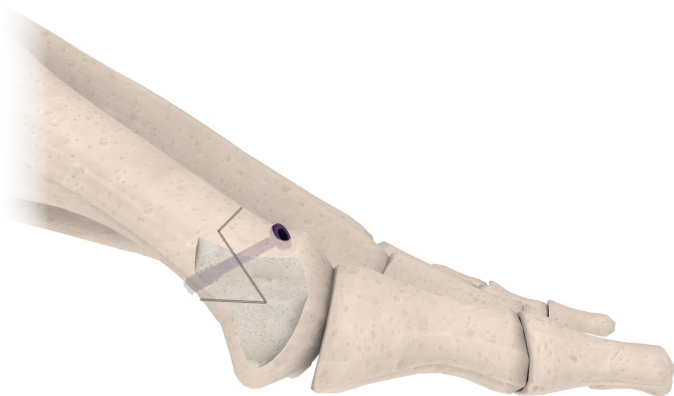
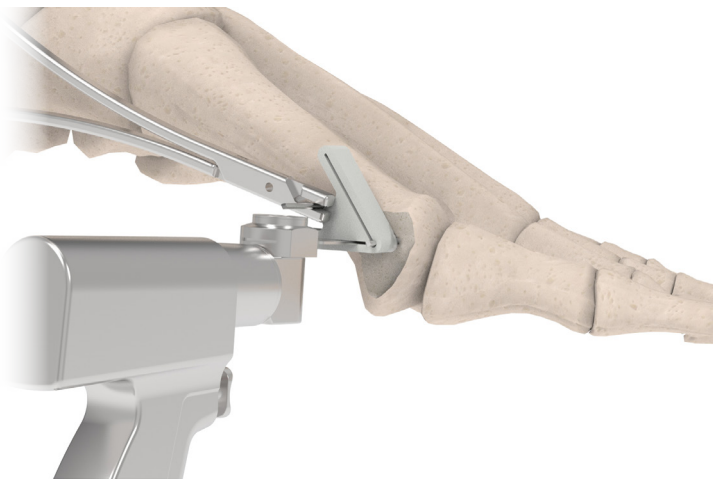
The apex wire acts like a cutting guard and will not allow the saw blade to cut beyond it in the metatarsal head, regardless of the angle the saw is held at during the cutting operation.

**Important Note**

The system includes two saw blades, designed to fit the most popular sagittal saw systems on the market today. Use the blade that best fits the system available and discard the other. Only use the provided saw blades with the Accu-Cut Osteotomy Guide System.

**Caution**

Blades not designed for the Accu-Cut will not fit properly within the guide slots and can damage the guide or produce material debris.

**Step Eight:**

Remove the hemostat, guide and K-wires from the operative site. Place the fragment in the desired position and use the second provided 0.045 K-wire for temporary fixation of the capital fragment.

**Step Nine:**

Fixate the osteotomy with the surgeon's desired technique and remove the medial eminence created by lateral transposition with sagittal saw.

*Suggestion:*

*BioPro recommends fixation with a 2.5 or 3.0mm Go-EZ Cannulated Compression Screw.*

# Technique Notes

## Youngswick Guide



The overall procedure is the same as the chevron with the addition of a second dorsal cut to be performed prior to transposing the osteotomy.

Be sure to make both dorsal cuts first and the plantar cut last. This will ensure all cuts are being made on a stable capital fragment with the guide securely attached to the metatarsal until the final cut is completed.

The Accu-Cut saw blades create a 0.5mm cut. When using the Youngswick guide, two dorsal cuts are created, equaling 1mm of shortening and plantar displacement in addition to the offset of the guide (1mm, 2mm or 3mm). Be sure to take this 1mm into account when choosing the appropriate guide for the correction needed.

## Long-Arm Chevron Guide



The procedure for the Long-Arm guide is the same as the Chevron, but at 45° to offer a longer dorsal arm than the traditional 55° guide. Length of the dorsal arm can be customized based on the angle the guide is mounted at.

The surgeon can also mount the guide, make one cut, then reposition the guide on the proximal K-wire before making the second cut. This will change the angle of the osteotomy by 11° for each mounting hole.

## DMAA Guide

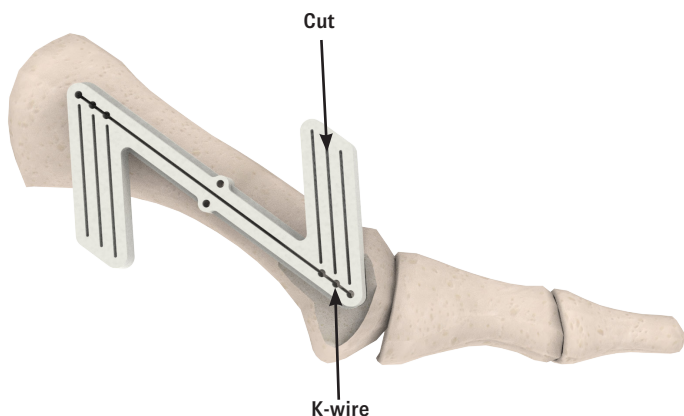


The overall procedure is the same as the chevron with the addition of a second dorsal cut to be performed prior to transposing the osteotomy. The second dorsal cutting slot is angled at 10° creating a wedge for rotation of the head.

Be sure to make both dorsal cuts first and the plantar cut last. This will ensure all cuts are being made on a stable capital fragment with the guide securely attached to the metatarsal until the final cut is completed.

The system includes both a right and left guide. Be sure to use the proper guide (either left or right) for the foot being operated on.

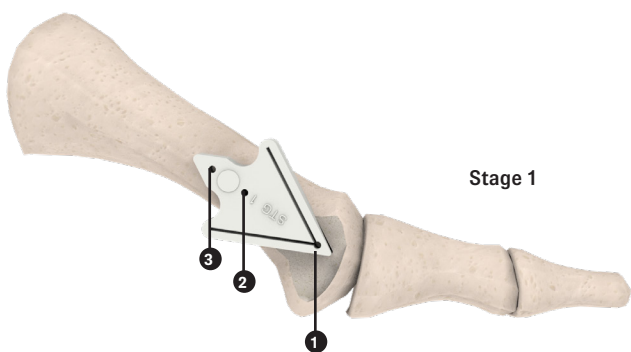
## Scarf Guide



The Scarf Accu-Cut Osteotomy Guide System includes two guides (short and long). Use the guide that best fits the patient's anatomy. Each guide can produce cuts of varying lengths, with each cutting slot corresponding to a K-wire hole. The placement of the guide should be considered before placing the first K-wire.

It is important that the K-wire be placed adjacent to the cutting slot used for the osteotomy. For example, if you plan to use the second slot from the proximal end of the guide but place the wire in the first most proximal hole, a small undercut will be created in the cut. The k-wire acts as a positive stop for the saw blade.

## 2-Stage Guide

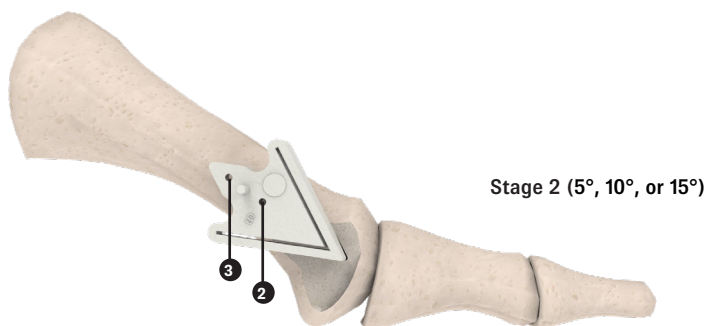


The 2-Stage Guide allows correction of PASA or DMAA, similar to the Reverdin-Gerbert procedure. The system includes a Stage-1 guide for a standard Chevron cut, along with three angled Stage-2 guides allowing 5°, 10°, or 15° of rotation along with lateral transposition.

This procedure is different from the other Accu-Cut Guide procedures as it requires two guides.

After performing stage 1, remove the guide and distal apex K-wire.

**Do NOT remove the two proximal K-wires.**



Choose the desired amount of correction; 5°, 10° or 15° and select the appropriate Stage-2 guide. Mount the chosen Stage-2 guide onto the two remaining proximal K-wires and re-apply the hemostat to the proximal most K-wire.

# Ordering

<b>ITEM #</b>	<b>DESCRIPTION</b>
19505	AUSTIN/CHEVRON GUIDE
19506	YOUNGSWICK 1MM
19507	YOUNGSWICK 2MM
19508	YOUNGSWICK 3MM
19509	2-STAGE PASA/DMAA GUIDE
19510	LONG ARM CHEVRON GUIDE
19511	Z (SCARF) GUIDE
19720	DMAA GUIDE



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