

EXACTECH | EXTREMITIES

Operative Technique



EPIC
EXTREMITIES

Distal Oblique
Metatarsal Osteotomy

TABLE OF CONTENTS

OPERATIVE TECHNIQUE OVERVIEW	1
DETAILED OPERATIVE TECHNIQUE	2
IMPLANT LISTING	6
INSTRUMENT LISTING	7
INDICATIONS FOR USE	
INDICATIONS	8
CONTRAINDICATIONS	8

INTRODUCTION

EPIC Extremity foot and ankle reconstruction system allows surgeons the ability to configure trays for their specific needs through a modular implant and instrument tray design. The connect and disconnect modules easily allow surgeons to mix and match screws and plates based on implant preferences and surgical needs. This specific technique outlines how to perform a Weil osteotomy using the EPIC Extremity snap-off screws and instruments.

The EPIC Extremity Snap-Off Screws consist of headed snap-off screws of various lengths and instruments to assist in implantation. All implants are made from titanium alloy (Ti6Al4V) conforming to ASTM F136.

EPIC Extremity is designed in conjunction with:

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OPERATIVE TECHNIQUE OVERVIEW

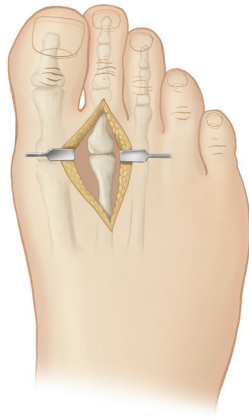


Figure A
Make Incision

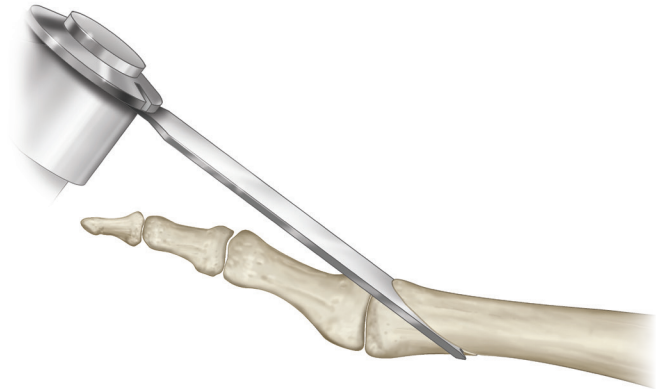


Figure B
Saw the Bone at 30 Degrees



Figure C
Shorten the Toe

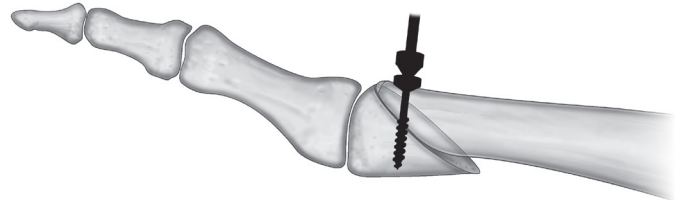


Figure D
Verify Screw Length

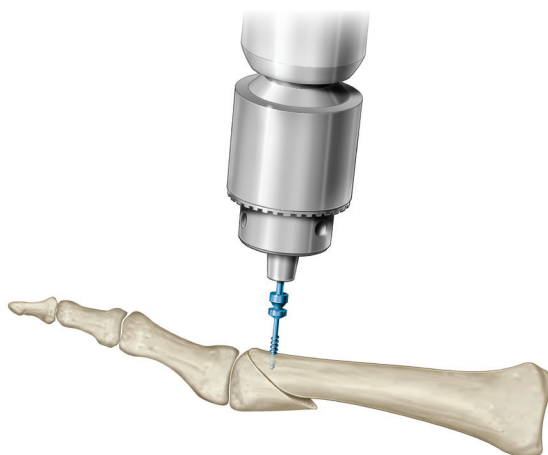


Figure E
Drive the Snap-Off Screw to Compress the Bone

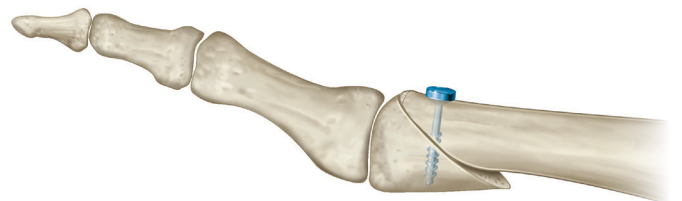


Figure F
Confirm Implant Position

DETAILED OPERATIVE TECHNIQUE

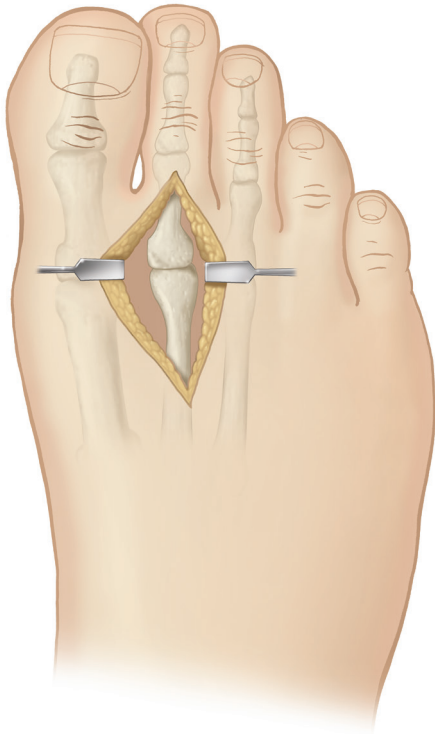


Figure 1
Make an Incision

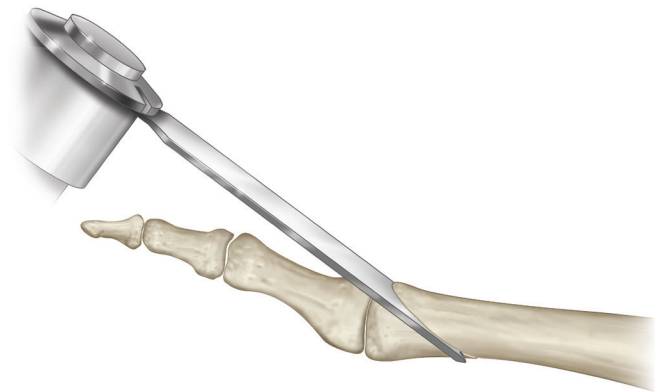


Figure 2
Saw the Bone at 30 Degrees

A dorsal approach is performed using an incision over the metatarsal, just between the extensor digitorum longus and brevis tendons. The incision should be extended distally until the deep fascia is reached, creating sufficient space for the saw (*Figure 1*). Care must be taken to avoid all dorsal neurovascular structures.

Once the joint is fully exposed, use an oscillating saw to begin the resection, 1-2mm proximal to the dorsal border of the metatarsal head articular cartilage. Continue the cut through the plantar cortex of the metatarsal. Ensure that the cut is approximately 30 degrees dorsal to the metatarsal axis, which is approximately parallel with the weight-bearing surface in patients with a normal arch anatomy (*Figure 2*).

Note: Adjust the resection angles to account for pes cavus and pes planus conditions. Failure to adjust will cause the cut to be either too short or too long.

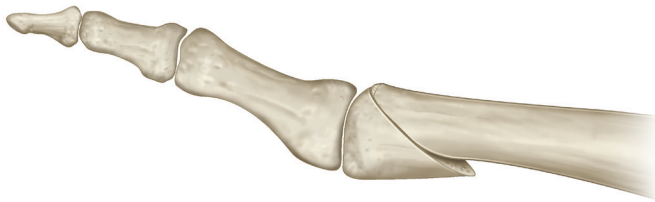


Figure 3
Shorten the Toe

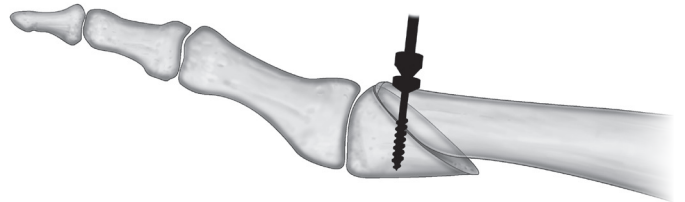



Figure 4
Verify Screw Length

Slide the distal bone fragment proximally, shortening the toe up to 3mm, as needed (*Figure 3*).

Once the osteotomy is completed, select the **Snap-Off Screw** size based on the relative size of the patient's anatomy. Verify screw size by holding the screw either medially or laterally to the metatarsal at the desired screw position.

 Using a lateral fluoroscopic image, verify the proper length of the screw. With the underside of the screw head in line with the dorsal cortex, the screw tip should engage, but not protrude beyond the plantar cortex (*Figure 4*).

DETAILED OPERATIVE TECHNIQUE

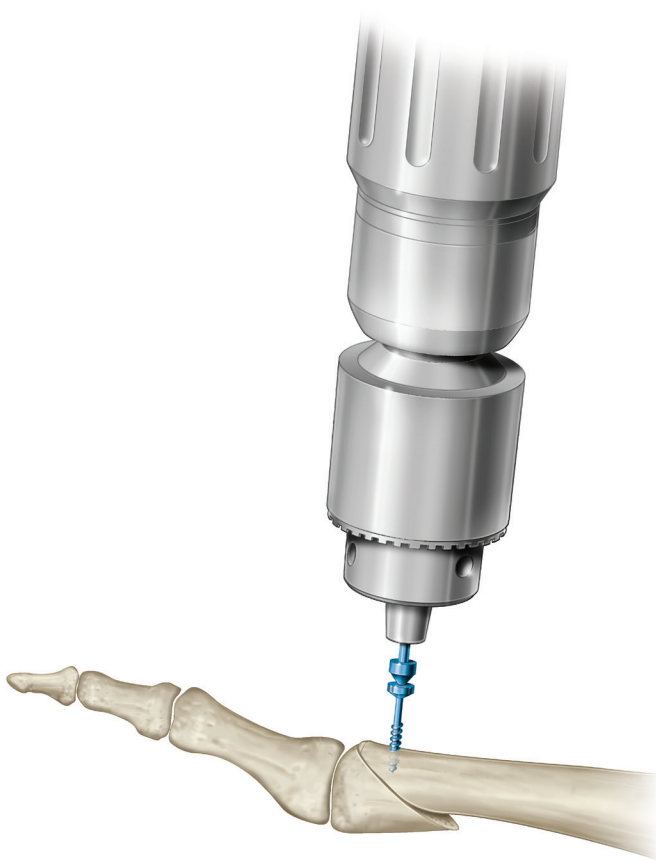


Figure 5

Drive the Snap-Off Screw to Compress the Bone

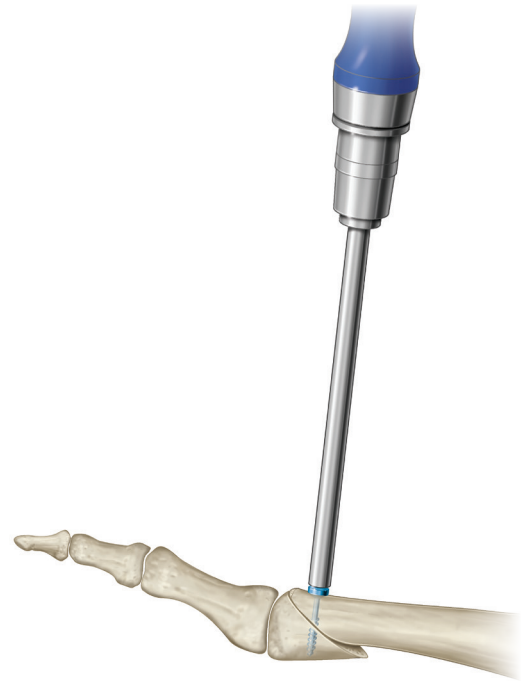


Figure 6

Use Screwdriver In Case of Poor Bone Quality

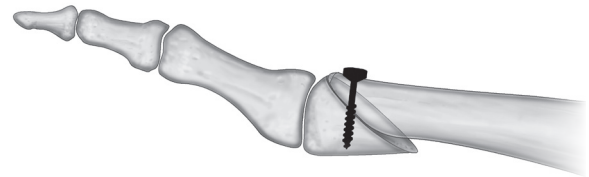



Figure 7

Confirm Implant Position

When the correct screw length has been identified, place the proximal portion of the Snap-Off Screw into a pin driver and drive the screw through the metatarsal to compress the bone across the osteotomy site (*Figure 5*). If the screw snaps off the driver prior to the screw head bottoming out against the dorsal cortex, use the **Snap-Off Screwdriver** to drive the screw until it bottoms out against the dorsal cortex.

In cases of poor bone quality, the Snap-Off Screw may be inserted by hand with the screwdriver and the snapping feature can manually snap off by bending the proximal portion of the pin off-axis to avoid excessively compressing the screw head through the cortex (*Figure 6*).

 Once the screw is in place, take a lateral fluoroscopic image to confirm proper implant position, as described previously (*Figure 7*).

Close the incision based on surgeon preference.

IMPLANT LISTING

CATALOG NO.	PART DESCRIPTION
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4000-0011	2.0 Snap-Off Screw x 11
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4000-0012	2.0 Snap-Off Screw x 12
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4000-0013	2.0 Snap-Off Screw x 13
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4000-0014	2.0 Snap-Off Screw x 14
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INSTRUMENT LISTING

CATALOG NO.	PART DESCRIPTION
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CORE TRAY

1100-0000	Handle with Quick Connect*
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1100-0004	Small Ratchet Handle with Quick Connect **
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HALLUX VALGUS INSERT

2111-0002	Bunion Insert
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4100-0001	Snap-Off Driver
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INDICATIONS FOR USE

INDICATIONS

The EPIC Extremity Snap-Off Screws are indicated for use in fixation of bone fractures or bone reconstruction. Examples include:

- Fixation of small bone fragments
- Weil osteotomy
- Mono-cortical fixation
- Osteotomies and fracture fixation in the foot and hand

Snap-Off Screws are intended for single-use only.

CONTRAINDICATIONS

- Patients where there is an active infection
- Possibility for conservative treatment
- Patients with malignant primary or metastasis tumors which preclude adequate bone support or screw fixations, unless supplemental fixation or stabilization methods are utilized.
- Growing patients with open epiphyses
- Insufficient quantity or quality of bone to permit stabilization of the arthrodesis
- Suspected or documented metal allergy or intolerance

*Corresponding MedTorque Device Number is 2HJ4-C09.

**Corresponding MedTorque Device Number is 2RUM5-C09.

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For additional device information, refer to the EPIC Extremity–Instructions for Use for a device description, indications, contraindications, precautions and warnings. For further product information, please contact Customer Service, Exactech, Inc., 2320 NW 66th Court, Gainesville, Florida 32653-1630, USA. (352) 377-1140, (800) 392-2832 or FAX (352) 378-2617.

Exactech, as the manufacturer of this device, does not practice medicine, and is not responsible for recommending the appropriate surgical technique for use on a particular patient. These guidelines are intended to be solely informational and each surgeon must evaluate the appropriateness of these guidelines based on his or her personal medical training and experience. Prior to use of this system, the surgeon should refer to the product package insert for comprehensive warnings, precautions, indications for use, contraindications and adverse effects.

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