



CUP AND CONE REAMERS

Surgical Technique

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Nota Bene

The technique description herein is made available to the healthcare professional to illustrate the author's suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the specific patient.

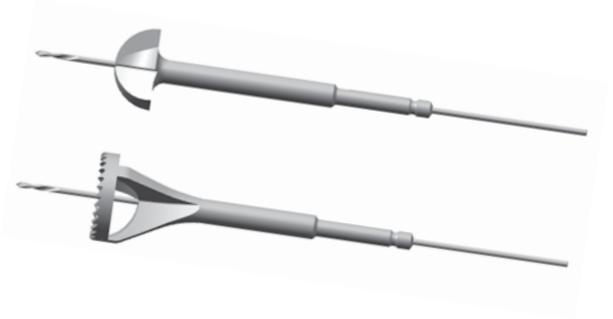
Product Overview

Introduction

The Smith & Nephew CUP AND CONE REAMERS includes five sizes of metatarsal and phalangeal reamers, as well as the guide wires used in conjunction with the reamers. These reamers are designed to be used to prepare the metatarsophalangeal joint for fusion.

Design features and benefits

The combination of a cutting ring and joint preparation blades allows for two steps to be performed at the same time. The aggressive cutting edge geometry decreases the force necessary for effective cartilage removal.



Drill Tip Guide wires

1.6mm drill tip guide wires provide a 56% decrease in maximum temperature and 96% increase in insertion time when compared to trocar tip wires. In addition, the wires are composed of cobalt chrome to provide increased stiffness and precise trajectory during entry.¹



Range of reamer sizes

The reamers are available in 2mm increment sizes from 14mm diameter to 22mm diameter, to fit a broad range of patient anatomies.

1. Hartsell Z, Livingstone J. "Evaluation of Heat Generation with Drill Tip K-wires." Smith & Nephew, Inc. Bristol Royal Infirmary and Avon Orthopaedic Centre. 2009.

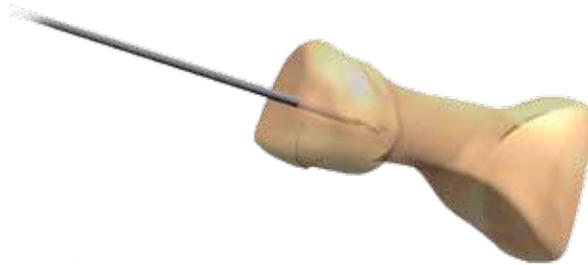
Surgical technique

Preparation

Make a dorsomedial incision over the first metatarsophalangeal joint, and dissect to the joint surface, being careful to protect the superficial nerve and vessel. Separate the joint by maximally plantar flexing the hallux so that the metatarsal reamer will not impinge on the surrounding soft tissue. Ensure direct access to both the metatarsal head and the base of the proximal phalanx of the hallux so the surrounding soft tissue and bone is not violated.

Ream metatarsal

Insert a 1.6mm Drill Tip Wire (7110-1502) into the distal end of the metatarsal head, along the center axis of the metatarsal. In order to accurately place the wire, the starting point should be slightly dorsal to the midline of the metatarsal, and it should be centered along the sagittal plane. Verify the depth and position of the wire using a c-arm, and ensure that the wire is inserted farther than the desired reaming depth.



Select the appropriate sized cone reamer. The size can be determined by placing cone reamers over the wire until the correct size is determined. The cutting flutes of the cone reamer should be outside the cortical bone of the first metatarsal head.



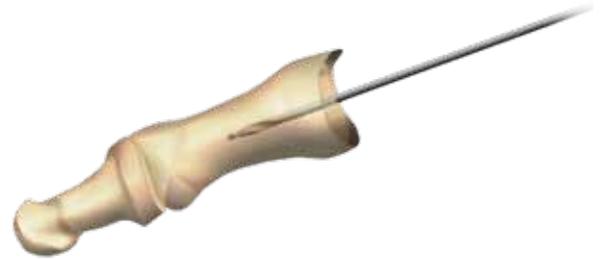
Using a powered reamer, start the instrument just prior to touching the bone. Remove as little bone as possible while still creating the correct shape and removing the articular cartilage. The bone should begin to bleed when the metatarsal has been sufficiently reamed.

Note: The CUP AND CONE REAMERS are extremely sharp. Begin each procedure by putting a very small amount of pressure on the bone, and gradually increase pressure until the desired depth is reamed. Caution should be taken when handling sharp instruments.

Remove the reamer and wire from the metatarsal.

Ream phalange

Insert the 1.6mm Drill Tip Wire into the base of the proximal phalanx of the hallux, along the center axis of the phalange. The insertion point should be slightly dorsal to the midline to account for the morphology of the proximal phalanx. Make sure that the wire is inserted farther than the desired reaming depth.



Select the appropriate sized cup reamer. This size should match the same size as the cone reamer selected previously, to ensure congruent surfaces are created.

Using a powered reamer, start the instrument just prior to touching the bone. Remove as little bone as possible while still creating the correct shape and removing the articular cartilage. The bone should begin to bleed when the phalange has been sufficiently reamed.



Note: The CUP AND CONE REAMERS are extremely sharp. Begin each procedure by putting a very small amount of pressure on the bone, and gradually increase pressure until the desired depth is reamed. Caution should be taken when handling sharp instruments.

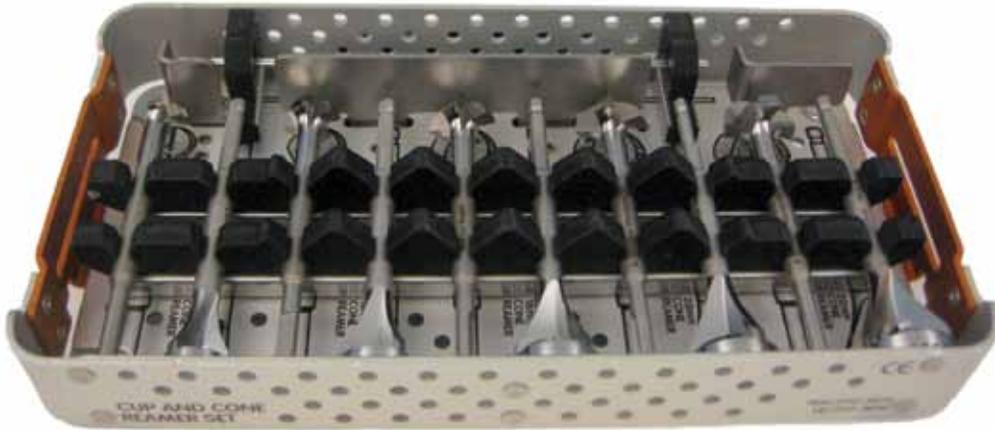
Remove the reamer and wire from the phalange.

Continue with desired fusion method.

Note: Reamers should be replaced if damage or excessive wear occurs.

Catalog Information

CUP AND CONE REAMER Set



CUP AND CONE REAMER Set

Set No. 7117-3880

Cat. No.	Description	Quantity
7117-3865	Cup Reamer, 14mm	1
7117-3866	Cone Reamer, 14mm	1
7117-3867	Cup Reamer, 16mm	1
7117-3868	Cone Reamer, 16mm	1
7117-3869	Cup Reamer, 18mm	1
7117-3870	Cone Reamer, 18mm	1
7117-3871	Cup Reamer, 20mm	1
7117-3872	Cone Reamer, 20mm	1
7117-3873	Cup Reamer, 22mm	1
7117-3874	Cone Reamer, 22mm	1
7110-1502	1.6mm Drill Tip Wire, 150mm	6
7117-3875	Cup and Cone Reamer Tray	1
7117-3876	Cup and Cone Reamer Tray Lid	1
7110-1505	1.6mm Drill Tip Threaded Wire, 150mm	0*

*Must be ordered separately

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