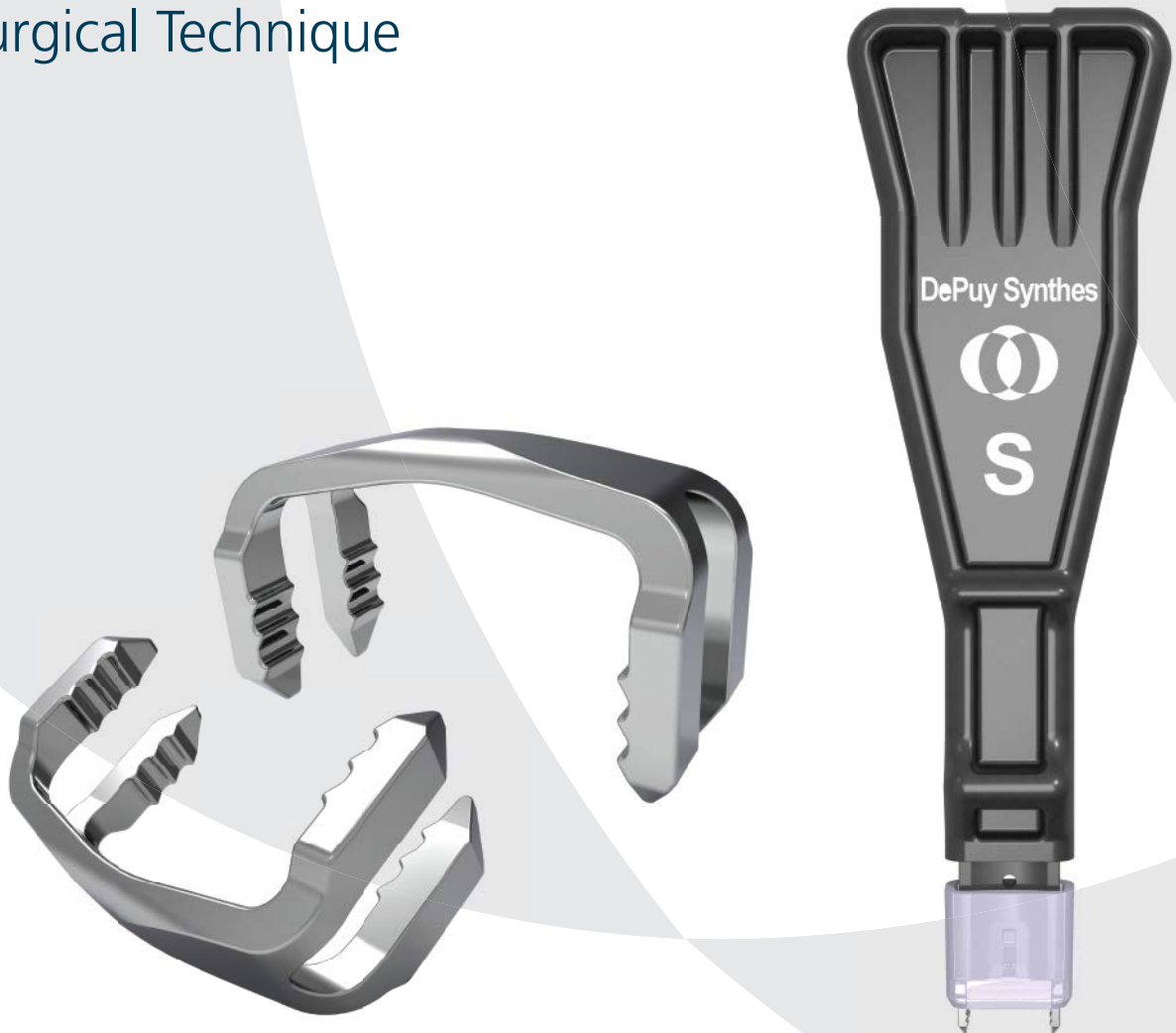


For Hammertoe Corrections

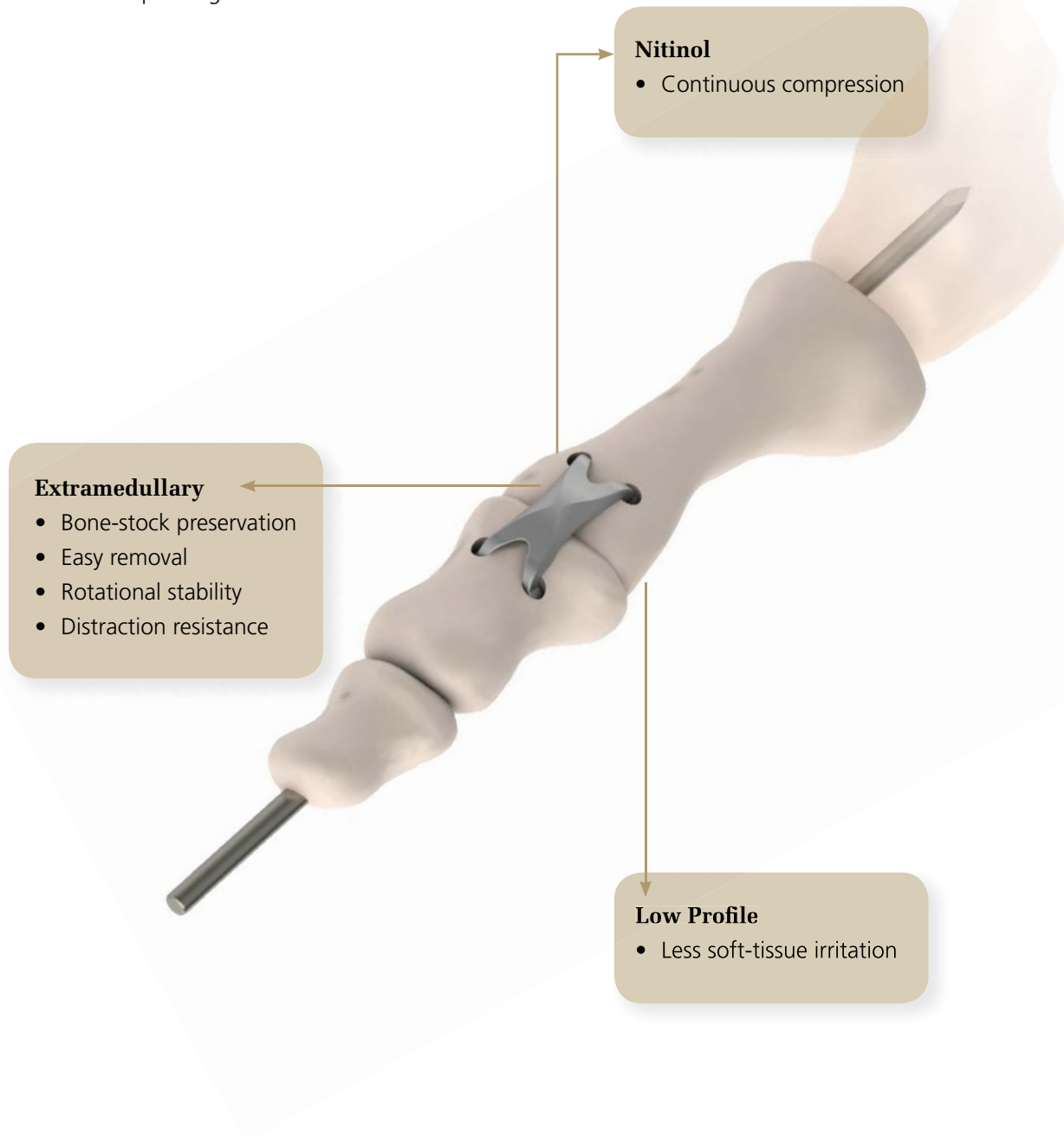
Hammertoe Continuous Compression Implant

Surgical Technique



System Highlights

The DePuy Synthes Hammertoe Continuous Compression Implants are designed for small bone reconstruction and fusion of the phalanges in toes.



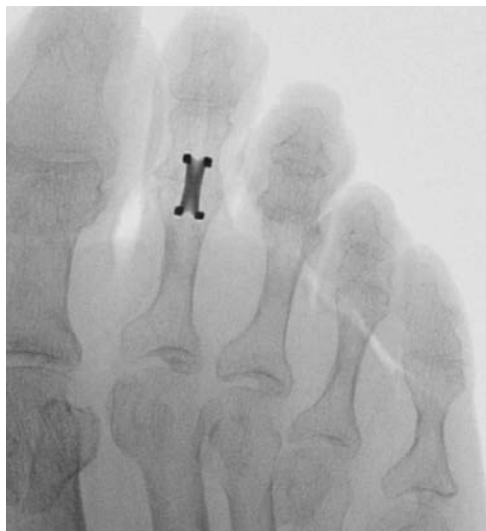
Indications and Contraindications

Indications

The DePuy Synthes Hammertoe Continuous Compression Implants are indicated for small bone reconstruction and fusion of the phalanges in toes.

Contraindications

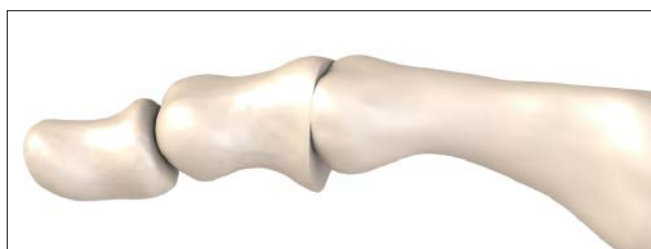
- Comminuted bone surface that would militate against implant placement.
- Pathologic conditions of bone such as osteopenia that would impair the ability to securely fix the implant.
- Foreign body sensitivity to metals including nickel. Where material sensitivity is suspected, appropriate tests should be made prior to implantation.



Surgical Technique

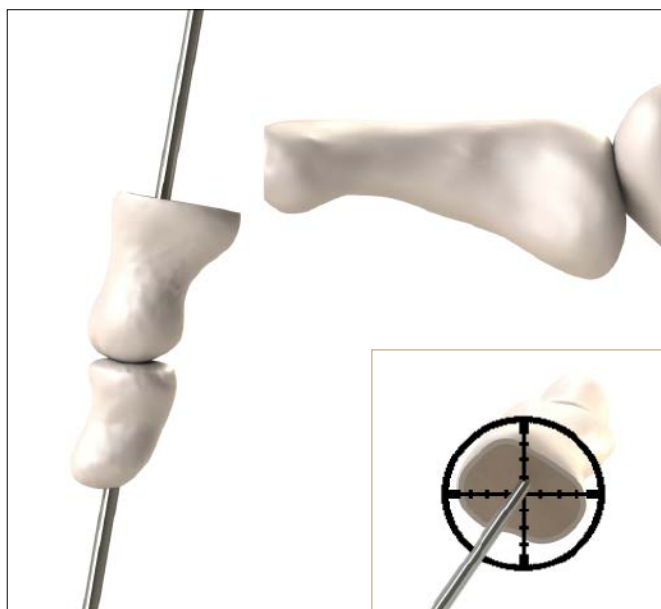
1. After exposing the surgical site and performing a proximal interphalangeal (PIP) joint capsulotomy as necessary, deflect the periosteum and extensor tendon 5 to 6 mm off the proximal aspect of the intermediate phalanx.

2. While hyperflexing the proximal interphalangeal joint, use a rongeur or saw to resect the articular cartilage from the intermediate phalanx and to resect the head of the proximal phalanx. Resections should be perpendicular to the long axis of the bones in the transverse and sagittal planes. If necessary, use a reciprocal planning technique to ensure the bone ends are flush so that there is no dorsal or plantar gapping.



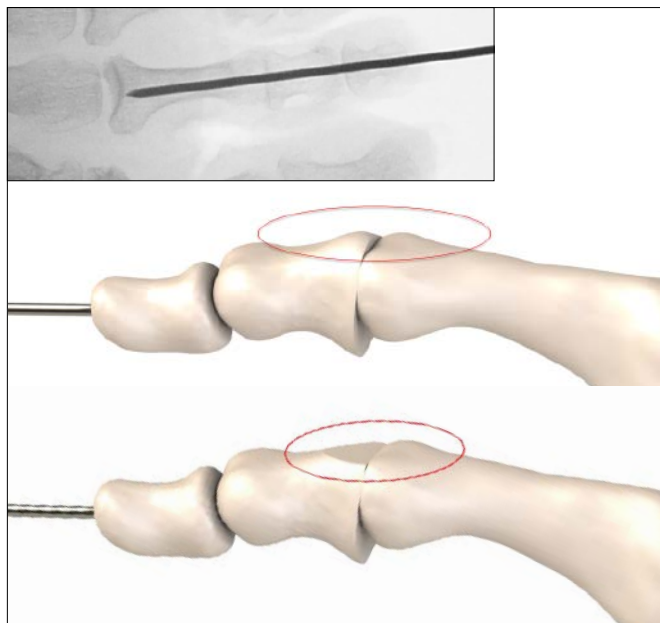
3. Choose the appropriate Hammertoe Continuous Compression Implant Kit based on the diameter of the K-wire required for the toe. The Standard Kit contains a 1.25 mm K-wire, and the Large Kit contains a 1.60 mm K-wire.

4. Antegrade the K-wire from the chosen kit distally through the intermediate phalanx until the tip is approximately 3 to 4 mm from the base. Fluorography is recommended to ensure proper placement of the K-wire.

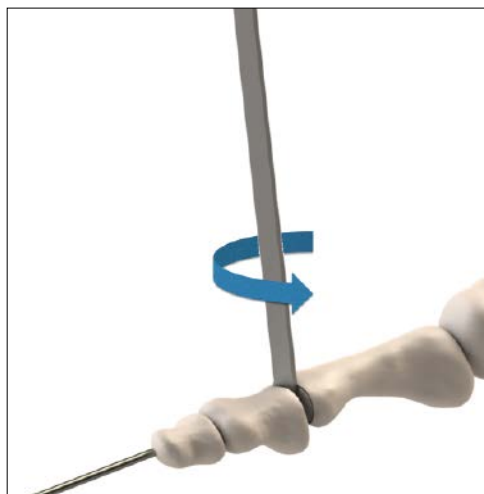


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- 5.** Align the tip of the K-wire with the central axis of the proximal phalanx, and reapproximate the proximal interphalangeal (PIP) joint until the bones are in contact. If dorsal or plantar gapping is present, resect the opposing surfaces as necessary to ensure the bones are flush.

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- 6.** Retrograde the K-wire the entire length of the proximal phalanx. Fluorography is recommended to ensure proper placement of the K-wire. Ensure proper phalange alignment and remove dorsal epiphyseal prominences.

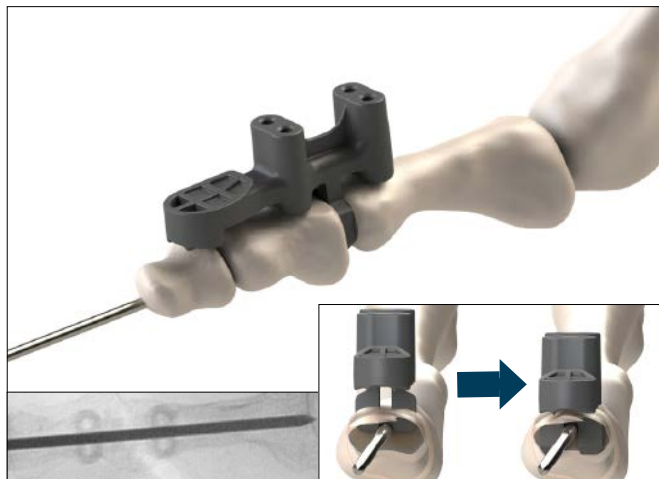


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- 7.** Distract the PIP joint to expose approximately 2 mm of the K-wire.



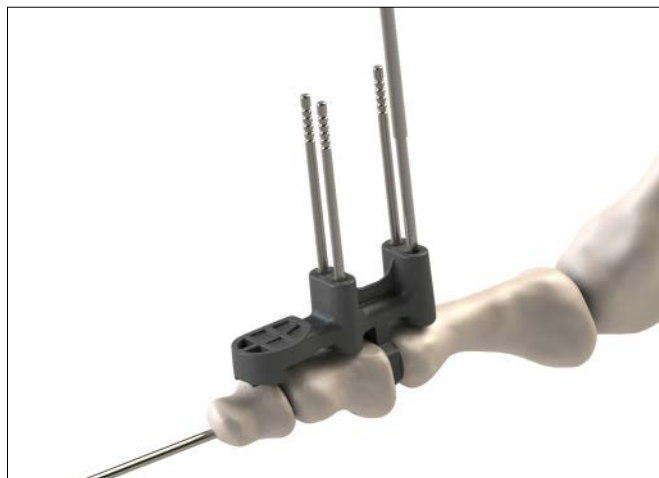
- 8.** Place the Drilling Template dorsally over the PIP joint so that the spacer under the drilling template slides into PIP joint and attaches securely onto the K-wire. Fluorography is recommended to ensure proper alignment of the drilling template over the K-wire. All the drill tubes should be in contact with the dorsal surfaces of the middle and proximal phalanges while the handle is over the skin distally. Verify that there is no soft tissue underneath the tubes of the drilling template. If any readjustment of the drilling template is necessary, ensure that the spacer is re-attached back onto the K-wire.

Tip: Before beginning the drilling of the bone the joint should be positioned in the position desired. Specifically, the bony surfaces should be aligned and tightly approximated so as to ensure best position post device placement and tight apposition of surfaces intended to fuse.

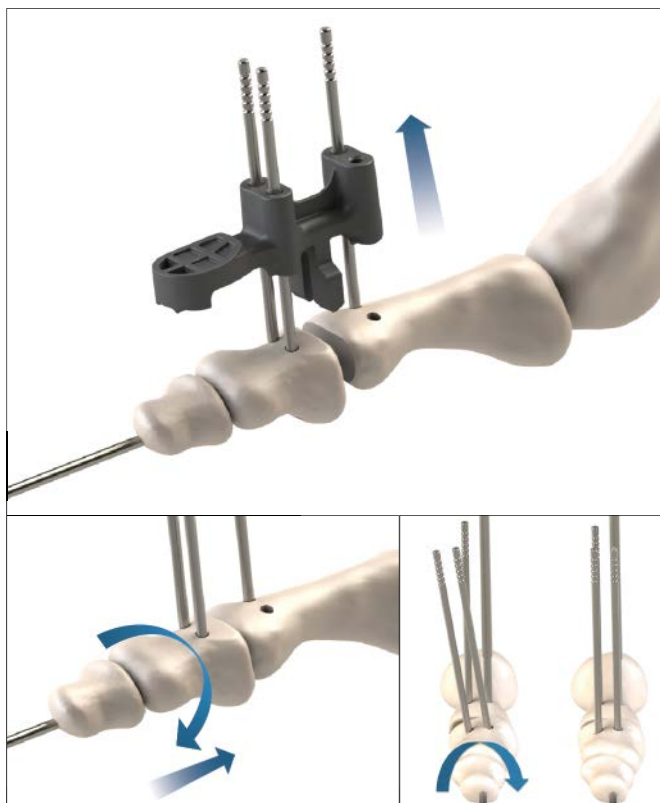


- 9.** While holding the handle of the Drilling Template against the distal aspect of the toe, compress the intermediate phalanx so that the spacer is compressed between the intermediate and proximal phalanges. The tubes of the Drilling Template should be in contact with the dorsal surfaces of the intermediate and proximal phalanges.

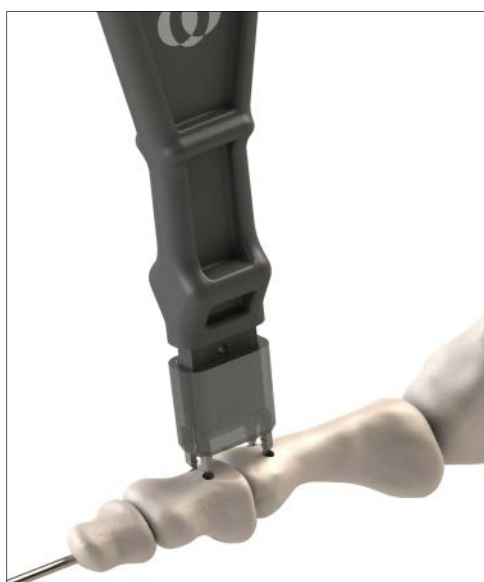
- 10.** Using the Drill Pin located in the Hammertoe Continuous Compression Implant Kit, drill the first hole into the proximal phalanx until the positive stop is reached. Insert a Locator Pin through the first hole. Drill the second hole into the intermediate phalanx and insert a Locator Pin. Finally, drill the remaining two holes through the unused tubes of the Drilling Template.



- 11.** Remove the Drilling Template, leaving the Locator Pins in place to mark the position of the drill holes. Reapproximate the PIP joint until the bones are flush. To ensure rotational alignment, verify that the Locator Pins are parallel to each other.



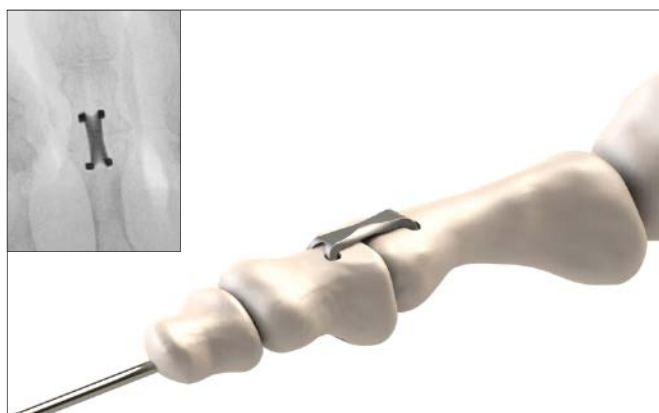
- 12.** Remove the Insertion Stick containing the Hammertoe Continuous Compression Implant from the implant kit. Remove the Locator Pins and align the tips of the legs of the implant parallel with the distal drill holes.



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- 13.** Insert the distal legs of the Hammertoe Continuous Compression Implant partially into the distal predrilled holes and then insert the remaining legs into the proximal holes. If necessary, rotate the intermediate phalanx until the proximal holes are aligned with the proximal legs of the implant.



- 14.** Insert the Hammertoe Continuous Compression Implant until the bridge is fully seated against the bones and the Insertion Tool has disengaged. The K-wire is left in place as needed to provide added stability at any joint level.



Implant Removal

1. Expose the site and the bridge of the implant.

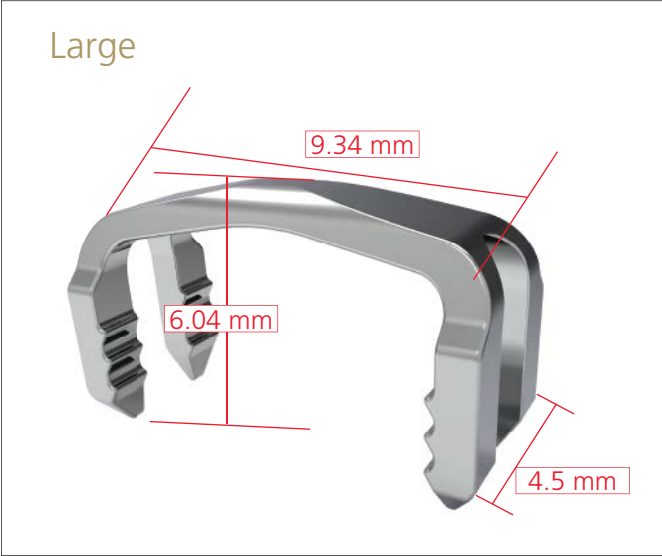
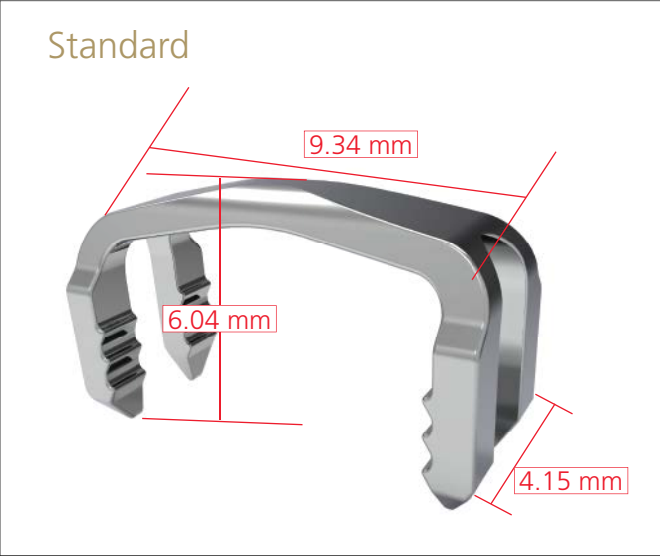
2. Place an elevator, osteotome, or similar instrument under the bridge of the implant and lift the implant off the bone. If needed, use forceps to finish removing the implant.



Ordering Information

Hammertoe Continuous Compression Implants

Description	Code	Bridge Length (mm)	Width (mm)	K-wire (mm)	Height (mm)
DePuy Synthes Hammertoe CCI Standard Kit w/1.25 K-wire	46.239.001	9.34	4.15	1.25	6.04
DePuy Synthes Hammertoe CCI Large Kit w/1.60 K-wire	46.239.002	9.34	4.5	1.60	6.04



Kit Contents

A Implant (Loaded on insertion stick)



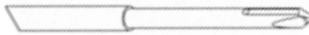
B Implant (Loaded on insertion stick)



C Drilling Template



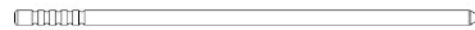
D Drill Pin



E K-wire



F Locator Pin



Please also refer to the package insert(s) or other labeling associated with the devices identified in this surgical technique for additional information.

CAUTION: Federal Law restricts these devices to sale by or on the order of a physician.

Some devices listed in this surgical technique may not have been licensed in accordance with Canadian law and may not be for sale in Canada. Please contact your sales consultant for items approved for sale in Canada.

Not all products may currently be available in all markets.



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