



A.L.P.S. mvX™ IM Nail Z-KIT™

Surgical Technique



Technique Guide

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Indications and Contraindications

Indications

The Zimmer Biomet A.L.P.S. mvX ™ IM Threaded Screws are indicated for use in bone reconstruction, osteotomy, arthrodesis, joint fusion, fracture repair, and fracture fixation of bones appropriate for the size of the device. Screws are intended for single use only.

WARNING: This device is not approved for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic, or lumbar spine.

NOTE: This Surgical Technique alone does not provide sufficient background for direct use of the instrument and implant set. Instruction by a surgeon experienced in handling these instruments is highly recommended.

Contraindications

The implant should not be used in a patient who has current, or who has a history of:

- Local or systemic acute or chronic inflammation
- Active infection or inflammation
- Suspected or documented metal allergy or intolerance

System Overview

The A.L.P.S. mvX IM Nail Z-KIT contains non-compressive nails designed to aid in the reduction of metacarpal fractures. Simple, easy-to-use instrumentation packaged in a sterile kit along with the intramedullary nails allow for a streamlined surgical experience.

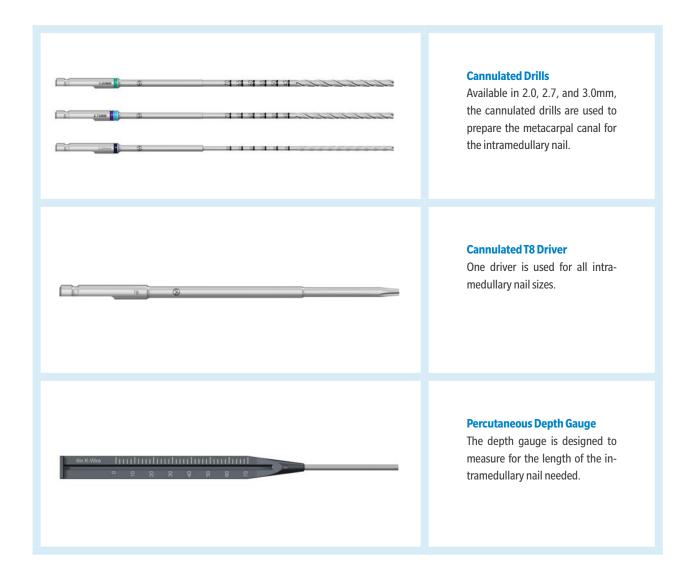
NAIL DIAMETER (mm)				
THREAD DIAMETER	3.0mm	3.5mm	4.0mm	4.5mm
BOX STICKER COLOR				
THREAD LENGTH	Fully Threaded	Fully Threaded	Fully Threaded	Fully Threaded
	30mm			
	40mm		40mm	
	45mm		45mm	
NAIL LENGTH	50mm		50mm	
	55mm		55mm	
	60mm		60mm	
	70mm		70mm	
DRIVER	Т8	Т8	Т8	Т8

DRILL BIT DIAMETERS (mm)					
	DRILL BIT	2.0mm	2.7mm	2.7mm	3.0mm



System Instrumentation

The A.L.P.S. mvX IM Nail Z-KIT offers simple, intuitive sterile instrumentation designed to create efficiencies in the operating room for a streamlined surgical workflow. The Instrument Kit contains all of the necessary instruments to complete a case, but in addition, individual sterile packaged versions of the instruments are also available in the event they are needed.



System Instrumentation

K-Wires 1.1mm k-wires are included in the kit for reduction of the fracture and placement of the intramedullary nail. 30 mm 45 mm 55 mm 70 mm 3.5 ● • 4.0 • 40 mm 50 mm 60 mm 3.0 mm Diameter 3.5 mm Diameter 4.0 mm Diameter 4.5 mm Diameter **Sizing Template** The sizing template is designed with four stepped diameters and is used in conjunction with fluoroscopy to determine the intramedullary nail diameter needed.

Technique

Intramedullary Nail

Intramedullary Nail Technique



Measure for Nail Diameter

To measure for diameter, lay the Sizing Template (880900008S) along the top of the metacarpal. The template has four diameters that correlate to each size intramedullary nail and can be used with fluoroscopy to determine the correct intramedullary nail diameter (Figure 1).



Exposure

Position the patient to allow for exposure of the metacarpal head. Make a small incision over the center of the metacarpal head.



K-Wire Insertion

Insert the K-Wire into the metacarpal head and continue in a retrograde fashion until the K-Wire tip reaches the proximal cortex (Figure 3).



Measure for Nail Length

Use the Depth Gauge to measure for the length of the intended nail. Slide the Depth Gauge over the K-Wire to measure for nail length (Figure 4).

Intramedullary Nail Technique



Drill for Intramedullary Nail

Select the correct cannulated drill per table on page 5. Pass the drill over the K-Wire and drill to the required depth, ensuring to cross the fracture site (Figure 5). Do not remove the K-Wire at this time.



Place Intramedullary Nail

Insert the selected intramedullary nail over the K-Wire and to the desired depth using the T8 Cannulated Driver (Figure 6).

Intramedullary Nail Technique



Closure

Confirm the reduction and intramedullary nail placement using an intraoperative radiograph. Note that the head of the nail should be below the articular surface (Figure 7). Irrigate the wound. Close the subcutaneous tissue and musculature in separate layers. Close the skin and dress the wound.

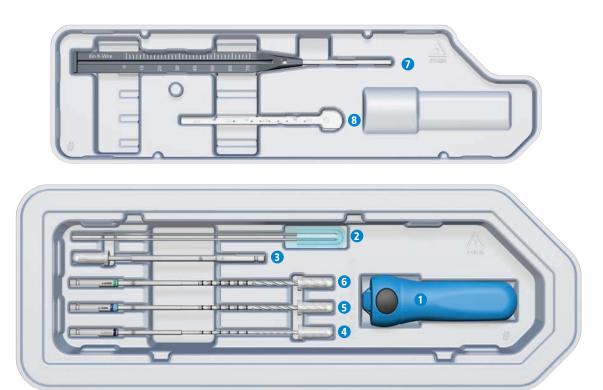
Implant Removal

Intramedullary nail removal should always be started manually. Once started, the nail may be removed either with power or manually.

Other Applications

The IM Nails are indicated for use in bone reconstruction, osteotomy, arthrodesis, joint fusion, fracture repair, and fracture fixation of bones appropriate for the size of the device. In addition to use for metacarpal fractures, these IM Nails may also be used for fractures in the foot.

Kit Layout



1	AO Handle	5	2.7mm Cannulated Drill Bit (880900005S)
2	K-Wire, 1.1mm x6" (880900103S)	6	3.0mm Cannulated Drill Bit (880900006S)
3	T8 Cannulated Driver ST (880900002S)	7	IM Nail Percutaneous Depth Gauge (880900003S)
4	2.0mm Cannulated Drill Bit (880900004S)	8	IM Nail Sizing Template (880900008S)

Ordering Information

Ordering Information

Intramedullary Nails

Part#	Description
880300030S	3.0mm IM Nail 30mm ST
880300040S	3.0mm IM Nail 40mm ST
880300045S	3.0mm IM Nail 45mm ST
880300050S	3.0mm IM Nail 50mm ST
880300055S	3.0mm IM Nail 55mm ST
880300060S	3.0mm IM Nail 60mm ST
880300070S	3.0mm IM Nail 70mm ST
880352030S	3.5mm IM Nail 30mm ST
880352040S	3.5mm IM Nail 40mm ST
880352045S	3.5mm IM Nail 45mm ST
880352050S	3.5mm IM Nail 50mm ST
880352055S	3.5mm IM Nail 55mm ST
880352060S	3.5mm IM Nail 60mm ST
880352070S	3.5mm IM Nail 70mm ST

IM Nail Z-KIT

Part#	Description
	IM Nail Instrument Kit ST
	• (1) - AO Handle
	. (2) - 1.1mm K-Wire 6 IN. ST
	. (1) - T8 Cannulated Driver ST
880900009S	• (1) - 2.0mm Cann Drill ST
	• (1) - 2.7mm Cann Drill ST
	• (1) - 3.0mm Cann Drill ST
	• (1) - IM Nail Percutaneous Depth Gauge ST
	• (1) - IM Nail Sizing Template ST

Intramedullary Nails

Part#	Description
880401040S	4.0mm IM Nail 40mm ST
880401045S	4.0mm IM Nail 45mm ST
880401050S	4.0mm IM Nail 50mm ST
880401055S	4.0mm IM Nail 55mm ST
880401060S	4.0mm IM Nail 60mm ST
880401070S	4.0mm IM Nail 70mm ST
880450040S	4.5mm IM Nail 40mm ST
880450045S	4.5mm IM Nail 45mm ST
880450050S	4.5mm IM Nail 50mm ST
880450055S	4.5mm IM Nail 55mm ST
880450060S	4.5mm IM Nail 60mm ST
880450070S	4.5mm IM Nail 70mm ST

Individually Packaged Sterile Instruments

Part#	Description
880900004S	2.0mm Cann Drill ST
880900005S	2.7mm Cann Drill ST
880900006S	3.0mm Cann Drill ST
880900002S	T8 Cannulated Driver ST
880900001S	IM Nail Depth Gauge ST
880900008S	IM Nail Sizing Template ST
880900103S	1.1mm K-Wire 6 IN. ST (2-Pack)
880800001S	IM Nail Carrying Case

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IM Nails



Manufacturer

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Instrumentation



Manufacturer

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